



## Meridium APM Installation

# 3.6.1.0.0



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## About This Document

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This file is provided so that you can easily print this section of the Meridium APM Help system.

**You should, however, use the Help system instead of a printed document.** This is because the Help system provides hyperlinks that will assist you in easily locating the related instructions that you need. Such links are not available in a print document format.

The Meridium APM Help system can be accessed within Meridium APM itself or via the Meridium APM Documentation Website (<https://www.meridium.com/documentation/WebHelp/WebHelpMaster.htm>).

**Note:** If you do not have access to the Meridium APM Documentation Website, contact [Meridium Global Support Services](#).

# Table of Contents

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Meridium APM Installation .....	1
Copyright and Legal .....	2
About This Document .....	3
Table of Contents .....	4
About the Installation, Upgrade, and System Administration Documentation .....	10
I Have my Meridium APM Distribution Package - Now What? .....	12
Deploying Meridium APM for the First Time .....	13
Updating or Upgrading Meridium APM to 3.6.1.0.0 .....	14
Directory of Shortcuts to the Most Frequently Visited Topics .....	24
Directory of Additional Meridium APM Components .....	25
Overview: The Basic Meridium APM System .....	31
The Basic Meridium APM System Architecture .....	32
Meridium APM Application Server - Hardware and Software Requirements .....	36
About the Operating System in the Meridium APM Testing Environment .....	42
Application Server Role Services .....	45
Web Server Role Services .....	47
Enabling WebDAV .....	50
Setting the Local DTC Property Settings .....	51
About the Operating System in the Meridium APM Testing Environment .....	56
Application Server Role Features .....	59
Web Server Role Features .....	60
Enabling WebDAV .....	64
Setting the Local DTC Property Settings .....	65
Microsoft ACE and the Application Server .....	70
Meridium APM Framework - Hardware and Software Requirements .....	71
Recommended Screen Resolution .....	74
Meridium APM Framework Machine - Recommended User Permissions .....	75
Database Server Machine - Hardware and Software Requirements .....	76

Oracle Requirements .....	77
SQL Server Requirements .....	78
<b>Setting the Local DTC Property Settings .....</b>	<b>79</b>
<b>SQL Server Report Server - Hardware and Software Requirements .....</b>	<b>84</b>
<b>How the SQL Server Report Server Works with Meridium APM .....</b>	<b>86</b>
<b>About the SQL Server Report Manager .....</b>	<b>89</b>
<b>About Communication Methods .....</b>	<b>90</b>
<b>About the Meridium APM Server and Add-Ons Installers .....</b>	<b>91</b>
<b>About the Meridium APM Framework Installer .....</b>	<b>94</b>
<b>Installing the Application Server Software .....</b>	<b>96</b>
<b>Installing Additional Application Server Components After the Initial Installation .....</b>	<b>108</b>
<b>Installing Only the Meridium APM Framework Application .....</b>	<b>114</b>
<b>Installing the Meridium APM Framework and Select Administrative Applications .....</b>	<b>124</b>
<b>Performing a Silent Installation on APM Framework Machines .....</b>	<b>136</b>
<b>Granting Windows Security Permissions .....</b>	<b>138</b>
<b>Installing Microsoft Visual Studio Tools for Applications .....</b>	<b>139</b>
<b>Installing Microsoft Visual Studio 2005 Remote Debugger .....</b>	<b>141</b>
<b>Report Server Installation and Configuration Tasks .....</b>	<b>149</b>
<b>Installing the Meridium APM Adapter for SSRS .....</b>	<b>152</b>
<b>Configuring Permissions for the Report Server .....</b>	<b>161</b>
<b>Configuring Meridium APM to Use the Report Server .....</b>	<b>163</b>
<b>About Report Deployment .....</b>	<b>166</b>
<b>Deploying All Reports to the Report Server .....</b>	<b>168</b>
<b>About the Meridium APM Database .....</b>	<b>172</b>
<b>Database Server Installation and Configuration Tasks .....</b>	<b>173</b>
<b>Installing the Database Upgrade Manager Application .....</b>	<b>176</b>
<b>Installing Oracle Server Software .....</b>	<b>177</b>
<b>Considering Oracle Server Globalization Software .....</b>	<b>178</b>
<b>Creating and Configuring the Oracle Database .....</b>	<b>179</b>
<b>About Creating the Oracle Schema .....</b>	<b>181</b>

Creating the Meridium APM Oracle Schema .....	182
Considering SQL Server Localization .....	184
Installing the SQL Server Software .....	185
About Creating and Configuring the SQL Server Database .....	186
Creating the SQL Server Database .....	187
Configuring the SQL Server Database .....	188
Installing Oracle Data Access Components (ODAC) .....	190
Configuring the TNS_ADMIN Environment Variable .....	192
Configuring An Oracle Net Service Name .....	197
Upgrading Application Server Instances to 3.6.1.0.0 .....	198
About Upgrading Meridium APM Framework Machines .....	214
Upgrading Meridium APM Framework Machines to 3.6.1.0.0 .....	216
Upgrading the Meridium APM Framework and Select Administrative Applications From V3.4.5 to 3.6.1.0.0 .....	230
Upgrading the Meridium APM Adapter for SSRS .....	242
How Can I Tell What Version is Currently Installed? .....	254
Merging Configuration Files After an Upgrade or an Update .....	256
About Automatic Upgrades .....	257
Running the ALT_MI_USER Script .....	258
Terms Used in this Documentation .....	259
About Upgrading Your Database .....	261
How Customized Database Content is Protected .....	264
Protected Database Content .....	267
How Do I Determine What Will be Replaced and What Will be Protected? .....	272
About Obtaining Baseline Content After an Upgrade .....	274
About the Database Upgrade Manager .....	276
Accessing the Database Upgrade Manager .....	281
Initiating the Database Upgrade Process .....	282
About Monitoring the Database Upgrade Process .....	290
Aspects of the Upgrade Details Grid .....	293

Pausing the Database Upgrade Process .....	295
Resuming a Paused Database Upgrade Process .....	296
The Final Stage of the Database Upgrade Process .....	297
About Reviewing the Log for Duplicate Records .....	298
Reviewing the Log for Duplicate Records .....	299
Sending the Database Upgrade Logs to Meridium, Inc. ....	302
I see a Failure. Now What? .....	303
The Events Log .....	304
Bootstrap Error .....	306
Configuring the Application Server for Oracle Components .....	307
About Comparing Databases .....	308
Database Comparison Options .....	310
About Accessing the Meridium APM Database Comparison Tool .....	312
Deploying the Tool Manually .....	313
Configuring the Application Server for a Pre-Upgrade Database Comparison .....	321
Accessing the Tool Manually .....	322
Accessing the Tool From the Configuration Manager .....	324
About the Meridium APM Database Comparison Tool .....	325
Running the Comparison Against a Pre-Upgraded Database .....	328
Running the Comparison Against an Upgraded Database .....	333
Saving the Results to a .ZIP File .....	337
Reloading Previous Comparison Results .....	339
Aspects of the Comparison Results Grid .....	342
Viewing Detailed Differences in WinMerge .....	346
Example: You Have Modified a Baseline Query .....	349
Exporting the Results to an Excel File .....	355
About Specifying Data Sources .....	357
Adding Data Sources .....	359
Testing a Data Source Connection .....	362
Modifying a Data Source .....	363

About Enabling Scheduled Item Execution .....	364
Specifying a Data Source as the Default .....	365
Removing Data Sources .....	366
About the Meridium APM System Administration Tool Documentation .....	367
Accessing the Meridium APM System Administration Tool .....	368
Getting Started: Meridium APM System Administration Tool .....	370
About License Activation .....	373
Activating Licenses .....	375
Activating Licensed Modules and Products .....	378
Overview of the Import/Export Metadata Tool .....	380
Data Types Available for Import and Export .....	381
Accessing the Import/Export Metadata Tool .....	385
Aspects of the Import/Export Metadata Window .....	386
Exporting Metadata .....	389
About Importing Metadata .....	391
Performing the Import Procedure .....	392
Making Selections for an Export .....	394
Making Selections for an Import .....	395
Selecting Changed Items .....	396
Selecting Some Items to Import or Export .....	398
Exporting Records and Links .....	401
Saving Your Import or Export Selections .....	403
Loading Saved Import or Export Selections .....	404
About the Excel File .....	405
About the XML File .....	407
About Action Indicators .....	408
Possible Values for Action Indicators .....	409
About the Files Folder .....	410
Resetting Selections on the Import/Export Metadata Window .....	412
Viewing the Import/Export Log .....	413



Meridium APM Supported Software and Devices .....	414
About Configuration Files and Server Upgrades .....	423
How Do Application Updates Work? .....	425
About Uninstalling and Repairing Meridium APM Installations .....	426
Uninstalling All Meridium APM Components on an Application Server Machine ..	427
Uninstalling Specific Components Using the Application Server and Add-Ons Installer .....	430
Repairing Application Server Software and Add-on Component Installations .....	435
Uninstalling All the Meridium APM Applications on a Framework Machine .....	439
Uninstalling Specific Applications Using the Meridium APM Framework Installer	442
Meridium APM Licenses .....	446

# About the Installation, Upgrade, and System Administration Documentation

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This documentation provides details on performing the tasks that are required for:

- Installing and configuring the components of the [basic Meridium APM system architecture](#), which is required by *all* Meridium APM components.
- Upgrading the components of the basic Meridium APM system architecture [from the following versions](#):
  - V3.6.0
  - V3.5.1
  - V3.5.0 SP1 LP
  - V3.5.0
  - V3.4.5

**Note:** The upgrade paths provided in this documentation assume that you have one of these base versions installed. If you have applied a hot fix or patch to your current version, upgrading may cause you to lose some or all of the changes that you applied through your support release. For more information, consult the hot fix or patch documentation for your current version.

- Deploying translated strings for all Meridium APM applications.

Specific instructions for installing, upgrading, and configuring individual modules and features is located in the documentation for that module or feature. Because you can use Meridium with multiple combinations of features and module licenses that require different or overlapping configurations and machines, you should read the instructions for each module or feature that you want to deploy in your system and consolidate the steps where they overlap. For your convenience, a [directory of the additional components that you can deploy with Meridium APM is provided here](#).

**IMPORTANT:** All the documentation in the root-level Installation, Upgrade, and System Administration section of the help system assumes that you are logged in as a Windows User with an *Administrator account* to the machine where you will perform each step.

The Installation, Upgrade, and System Administration documentation provides details on the following specific items:

- **Hardware and Software (HW and SW) requirements for the Meridium APM installers.** This documentation does not provide a list of HW and SW requirements for individual modules or features. Instead, the requirements for an individual modules and features are located in the documentation for that module or feature. This documentation does, however, provide a [directory of the additional Meridium APM components](#) with a link to the system requirements for that

module or feature.

- **Installing, upgrading, and configuring the basic Meridium APM system architecture.** Instructions on installing, upgrading, and configuring the components of the [basic Meridium APM system architecture](#).
- **Deploying translated strings for Meridium APM applications.** Instructions for installing, upgrading, and configuring Meridium APM applications to display translated strings. Meridium APM software is installed in English, by default. Before you can view translated strings in Meridium APM applications, you must complete the steps for installing and configuring the basic Meridium APM system architecture and any additional modules or features that you want to use with Meridium APM.
- **Using the Meridium APM Server Administration tool, which lets you modify configuration files that support Meridium APM components.** This documentation does not provide instructions on modifying files for individual modules or features. Instead, the documentation for modifying individual files is located in the documentation for the module or feature that file supports. This documentation does, however, provide a [directory of the files that you can modify for modules and features](#) with a link to the documentation on modifying that file, which resides in the documentation for that module or feature.
- **Database creation, configuration, and upgrades.** Instructions for creating, configuring and upgrading your Meridium APM database (SQL and Oracle).
- **Using the Database Comparison Tool.** Instructions on [using the Database Comparison Tool](#) to view the differences between the source and target databases.
- **Uninstalling or repairing Meridium APM components.** Instructions for uninstalling or repairing Meridium APM components using the Meridium APM installers.

When you are using this documentation to perform the installation, upgrade, and system administration tasks that are documented herein, we recommend that you view this Help system *in a web browser* on a computer or device other than the machine on which you are performing the procedures. There are many cross references incorporated into the Help system that are necessary for seamless navigation through the multiple steps that are required before your Meridium APM system can be used. These cross references are not possible in the printed or PDF formats of this documentation.

[If you have your Meridium APM distribution package and you are ready to begin, click here.](#)

## I Have my Meridium APM Distribution Package - Now What?

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Use the following sections to view the steps that must be completed before your system is ready to be used in production.

Click the option that corresponds to the task you want to complete:

- [I am deploying Meridium APM for the first time.](#)
- [I am upgrading from V3.6.0.](#)
- [I am upgrading from V3.5.1.](#)
- [I am upgrading from V3.5.0 SP1 LP.](#)
- [I am upgrading from V3.5.0.](#)
- [I am upgrading from V3.4.5.](#)

**Note:** You can upgrade directly to any release listed in these instructions from version 3.4.0 SP3 and later. If you are upgrading from a version prior to V3.4.5, please contact Global Support Services for more information.

## Deploying Meridium APM for the First Time

Deploying Meridium APM for the first time includes completing multiple steps, which are outlined in the table in this topic. The steps in this section of the documentation provide all the information that you need to deploy the basic system architecture. After you have completed these steps, you will need to perform [additional steps required to configure the modules that you have purchased](#).

The person responsible for completing each task may vary within in your organization. We recommend, however, that the steps be performed in relatively the same order in which they are listed in the table.

Step	Task
1	Ensure that your system meets the <a href="#">hardware and software requirements for the basic Meridium APM system architecture</a> .
2	<a href="#">Install the Meridium APM Server and Add Ons software</a> on the Application Server(s).  Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.
3	<a href="#">Set up the SQL Server Report Server</a> .
4	<a href="#">Set up the Database Server</a> , which includes creating and configuring your Meridium APM database.
5	Create Security User records for the individuals in your organization who will need to log in to Meridium APM applications.
6	<a href="#">Grant Windows security permissions</a> to the individuals in your organization who will need to log in to Meridium APM applications.
7	<a href="#">Activate licensed modules and products</a> .
8	If you want to use non-English translations in Meridium APM, deploy translations.
9	<a href="#">Install the Meridium APM Framework applications on the APM Framework machines</a> .

## Updating or Upgrading Meridium APM to 3.6.1.0.0

Updating or upgrading to the basic Meridium APM system architecture includes completing multiple steps, which are outlined in the table in this topic. The steps in this section of the documentation provide all the information that you need to update or upgrade and to configure the basic system architecture for 3.6.1.0.0. After you have completed these steps, [you will need to perform additional steps required to update or upgrade any modules that you deployed on your previous version](#). If you have purchased additional modules for use with 3.6.1.0.0, you will need to use the first-time installation steps to configure those modules.

The person responsible for performing each step may vary within your organization. We recommend, however, that you perform the steps in relatively the same order in which they are listed in the table.

**Note:** You may upgrade directly to 3.6.1.0.0 from V3.4.0 SP3 and any version after it by following the steps listed in the table below. If you are upgrading from a version prior to V3.4.0 SP3, or if you have any questions about the upgrade process, please contact Global Support Services.

### Upgrade from any version V3.6.0.0.0 through V3.6.0.12.3

Step	Task
1	<p><a href="#">Upgrade all instances of the Meridium APM Application Server</a> (both dedicated and supporting).</p> <p>If you do not have a supporting instance of the Meridium APM Application Server installed on the Meridium APM Sync Server, Web Services, or Web Framework Server machine, you will also need to apply the maintenance release to those machines. If you have followed our recommendation to install a supporting instance of the Meridium APM Application Server on these machines, updating that instance will also update the components that it supports.</p> <p>Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.</p>

Step	Task
2	<p>If you are upgrading from V3.6.0.1.0, V3.6.0.2.0, or V3.6.0.3.0, complete this step.</p> <p>Delete the following rules projects from your Rules Library in Configuration Manager:</p> <ul style="list-style-type: none"> <li>• Rules Library\Client\RBI\RBI_ASM_Mapping</li> <li>• Rules Library\Client\RBI\RBI_ASM_MappingFactory</li> </ul> <p>If you have implemented custom rule code in this area, you should create a backup of your custom rules prior to deleting these projects. Then, after you upgrade your database, you can merge your customer changes with the upgraded rule code.</p>
3	<p>Upgrade your database.</p> <p>This includes the following steps, which you should complete in the order in which they are listed here:</p> <ol style="list-style-type: none"> <li>A. <a href="#">Upgrade the database</a> using the Database Upgrade Manager.</li> <li>B. <a href="#">Review the log for duplicate records.</a></li> <li>C. <a href="#">Send the upgrade logs to Meridium, Inc.</a></li> <li>D. <a href="#">Activate licensed modules and products.</a></li> <li>E. Compile the database.</li> </ol> <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <p><b>IMPORTANT:</b> If your starting database version is V3.5.1 through V3.6.0.6.0 and you are planning to use Oracle Server 12.1.0.2 or higher, there are additional steps you must complete prior to upgrading your database. These steps are described in <a href="#">Step 4 of the About Upgrading Your Database topic.</a></p> </div>
4	<p>For each baseline configuration file that Meridium, Inc. has changed between your current version and 3.6.1.0.0, <a href="#">reconcile the differences between the updated baseline files and your existing, customized configuration files.</a></p> <p>Click here for more information <a href="#">about configuration files and server upgrades.</a></p>
5	<p><a href="#">Upgrade all Meridium APM Framework machines.</a></p>

Step	Task
6	If you are using mobileAPM, reinstall the mobileAPM App on any mobile devices that your site plans to use.
7	If you are using mobileAPM on the Panasonic ToughPad or installing on other Windows 8.1 device, you will need to install mobileAPM for Windows 8.1 and integrate the UHF RFID scanning with mobileAPM on the Panasonic Toughpad.

## Upgrade from any version V3.5.1.0.0 through V3.5.1.12.0

Step	Task
1	If you will connect to an Oracle database, on the dedicated Application Server machine, <a href="#">install the Oracle Data Access Components version 12.1.0.1</a> (both 32-bit and 64-bit versions).
2	<p><a href="#">Upgrade all instances of the Meridium APM Application Server</a> (both dedicated and supporting).</p> <p>If you do not have a supporting instance of the Meridium APM Application Server installed on the Meridium APM Sync Server, Web Services, or Web Framework Server machine, you will also need to apply the maintenance release to those machines. If you have followed our recommendation to install a supporting instance of the Meridium APM Application Server on these machines, updating that instance will also update the components that it supports.</p> <p>Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.</p>



Step	Task
3	<p>Upgrade the <a href="#">SQL Server Report Server</a>.</p> <div style="border: 1px solid yellow; padding: 5px;"> <p><b>Note:</b> The instructions for upgrading the Meridium APM Adapter for SSRS assume that you were using the 64-bit Adapter for SSRS in your previous version. If you were using the 32-bit Adapter for SSRS, you will need to uninstall the older 32-bit version and install the new 64-bit version on a 64-bit SQL Server Report Server.</p> </div>
4	<p>Upgrade your database.</p> <p>This includes the following steps, which you should complete in the order in which they are listed here:</p> <ol style="list-style-type: none"> <li>A. <a href="#">Upgrade the database</a> using the Database Upgrade Manager.</li> <li>B. <a href="#">Review the log for duplicate records</a>.</li> <li>C. <a href="#">Send the upgrade logs to Meridium, Inc.</a></li> <li>D. <a href="#">Activate licensed modules and products</a>.</li> <li>E. Compile the database.</li> </ol> <div style="border: 1px solid red; padding: 5px;"> <p><b>IMPORTANT:</b> If your starting database version is V3.5.1 through V3.6.0.6.0 and you are planning to use Oracle Server 12.1.0.2 or higher, there are additional steps you must complete prior to upgrading your database. These steps are described in <a href="#">Step 4 of the About Upgrading Your Database topic</a>.</p> </div>
5	<p>For each baseline configuration file that Meridium, Inc. has changed between your current version and 3.6.1.0.0, <a href="#">reconcile the differences between the updated baseline files and your existing, customized configuration files</a>.</p> <p>Click here for more information <a href="#">about configuration files and server upgrades</a>.</p>
6	<p><a href="#">Upgrade all Meridium APM Framework machines</a>.</p>

## Upgrade from any version V3.5.0 SP1 LP through V3.5.0.1.9.0

Step	Task
1	<p>If you will connect to an Oracle database, on the dedicated Application Server machine:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Install the Oracle Data Access Components version 12.1.0.1</a> (both 32-bit and 64-bit versions).</li> <li>B. Additionally, <a href="#">modify the machine configuration file</a> to undo modifications that were made to bind the 64-bit .Net Framework to the Oracle Data Access Component in previous releases.</li> </ul>
2	<p><a href="#">Upgrade all instances of the Meridium APM Application Server</a> (both dedicated and supporting).</p> <p>If you do not have a supporting instance of the Meridium APM Application Server installed on the Meridium APM Sync Server, Web Services, or Web Framework Server machine, you will also need to apply the maintenance release to those machines. If you have followed our recommendation to install a supporting instance of the Meridium APM Application Server on these machines, updating that instance will also update the components that it supports.</p> <p>Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.</p>
3	<p>Upgrade the <a href="#">SQL Server Report Server</a>.</p> <div style="border: 1px solid yellow; padding: 5px;"> <p><b>Note:</b> The instructions for upgrading the Meridium APM Adapter for SSRS assume that you were using the 64-bit Adapter for SSRS in your previous version. If you were using the 32-bit Adapter for SSRS, you will need to uninstall the older 32-bit version and install the new 64-bit version on a 64-bit SQL Server Report Server.</p> </div>
4	<p>If you connect to a SQL Server database and the Database Server is a 2008 R2 machine, complete this step.</p> <p><a href="#">Install SQL Server 2008 R2 SP2</a> on the Database Server.</p>

Step	Task
5	<p>If you connect to an Oracle database, complete this step.</p> <p><a href="#">Run the script ALT_MI_USER</a> on the Database Server.</p>
6	<p>Upgrade your database.</p> <p>This includes the following steps, which you should complete in the order in which they are listed here:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Upgrade the database</a> using the Database Upgrade Manager.</li> <li>B. <a href="#">Review the log for duplicate records.</a></li> <li>C. <a href="#">Send the upgrade logs to Meridium, Inc.</a></li> <li>D. <a href="#">Activate licensed modules and products.</a></li> <li>E. Compile the database.</li> </ul>
7	<p>For each baseline configuration file that Meridium, Inc. has changed between your current version and 3.6.1.0.0, <a href="#">reconcile the differences between the updated baseline files and your existing, customized configuration files.</a></p> <p>Click here for more information <a href="#">about configuration files and server upgrades.</a></p>
8	<p>If you use non-English translations in Meridium APM, complete this step.</p> <p>Redeploy the baseline translations.</p> <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p><b>Note:</b> When you redeploy the baseline translations, your custom translations will be maintained.</p> </div>
9	<p><a href="#">Upgrade all Meridium APM Framework machines.</a></p>

## Upgrade from any version V3.5.0 through V3.5.0.0.7.1

Step	Task
1	<p>If you will connect to an Oracle database, on the dedicated Application Server machine:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Install the Oracle Data Access Components version 12.1.0.1</a> (both 32-bit and 64-bit versions).</li> <li>B. Additionally, <a href="#">modify the machine configuration file</a> to undo modifications that were made to bind the 64-bit .Net Framework to the Oracle Data Access Component in previous releases.</li> </ul>
2	<p><a href="#">Upgrade all instances of the Meridium APM Application Server</a> (both dedicated and supporting).</p> <p>If you do not have a supporting instance of the Meridium APM Application Server installed on the Meridium APM Sync Server, Web Services, or Web Framework Server machine, you will also need to apply the maintenance release to those machines. If you have followed our recommendation to install a supporting instance of the Meridium APM Application Server on these machines, updating that instance will also update the components that it supports.</p> <p>Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.</p>
3	<p>Upgrade the <a href="#">SQL Server Report Server</a>.</p> <div style="border: 1px solid yellow; padding: 5px;"> <p><b>Note:</b> The instructions for upgrading the Meridium APM Adapter for SSRS assume that you were using the 64-bit Adapter for SSRS in your previous version. If you were using the 32-bit Adapter for SSRS, you will need to uninstall the older 32-bit version and install the new 64-bit version on a 64-bit SQL Server Report Server.</p> </div>
4	<p>If you connect to a SQL Server database and the Database Server is a 2008 R2 machine, complete this step.</p> <p><a href="#">Install SQL Server 2008 R2 SP2</a> on the Database Server.</p>

Step	Task
5	<p>If you connect to an Oracle database, complete this step.</p> <p><a href="#">Run the script ALT_MI_USER</a> on the Database Server.</p>
6	<p>Upgrade your database.</p> <p>This includes the following steps, which you should complete in the order in which they are listed here:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Upgrade the database</a> using the Database Upgrade Manager.</li> <li>B. <a href="#">Review the log for duplicate records.</a></li> <li>C. <a href="#">Send the upgrade logs to Meridium, Inc.</a></li> <li>D. <a href="#">Activate licensed modules and products.</a></li> <li>E. Compile the database.</li> </ul>
7	<p>For each baseline configuration file that Meridium, Inc. has changed between your current version and 3.6.1.0.0, <a href="#">reconcile the differences between the updated baseline files and your existing, customized configuration files.</a></p>
8	<p>If you use non-English translations in Meridium APM, complete this step.</p> <p>Redeploy the baseline translations.</p> <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p><b>Note:</b> When you redeploy the baseline translations, your custom translations will be maintained.</p> </div>
9	<p><a href="#">Upgrade all Meridium APM Framework machines.</a></p>

## Upgrade from any version V3.4.5 through V3.4.5.0.1.4

Step	Task
1	<p>If you will connect to an Oracle database, on the dedicated Application Server machine:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Install the Oracle Data Access Components version 12.1.0.1</a> (both 32-bit and 64-bit versions).</li> <li>B. Additionally, <a href="#">modify the machine configuration file</a> to undo modifications that were made to bind the 64-bit .Net Framework to the Oracle Data Access Component in previous releases.</li> </ul>
2	<p><a href="#">Upgrade all instances of the Meridium APM Application Server</a> (both dedicated and supporting).</p> <p>If you do not have a supporting instance of the Meridium APM Application Server installed on the Meridium APM Sync Server, Web Services, or Web Framework Server machine, you will also need to apply the maintenance release to those machines. If you have followed our recommendation to install a supporting instance of the Meridium APM Application Server on these machines, updating that instance will also update the components that it supports.</p> <p>Before you complete this step, you should review the steps required to <a href="#">configure the modules/features that you purchased</a> and consolidate any overlapping steps.</p>
3	<p>Upgrade the <a href="#">SQL Server Report Server</a>.</p> <div style="border: 1px solid yellow; padding: 5px;"> <p><b>Note:</b> The instructions for upgrading the Meridium APM Adapter for SSRS assume that you were using the 64-bit Adapter for SSRS in your previous version. If you were using the 32-bit Adapter for SSRS, you will need to uninstall the older 32-bit version and install the new 64-bit version on a 64-bit SQL Server Report Server.</p> </div>
4	<p>If you connect to a SQL Server database and the Database Server is a 2008 R2 machine, complete this step.</p> <p><a href="#">Install SQL Server 2008 R2 SP2</a> on the Database Server.</p>

Step	Task
5	<p>If you connect to an Oracle database, complete this step.</p> <p><a href="#">Run the script ALT_MI_USER</a> on the Database Server.</p>
6	<p>Upgrade your database.</p> <p>This includes the following steps, which you should complete in the order in which they are listed here:</p> <ul style="list-style-type: none"> <li>A. <a href="#">Upgrade the database</a> using the Database Upgrade Manager.</li> <li>B. <a href="#">Review the log for duplicate records.</a></li> <li>C. <a href="#">Send the upgrade logs to Meridium, Inc.</a></li> <li>D. <a href="#">Activate licensed modules and products.</a></li> <li>E. Compile the database.</li> </ul>
7	<p>For each baseline configuration file that Meridium, Inc. has changed between your current version and 3.6.1.0.0, <a href="#">reconcile the differences between the updated baseline files and your existing, customized configuration files.</a></p> <p>Click here for more information <a href="#">about configuration files and server upgrades.</a></p>
8	<p>If you use non-English translations in Meridium APM, complete this step.</p> <p>Redeploy the baseline translations.</p> <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p><b>Note:</b> When you redeploy the baseline translations, your custom translations will be maintained.</p> </div>
9	<p><a href="#">Upgrade all Meridium APM Framework machines.</a></p>

## Directory of Shortcuts to the Most Frequently Visited Topics

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- [Hardware and software requirements](#)
- [Upgrading my Meridium APM system](#)
- [Directory of additional Meridium APM components](#)
- [Configuring the Application Server](#)
- Deploying translations for Meridium APM



## Directory of Additional Meridium APM Components

The following table provides an alphabetical list of the modules/features that you can configure for Meridium APM with a link to the complete steps for configuring that module/feature. You can use this table as a directory for accessing the system requirements and deployment steps for a given module/feature. This table also contains the name of the license that activates each module/feature.

The upgrade steps provided for each module/feature include information that you need to upgrade the module/feature if you had deployed it in a previous version. If you are adding an additional module/feature to your Meridium APM deployment, you should refer to the first-time deployment steps for that module/feature.

Module/Feature Name	System Requirements and Deployment Steps
<p><b>AMS Analytics</b></p> <p>Activated with the <i>AMS Analytics</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Asset Answers Integration</b></p> <p>Activated with the <i>Asset Answers</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Asset Criticality Analysis</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license</p> <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> The ACA feature that updates criticality indicator values in SAP is activated with the <i>SAP Interfaces - Criticality Assessment</i> license.</p> </div>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Asset Health Manager</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>

Module/Feature Name	System Requirements and Deployment Steps
<p><b>Asset Strategy Implementation</b></p> <p>Activated with <i>ASM and ASI</i></p> <p>Additional features activated with <i>ASI for SAP</i></p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Asset Strategy Management</b></p> <p>Activated with the <i>ASM and ASI</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Asset Strategy Optimization</b></p> <p>Activated with the <i>Asset Strategy Optimization</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Calibration Management</b></p> <p>Activated with the <i>Calibration Management</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Core Analysis</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Failure Modes and Effects Analysis</b></p> <p>Activated with the <i>RCM and FMEA</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Generation Management</b></p> <p>Activated with the <i>Generation Management</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>

Module/Feature Name	System Requirements and Deployment Steps
<p><b>Hazards Analysis</b> Activated with the <i>Hazards and Operability Analysis</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Inspection Management</b> Activated with the <i>Inspection Management</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Lubrication Management</b> Activated with the <i>Lubrication Management</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Maximo Interfaces</b> Activated with the <i>Maximo Interfaces</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Meridium APM Web Framework</b> Activated with the <i>Meridium APM Web Framework</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Metrics and Scorecards</b> Activated with the <i>Metrics and Scorecards</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>NR13</b> Activated with the <i>NR13</i> license</p>	<p>You can <a href="https://www.meridium.com/secure/documentation/NR13/Meridium_APM_NR13_Module.pdf">download the NR13 help documentation here</a> (PDF).download the NR13 help documentation here: <a href="https://www.meridium.com/secure/documentation/NR13/Meridium_APM_NR13_Module.pdf">https://www.meridium.com/secure/documentation/NR13/Meridium_APM_NR13_Module.pdf</a></p>
<p><b>Operator Rounds</b> Activated with the <i>Operator Rounds</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>

Module/Feature Name	System Requirements and Deployment Steps
<p><b>Oracle EBS eAM Inter-faces</b></p> <p>Activated with the <i>Oracle EBS eAM Inter-faces</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps for Oracle SOA Gateway</li> <li>• First-Time Deployment Steps for Oracle DB Direct</li> <li>• Upgrade Steps for Oracle SOA Gateway</li> <li>• Upgrade Steps for Oracle DB Direct</li> </ul>
<p><b>Policy Manager</b></p> <p>Activated with the <i>Policy Manager</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Process Data Integration</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license.</p> <p>Additional features activated with the following licenses:</p> <ul style="list-style-type: none"> <li>• <i>OSI PI Interfaces</i></li> <li>• <i>OPC Interfaces</i></li> </ul>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Production Loss Accounting</b></p> <p>Activated with the <i>Production Loss Accounting</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>RBI 581</b></p> <p>Activated with the <i>RBI 581</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Recommendation Management</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>

Module/Feature Name	System Requirements and Deployment Steps
<p><b>Reliability Centered Maintenance</b></p> <p>Activated with the <i>RCM and FMEA</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Reliability Analytics</b></p> <p>Activated by the <i>Reliability Analytics</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Risk Assessment</b></p> <p>Activated with the <i>Meridium APM Framework Tools</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Risk Based Inspection</b></p> <p>Activated with the <i>Risk Based Inspection</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Root Cause Analysis</b></p> <p>Activated with the <i>Root Cause Analysis</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>SAP Interfaces</b></p> <p>Activated with the <i>SAP Interfaces - Foundation</i> license.</p> <p>Additional features activated with the following licenses:</p> <ul style="list-style-type: none"> <li>• <i>SAP Interfaces - Process Integration</i></li> <li>• <i>SAP Interfaces - Technical Characteristics</i></li> <li>• <i>SAP Interfaces-Work Management</i></li> </ul>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps for PI Customers</li> <li>• First-Time Deployment Steps for Non-PI Customers</li> <li>• Upgrade Steps for PI Customers</li> <li>• Upgrade Steps for Non-PI Customers</li> </ul>

Module/Feature Name	System Requirements and Deployment Steps
<p><b>SIS Management</b> Activated with the <i>SIS Management</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>
<p><b>Thickness Monitoring</b> Activated with the <i>Thickness Monitoring</i> license</p>	<ul style="list-style-type: none"> <li>• System Requirements</li> <li>• First-Time Deployment Steps</li> <li>• Upgrade Steps</li> </ul>

## Overview: The Basic Meridium APM System

The *basic Meridium APM system* consists of machines and software that are required for ANY Meridium APM implementation to function. Implementation of the basic Meridium APM system gives you the foundation-level analysis tools within the APM Framework application and is the basis upon which you can add additional machines that provide functionality for [other Meridium APM components](#). This section of the documentation provides details on the [architecture of the basic Meridium APM system](#), including the hardware and software requirements for each machine within the basic system.

The HW and SW requirements and Meridium APM system architecture represent the environment in which Meridium, Inc. tests Meridium APM. This is the environment that we recommend you use in your system. Throughout the documentation, we assume that your system meets these requirements. In addition, the HW and SW requirements indicate the associated behavior of the installers if these requirements are not met. You can use these as a reference for how the installation process behaves within the basic Meridium APM system.

Other HW or SW may be required for a specific module or feature that is not required to deploy the basic Meridium APM system. System requirements for specific modules and features is located in the documentation for that module or feature.

### Directory of HW and SW requirements for the basic Meridium APM system architecture

Use the following list as a directory to locate the HW and SW requirements for each component of the basic Meridium APM system architecture.

Basic System Architecture Component
<a href="#">APM Application Server machine</a>
<a href="#">APM Framework machine</a>
<a href="#">APM Database Server machine</a>
<a href="#">SQL Server Report Server</a>

For a directory of HW and SW requirements for additional Meridium APM components, [click here](#).

For HW and SW requirements for translations in Meridium APM, [click here](#).

## The Basic Meridium APM System Architecture

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Meridium APM is a multi-tier system that runs on the Microsoft .NET Framework with some HTML5 components. The .NET Framework is an infrastructure for building, deploying, and running thin- and thick-client applications. In its most basic implementation, the Meridium APM architecture consists of the following machines. To read a detailed description of each machine, click the hyperlinked machine name. To collapse the detailed descriptions, click the machine name again.

- [Meridium APM Application Server](#)

A computer on which the Meridium APM Application Server software is installed. The Meridium APM Application Server machine contains Internet Information Services (IIS), which serves as the host for communication between the Application Server and APM Framework workstations. The Meridium APM Application Server:

- Contains and executes the Meridium APM business objects implemented using the .NET transaction management framework.
- Receives requests from an APM Framework computer, processes those requests, connects to the database to retrieve information, and returns that information to the APM Framework computer.
- Executes and enforces the business logic and business rules.
- Processes data.
- Performs calculations.

Your Meridium APM system should include multiple Meridium APM Application Server instances.

- Meridium APM Application Server machines that will receive and process requests from Meridium APM Framework workstations are referred to as *dedicated* Meridium APM Application Servers and should not have any other Meridium APM components installed on them (with the exception of the APM Framework applications). You can have one or more dedicated Application Servers in your implementation. The number of dedicated Application Servers you need will depend upon the number of users you have.
- Meridium APM Application Server instances that exist to support other Meridium components are referred to as *supporting* Meridium APM Application Servers. We recommend you install a supporting instance of the Meridium APM Application Server on every *Meridium APM* Server machine. For example, for the Meridium APM Web Framework, a supporting Meridium APM Application Server must be installed on the Meridium APM Web Framework machine. For more information on this and other components, refer to the [directory of additional Meridium APM components](#).

- [Meridium APM Framework Machine](#)

The computer on which the Meridium APM Framework application is installed. The Meridium APM Framework serves as the user interface for Meridium APM. From Meridium APM Framework workstations, users can connect to a *dedicated* Meridium APM Application Server and perform tasks using the Meridium APM



tools.

**Note:** There is no functional restriction that prevents Meridium APM Framework instances from connecting to *supporting* Meridium APM Application Servers. For performance reasons and caching considerations, however, we recommend that you enforce this restriction manually. Throughout the Meridium APM documentation, whenever we refer to the Meridium APM Application Server within the context of the Meridium APM Framework, unless otherwise specified, we are referring to a *dedicated* Meridium APM Application Server machine.

Each Meridium APM Framework workstation may also have the Meridium APM Administrative Applications installed. The Meridium APM Framework application and the Meridium APM Administrative Applications (with some exceptions) will also be installed on the Meridium APM Application Server automatically so that the Application Server can function as a Meridium APM Framework workstation.

**Note:** In most cases, we do not make a distinction between Meridium APM Framework workstations where the Administrative Applications *are* installed and Meridium APM Framework workstations where the Administrative Applications *are not* installed. Because the Administrative Applications usually use the same configuration and settings that are defined for the Meridium APM Framework application, you can assume that all guidelines outlined for Meridium APM Framework workstations apply *to all Meridium APM Framework workstations*, regardless of whether or not the Administrative Applications are also installed. Exceptions are noted where appropriate.

- **Database Server**

The computer on which the database software (Oracle or SQL Server) and the physical Meridium APM databases or schemas reside. Your Database Server may contain multiple Meridium APM databases or schemas (e.g., a test database and a production database). The Database Server answers requests for data from Meridium APM Application Servers. The Meridium APM database or schema contains the metadata (information about Entity families, fields, System Codes, etc.) and the tables containing actual data. The Meridium APM system allows for a single, central database, which can be accessed from any site at which the Meridium APM software has been installed. This approach enables cross-site and cumulative analyses.

- **SQL Server Report Server**

The computer on which the SQL Server Reporting Services is installed. The SQL Server Report Server stores SQL Server reports. Reports can be developed via a Meridium APM Framework workstation, and when they are saved to the Meridium APM Catalog, they will be simultaneously uploaded to the SQL Server Report Server. After they exist on the SQL Server Report Server, they can be viewed by other Meridium APM users through:

- The Meridium APM Framework application.
- The Meridium APM Web Framework application (this is an optional com-

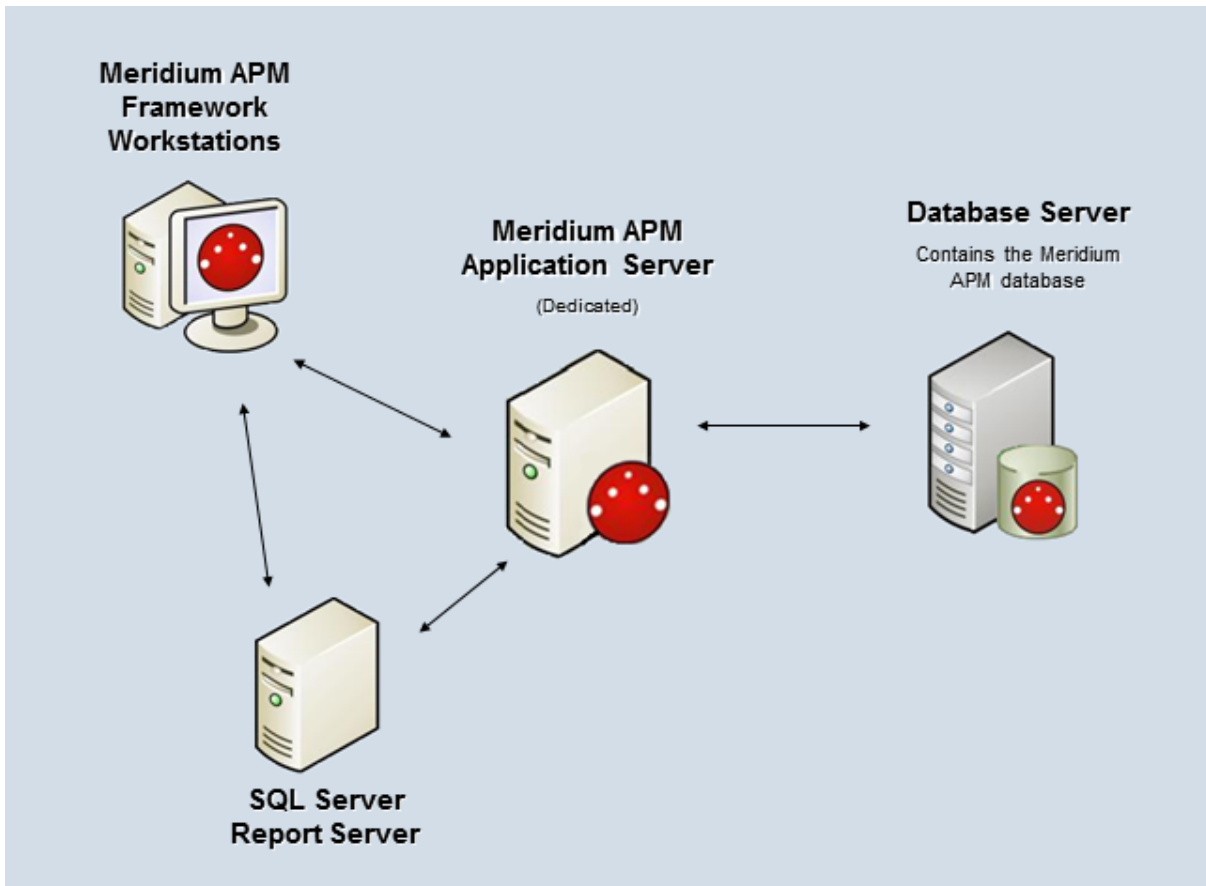
ponent).

- Through a web browser using SQL Server Report Manager.

In addition to the custom reports that can be created using SQL Server Reporting Services, the Meridium APM database contains baseline SQL Server Reporting Services reports. In the image below, the basic Meridium APM system architecture does not show the external database that is required for SQL Server Reporting Services. [Click here for more information on the system requirements for the SQL Server Report Server.](#)

Note that while the SQL Server Report Server is part of the basic Meridium APM architecture, it is not considered a *Meridium APM Server*. Therefore, you are not required to install a supporting instance of the Meridium APM Application Server on the SQL Server Report Server machine. You will, however, need to install the Meridium APM Adapter for SSRS on this machine. [Click here for more information on how the SQL Server Report Server interacts within the basic Meridium APM system architecture.](#)

In the recommended implementation, Meridium APM is deployed in a distributed environment where each workstation described above is a separate, physical machine in your system. The following image illustrates the basic Meridium APM System architecture.



This image shows *one* dedicated Meridium APM Application Server. In a deployment where multiple dedicated Meridium APM Application Servers exist, connections can be managed manually by assigning users to specific servers, or they can be managed automatically by a hardware- or software-based network load balancer.

**Note:** A given Meridium APM Framework machine can access only one Application Server and data source *at a time*. A single Application Server can access multiple databases.

If you choose to use a network load balancer, the type of solution that you deploy will depend upon how your network is set up. In either solution, you *must* ensure that the client affinity is configured to be *sticky*. Note that some load balancers provide different communication strategies, such as Unicast or Multicast, with or without Internet Group Management Protocol (IGMP) support. Unicast solutions are designed to flood switches, and multicast solutions with IGMP support require all network hardware to be compatible with it. Attempting to compensate for the adverse effects of switch flooding or IGMP support by using virtual LANs will have considerable performance implications for Meridium APM.

**IMPORTANT:** We strongly recommended that you thoroughly test any network load balancing solution before you deploy it in a production environment.

# Meridium APM Application Server - Hardware and Software Requirements

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## Hardware Requirements

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The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the Meridium APM Application Server machine. These requirements account for the Meridium APM software only. Additional hardware may be required on an Application Server machine where other components are installed. These requirements may not be sufficient, depending upon how your system is configured.

- Two Processor Cores, 2+ GHz
- 4 GB RAM
- 20 GB Hard Drive space

Meridium APM recommends a 100BASE-TX switched network between the Application Server, Database Server, Web Server, and Meridium APM Web Framework Server. A minimum of 128KBPS link is required between the Application Server and the APM Framework machines. Full duplex communication must be enabled between servers. We recommend that you also enable full duplex communication between Meridium APM Framework machines and servers.

**Note:** 100BASE-TX is not a requirement but is highly recommended. An entire 100BASE-TX network would be an ideal situation.

If you are using a virtual machine (VM) to host your Meridium APM Application Server, we recommend that:

- You increase the physical server CPU and hard drive space requirements by 20% to ensure that the application will perform equivalently in a virtualized environment.
- You double the physical server memory requirements.
- Each VM have its own dedicated processor cores and memory allocation to ensure appropriate performance.

Meridium, Inc. supports Hyper-V and VMWare platforms.

These requirements may not be sufficient, depending upon how your system is configured. Parameters that affect the hardware requirements include the number of users, modules purchased, database size, and other factors that can vary from one customer to another. For help refining your specific system requirements, consult a member of the Meridium Inc. Global Support Services or Professional Services department.

## Software Requirements

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The following software components are required on any machine that will serve as the Meridium APM Application Server. This table is intended to be used as a reference of the behavior of the Meridium APM Application Server and Add-ons installer as it relates to each component. In addition to the components that appear in this list, there are [configuration settings that will need to be set depending upon your operating system](#).

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
Microsoft.net 3.5 SP1	Microsoft	Yes	If this is not found, the installer will close.
Microsoft.net 4.0	Microsoft	Yes	If this is not found, the installer will install it automatically.
Microsoft.net 4.5	Microsoft	Yes	If this is not found, the installer will install it automatically.
Microsoft Shared Management Objects (SMO) and Common Language Runtime Types (CLR)	Microsoft	Yes	If this is not found, the installer will install it automatically.
ReportViewer2008	Microsoft	Yes	If this is not found, the installer will install it automatically.
Microsoft WSE 3.0 Runtime	Microsoft or Meridium APM 3rd party distribution package	Yes	If this is not found, the installer will close.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
<a href="#">Windows 2008 R2 (64-bit) OS</a> -or- <a href="#">Windows 2012 (64-bit) OS</a> -or- <a href="#">Windows 2012 R2 (64-bit) OS</a>	Microsoft	Yes	If this is not found, a message will appear, indicating that the environment is not supported. You can, however, continue the installation process.
Internet Explorer 8.0, 9.0, 10.0, or 11.0	Microsoft	Yes	If this is not found, a message will appear, indicating that the environment is not supported. You can, however, continue the installation process.
IIS 7.0 or later	Microsoft	Yes	If this is not found, an error message will appear, and the installer will close.
IIS 6 WMI Compatibility	Microsoft	Yes	If this is not found, the installer will close.
Microsoft ADOMD.Net	Microsoft	Yes	If this is not found, the installer will install it automatically.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
Microsoft.Web.Services3.dll	Microsoft	Yes	If this is not found, the installer will close.
Microsoft Visual Studio for Applications (VSTA)	Microsoft -or- Meridium APM 3rd party distribution package	Yes, if you want to install the Configuration Manager application. Otherwise, this is not required.	If the Configuration Manager option is selected, and this is not found, a message will appear, indicating that you cannot continue with the installation process for the Configuration Manager.
Microsoft Business Intelligence Development Studio (if you are using SQL Server Reporting Services 2008 R2) -or- SQL Server Data Tools (SSDT) (if you are using SQL Server Reporting Services 2012)	Microsoft	Yes, if you want to design reports on that machine. Otherwise, this is not required.	If the Meridium Adapter for SSRS Designer option is selected and this is not found, the installer will close.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
Jet 4.0	Microsoft	No  *This is required only if you have translations stored in your database, and you want those translations to be exported during the database upgrade process.	The installer does not check for this component.
<a href="#">Microsoft Access Database Engine (ACE) 2010</a>	Meridium APM 3rd party distribution package	Yes	The installer does not check for this component.
WinMerge	Meridium APM	Yes	This is installed automatically.
<a href="#">Oracle Data Provider for .NET (ODP.NET) 12.1.0.1 (32-bit and 64-bit)</a>	Meridium APM 3rd party distribution package	No  *This is required only on Application Server machines that connect to Oracle Database Servers.	The installer does not check for this component.
<a href="#">Oracle Services for Microsoft Transaction Server 12.1.0.1 (64-bit)</a>	Meridium APM 3rd party distribution package	No  *This is required only on Application Server machines that connect to Oracle Database Servers.	The installer does not check for this component.



Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
Microsoft Message Queuing (MSMQ)	Microsoft	Yes	If this is not found, you can continue through the installation process. This service can be activated through roles in the Server Manager.
MSXML 3.0 MSXML3 Exception INF	Microsoft Internet Explorer. This is installed automatically with Internet Explorer 6.0 and later.	Yes	The installer does not check for this component.
Visual C++ 8.0 CRT (x86) WinSXS MSM  Visual C++ 8.0 MFC (x86) WinSXS MSM  Visual C++ 10.0 CRT (x86)  Visual C++ 9.0 CRT (x86) WinSXS MSM  Visual C++ 10.0 ATL (x64)  Visual C++ 9.0 ATL (x86) WinSXS MSM	Meridium APM	Yes	If this is not found, the installer will install it automatically.

# About the Operating System in the Meridium APM Testing Environment

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**Note:** The following information is specific to the 2008 R2 operating system. The same information is also [available for the 2012 operating system](#).

The Meridium APM testing environment uses the 64-bit version of Windows Server 2008 R2 and 2012 for all instances of the Meridium APM Application Server (both dedicated and supporting). The operating system is not distributed by Meridium, Inc. and must be obtained from another vendor. While instructions on installing the operating system exceeds the scope of this documentation, we do provide guidelines on how the operating system in the Meridium APM testing environment is configured for each version of the operating system. We recommend that you configure your system to match the Meridium APM testing environment.

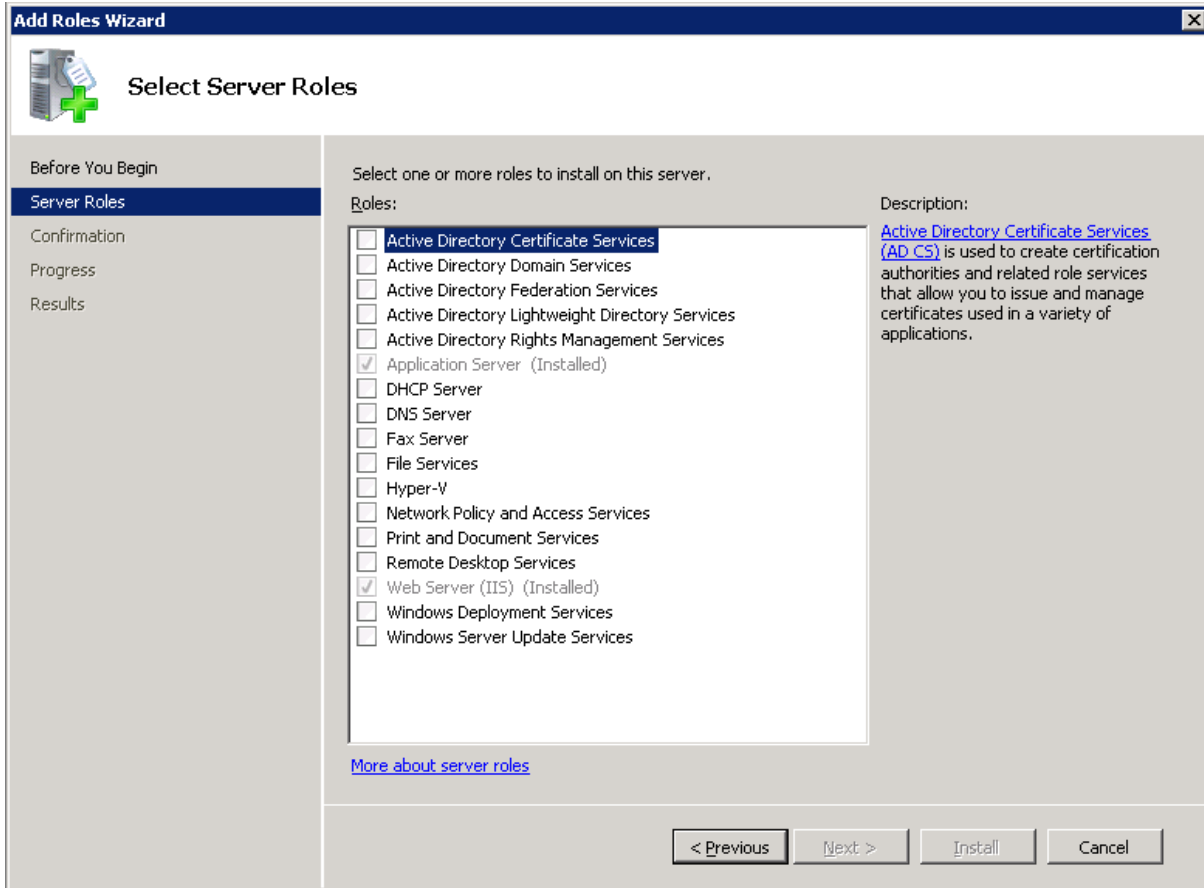
## Roles and Role Services

---

The following roles are installed on the Meridium APM Application Server instances in the Meridium APM testing environment. Click either of these roles to see what additional items need to be installed for that role:

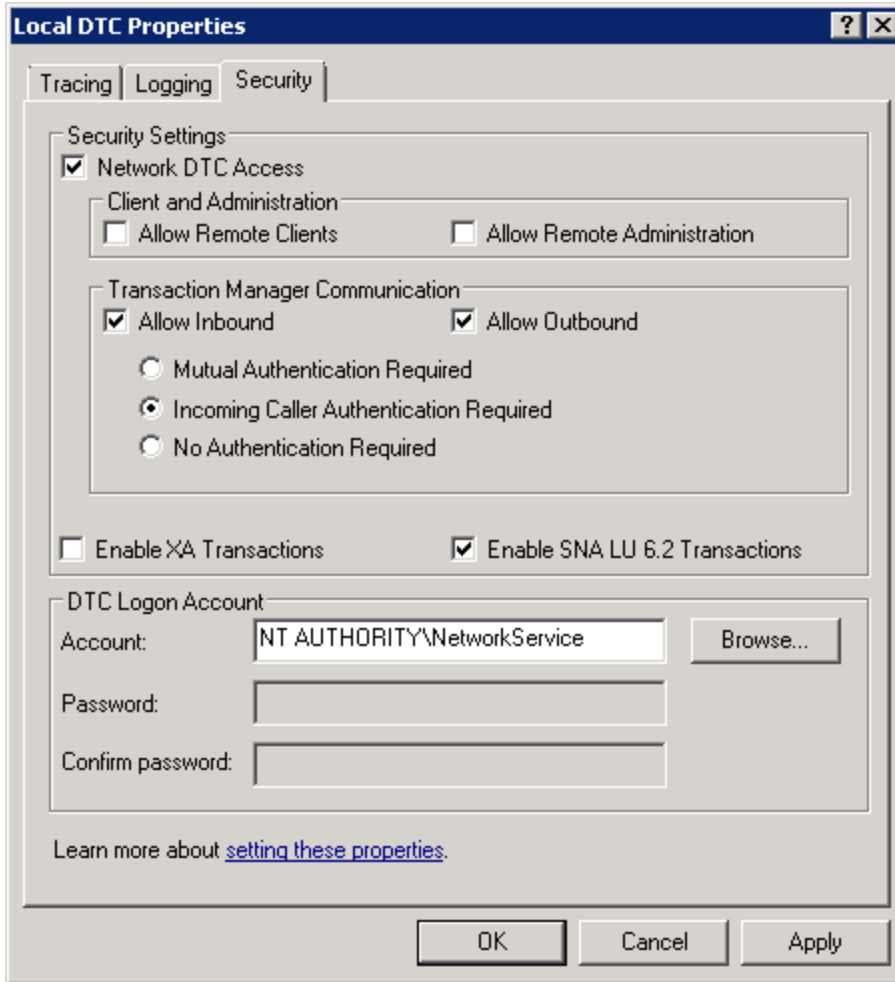
- [Application Server](#)
- [Web Server \(IIS\)](#)

These roles can be installed via the **Add Roles and Features Wizard** in the Server Manager. After the roles are installed, the **Select Server Roles** screen in the **Add Roles Wizard** should look similar to the following image.



## Component Services settings for Local DTC

The following image shows [how the Local DTC properties are set in Component Services](#) for all instances of the Meridium APM Application Server in the Meridium APM testing environment.



## WebDAV

[WebDAV is enabled.](#)

## Application Server Role Services

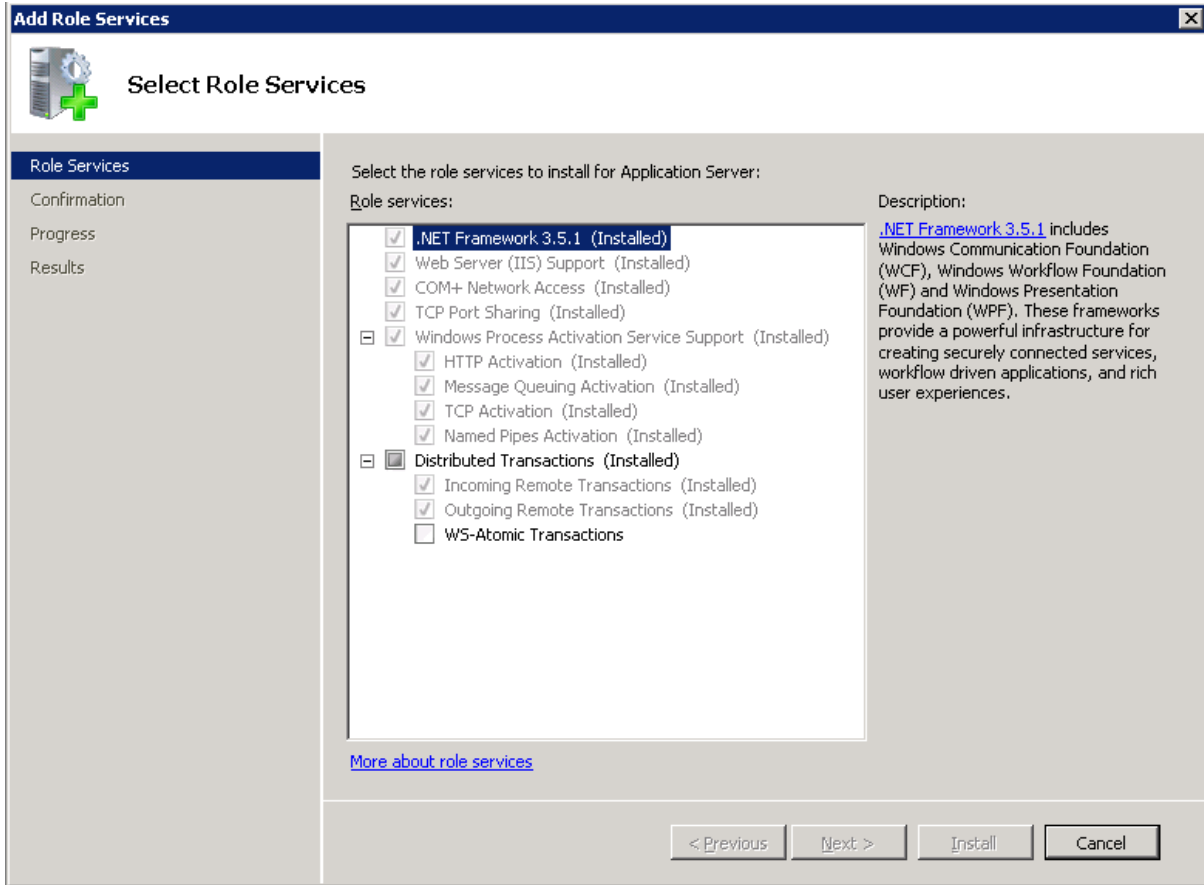
---

**Note:** The following information is specific to the 2008 R2 operating system. The same information is also [available for the 2012 operating system](#).

The following Application Server role services are installed on the Meridium APM Application Server machine within the Meridium APM testing environment:

- Net Framework 3.5.1 and 4.5
- Web Server (IIS) Supports
- COM+ Network Access
- TCP Port Sharing
- Windows Process Activation Service Support
  - HTTP Activation
  - Message Queuing Activation
  - TCP Activation
  - Named Pipes Activation
- Distributed Transactions
  - Incoming Remote Transactions
  - Outgoing Remote Transactions

After the Application Server role services are installed, the **Select Role Services** screen in the **Add Roles Wizard** should look similar to the following image.



# Web Server Role Services

---

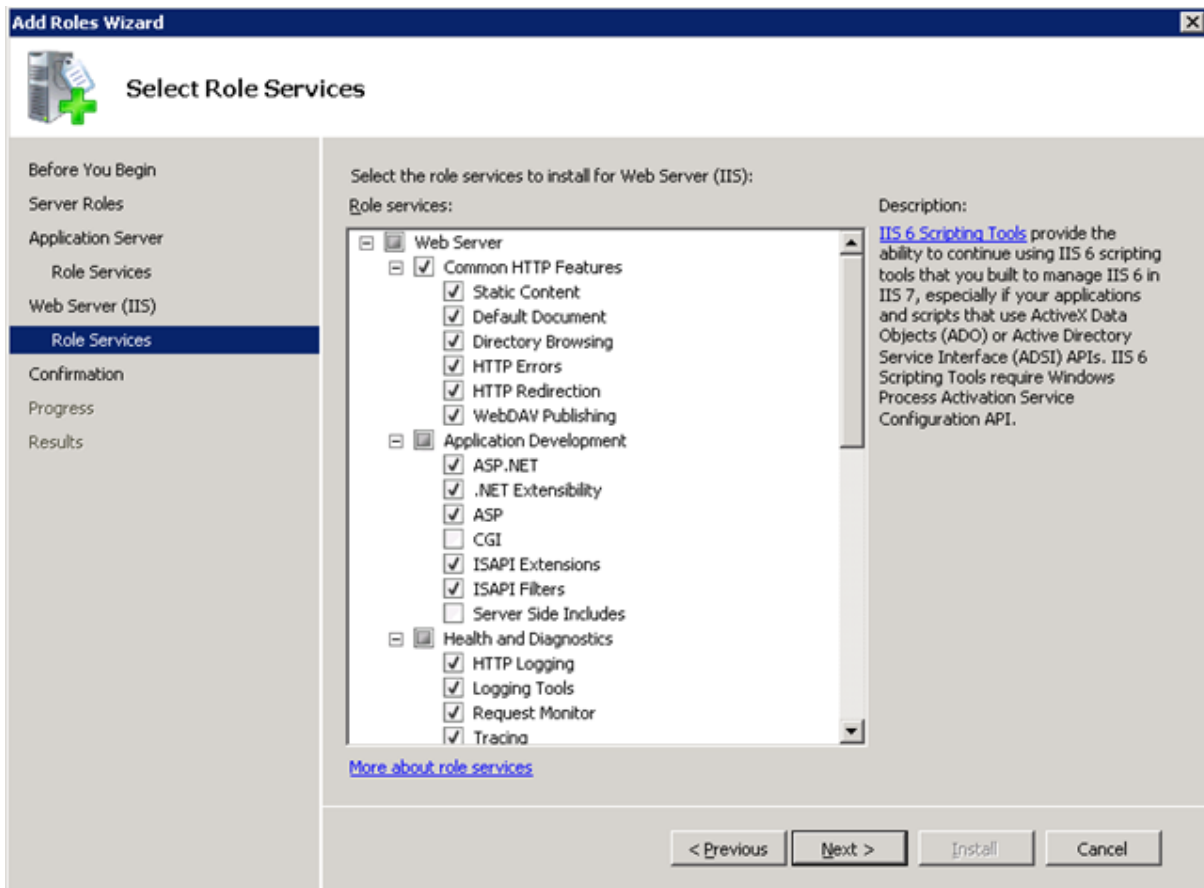
**Note:** The following information is specific to the 2008 R2 operating system. The same information is also available for the 2012 operating system.

The following Web Server role services are installed on the operating system for the Meridium APM Application Server machine within the Meridium APM testing environment:

- Web Server
  - Common HTTP Features
    - Static Content
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - HTTP Redirection
    - WebDAV Publishing
  - Application Development
    - ASP .NET
    - .NET Extensibility
    - ASP
    - ISAPI Extensions
    - ISAPI Filters
  - Health and Diagnostics
    - HTTP Logging
    - Logging Tools
    - Request Monitor
    - Tracing
  - Security
    - Basic Authentication
    - Windows Authentication
    - Digest Authentication
    - Client Certificate Mapping Authentication
    - IIS Client Certificate Mapping Authentication
    - URL Authorization

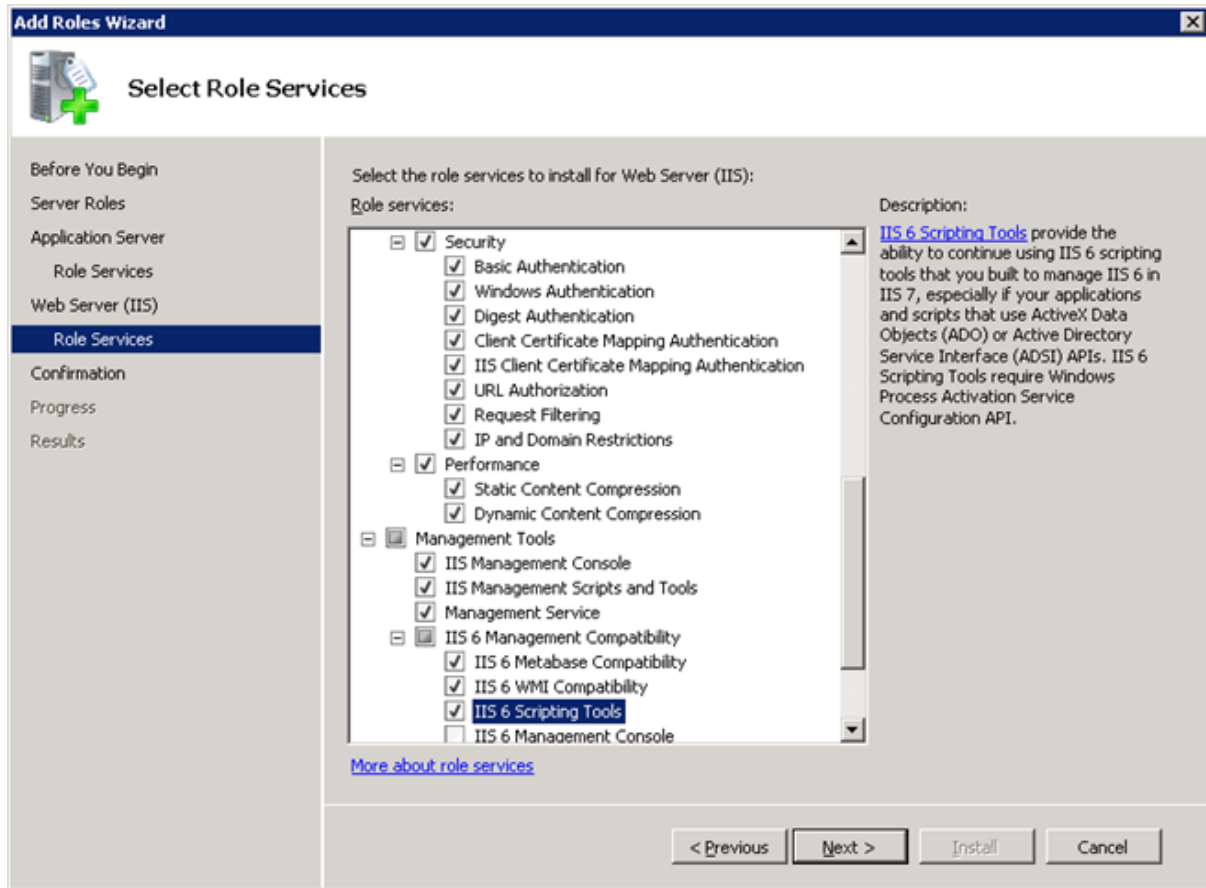
- Request Filtering
- IP and Domain Restrictions
- Performance
  - Static Content Compression
  - Dynamic Content Compression
- Management Tools
  - IIS Management Console
  - IIS Management Scripts and Tools
  - Management Service
  - IIS 6 management Compatibility
    - IIS 6 Metabase Compatibility
    - IIS 6 WMI Compatibility
    - IIS 6 Scripting Tools

After the Web Server (IIS) role services are installed, in the **Add Roles Wizard**, the top part of the tree on the **Select Role Services** screen will look like this:





...and the bottom part of the tree on the **Select Role Services** screen should look like this:



## Enabling WebDAV

---

After you configure the [Application and Web Server Roles Services](#), you should enable WebDAV via your IIS Manager.

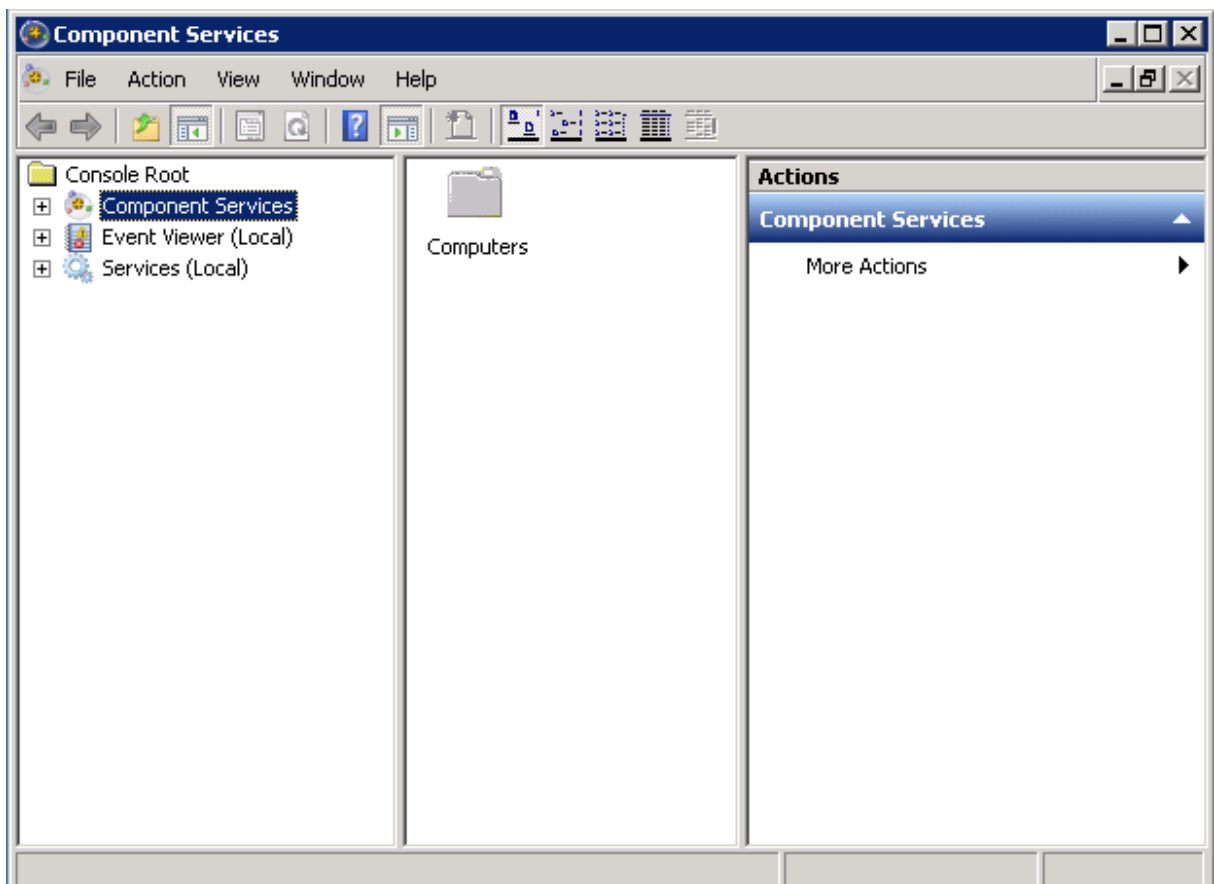
## Setting the Local DTC Property Settings

**Note:** The following settings apply to all Meridium APM Application Server instances (both dedicated and supporting) that are installed on a 2008 R2 operating system, regardless of whether they point to an Oracle *or* SQL Server Database Server machine. The same [information is available for 2012 operating systems](#).

To set the Local DTC property settings to match the Meridium APM testing environment:

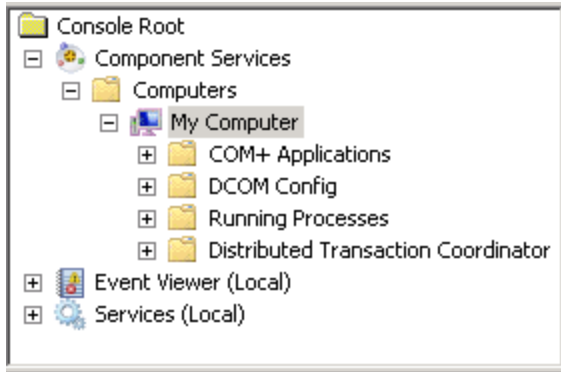
1. On the Windows **Start** menu, click **Programs**, point to **Administrative Tool**, and then click **Component Services**.

The **Component Services** window appears.

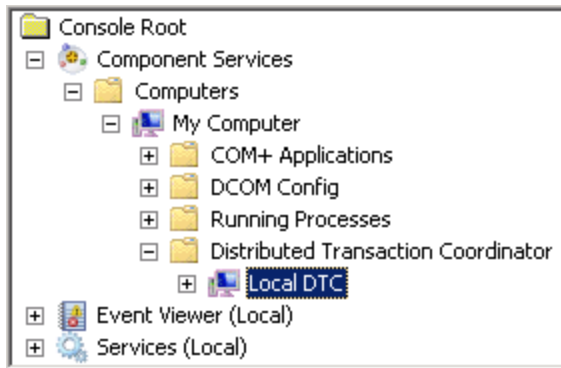



2. In the tree to the left, expand the **Component Services** node down to the **My Computer** node.

## Setting the Local DTC Property Settings

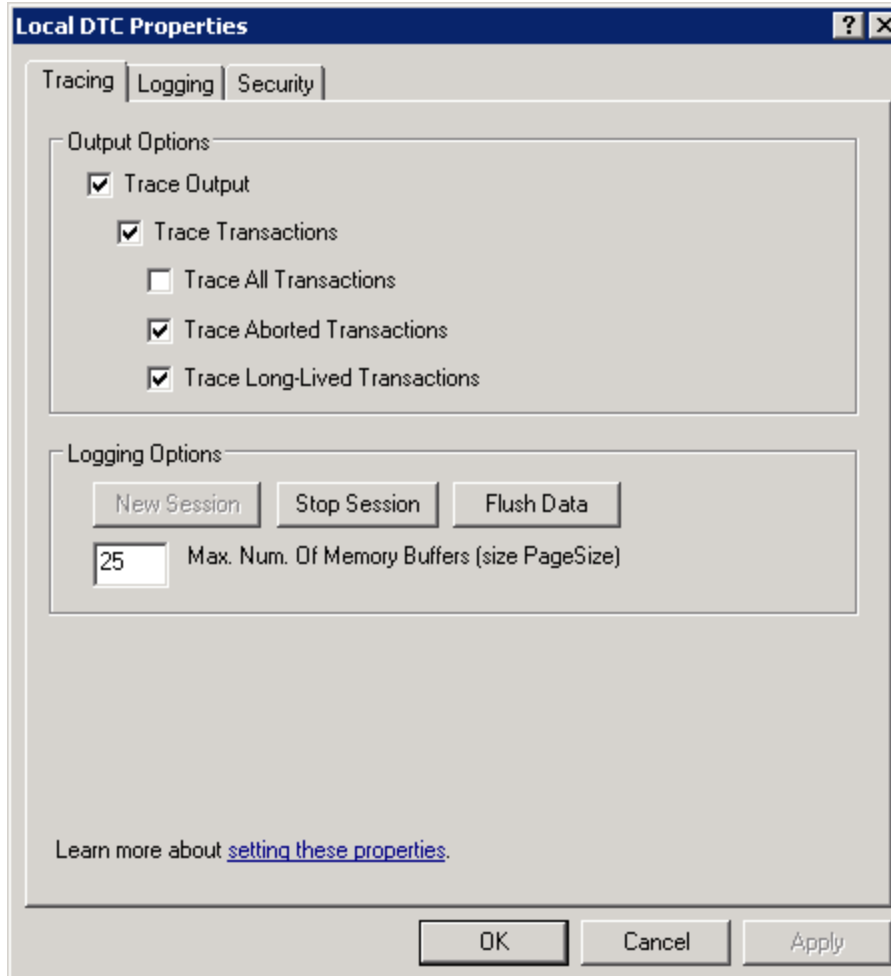


3. Expand the **Distributed Transaction Coordinator** node, and select **Local DTC**.

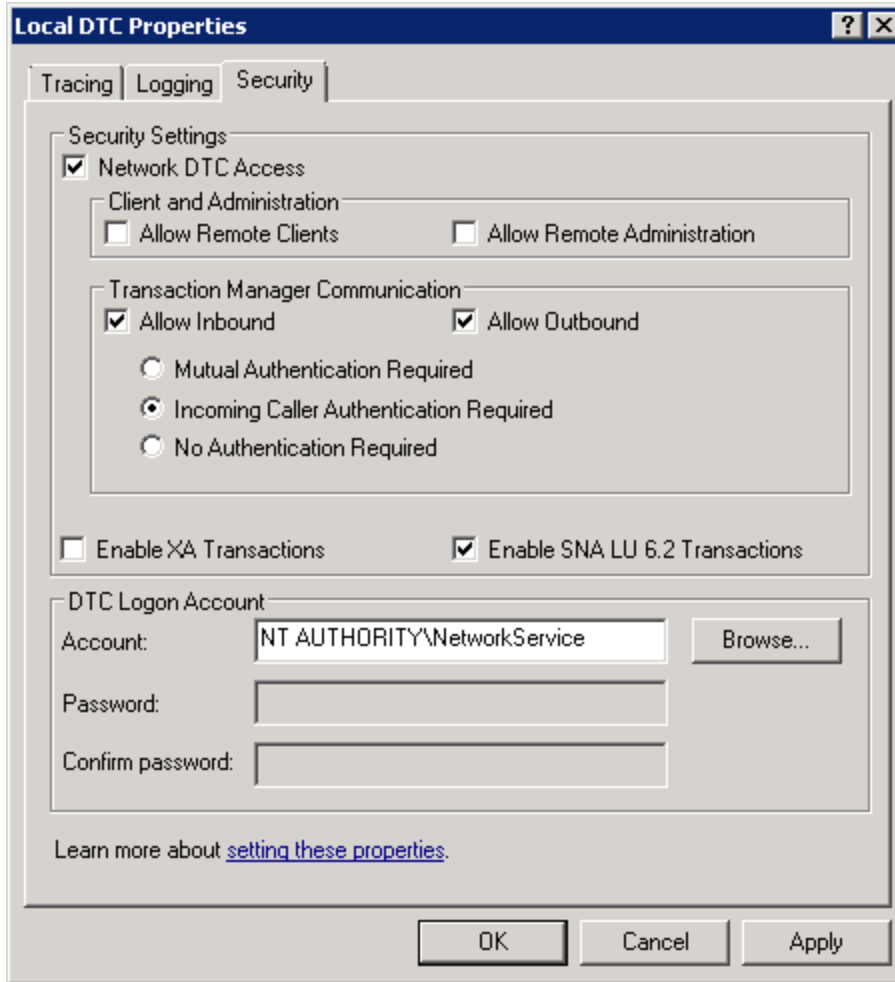


4. On the menu above the tree, click the **Properties** button. 

The **Local DTC Properties** window appears, displaying the **Tracing** tab by default.



5. Click the **Security** tab.  
The **Security** tab appears.



6. Specify the following settings on this tab (i.e., to match the preceding image):
  - In the **Security Settings** section, select the **Network DTC Access** check box.
  - In the **Client and Administration** section, clear the **Allow Remote Clients** check box.
  - In the **Client and Administration** section, clear the **Allow Remote Administration** check box.
  - In the **Transaction Manager Communication** section, select the **Allow Inbound** check box.
  - In the **Transaction Manager Communication** section, select the **Allow Outbound** check box.
  - In the **Transaction Manager Communication** section, select the **Incoming Caller Authentication Required** option.
7. Click **OK**.

A message appears, indicating that the MSDTC service will be stopped and restarted.

8. Click the **Yes** button.

A message appears, indicating that the MSDTC service has been restarted.

9. Click **OK**.

The **Local DTC Properties** window closes, and your settings are saved. At this point, you can close the **Component Services** window.

# About the Operating System in the Meridium APM Testing Environment

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**Note:** The following information is specific to the 2012 and 2012 R2 operating systems. The same information is also [available for the 2008 R2 operating system](#).

The Meridium APM testing environment uses the 64-bit version of Windows Server 2008 R2, 2012, and 2012 R2 for all instances of the Meridium APM Application Server (both dedicated and supporting). The operating system is not distributed by Meridium, Inc. and must be obtained from another vendor. While instructions on installing the operating system exceeds the scope of this documentation, we do provide guidelines on how the operating system in the Meridium APM testing environment is configured for each version of the operating system. We recommend that you configure your system to match the Meridium APM testing environment.

## Server Roles and Role features

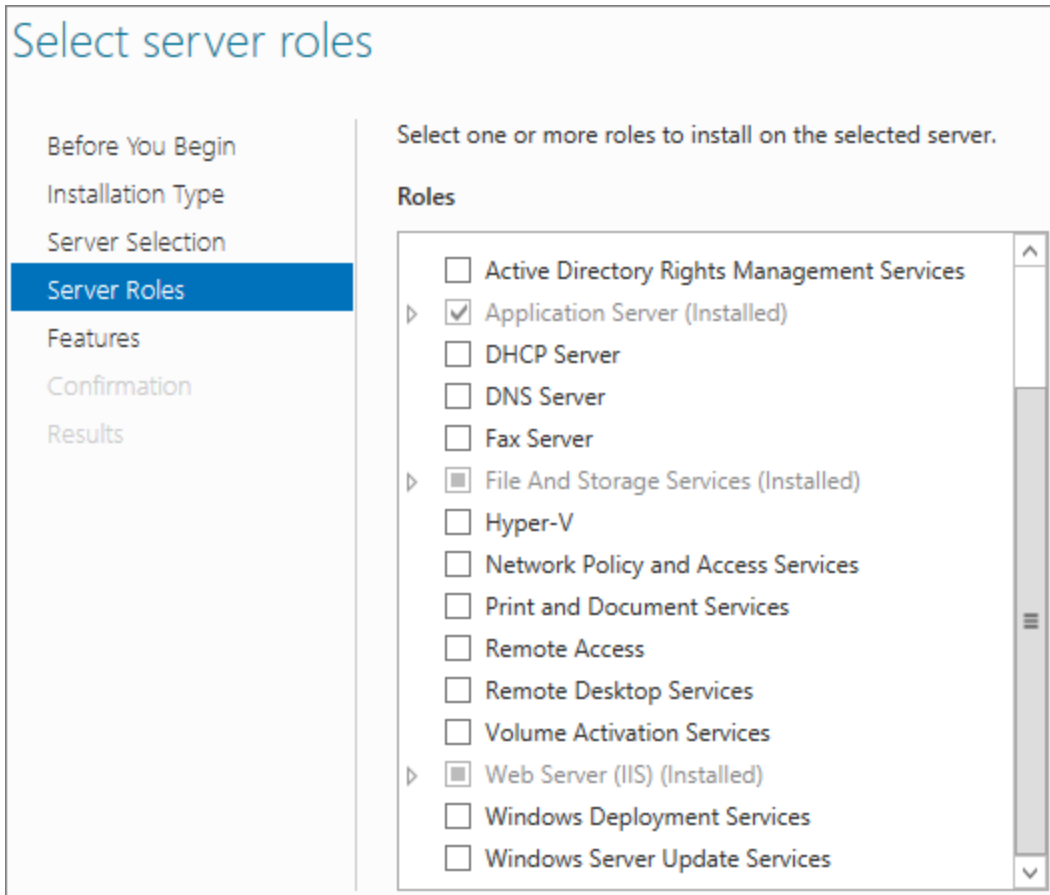
---

The following roles are installed on the Meridium APM Application Server instances in the Meridium APM testing environment. Click either of these roles to see what additional features need to be installed for that role.

- [Application Server](#)
- [Web Server \(IIS\)](#)

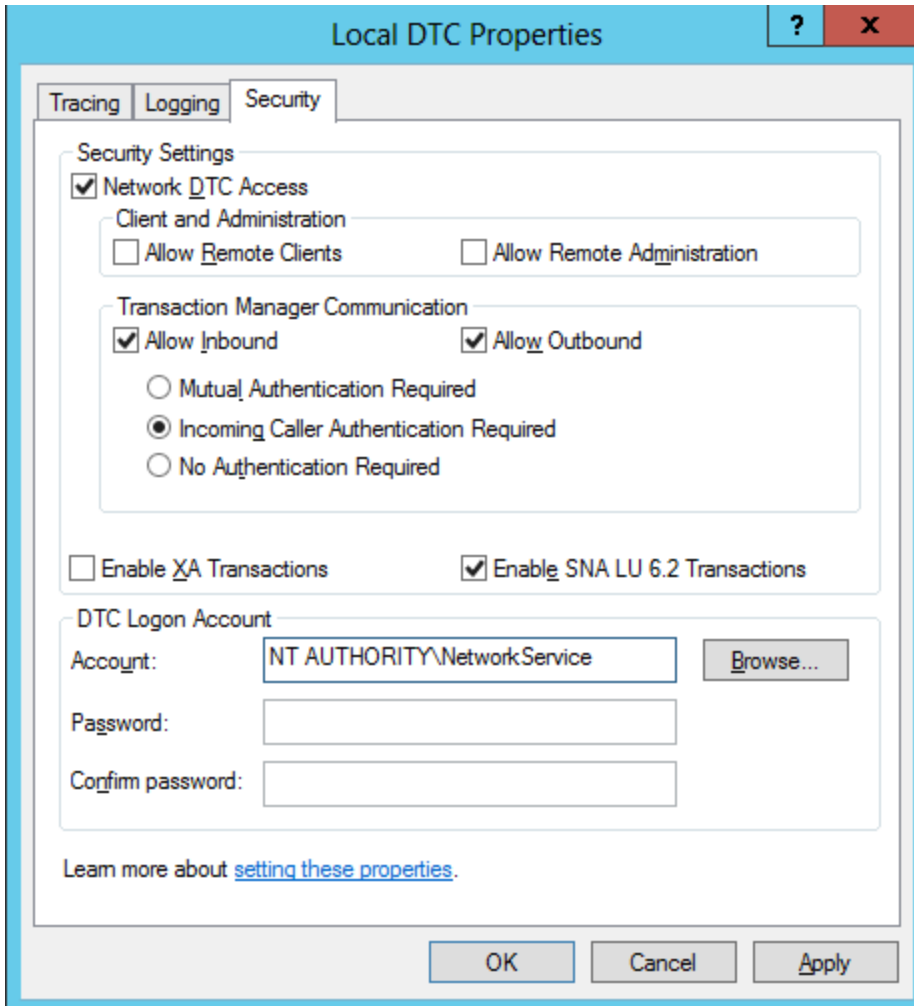
These roles can be installed via the **Add Roles and Features Wizard** in the Server Manager. After the roles are installed, the **Select Server Roles** screen in the **Add Roles Wizard** should look similar to the following image.





## Component Services settings for Local DTC

The following image shows [how the Local DTC properties are set in Component Services](#) for all instances of the Meridium APM Application Server in the Meridium APM testing environment.



## WebDAV

[WebDAV is enabled.](#)

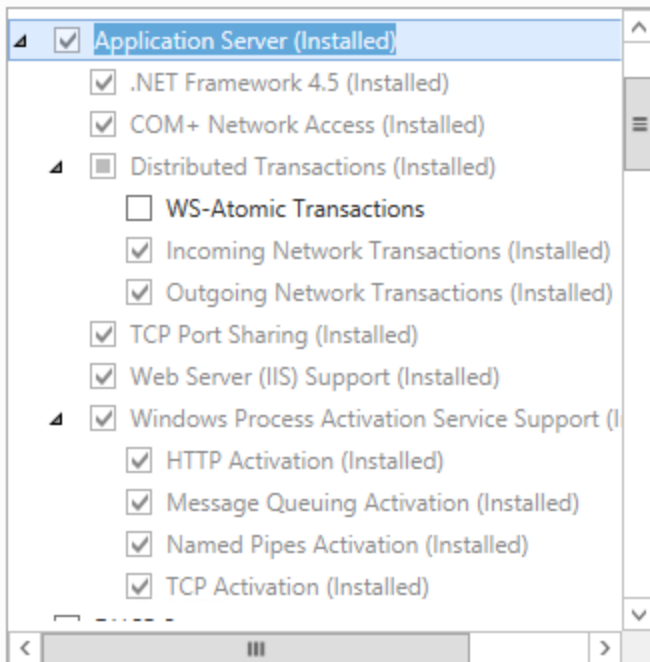
# Application Server Role Features

**Note:** The following information is specific to the 2012 and 2012 R2 operating systems. The same information is also [available for the 2008 R2 operating system](#).

The following services are installed on all instances of the Application Server in the Meridium APM testing environment:

- IIS Management Console
- .Net Framework 3.5 features
- .Net Framework 3.5
- HTTP Activation
- Non-HTTP Activation
- Message Queuing
- Message Queuing Services
- Message Queuing Server
- Windows Process Activation Service
- Process Model
- .Net Environment 3.5
- Configuration APIs

After the Application Server role features are installed, the **Select Features** screen in the **Add Roles Wizard** should look similar to the following image.



## Web Server Role Features

---

**Note:** The following information is specific to the 2012 and 2012 R2 operating systems. The same information is also [available for the 2008 R2 operating system](#).

The following Web Server role features are installed on all instances of the Application Server in the Meridium APM testing environment:

- Common HTTP Features
  - Default Document
  - Directory Browsing
  - HTTP Errors
  - Static Content
  - HTTP Redirection
  - WebDAV Publishing
- Health and Diagnostics
  - HTTP Logging
  - Logging Tools
  - Request Monitor
  - Tracing
- Performance
  - Static Content Compression
  - Dynamic Content Compression
- Security
  - Request Filtering
  - Basic Authentication
  - Client Certificate Mapping Authentication
  - Digest Authentication
  - IIS Client Certification Mapping Authentication
  - IP and DOcmain Restrictions
  - URL Authorization
  - Windows Authentication
- Application Development
  - .NET Extensibility 3.5
  - .NET Extensibility 4.5
  - Application Initialization

- ASP
- ASP.NET 3.5
- ASP.NET 4.5
- ISAPI Extensions
- ISAPI Filters
- Management Tools
  - IIS Management Console
  - IIS 6 Management Compatibility
    - IIS 6 Metabase Compatibility
    - IIS 6 Management Console
    - IIS 6 Scripting Tools
    - IIS 6 WMI Compatibility
  - IIS Management Scripts and Tools
  - Management Service

After the Web Server role features are installed, the **Select Features** screen in the **Add Roles Wizard** should look similar to the following image. The image has been split into multiple pieces to illustrate the complete list of features, which are not visible without scrolling in the **Roles** list.

## Web Server Role Features

- ▲  Web Server (IIS) (Installed)
  - ▲  Web Server (Installed)
    - ▲  Common HTTP Features (Installed)
      - Default Document (Installed)
      - Directory Browsing (Installed)
      - HTTP Errors (Installed)
      - Static Content (Installed)
      - HTTP Redirection (Installed)
      - WebDAV Publishing (Installed)
    - ▲  Health and Diagnostics (Installed)
      - HTTP Logging (Installed)
      - Custom Logging
      - Logging Tools (Installed)
      - ODBC Logging
      - Request Monitor (Installed)
      - Tracing (Installed)
    - ▲  Performance (Installed)
      - Static Content Compression (Installed)
      - Dynamic Content Compression (Installed)
    - ▲  Security (Installed)
      - Request Filtering (Installed)
      - Basic Authentication (Installed)
      - Centralized SSL Certificate Support
      - Client Certificate Mapping Authentication (IIS)
      - Digest Authentication (Installed)
      - IIS Client Certificate Mapping Authentication (IIS)

## Web Server Role Features

- IP and Domain Restrictions (Installed)
- URL Authorization (Installed)
- Windows Authentication (Installed)
- ▲  Application Development (Installed)
  - .NET Extensibility 3.5 (Installed)
  - .NET Extensibility 4.5 (Installed)
  - Application Initialization (Installed)
  - ASP (Installed)
  - ASP.NET 3.5 (Installed)
  - ASP.NET 4.5 (Installed)
  - CGI
  - ISAPI Extensions (Installed)
  - ISAPI Filters (Installed)
  - Server Side Includes
  - WebSocket Protocol
- ▲  FTP Server
  - FTP Service
  - FTP Extensibility
- IIS Hostable Web Core
- ▲  Management Tools (Installed)
  - IIS Management Console (Installed)
  - ▲  IIS 6 Management Compatibility (Installed)
    - IIS 6 Metabase Compatibility (Installed)
    - IIS 6 Management Console (Installed)
    - IIS 6 Scripting Tools (Installed)
    - IIS 6 WMI Compatibility (Installed)
  - IIS Management Scripts and Tools (Installed)
  - Management Service
- Windows Deployment Services
- Windows Server Update Services

**Note:** The previous image was taken using a Windows Server 2012 operating system. If you are using a Windows Server 2012 *R2* operating system, the *IIS Hostable Web Core* option is not available. You do not need to install this feature on either operating system.

## Enabling WebDAV

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After you configure the [Application and Web Server Roles Services](#), you should enable WebDAV via your IIS Manager.



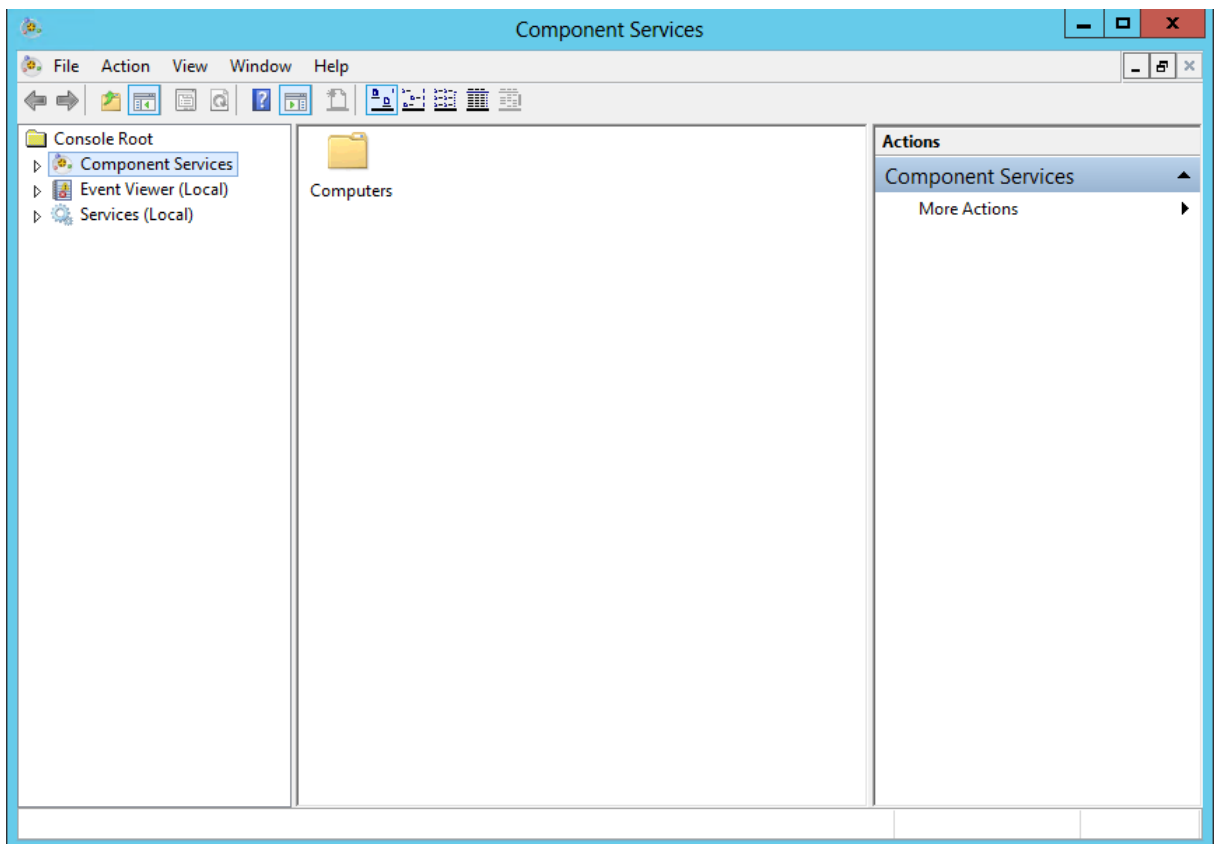
## Setting the Local DTC Property Settings

**Note:** The following settings apply to all Meridium APM Application Server instances (both dedicated and supporting) that are installed on a 2012 and 2012 R2 operating systems, regardless of whether they point to an Oracle or SQL Server Database Server machine. The same [information is available for 2008 R2 operating systems](#).

To set the local DTC property settings to match the Meridium APM testing environment:

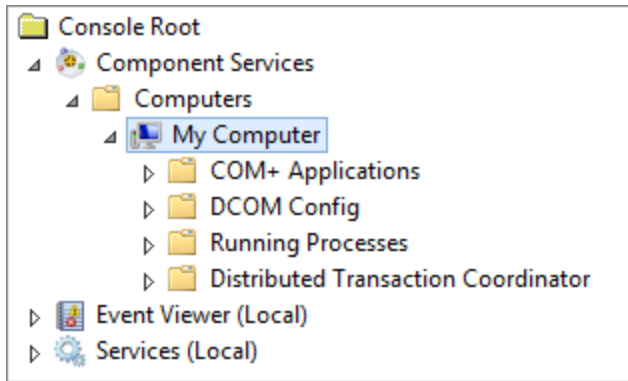
1. On the machine containing the Application Server instance, in the Server Manager, on the **Tools** menu, click the **Component Services** option.

The **Component Services** window appears.

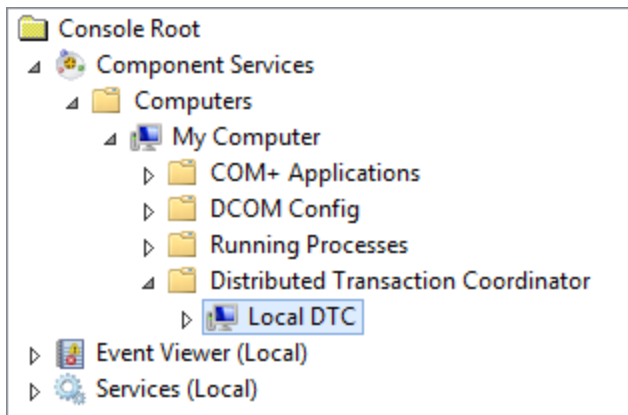



2. In the tree to the left, expand the **Component Services** node down to the **My Computer** node.

## Setting the Local DTC Property Settings

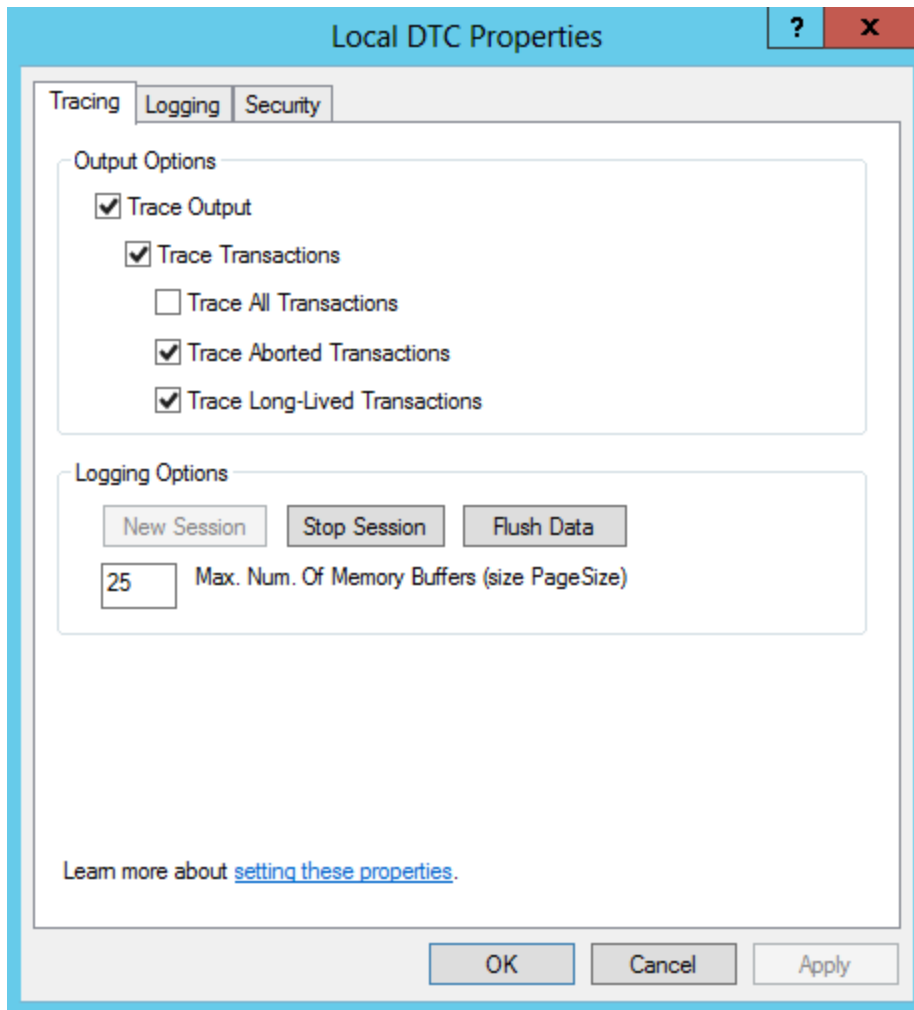


3. Expand the **Distributed Transaction Coordinator** node, and select the **Local DTC** node.

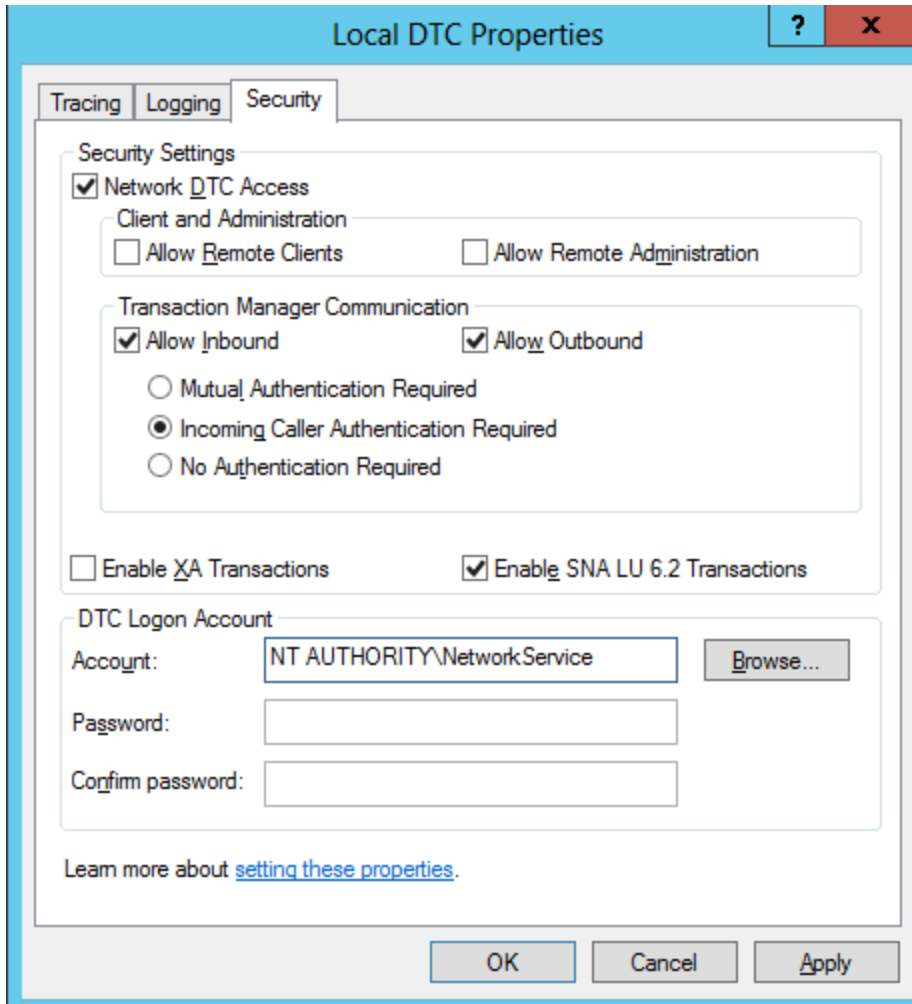


4. On the menu above the tree, click the **Properties** button. 

The **Local DTC Properties** window appears, displaying the **Tracing** tab.



5. Click the **Security** tab.  
The **Security** tab appears.
6. Specify the settings on this tab according to the following image.



More specifically, in the **Security Settings** section:

- Select the **Network DTC Access** check box, and *clear* the following check boxes:
  - **Allow Remote Clients**
  - **Allow Remote Administration**
- In the **Transaction Manager Communication** section, select the following options:
  - **Allow Inbound**
  - **Allow Outbound**
  - **Incoming Caller Authentication Required**
- Select the **Enable SNA LU 6.2 Transactions** check box.

7. Click **OK**.

A message appears, indicating that the MSDTC service will be stopped and restarted and asks if you want to proceed.

8. Click the **Yes** button.

A message appears, indicating that the MSDTC service was restarted.

9. Click **OK**.

The **Local DTC Properties** window closes, and your settings are saved. At this point, you can close the **Component Services** window.

## Microsoft ACE and the Application Server

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Microsoft Database Access (ACE) is required on the Meridium APM Application Server if you have translations stored in your database, and you want those translations to be exported during the database upgrade process.

The Microsoft ACE software is provided with your 3rd party components distribution package and is stored in the following location in the root folder: \\Microsoft ACE\12.0. To install this component, double-click the file **AccessDatabaseEngine\_x64.exe**.

**CE**Hint: If you are prompted to allow ACE to make changes to your computer, click the **Yes** button.

# Meridium APM Framework - Hardware and Software Requirements

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## Hardware Requirements

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The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the Meridium APM Framework machine. These requirements account for the Meridium APM software only. Additional hardware may be required on an APM Framework machine where other components are installed. These requirements may not be sufficient, depending upon how your system is configured.

- One Processor Core, 1+ GHz
- 2 GB RAM
- 5 GB Hard Drive space

Meridium APM recommends a 100BASE-TX switched network between the Application Server, Database Server, Web Server, and Meridium APM Web Framework Server. A minimum of 128KBPS link between the Application Server and the APM Framework machines. Full duplex communication must be enabled between servers. We recommend that you also enable full duplex communication between clients and servers.

**Note:** 100BASE-TX is not a requirement but is highly recommended. An entire 100BASE-TX network would be an ideal situation.

## Software Requirements

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The following software components are required on any machine that will serve as a Meridium APM Framework workstation. This table is intended to be used as a reference of the behavior of the Meridium APM Application Server and Add-Ons installer as it relates to each component.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
One of the following operating Systems: <ul style="list-style-type: none"> <li>• Windows XP (32-bit)</li> <li>• Windows 7 (64-bit or 32-bit)</li> <li>• Windows 8.1 (64-bit)</li> <li>• Windows 10 (64-bit)</li> </ul>	Microsoft	Yes	If this is not found, a message will appear, indicating that the environment is not supported. You can, however, continue the installation process.
Microsoft.net 3.5 SP1	Microsoft	Yes	If this is not found, the installer will close.
Microsoft.net 4.0	Microsoft	Yes	If this is not found, the installer will install it automatically.
Microsoft ADOMD.Net	Microsoft	Yes	If this is not found, the installer will install it automatically.
Report Viewer 2008	Microsoft	Yes	If this is not found, the installer will install it automatically.
Internet Explorer 8.0, 9.0, 10.0, or 11.0	Microsoft	Yes, if you will use the machine to access the Web Framework application. Otherwise, this is not required.	If this is not found, a message will appear, indicating that the environment is not supported. You can, however, continue the installation process.



Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
<a href="#">Microsoft Visual Studio for Applications (VSTA)</a>	Microsoft -or- Meridium APM 3rd party DVD	Yes, if you want to: <ul style="list-style-type: none"> <li>• Install the Configuration Manager application.</li> <li>-or-</li> <li>• Work with Strategy rules in the Meridium APM Framework application.</li> </ul> Otherwise, this is not required.	If the Configuration Manager option is selected, and this is not found, a message will appear, indicating that you cannot continue with the installation process for the Configuration Manager.
<a href="#">Microsoft Visual Studio 2005 Remote Debugger</a>	Meridium APM 3rd party DVD	Yes, if you want to use the debugging feature in VSTA on a 64-bit APM Framework machine. Otherwise, this is not required.	The Meridium APM Framework installer does not check for this software.
Microsoft Business Intelligence Development Studio (if you are using SQL Server Reporting Services 2008 R2) -or- SQL Server Data Tools (SSDT) (if you are using SQL Server Reporting Services 2012)	Microsoft	Yes, if you want to design reports on that machine. Otherwise, this is not required.	If the Meridium Adapter for SSRS Designer option is selected and this is not found, the installer will close.

## Recommended Screen Resolution

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To view the Meridium APM Web Framework application and the Meridium APM applications on the Meridium APM Framework workstation, we recommend that you use a screen resolution of 1280x1024. The *minimum supported* screen resolution, however, is 1024x768.

## Meridium APM Framework Machine - Recommended User Permissions

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For the APM Framework applications to [update automatically](#), the user who runs the APM Framework application when an update is available must have *administrative* permission to the files that need to be updated. For this reason, we recommend that you grant administrative privileges to the <root>\Program Files\Meridium folders to the user who will run the APM Framework application and perform the automatic update.

# Database Server Machine - Hardware and Software Requirements

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## Hardware Requirements

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The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the Database Server for the Meridium APM database. These requirements account for the Meridium APM software only. Additional hardware may be required on Database Server machines where components other than the Meridium APM database are installed. These requirements may not be sufficient, depending upon how your system is configured.

- Four Processor Cores, 2+ GHz
- 8 GB RAM
- 100 GB Hard Drive space

Note also that:

- While Meridium, Inc. supports the use of RAID 5, which has benefits in its recoverability features, Meridium, Inc. *recommends the use of RAID 0+1* for the best overall database performance.
- Oracle requires instance tuning to use memory cache effectively. For Oracle Database Servers, a comparable UNIX-based system can be used.
- We recommend you use a 100BASE-TX switched network between the Application Server and Database Server.

**Note:** 100BASE-TX is not a requirement but is highly recommended. An entire 100BASE-TX network would be an ideal situation.

## Software Requirements

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Meridium APM supports the use of an Oracle or SQL Server Database Server. Oracle is required for Unicode characters (e.g., for Asian languages). If you plan to use Unicode characters in Meridium APM, you will need to use an Oracle Database Server instead of a SQL Server Database Server.

## Oracle Requirements

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Meridium APM requires that you use Oracle Server 11.2 or 12.1 Enterprise Edition. The Meridium Inc. testing environment uses 11.2.0.1, 11.2.0.4, 12.1.0.1, and 12.1.0.2.

Oracle patch *13780035* is also required for Oracle Server if you use 11.2.0.2 or 11.2.0.3. This patch must be applied before the Meridium schema is created or upgraded. You can obtain this patch from Oracle.

## SQL Server Requirements

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Meridium APM requires that you use SQL Server 2008 R2 or SQL Server 2012. The Meridium Inc. testing environment uses SQL Server 2008 R2 *SP2* Standard Edition and SQL Server 2012 Standard Edition *SP1 Cumulative Pack 4*.

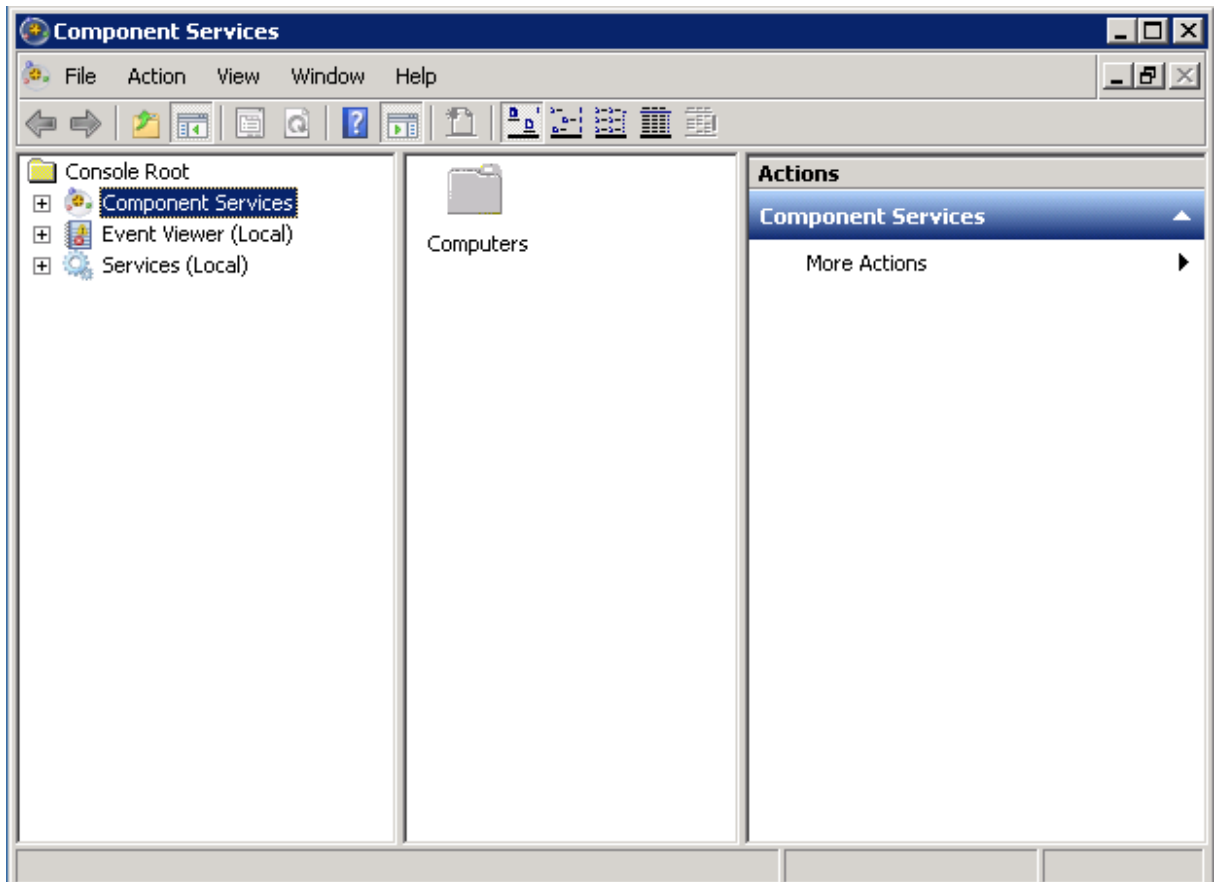
## Setting the Local DTC Property Settings

**Note:** The following settings apply to the Database Server machine if it is using SQL Server. These settings represent the Meridium, Inc. testing environment.

To set the Local DTC property settings to match the Meridium APM testing environment:

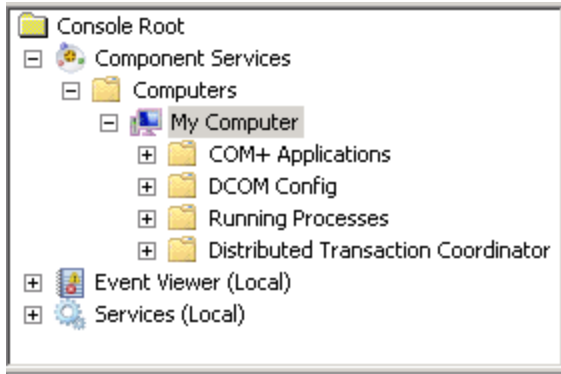
1. On the Windows **Start** menu, click **Programs**, point to **Administrative Tools**, and then click **Component Services**.

The **Component Services** window appears.

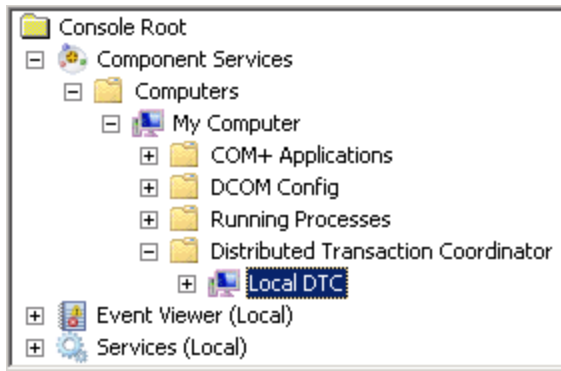



2. In the tree to the left, expand the **Component Services** node down to the **My Computer** node.

## Setting the Local DTC Property Settings

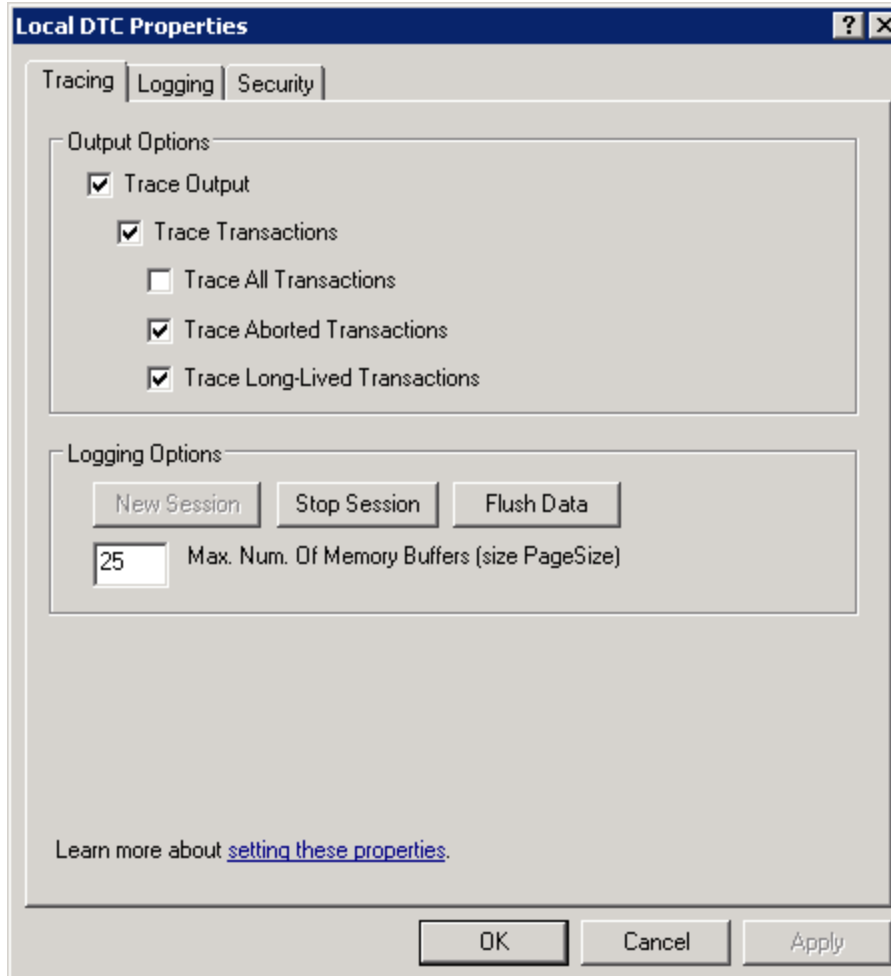


3. Expand the **Distributed Transaction Coordinator** node

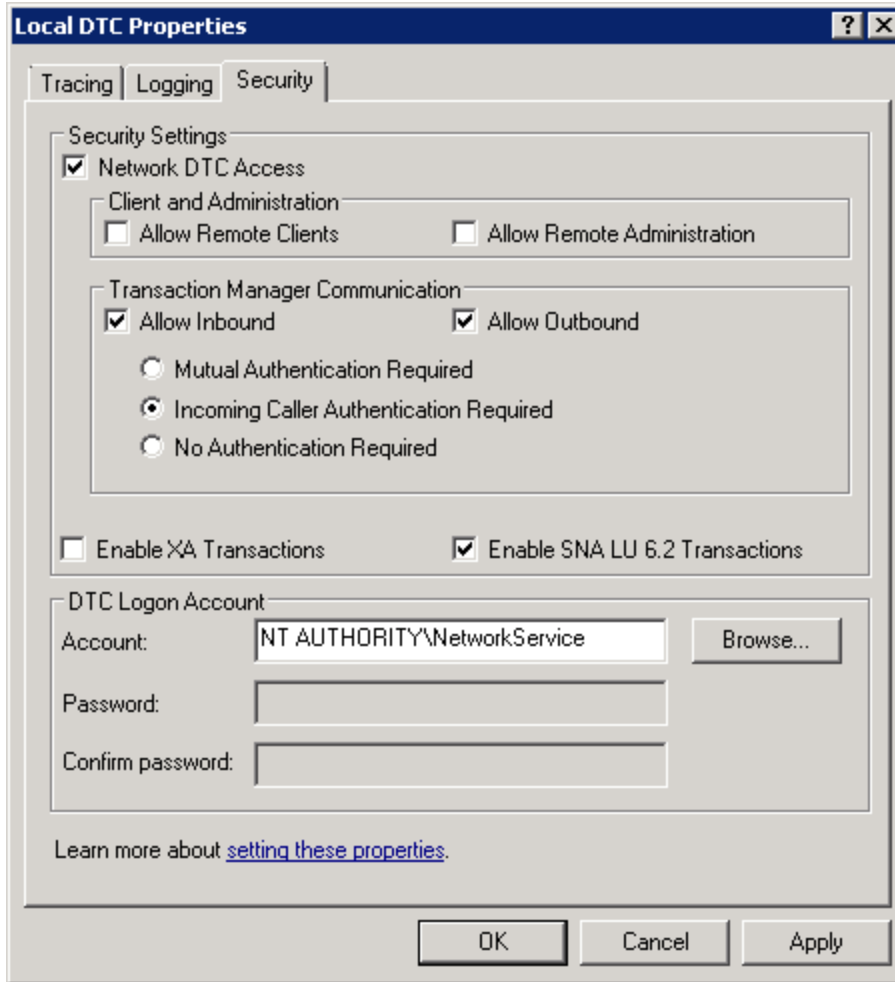


4. Select the **Local DTC** node, and on the menu above the tree, click  (**Properties**).  
The **Local DTC Properties** window appears, displaying the **Tracing** tab by default.





5. Click the **Security** tab.  
The **Security** tab appears.



6. Specify the following settings on this tab (i.e., to match the preceding image):
  - In the **Security Settings** section, select the **Network DTC Access** check box.
  - In the **Client and Administration** section, clear the **Allow Remote Clients** and **Allow Remote Administration** check boxes.
  - In the **Transaction Manager Communication** section, select the **Allow Inbound** and **Allow Outbound** check boxes.
  - In the **Transaction Manager Communication** section, select the **Incoming Caller Authentication Required** option.
7. Click **OK**.

A message appears, indicating that the MSDTC service will be stopped and restarted.
8. Click the **Yes** button.

A message appears, indicating that the MSDTC service has been restarted.
9. Click **OK**.

The **Local DTC Properties** window closes, and your settings are saved. At this point, you can close the **Component Services** window.

# SQL Server Report Server - Hardware and Software Requirements

## Hardware Requirements

The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the SQL Server Report Server machine. These requirements account for the Meridium APM software only. Additional hardware may be required on a SQL Server Report Server machine where other components are installed. These requirements may not be sufficient, depending upon how your system is configured.

- One Processor Core, 2+ GHz
- 2 GB RAM
- 10 GB Hard Drive space

If you are using a virtual machine (VM) to host your SQL Server Report Server, we recommend that:

- You increase the physical server CPU and hard drive space requirements by 20% to ensure that the application will perform equivalently in a virtualized environment.
- You double the physical server memory requirements.
- Each VM have its own dedicated processor cores and memory allocation to ensure appropriate performance.

Meridium, Inc. supports Hyper-V and VMWare platforms.

These requirements may not be sufficient, depending upon how your system is configured. Parameters that affect the hardware requirements include the number of users, modules purchased, database size, and other factors that can vary from one customer to another. For help refining your specific system requirements, consult a member of the Meridium Inc. Global Support Services or Professional Services department.

## Software Requirements

The following software components are required on any machine that will serve as the SQL Server Report Server. This table is intended to be used as a reference of the behavior of the Meridium APM Application Server and Add-ons installer as it relates to each component.

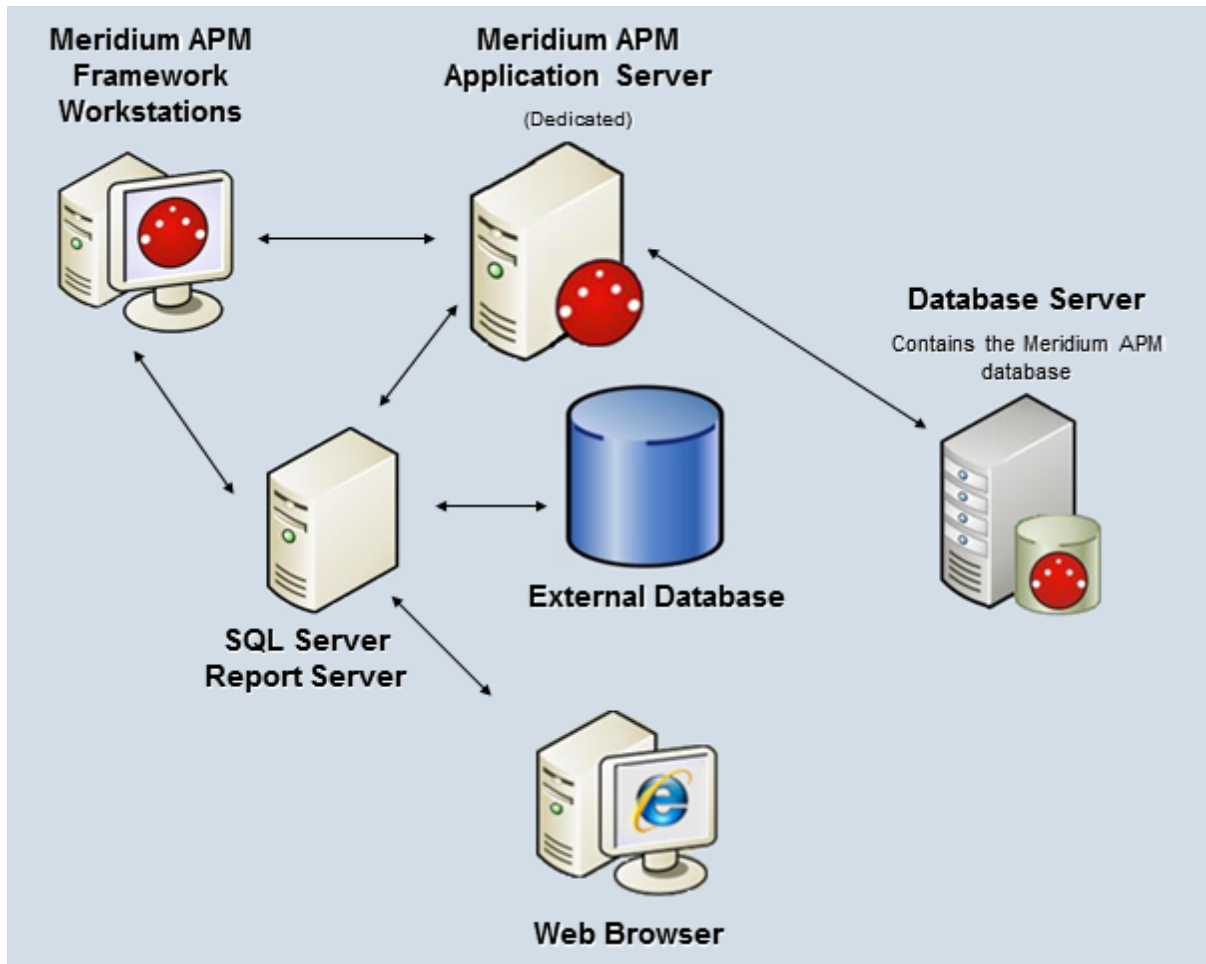
Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
Microsoft .Net 3.5 SP1	Microsoft	Yes	If it is not found, the installer will close.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
ReportViewer 2008	Microsoft	Yes	If it is not found, the installer will install it automatically.
Microsoft WSE 3.0 Runtime	Microsoft or Meridium APM 3rd party folder	Yes	If it is not found, the installer will close.
SQL Server Reporting Services 2008 R2 (Includes 2008 R2 SP2) -or- SQL Server Reporting Services 2012	Microsoft	Yes	If it is not found, the installer will close.
MSXML 3.0 MSXML3 Exception INF	Microsoft Internet Explorer.  This is installed automatically with Internet Explorer 6.0 and later.	Yes	None
Visual C++ 8.0 CRT (x86) WinSXS MSM Visual C++ 8.0 MFC (x86) WinSXS MSM Visual C++ 10.0 CRT (x86) Visual C++ 9.0 CRT (x86) WinSXS MSM Visual C++ 10.0 ATL (x64) Visual C++ 9.0 ATL (x86) WinSXS MSM	Meridium APM	Yes	If this is not found, the installer will install it automatically.

## How the SQL Server Report Server Works with Meridium APM

The SQL Server Report Server is the machine that stores SQL Server reports so that you can view SQL Server Reporting Services (SSRS) reports in the Meridium APM Framework, Meridium APM Web Framework (optional component), or a web browser.

The following image provides a visual representation of how components work together.



The components shown in this image will work together as described in the following list. Click an item name to expand and collapse the details.

- **Meridium APM Framework Workstations**

Let users create new reports that are based upon Meridium APM queries and datasets. When a report is created in Meridium APM, a connection will be made to the Meridium APM Application Server to retrieve information from the current data source and display the information to the Meridium APM Framework user. When a user saves a new report to the Catalog, the report will be saved to the Meridium

APM database and deployed to the SQL Server Report Server.

When a Meridium APM Framework user opens an existing report from the Meridium APM Catalog, the Meridium APM system will check to see if a report with the same name exists in the corresponding folder on the SQL Server Report Server.

- If the report already exists on the Report Server, it will simply be displayed to the user.
- If the report does not already exist on the Report Server, it will be deployed on the Report Server first and then displayed to the user.

When a user modifies an existing report and saves it to the Meridium APM system, an updated version of the report will be deployed to the Report Server.

SQL Server Reporting Services reports can be viewed from any Meridium APM Framework workstation via the SQL Server Report Viewer, which is installed automatically via the Meridium APM Framework installer and integrated into the Meridium APM Framework application. To create and modify reports from Meridium APM Framework workstations, you must have the following software installed on that machine:

- [Microsoft Business Intelligence Development Studio \(if you are using SQL Server Reporting Services 2008 R2\) or SQL Server Data Tools \(SSDT\) \(if you are using SQL Server Reporting Services 2012\).](#)
- The Meridium APM Adapter for SSRS Designer (so that SSRS can connect to Meridium APM and retrieve data while reports are being developed).

In addition to viewing reports from the Meridium APM Framework application, all reports that are stored on the Report Server can be accessed directly through a web browser via the SQL Server Report Manager. Whether reports are viewed in the Meridium APM Framework or the Report Manager, their appearance and content will be the same.

- **Meridium APM Application Server**

Serves as the host for communications between the SQL Server Report Server and the Meridium APM database based upon requests initiated from the Meridium APM Framework. When a user accesses a report that is based upon a Meridium APM query or dataset and stored on the SQL Server Report Server, the Report Server sends a request to the Meridium APM Application Server, which in turn connects to the Meridium APM database and returns the requested information.

**Note:** In Meridium APM deployments that contain multiple dedicated Application Servers, where a load balancer handles connections to those servers, the *load balancer* will handle report requests initiated from Meridium APM Framework workstations.

- **Meridium APM Database**

Stores the Meridium APM copy of each SQL Server Reporting Services report that has been saved to the Meridium APM Catalog. Additionally, the Meridium APM database responds to requests made from the Application Server and returns data

that is displayed in reports that are based upon Meridium APM queries and datasets.

- **SQL Server Report Server**

Contains the SQL Server Reporting Services software and stores the master copy of each Meridium APM report. Meridium APM reports are deployed to the Report Server when they are first saved to the Meridium APM Catalog. When a report is modified, the copy on the Report Server is updated.

The Meridium APM Adapter for SSRS must be installed on the SQL Server Report Server to allow the Report Server to communicate with the Meridium APM Application Server. When a request is made to the Report Server to access a Meridium APM report, the Report Server sends a request to the Meridium APM Application Server, which in turn retrieves the requested data from the Meridium APM database.

The SQL Server Report Server machine in the image shown above represents a single *instance* of the SQL Server Reporting Services. Meridium APM supports the use of *one* SQL Server Reporting Services *instance* per Meridium APM Application Server. SQL Server supports installing more than one SQL Server Reporting Services instance on the same machine. If your Meridium APM system includes more than one Application Server (e.g., a test Application Server and a production Application Server), you will need to create a separate SQL Server Reporting Services instance for *each* Application Server.

Note that when you install SQL Server Reporting Services, two SQL Server databases that store the reports for a given instance of SQL Server Reporting Services are installed automatically. These databases are not represented in the image shown above. For more information about the components a SQL Server Reporting Services implementation and details about the supported configuration scenarios, see the SQL Server documentation.

- **External Database**

Represents any external data source that is supported by SQL Server Reporting Services for building reports. Reports that are built upon external data sources can be imported into Meridium APM and saved to the Meridium APM Catalog. When a user accesses an external report, either through the Meridium APM Framework Application or via SQL Server Report Manager, a request is sent to the Report Server, which in turn retrieves the data from the appropriate data source and displays the results to the user. Any report that can be built upon an external data source via the Business Intelligence Development Studio and viewed in Report Manager can be imported into Meridium APM, saved to the Meridium APM Catalog, and viewed by Meridium APM users.



## About the SQL Server Report Manager

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The SQL Server Report Manager is a tool that is provided with SQL Server Reporting Services that lets you manage the reports that exist on the SQL Server Report Server. You will need to use the Report Manager to perform tasks to configure the Report Server for use with your Meridium APM system.

After SQL Server Reporting Services has been installed and properly configured via the Reporting Services Configuration Manager, the Report Manager will be accessible from any web browser, either on the Report Server itself or remotely via the following URL:

**http:\\<Report Server Name>\<Report Manager Virtual Directory>**

...where:

- **<Report Server Name>** is the name of the Report Server.
- **<Report Manager Virtual Directory>** is the name of the virtual directory that you created for Report Manager. The Report Manager Virtual Directory can be defined for each instance of Reporting Services via the Reporting Services Configuration Manager.

**Note:** For more information on determining how to access Report Manager, see the SQL Server Setup Help, which is accessible via the Reporting Services Configuration Manager.

All Meridium APM reports that exist on the SQL Server Report Server can be accessed through Report Manager. Reports are organized on the Report Server using a folder structure that corresponds to the Meridium APM Catalog folder structure. [Meridium APM users must be granted permissions to these folders](#) in order to access SSRS reports through Meridium APM.

When you attempt to open a report in Report Manager, you will be prompted to provide a user ID and password. You will need to supply a Meridium APM user ID and password with the appropriate security privileges. The results that are displayed in the Report Manager should look the same as the results that are displayed when a user opens the report in the Meridium APM Framework application or through the Meridium APM Web Framework.

The SQL Server Report Manager should be used only to *view* Meridium APM reports. Meridium APM reports should not be created or modified directly through the Report Manager. When a user modifies an existing report in Meridium APM and re-saves it to the Meridium APM Catalog, the report will be redeployed automatically to the Report Server. Any modifications that have been made on the Report Server via the Report Manager will be overwritten when the report is redeployed from the Meridium APM Framework Application.

Additional details about the Report Manager can be found in the Help system that is accessible from the Report Manager tool.

## About Communication Methods

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Meridium APM provides two communication methods for allowing Meridium APM clients to communicate with the Meridium APM Application Server:

- **Remoting:** A communication infrastructure that uses the HTTP protocol over the IIS port (usually port 80) to connect client workstations to the Application Server. A Remoting connection is required whenever the client resides on a computer that is physically separate from the Meridium APM Application Server to which it needs to connect. All Meridium APM Framework workstations will connect to [dedicated Meridium APM Application Servers](#) via a Remoting connection.
- **Local:** A method that allows clients to access files directly on the Meridium APM Application Server without having to transfer data across a network. A Local connection should be used whenever a client resides on the same machine as the Meridium APM Application Server to which it needs to connect. Meridium APM clients should connect to [supporting Meridium APM Application Servers](#) via a Local connection.

The Meridium APM Framework and Administrative Applications will be installed on every dedicated Meridium APM Application Server. This local installation will exist for reasons such as running the database upgrade and debugging business rules via the Configuration Manager. While most Meridium APM Framework workstations will connect to dedicated Application Servers remotely, local installations should connect to the Application Server via a Local connection. Note that business rules debugging can be performed *only* via a Configuration Manager application that is running on the Application Server using a Local connection. To use a Local connection, you must be a member of the local Administrators group on the Meridium APM Application Server machine.

**Note:** Remoting connections for local installations are supported and will work properly. Local connections, however, provide better performance for components that reside on the same machine as the Application Server and are recommended for this reason.

## About the Meridium APM Server and Add-Ons Installers

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The Meridium APM Server and Add-ons installers let you install and upgrade the Meridium APM Server software and Add-on software components on the Meridium APM Application Server machine and other machines as appropriate for the Add-on components. Meridium APM components are installed in English, by default. For details on installing non-English translations for Meridium APM, [click here](#). For details on the system architecture for the basic Meridium APM system, [click here](#). For a directory of other Meridium APM components and their respective system architecture specifications, [click here](#).

Your Meridium APM distribution package includes two Meridium APM Server and Add-ons installers. Click an option in the following list to expand and collapse details about that installer:

- **64-bit**

You can use the Meridium APM Server and Add-Ons installer to install and upgrade the following Meridium APM components:

- **Meridium APM Application Server:** Meridium, Inc. supports only 64-bit *Application Server* machines, and the *Meridium APM Server and Add Ons* software can be [installed only on a 64-bit machine](#). If a previous version of Meridium APM was installed on a 32-bit Application Server machine, you will need to use a 64-bit machine and [perform a first-time install on that machine](#). When you install the Meridium APM Application Server software, the following client components are also installed automatically:
  - APM Framework
  - Database Upgrade Manager
  - Data Source Manager
  - Schedule Manager
  - URL Manager
- **Configuration Manager:** This is an optional component that you can [install on an Application Server machine if the required prerequisites are also installed on that machine](#). The Configuration Manager application lets you define how you want data to be stored in Meridium APM. For example, you can define field properties and create entity families. To install the Configuration Manager application, you must have Microsoft Visual Studio for Applications (VSTA) installed.
- **Meridium APM Adapter for SSRS Designer:** This is an optional client component that you can [install to integrate Meridium APM with SQL Server Business Intelligence Development studio](#). The Meridium Adapter for SSRS Designer is used when building reports that are based upon a Meridium APM data source. If the Meridium APM Adapter for SSRS Designer is not installed on the Meridium APM Framework machine and you build a report

using SQL Server Business Intelligence Development Studio, you will not be able to preview the report output.

- **Meridium Adapter for SSRS:** The files needed to [integrate Meridium APM with a SQL Server Report Server](#).
- **Meridium APM Sync Services with Operator Rounds:** Installs the Meridium APM Sync Services software and the files that are needed to deploy the Meridium APM Mobile Framework and Operator Rounds. [Documentation on installing, upgrading, and configuring the Meridium APM Sync Services software is located in the Operator Rounds documentation](#).
- **Meridium APM Policy Execution Service:** Installs the files that are needed for deploying the Meridium APM Policy Execution Service for the Policy Manager component of Meridium APM. [Documentation on installing, upgrading, and configuring the Meridium APM Policy Execution Service is located in the Policy Manager documentation](#).
- **Meridium APM Process Data Integration Service:** Installs the files that are needed for deploying the Meridium APM Process Data Integration Service for the Policy Data Integration (PDI) component of Meridium APM. [Documentation on installing, upgrading, and configuring the Meridium APM Policy Data Integration Service is located in the PDI documentation](#).
- **Meridium APM Web Framework:** Installs the web based application for working with Meridium APM data. [Documentation on installing, upgrading and configuring the Meridium APM Web Framework is located in the Meridium APM Web Framework documentation](#).
- **Meridium APM Web Services:** Installs the files that are needed for deploying the Meridium APM Web Services that support [various Meridium APM components](#). Details on installing, upgrading, and configuring Meridium APM Web Services is available in the documentation for the module or feature Meridium APM Web Services supports.

When you install any of these components, the following applications will be installed automatically:

- [APM System Administration tool](#), which provides an interface to [configuration files that you need to modify](#) to support the corresponding component.
- Database Comparison tool, which lets you view the [differences that exist between two databases](#).

Beginning in V3.5.0, Crystal reports are not supported. As a result, when you upgrade to the current version from V3.4.5 or earlier, the installer will also automatically uninstall the Crystal 10 for Meridium software.

- **32-bit**

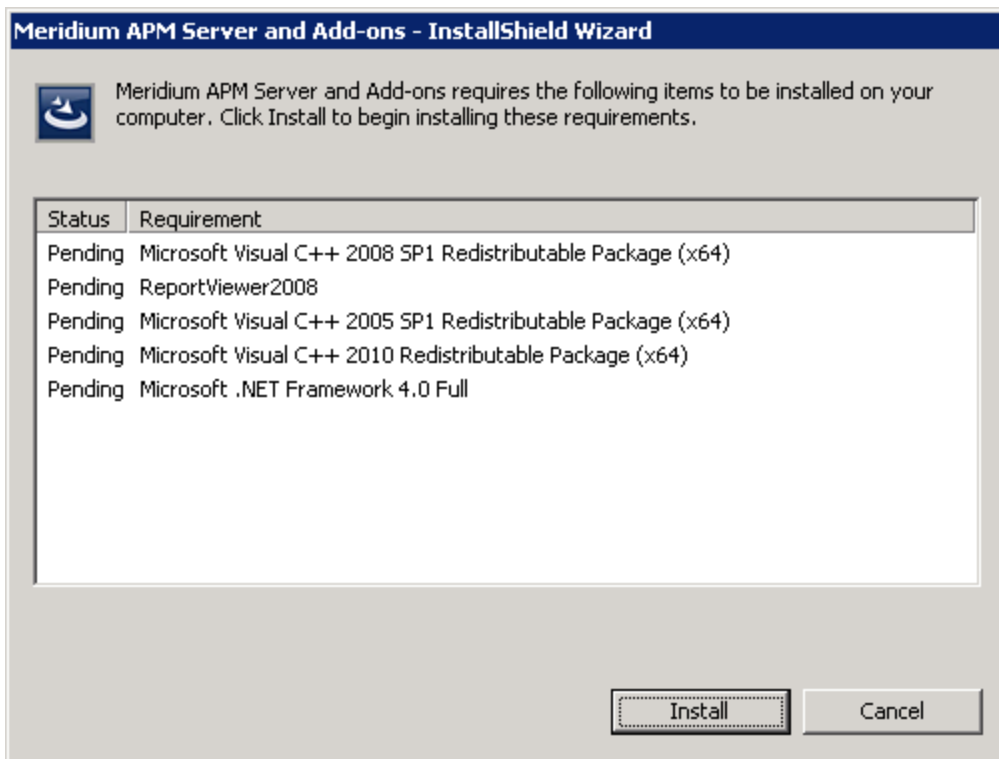
**Note:** Throughout this documentation, we refer to the 32-bit installer as the *32-bit version*. When we use the term *Meridium APM Application Server and Add-ons* installer, we are referring to the 64-bit installer.

The following features can be installed using the 32-bit installer:

- **Meridium APM Plug-In for DataStage Client:** Installs the client components that are needed for integrating Meridium APM with Datastage. *Instructions for installing this component are not available in this documentation.*
- **Meridium APM Plug-In for DataStage Server:** Installs the server components that are needed for integrating Meridium APM with DataStage. *Instructions for installing this component are not available in this documentation.*

To upgrade components on a 32-bit machine, you must first [uninstall the previous version](#) of that component and then perform a new installation of it.

When you run either of these installers, if the machine is missing any required prerequisites, a screen will appear, displaying the list of missing components (similar to the following image) and prompting you to install them. If you see this screen, you should install each of the components in the list. Note that for some components, a third-party installer may appear.



## About the Meridium APM Framework Installer

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The Meridium APM Framework installer will take you step-by-step through the process of installing the Meridium APM Framework application on workstations in your organization where you want to provide access to Meridium APM modules. You can also use the Meridium APM Framework installer to install any of the administrative applications. The following list contains the administrative applications that you can install using the Meridium APM Framework installer. To view a description of an application, click the hyperlinked application name.

- [Configuration Manager](#)

Lets you define how you want data to be stored in Meridium APM. Using the Configuration Manager, you can define field properties, create entity families, set up relationships between families, create views, create business rules, design data-sheets, copy objects from one database to another, view the data dictionary, and generate the tables that store data.
- [Data Source Manager](#)

Lets you define the data sources that will be accessible in the Meridium APM applications. Using the Data Source Manager, you can define connection information for data sources and define a default data source for the Meridium APM applications.
- [Schedule Manager](#)

Lets you view and manage the scheduled items that exist in Meridium APM.
- [URL Manager](#)

Lets you view and manage registered URLs and Associated Pages.
- [Meridium Adapter for SSRS Designer](#)

Used when building reports that are based upon a Meridium APM data source. If the Meridium APM Adapter for SSRS Designer is not installed on the Meridium APM Framework machine and you build a report using SQL Server Business Intelligence Development Studio, you will not be able to preview the report output.
- [VSTA for Strategy](#)

Provides access to Strategy rules.

This installer will run on both 32-bit and 64-bit APM Framework machines. Before you run the Meridium APM Framework installer, you should ensure that the machine [meets the hardware and software requirements](#). The APM Framework installer cannot be run, however, on a machine where the Meridium APM Application Server and Add-ons software is installed. If you try to run the Meridium APM Framework installer on the Application Server machine, a message will appear, indicating that you cannot run the installer in this case, and the installer will close. To install the Meridium APM Framework or administrative applications on the Meridium APM Application Server machine (e.g., Configuration Manager), you can use the [Meridium APM Server and Add Ons installer](#).

You can use the Meridium APM Framework installer to install Meridium APM applications on each APM Framework machine, or you can use the Meridium APM Framework installer to record an APM Framework installation and then use then perform that recorded installation on each APM Framework machine without the user of that machine interacting with an installer. This is referred to as a *[silent installation](#)*.

The Meridium APM Framework installer provides two options for the applications that you can install on an APM Framework machine:

- [Install only the Meridium APM Framework application and no administrative applications.](#)
- [Select which applications will be installed, including administrative applications.](#)

The steps in the installer are different for each option. As a result, a separate set of instructions are provided for each. To get started, in the preceding list, click the hyper-linked option that corresponds to the installation that you want to perform.

## Installing the Application Server Software

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The following instructions provide details on installing the Meridium APM Application Server and Add-ons software on the Meridium APM Application Server machine. The Application Server machine is part of the [basic Meridium APM system architecture](#).

These instructions assume that:

- Your system meets the hardware and software requirements for the Application Server machine.

**Note:** If your system does meet certain software requirements, a message may be displayed during the installation process that indicates the software requirement that is missing. Some software requirements, however, will be installed automatically if they are missing. For more information, see the hardware and software requirements for the basic Meridium APM system architecture.

- You are an Administrator with full access to the Application Server machine.
- You have read and understand how to combine steps in the Application Server installation process if you are [installing other Meridium APM components](#) on the Application Server machine.

**Note:** IIS will be reset automatically by the installer before the installation process begins.

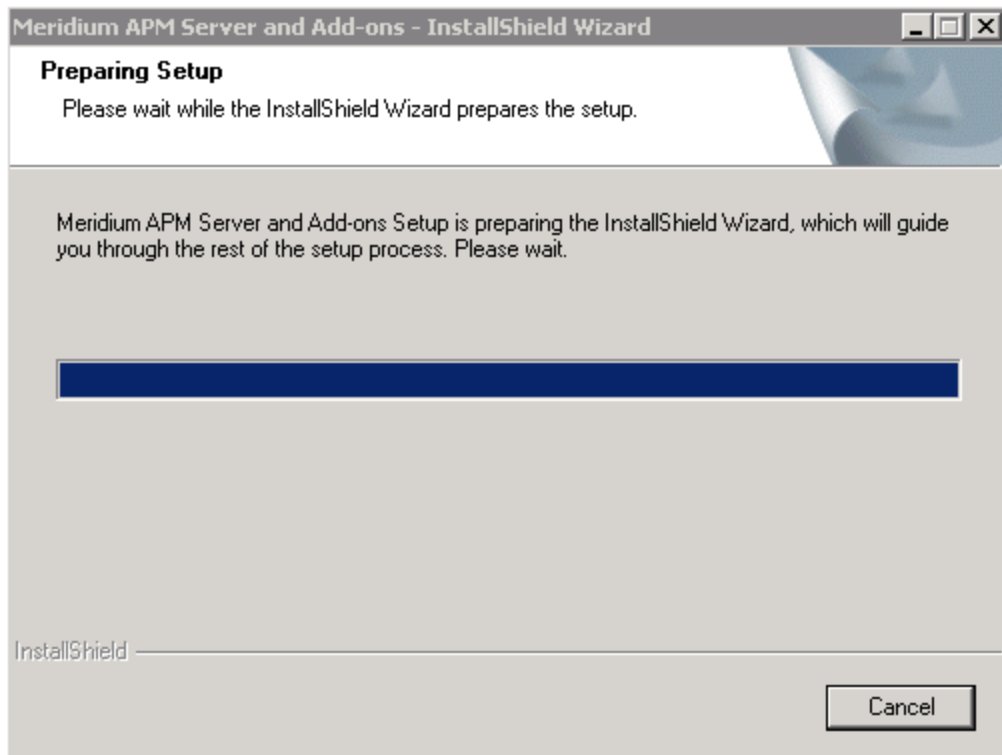
**To install the Application Server and Add-ons software on an Application Server machine:**

1. On the APM Application Server machine, insert the Meridium APM DVD, and navigate to the folder **\\General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Server and Add-ons**.
2. Double-click the file **Setup.exe**.  
A message appears, asking if you want to allow the installer to make changes to your machine.
3. Click the **Yes** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



## Installing the Application Server Software

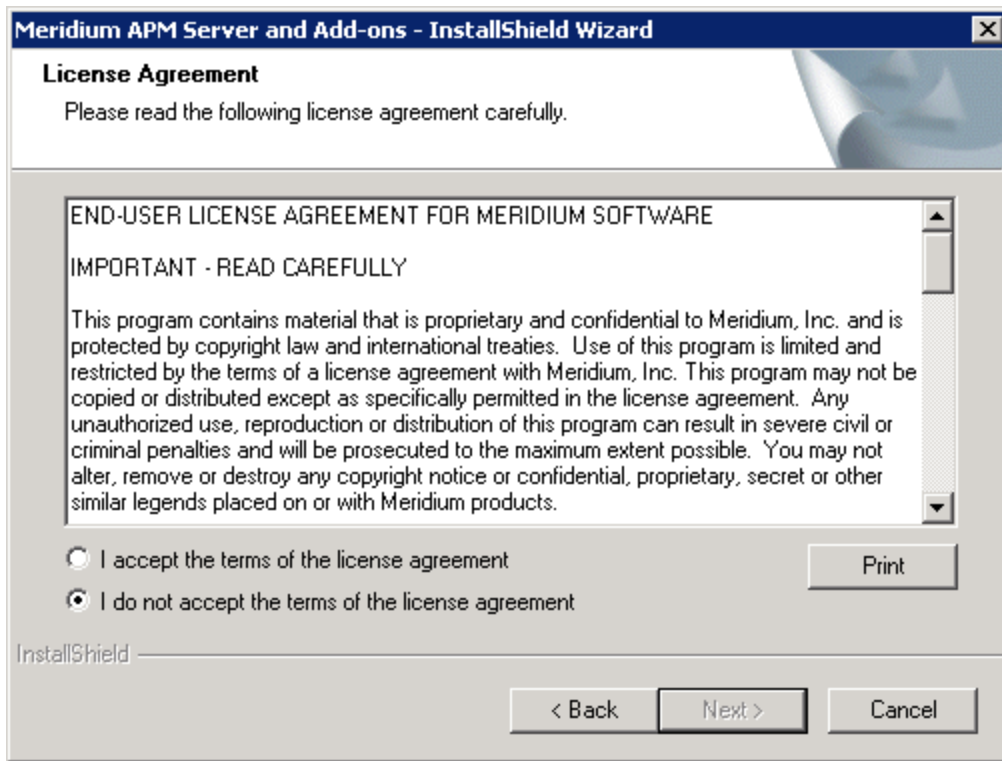


After the progress bar reaches the end, the Welcome screen appears.



4. Click the **Next** button.

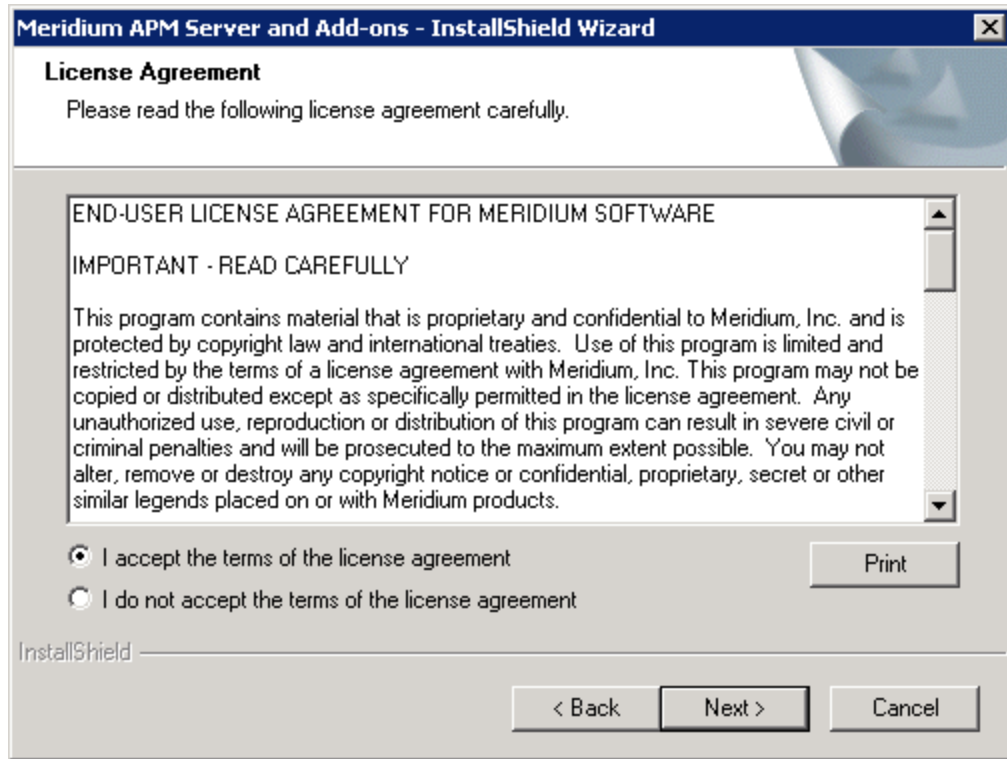
The **License Agreement** screen appears.



5. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do

not want to continue, click the **Cancel** button to exit the installer.

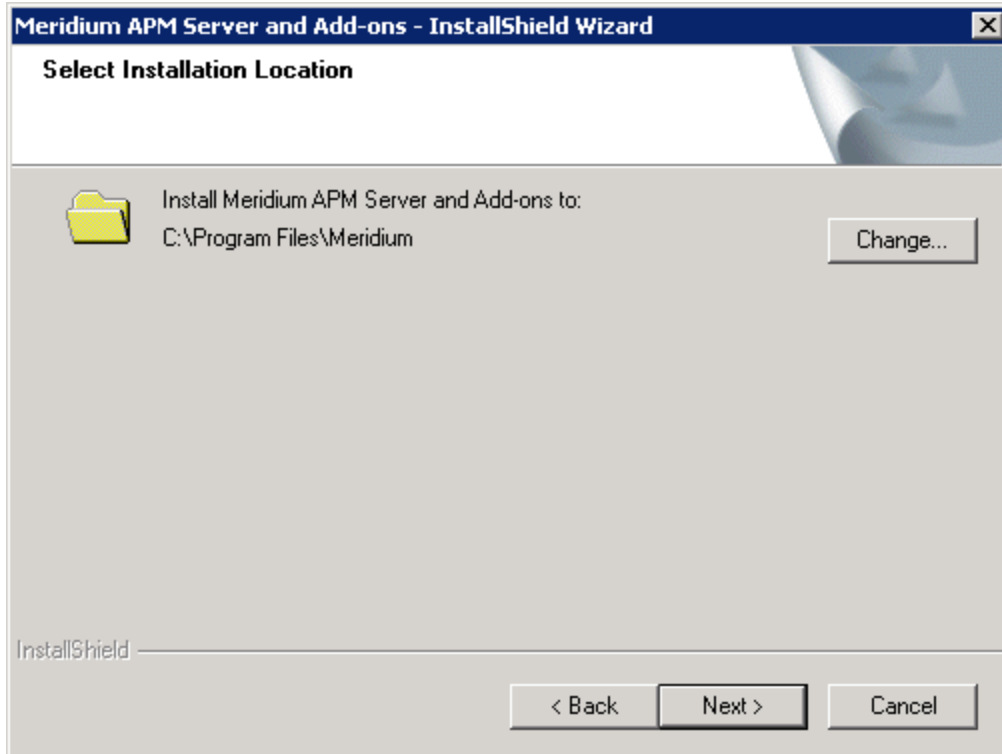


**CEHint:** If you want to print the license agreement, click the **Print** button.

The **Next** button becomes enabled.

6. Click the **Next** button.

The **Select Installation Location** screen appears, prompting you to select the location where the Meridium APM Server and Add-ons will be installed. By default, the Meridium APM Server and Add-ons software will be saved to the following folder: **C:\Program Files\Meridium**.

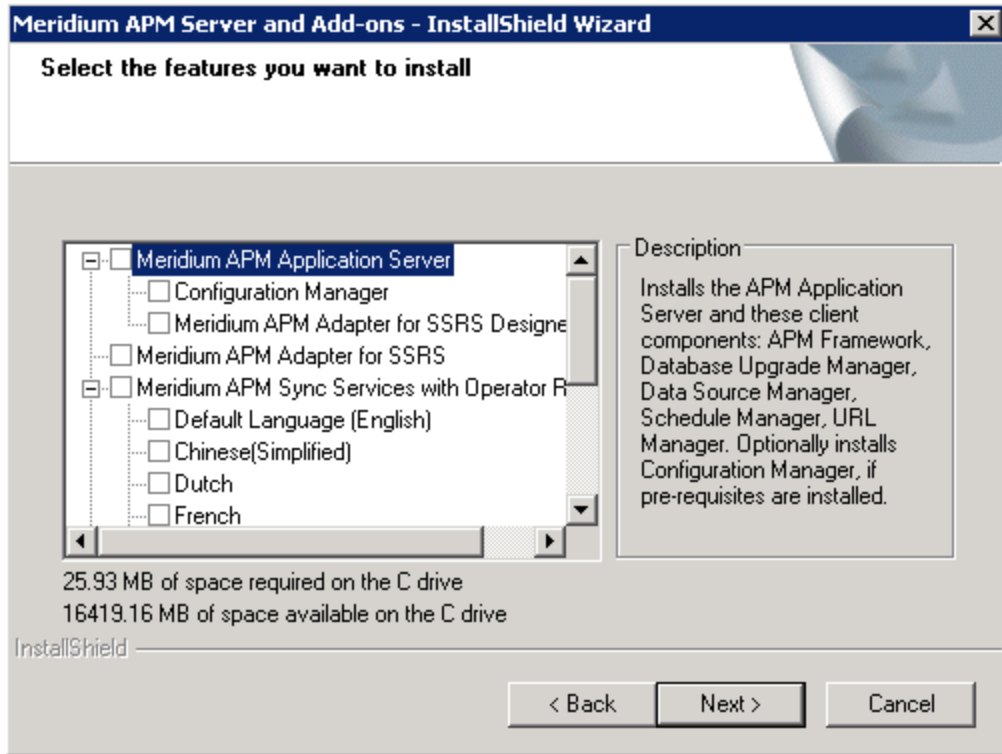


7. If you are satisfied with the default location where the software will be installed, click the **Next** button.

-or-

If you want to change the location where the software will be installed, click the **Change** button, and navigate to the location where you want to install the Meridium APM Server and Add-ons software. The folder path that you select will be displayed in place of the default folder path. When you are satisfied with the installation location, click the **Next** button.

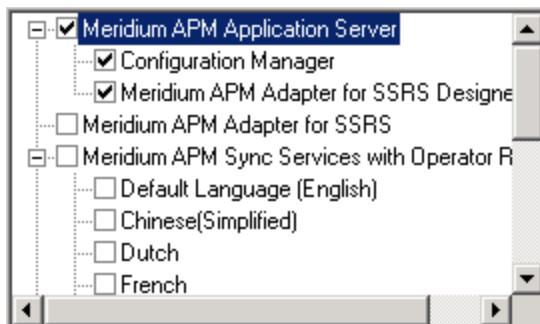
The **Select the features you want to install** screen appears, and the **Meridium APM Application Server** node is highlighted automatically in the tree.



**IMPORTANT:** The **Select the features you want to install** screen lets you specify which features you want to install on the Application Server machine. *These instructions* assume that you want to deploy only Meridium APM Application Server software. When the Meridium APM Application Server software is installed, the Meridium APM System Administration Tool and the following APM Framework applications are also installed automatically: APM Framework, Database Upgrade Manager, Data Source Manager, Schedule Manager, and URL Manager. Corresponding options for these applications are not listed in the tree because these components must be installed with the Meridium APM Application Server software. You can optionally install the *Configuration Manager* and the APM Framework adapter, *Meridium APM Adapter for SSRS Designer*.

8. In the tree, select the **Meridium APM Application Server** check box.

The subnodes are selected automatically.



9. If you want to install the Meridium APM Configuration Manager application on the APM Application Server machine, accept the default selection.

-or-

If you do not want to install the Meridium APM Configuration Manager application on the APM Application Server machine, clear the **Configuration Manager** check box. Keep in mind that you can run this installer again and install the Configuration Manager at a later time.

**Note:** The Configuration Manager application can be installed on the APM Application Server machine only if the necessary prerequisites are installed on that machine.

10. If you want to install the Meridium APM Adapter for SSRS Designer on the APM Application Server machine (used by the Meridium APM Framework application for reports), accept the default selection.

-or-

If you do not want to install the Meridium APM Adapter for SSRS Designer on the APM Application Server machine, clear the **Meridium APM Adapter for SSRS Designer** check box. Keep in mind that you can run this installer again and install the Meridium APM Adapter for SSRS Designer at a later time.

**IMPORTANT:** While additional options are available for selection in the tree on the **Select the features you want to install** screen, these options are not meant to be installed on the [APM Application Server machine within the basic Meridium APM system architecture](#), and these instructions are limited to installing the Meridium APM Application Server and Add-ons software (with APM Framework applications). This installer is also used to install the additional components *on other machines*.

11. Click the **Next** button.

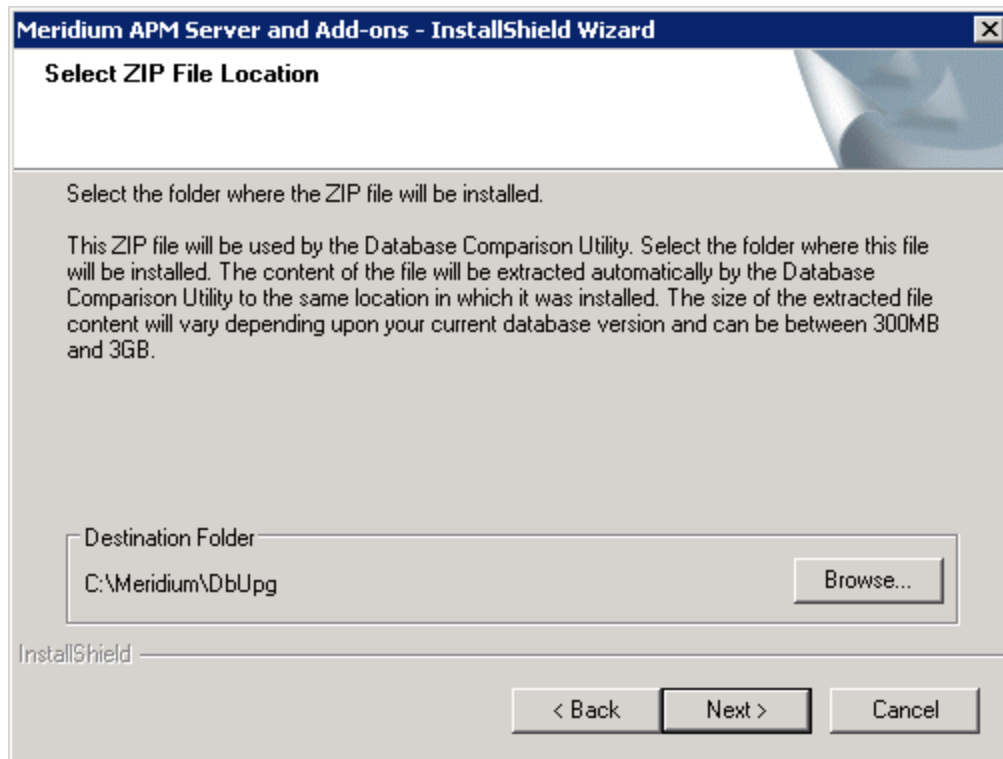
A message appears, indicating that the installer is checking your machine for the required prerequisites for the features that you want to install.

- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the [feature that is dependent on that prerequisite](#). This message also indicates what you can do to continue.

If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

- If all the prerequisites for the selected components are installed on the machine,

or you have selected components that do not require any prerequisites, the **Select ZIP File Location** screen appears.



The **Select ZIP File Location** screen lets you specify the location where you want the ZIP file of database content to be installed. This ZIP file is used by the Database Comparison Utility. By default, the ZIP file will be installed in the folder **C:\Meridium\DbUpg**. You can, however, select a different location.

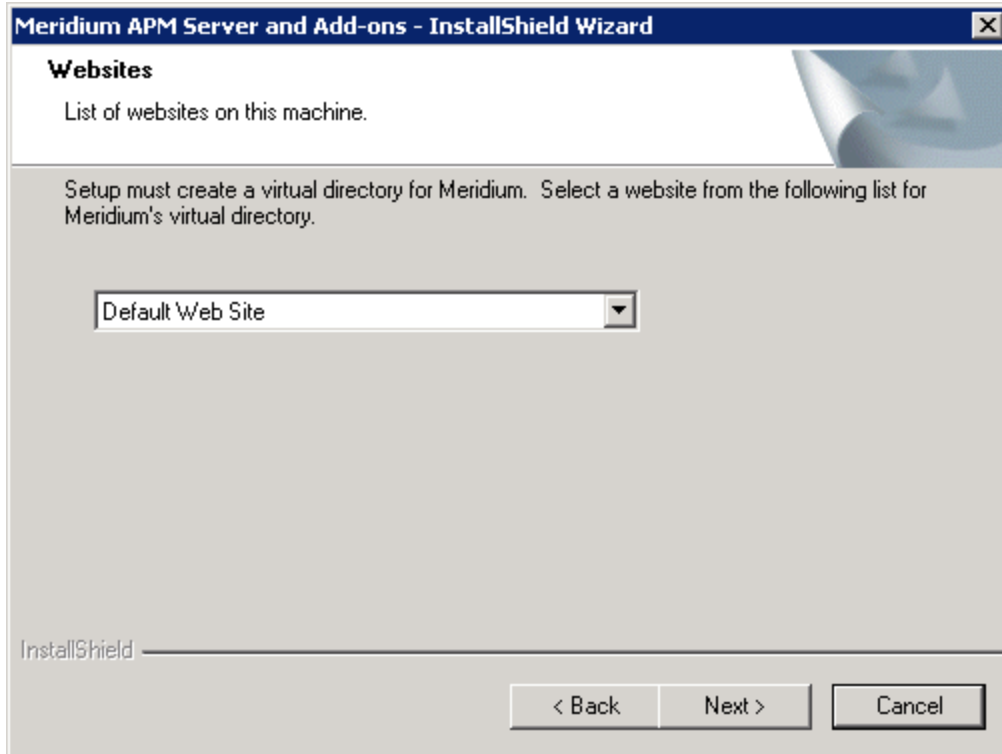
12. Read the information on this screen and note the estimated size of the extracted files from this ZIP file. You should use this information to determine where you want install the ZIP file.
13. If you want the ZIP file to be installed in the default location, accept the default setting.

-or-

If you want the ZIP file to be installed in a different location, click the **Browse** button, and navigate to the location where you want the ZIP file to be installed. The selected file path will appear in the **Destination Folder** section in place of the default file path.

14. Click the **Next** button.

The **Websites** screen appears.

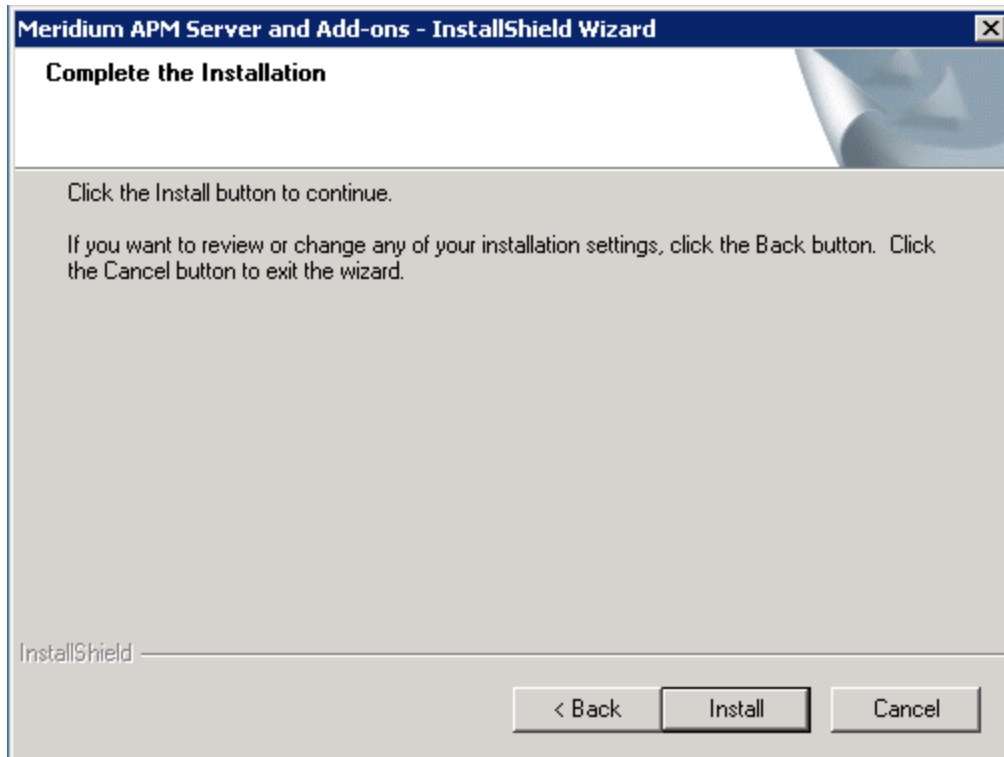


The **Websites** screen lets you specify where the installer will create a virtual directory for Meridium APM. This website is configured in the IIS Manager on the APM Application Server machine. The websites list contains all the websites that are configured on the APM Application Server machine. The default website is *Default Web Site*. Throughout this documentation, we assume that you have chosen to install Meridium APM under the *Default Web Site*.

15. In the list of websites, select the website where you want the installer to create a virtual directory.
16. Click the **Next** button.

The **Complete the Installation** screen appears.



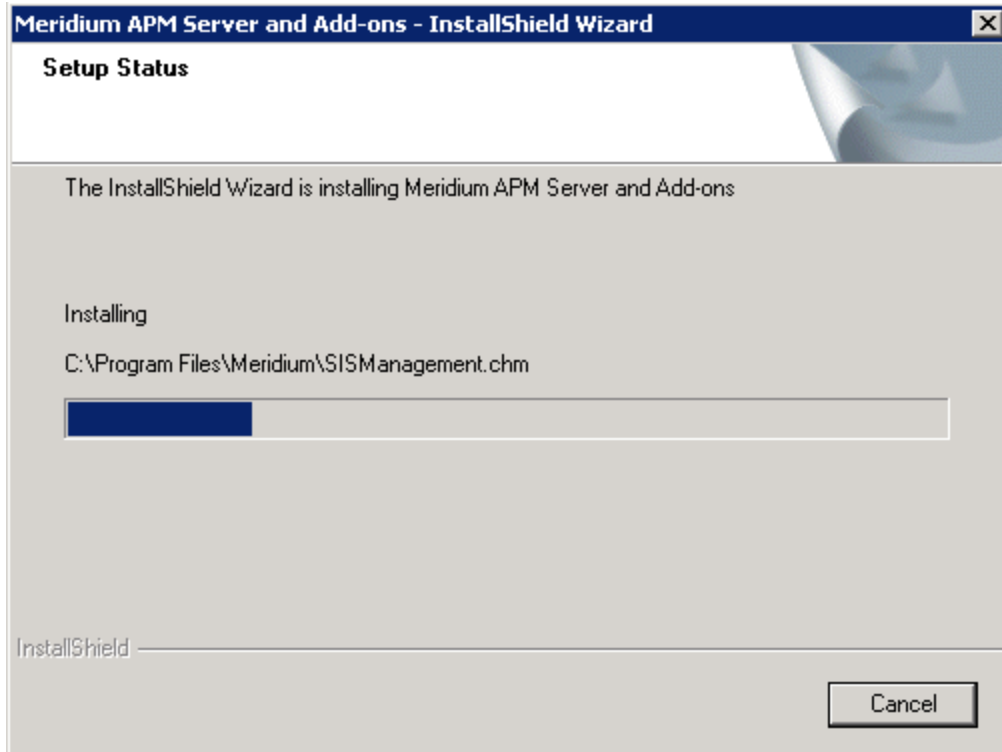


The **Complete the Installation** screen contains a message, indicating that if you want to modify any of the settings that you specified in the preceding screens in the installer, you can use the **Back** button to do so, or if you do *not* want to complete the installation, you can click **Cancel**.

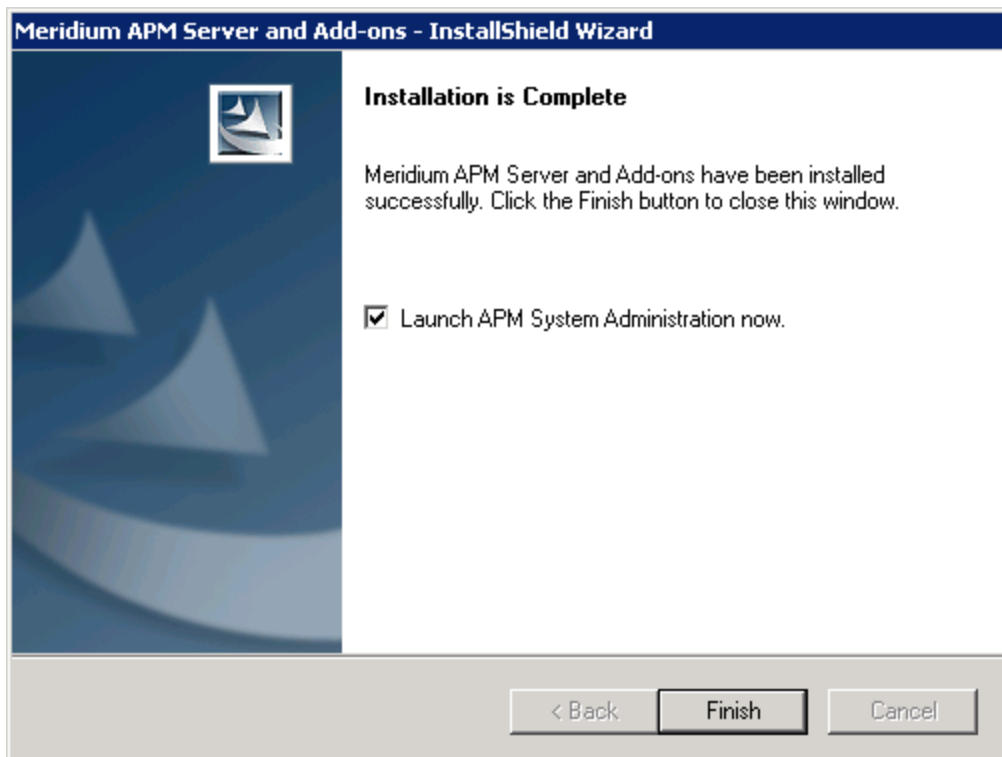
These instructions assume that you are ready to complete the installation process.

17. Click the **Install** button.

The **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.



This screen contains a message, indicating that Meridium APM Server and Add-ons has been installed successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to Yes.

18. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

*-or-*

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

19. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears. At this point, you should [refer back to the checklist](#).

## Installing Additional Application Server Components After the Initial Installation

---

If you need to install a Meridium APM component on a machine after the initial installation is complete, you can run the installer in *modify mode*, which will allow you to make changes to the current installation on that machine. For example, if you were missing a prerequisite for the Configuration Manager application the first time that you ran the installer and, rather than cancelling the installation, you finished the installation without installing the Configuration Manager application, you can install the Configuration Manager application through the modify mode of the Meridium Application Server and Add-Ons installer. Keep in mind, however, that the same prerequisites are still required when you run the installer in modify mode.

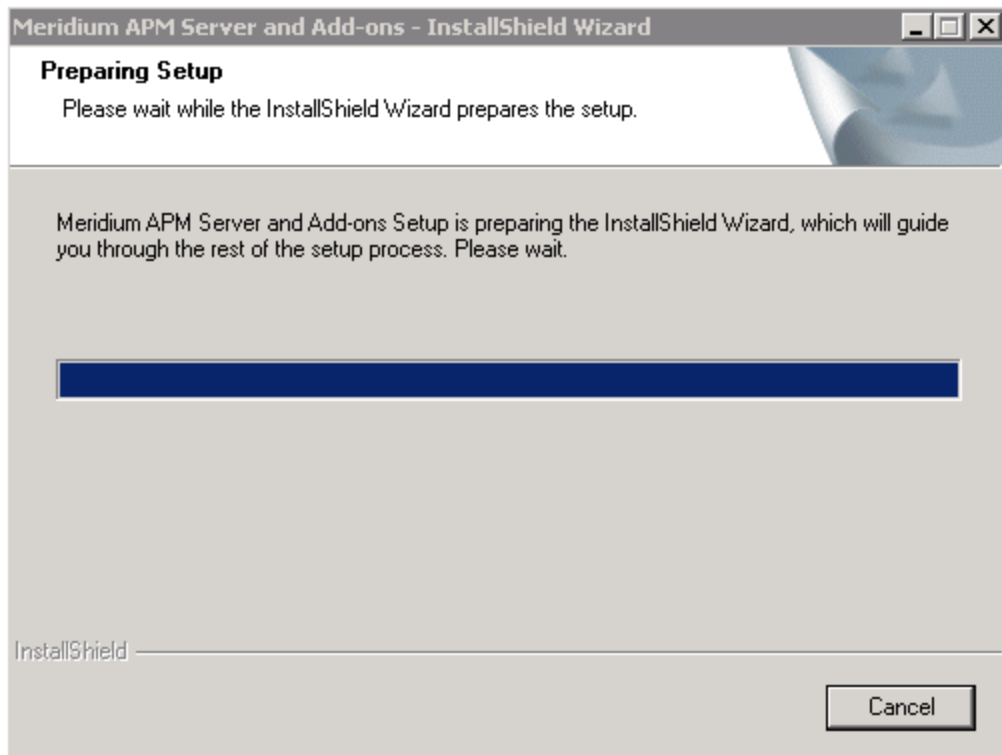
The following instructions provide details on running the Meridium APM Application Server and Add-Ons installer in modify mode on the Meridium APM Application Server machine.

**Note:** IIS will be reset automatically by the installer before the installation process begins.

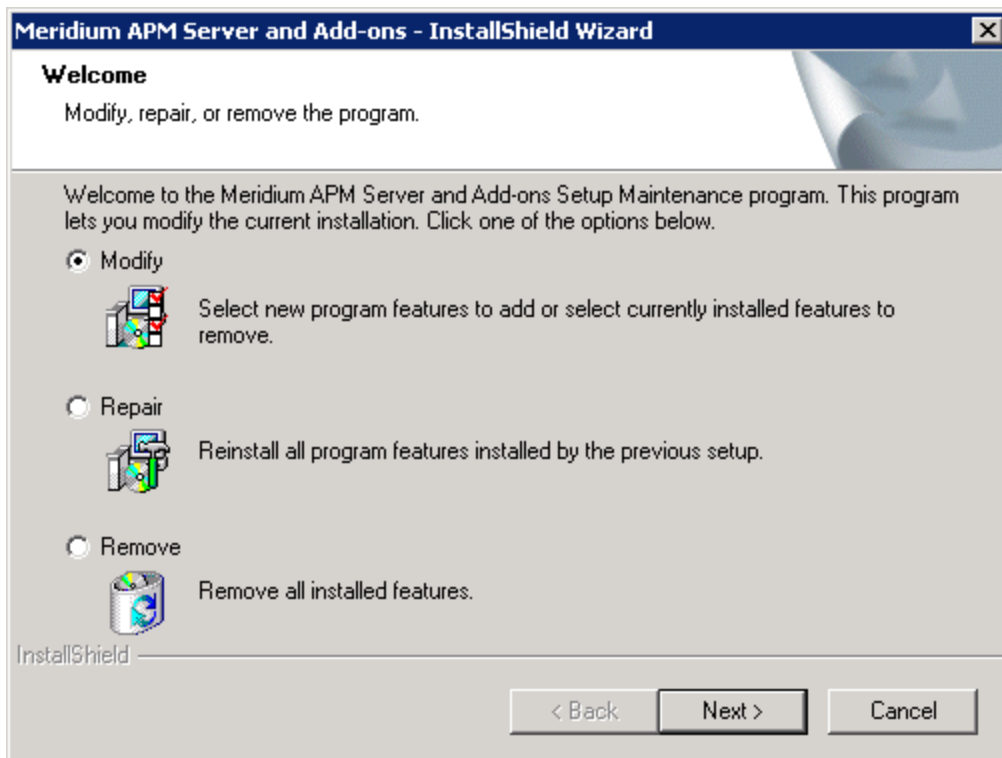
### To install Application Server components in modify mode:

1. On the Application Server machine where you want to install additional components through the modify mode of the installer, access the Programs and Features window from the Control Panel.
2. In the grid, select the **Meridium APM Server and Add-on** item, and then click the **Change** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



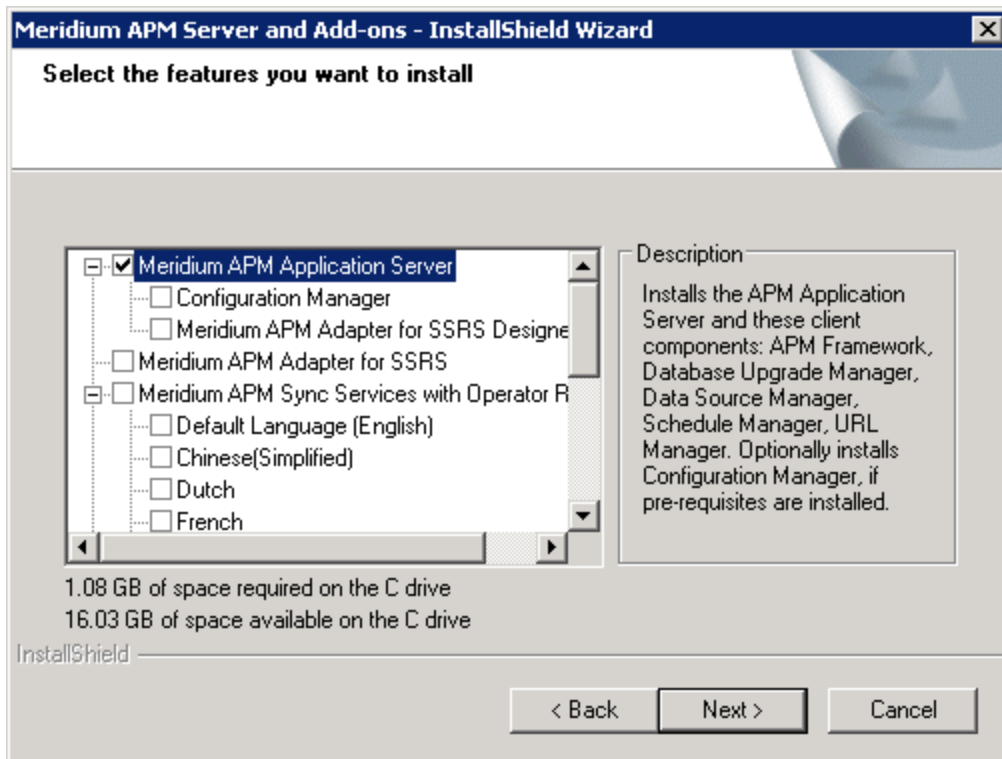
After the progress bar reaches the end, the **Welcome** screen appears.



The Welcome screen contains the following options:

- **Modify:** Runs the installer in modify mode, which allows you to install additional components on the machine or uninstall specific components. This option is selected by default. These instructions assume that you want to run the installer in modify mode.
  - **Repair:** Runs the installer in repair mode, which allows you to update the components that are installed on the machine.
  - **Remove:** Uninstalls *all* the Meridium APM components that are installed on the machine.
2. Accept the default selection, **Modify**, and then click the **Next** button.

The **Select the features you want to install** screen appears, and the Meridium APM Application Server node is highlighted automatically in the tree.



The components that are currently installed on the machine are selected in the tree. If you want to *remove* one or more of these components, you can clear the check box. These instructions, however, assume that you want *install* additional components.

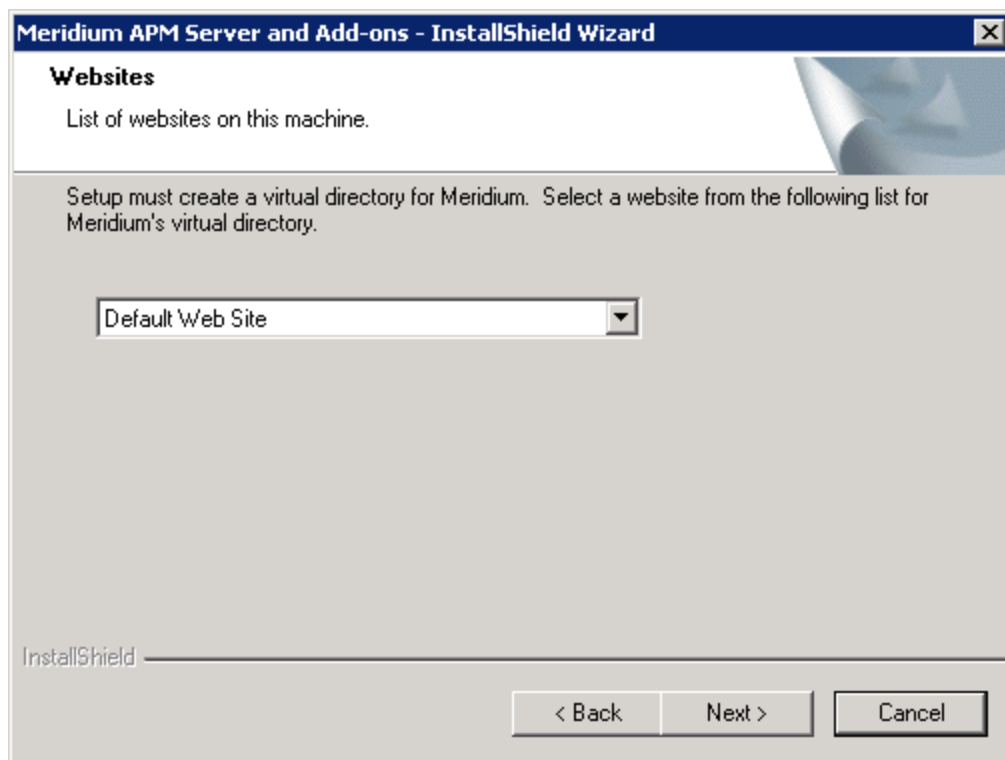
3. Select the check box that corresponds to the additional component(s) that you want to install.
4. Click the **Next** button.

A message appears, indicating that the installer is checking your machine for the required prerequisites for the features that you want to install.

- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the feature that is dependent on that prerequisite. This message also indicates what you can do to continue.

If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

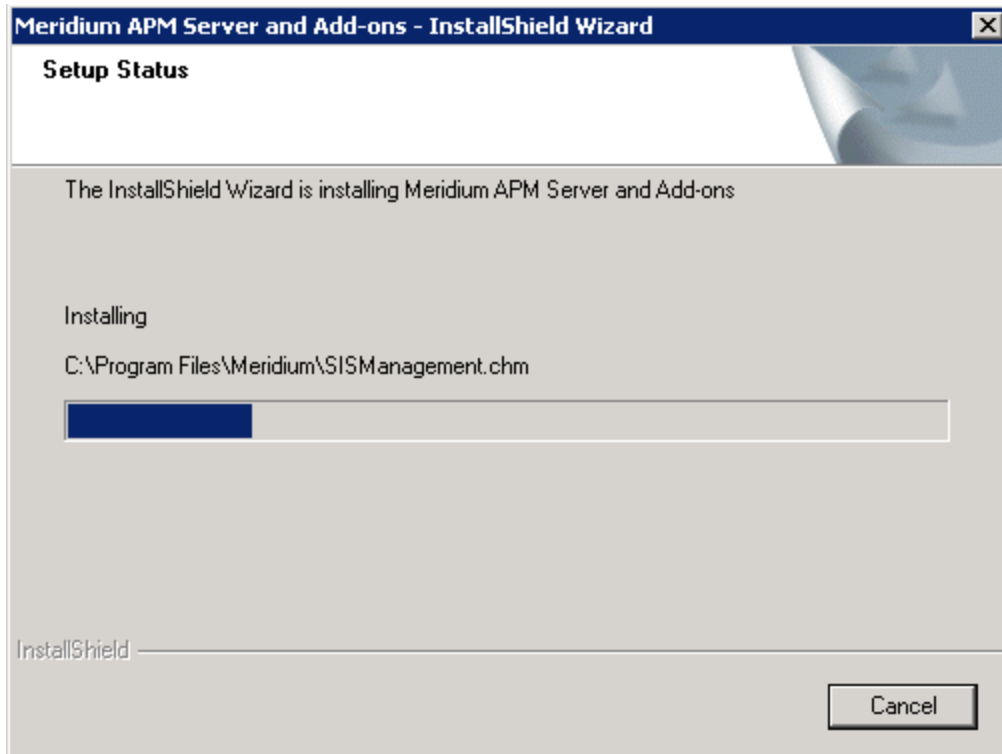
- If all the prerequisites for the selected components are installed on the machine, or you have selected components that do not require any prerequisites, the **Websites** screen appears.



The **Websites** screen lets you specify where the installer will create a virtual directory for Meridium APM. This website is configured in the IIS Manager on the APM Application Server machine. The websites list contains all the websites that are configured on the APM Application Server machine. The default website is *Default Web Site*. Throughout this documentation, we assume that you have chosen to install Meridium APM under the *Default Web Site*.

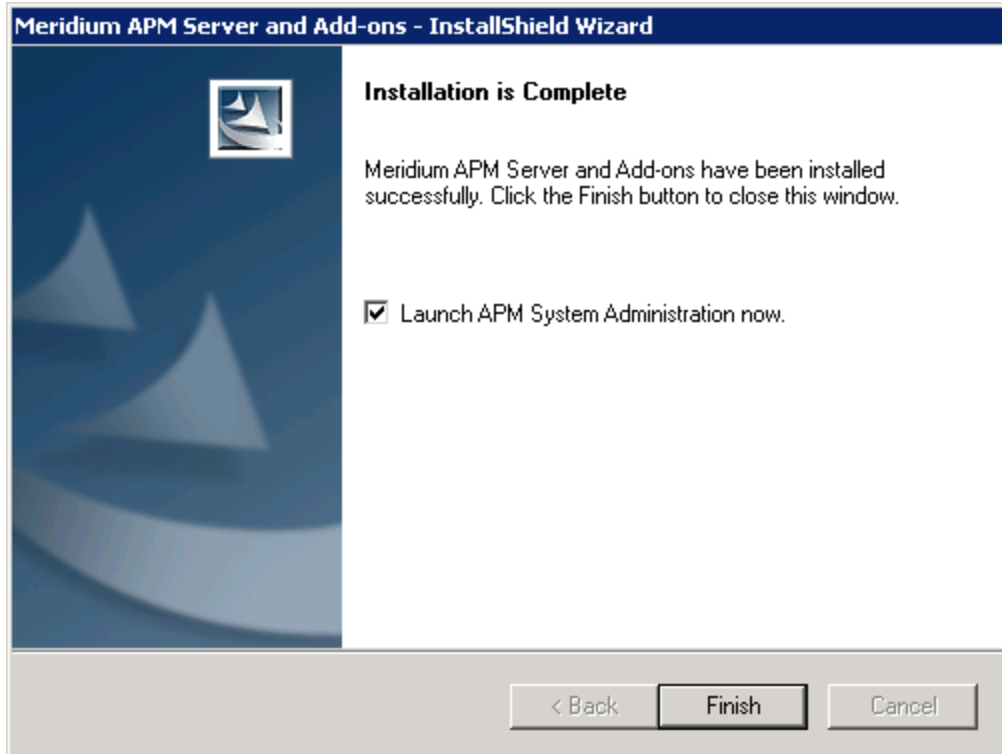
5. In the list of websites, select the website where you want the installer to create a virtual directory.
6. Click the **Next** button.

The **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.





This screen contains a message, indicating that Meridium APM Server and Add-ons has been installed successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to Yes.

7. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

*-or-*

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

8. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears.

## Installing Only the Meridium APM Framework Application

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The following instructions provide details on installing the Meridium APM Framework application on a 32-bit or 64-bit APM Framework machine.

These instructions assume:

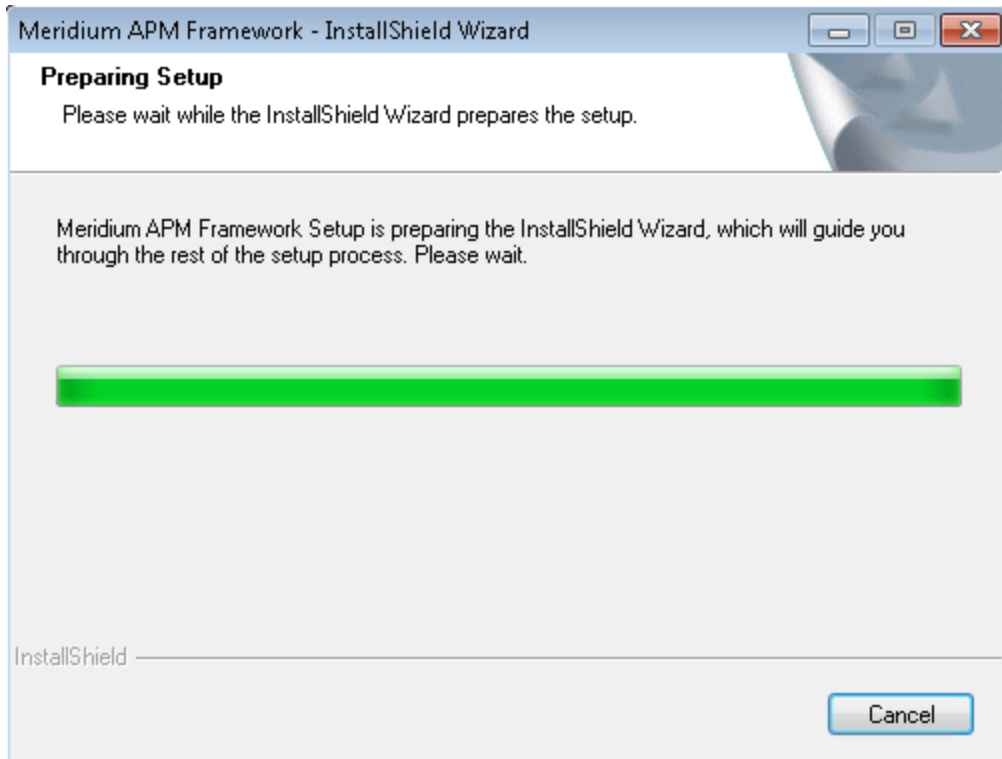
- That the APM Framework machine [meets the hardware and software requirements](#).
- The Application Server machine is already set up.
- The user on this APM Framework machine does not need to be able to design reports (i.e., you are not installing the Adapter for SSRS Designer).
- The user on this APM Framework machine does not need to use Administrative Applications (e.g., Configuration Manager).

**To install only the Meridium APM Framework application on an APM Framework machine:**

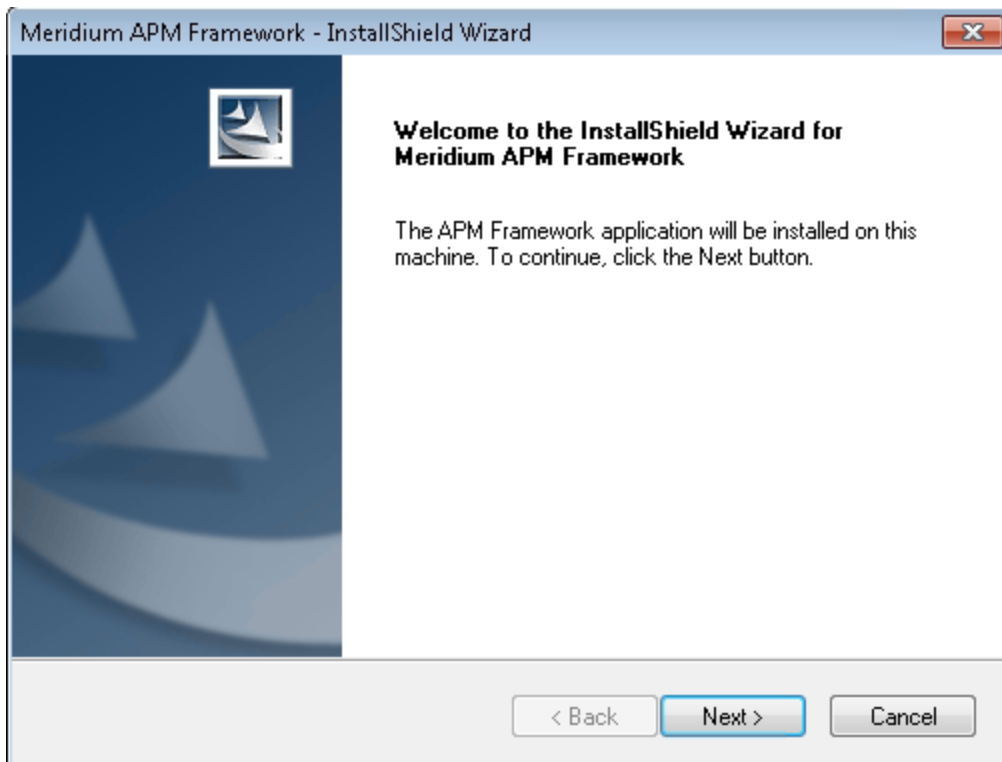
1. On the Meridium APM Framework machine on which you want to install the APM Framework application, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Framework**.
2. Double-click the file **setup.exe**.  
  
A message appears, asking if you want to allow the installer to make changes to your machine.
3. Click the **Yes** button.

The **Meridium APM Framework** installer appears, displaying the **Prepare Setup** screen, which contains a progress bar.

## Installing Only the Meridium APM Framework Application

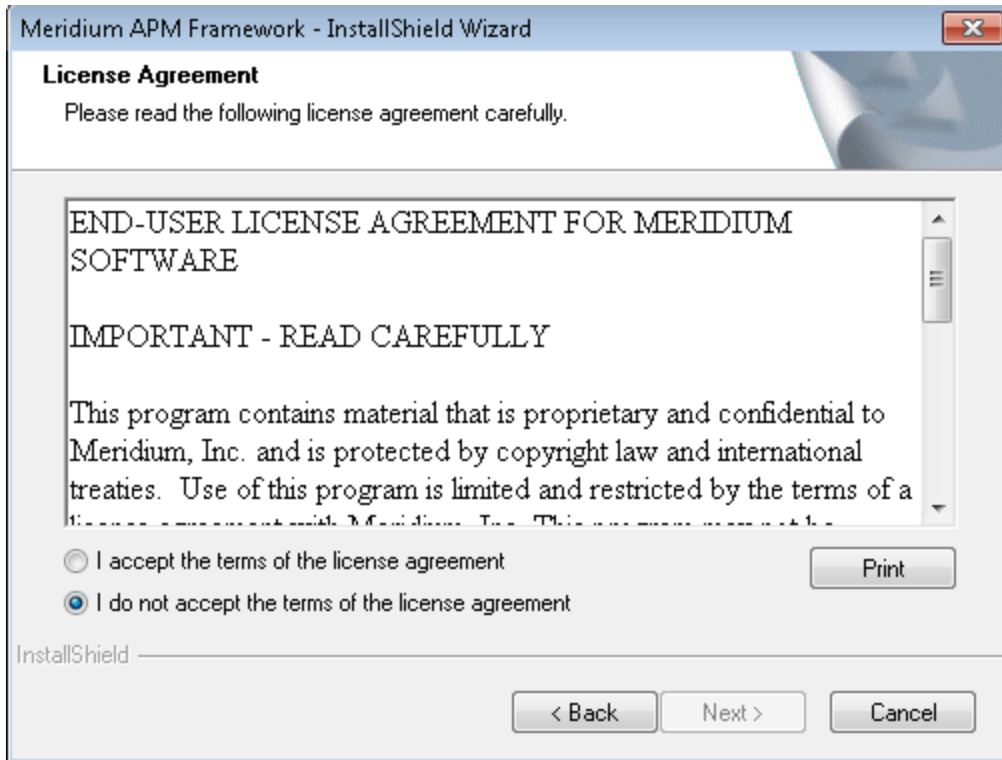


After the progress bar reaches the end, the Welcome screen appears.



4. Click the **Next** button.

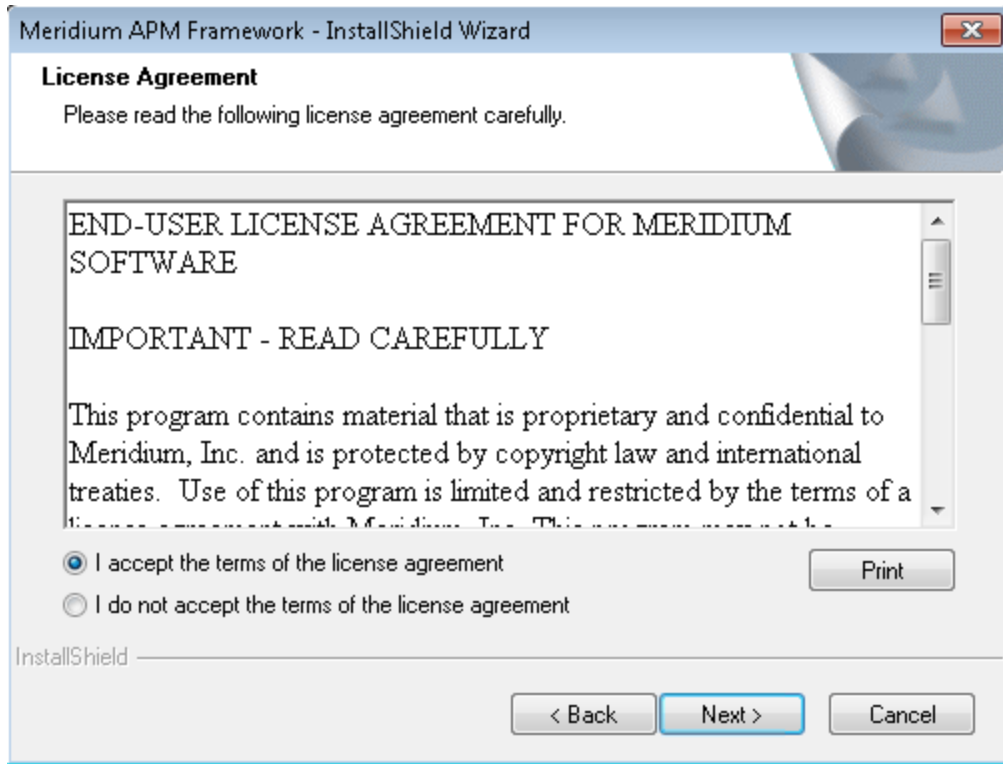
The **License Agreement** screen appears.



5. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

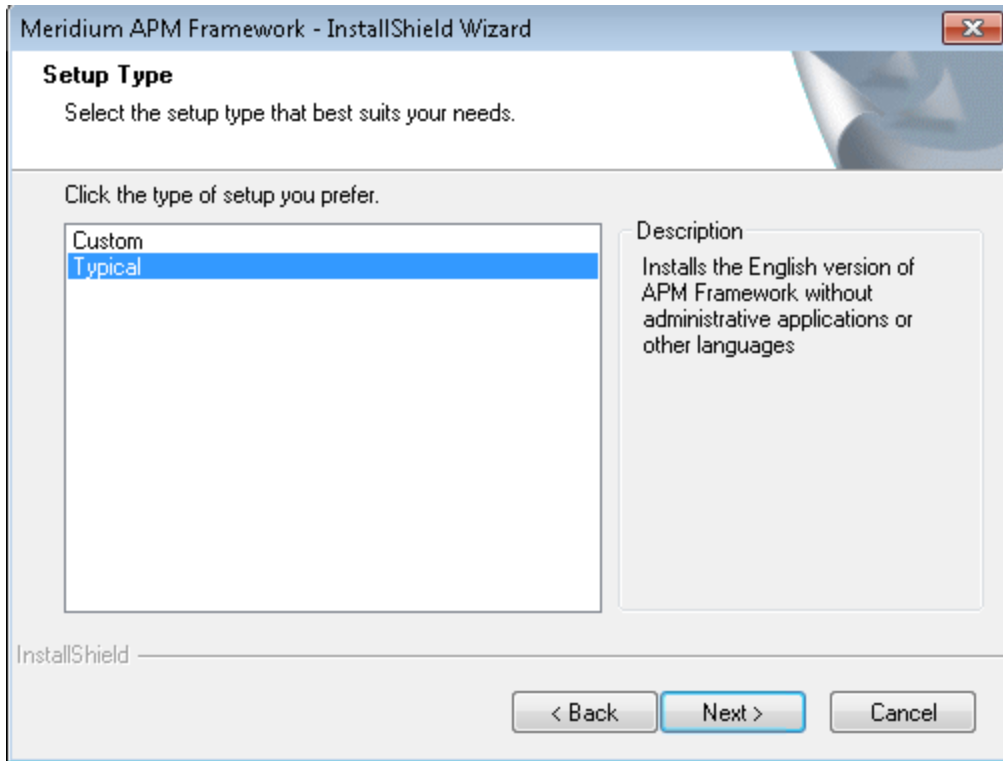
The **Next** button becomes enabled.



**CE Hint:** If you want to print the license agreement, click the **Print** button.

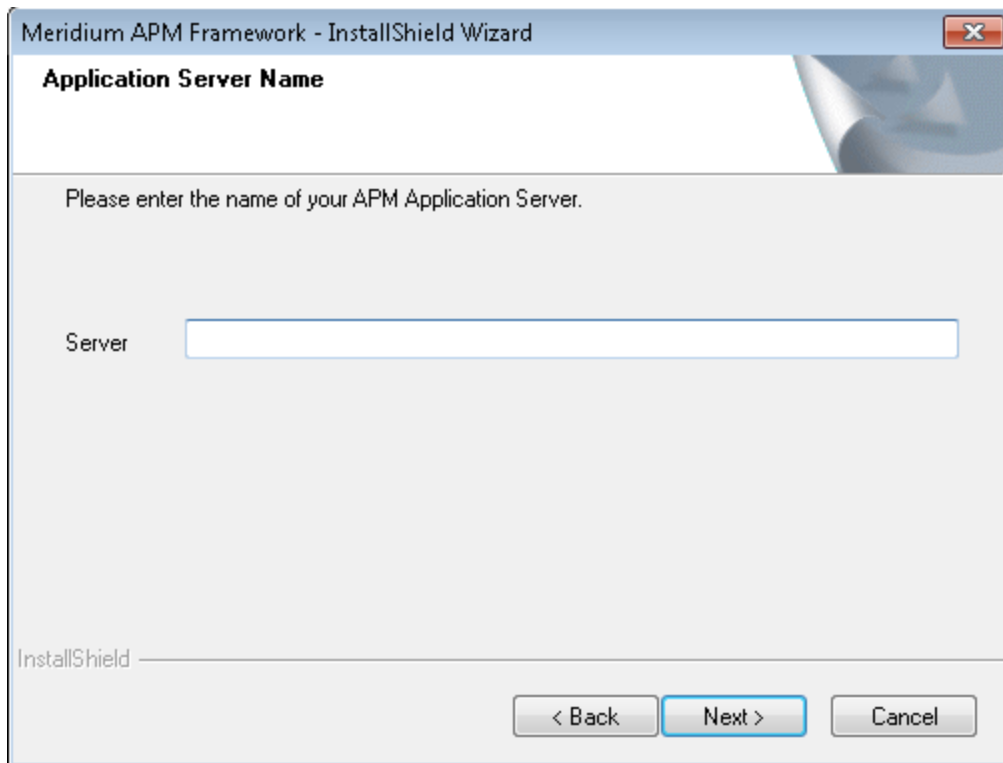
6. Click the **Next** button.

The **Setup Type** screen appears, asking which setup you want to use: *Custom* or *Typical*.



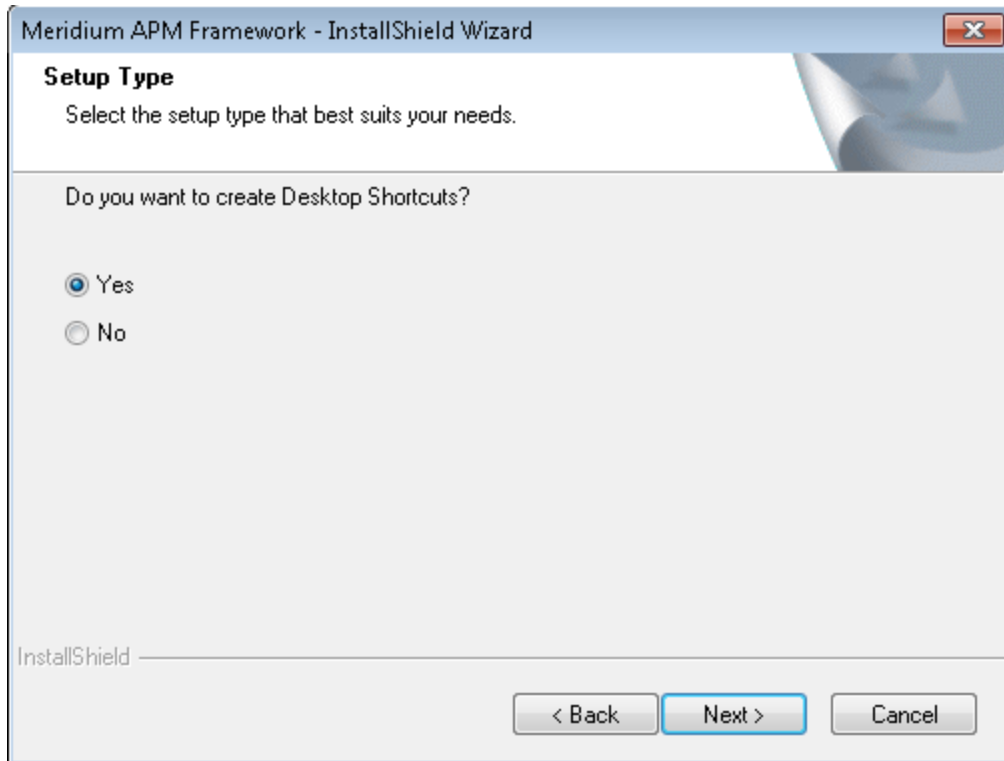
**CE Hint:** Select the options in the left pane to view a description of that option in the **Description** section to the right.

7. Accept the default selection, **Typical**, and click the **Next** button.  
The **Application Server Name** screen appears.



8. In the **Server** text box, type the name of the machine that serves as the dedicated Meridium APM Application Server.
9. Click the **Next** button.

The **Setup Type** screen appears, asking if you want to create shortcuts on your desktop.



By default, a shortcut will be created on the desktop of the APM Framework machine. You can, however, choose not to create the shortcut.

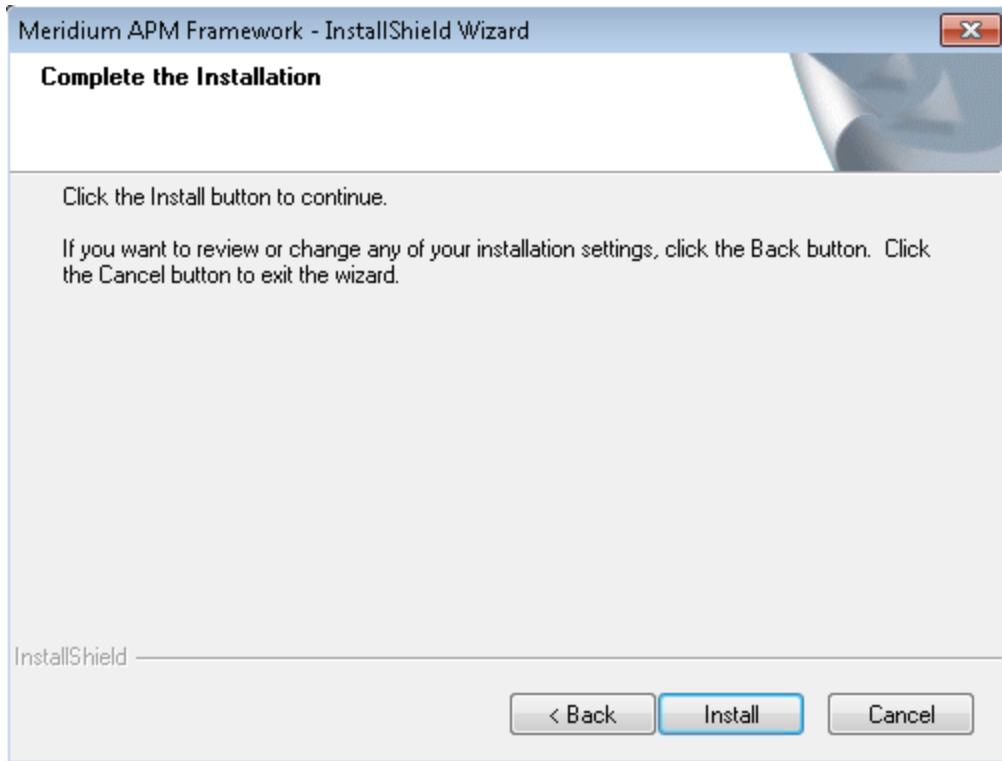
10. If you want a shortcut to be created on the desktop when the application is installed, accept the default selection, **Yes**, and click the **Next** button.

*-or-*

If you do not want a shortcut to be created on the desktop when the application is installed, select the **No** option, and click the **Next** button.

The **Complete the Installation** screen appears.



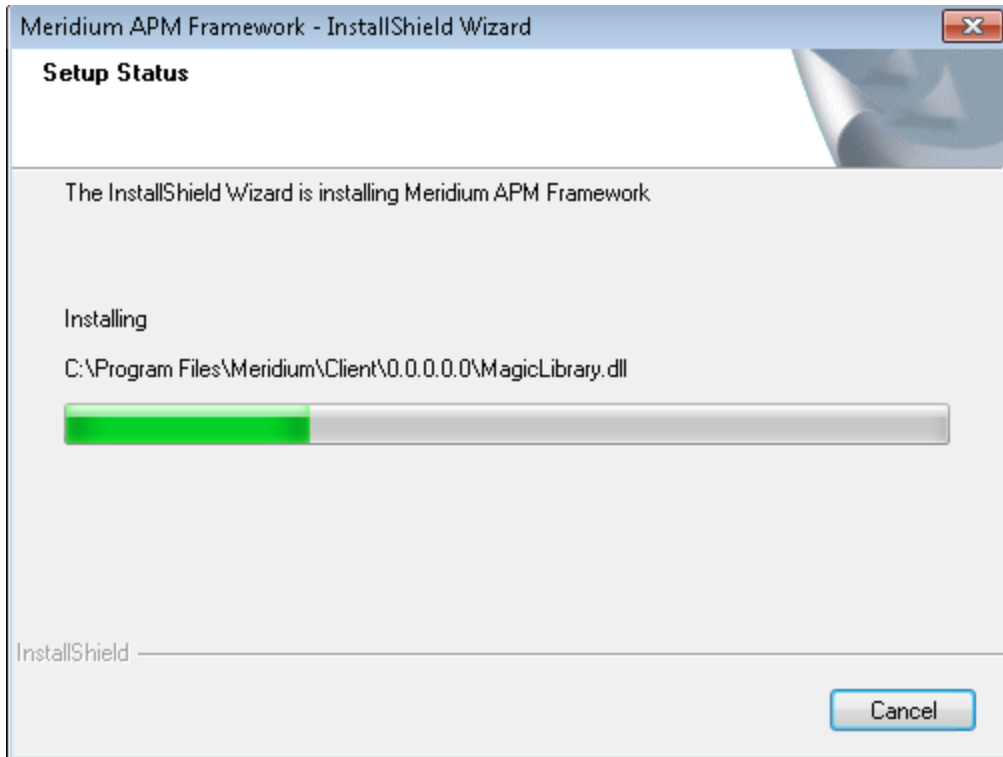


This screen contains a message indicating that you can change your settings on any of the previous screens by clicking the **Back** button, or you can close the installer by clicking the **Cancel** button. If you cancel the installation, however, all your settings will be lost. These instructions assume that you want to complete the installation now.

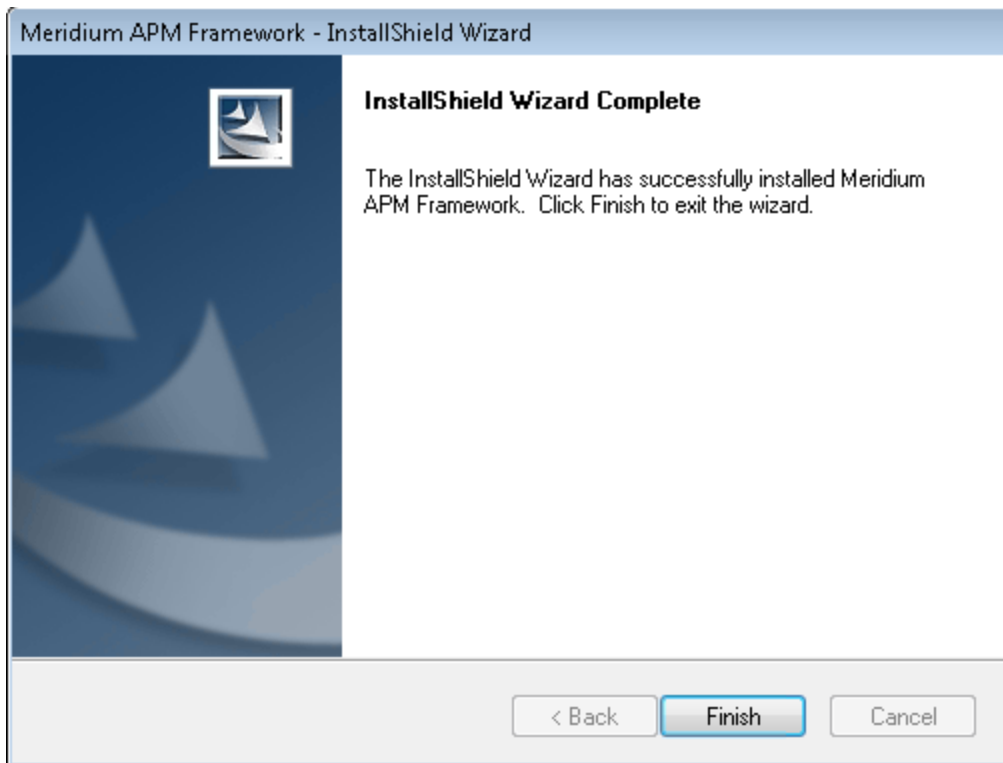
11. Click the **Install** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the installation process.

## Installing Only the Meridium APM Framework Application



After the progress bar reaches the end, a message appears, indicating that the ADOMD.Net is being configured. After ADOMD.Net is configured, the **InstallShield Wizard Complete** screen appears.



12. Click the **Finish** button.

The Meridium APM Framework installer closes. Additionally, if you indicated that a shortcut should be installed with the application, the icon will appear on the desktop. At this point, you should [refer back to the checklist](#).

# Installing the Meridium APM Framework and Select Administrative Applications

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The following instructions provide details on installing applications on a 32-bit or 64-bit APM Framework machine using the *Custom* option. The Custom option allows you to select the administration applications that you want to install in addition to the Meridium APM Framework application.

These instructions assume:

- That the APM Framework machine [meets the hardware and software requirements](#).
- The Application Server machine is already set up.
- The user on this Meridium APM Framework machine will need to be able to use administrative applications (e.g., Configuration Manager).
- The user on this Meridium APM Framework machine will need to be able to design reports.

**To install the Meridium APM Framework and administrative applications on the Meridium APM Framework machine:**

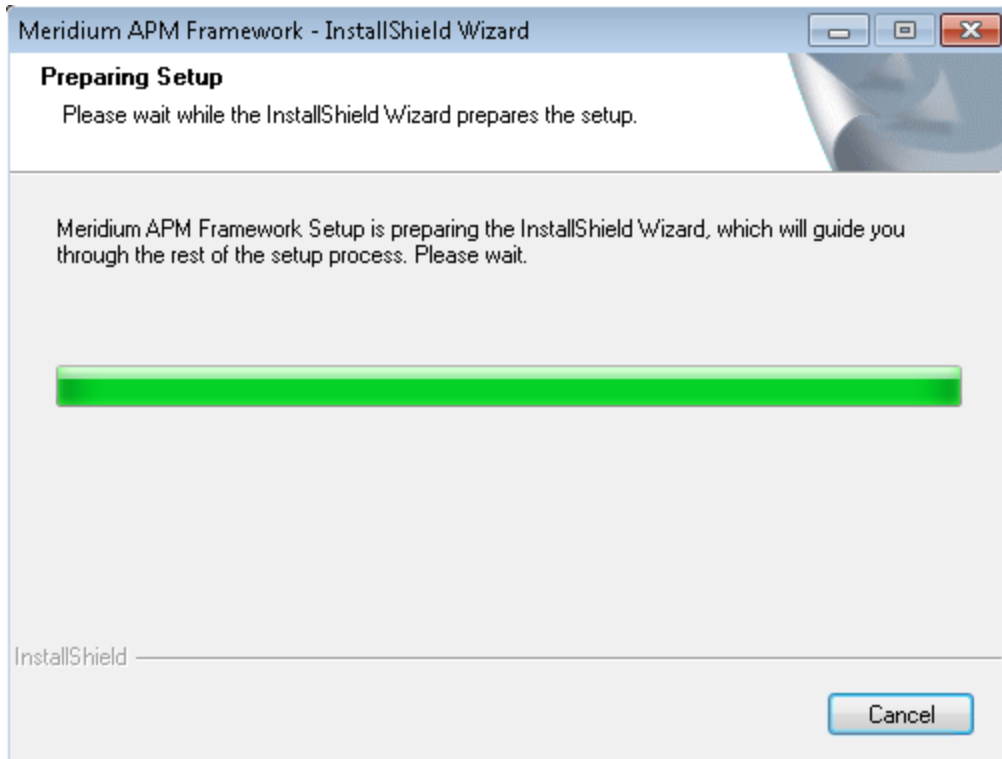
1. On the Meridium APM Framework machine on which you want to install the Meridium APM Framework and administrative applications, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Framework**.

2. Double-click the file **setup.exe**.

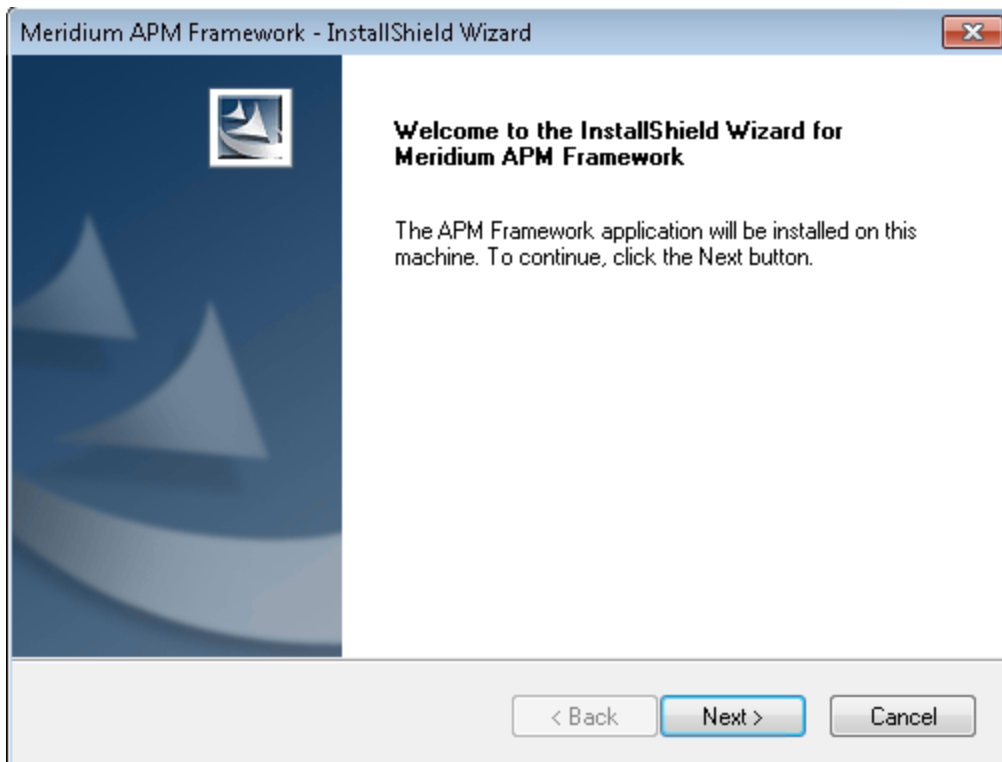
A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The **Meridium APM Framework** installer appears, displaying the **Prepare Setup** screen, which contains a progress bar.

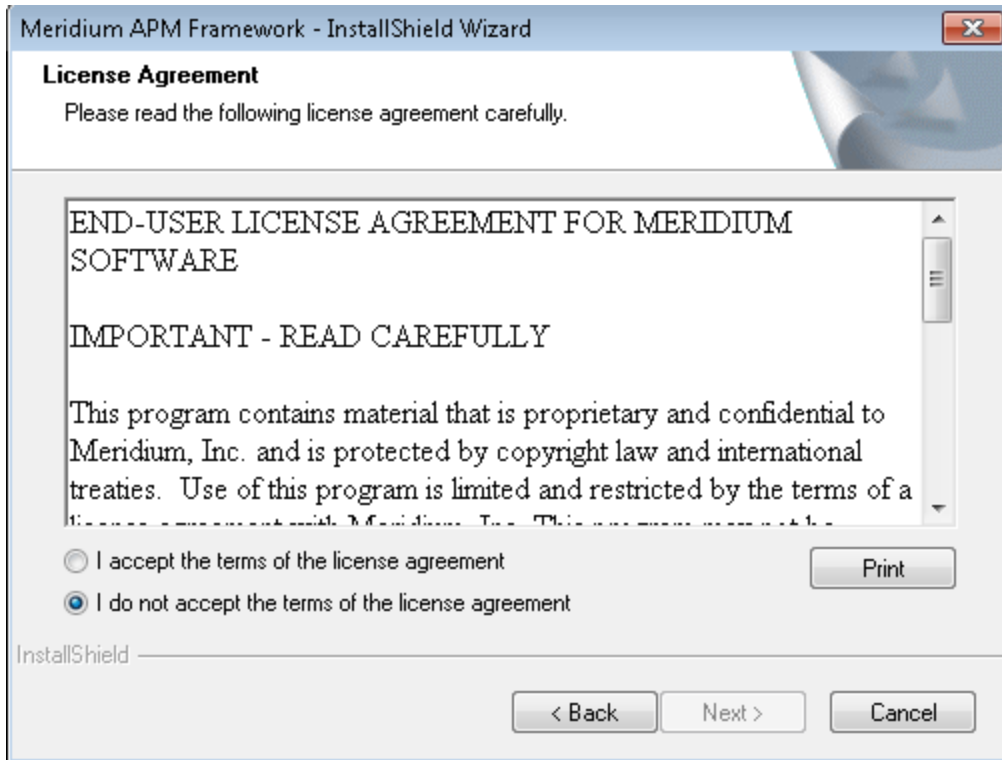


After the progress bar reaches the end, the Welcome screen appears.



4. Click the **Next** button.

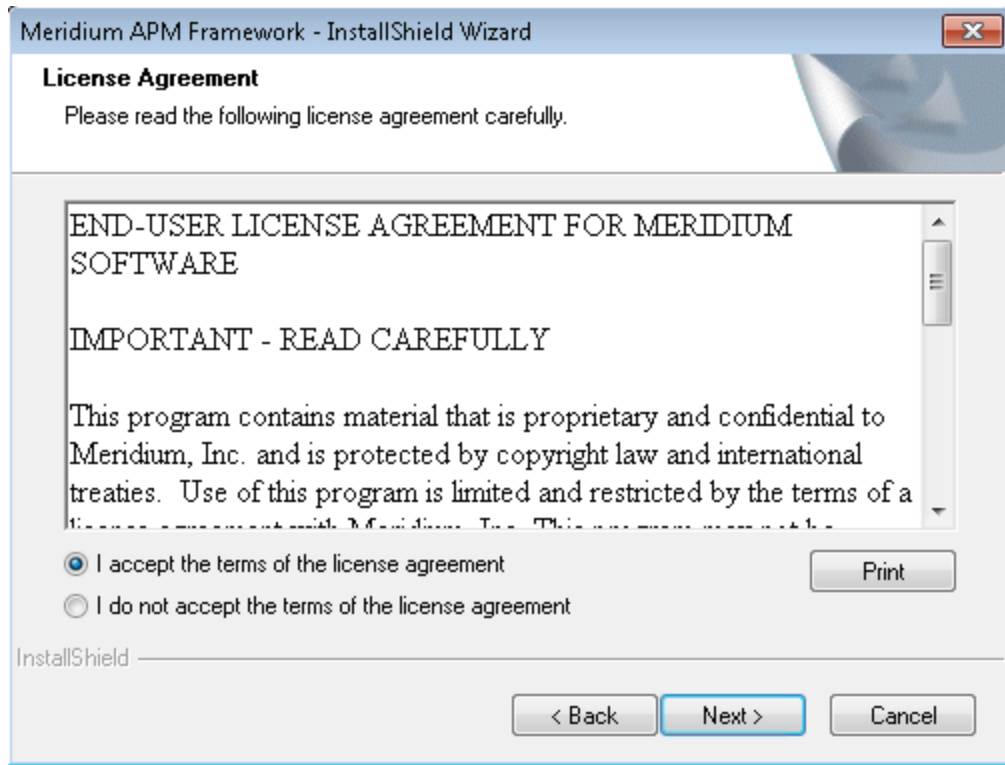
The **License Agreement** screen appears.



5. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do

not want to continue, click the **Cancel** button to exit the installer.

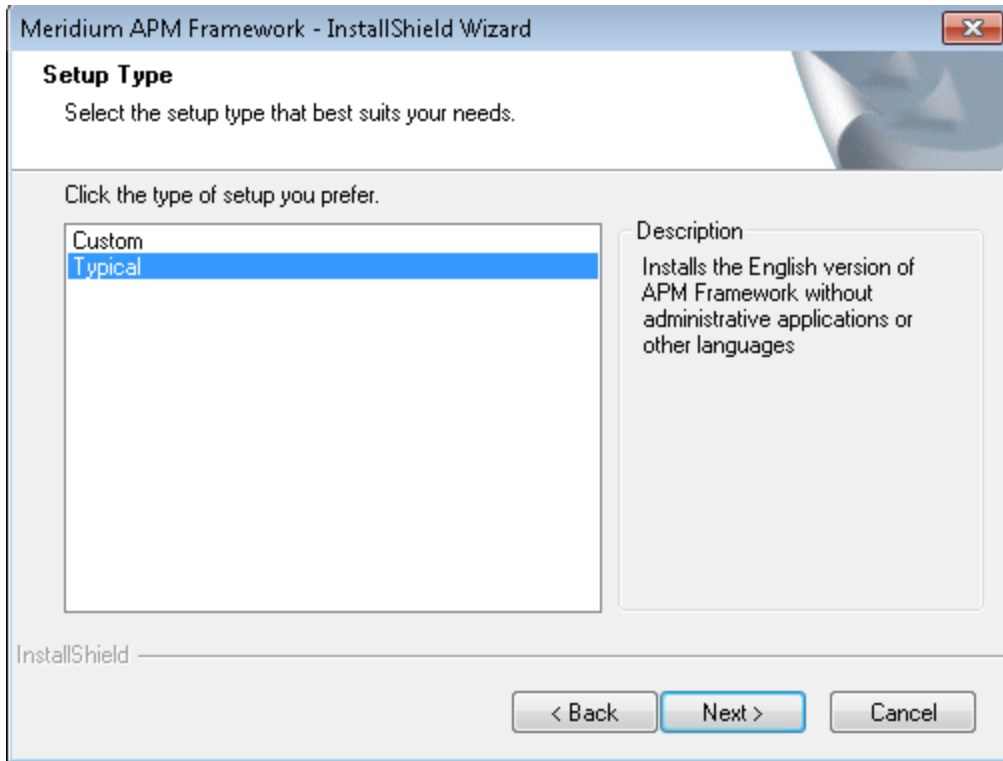


The **Next** button becomes enabled.

**CEHint:** If you want to print the license agreement, click the **Print** button.

6. Click the **Next** button.

The **Setup Type** screen appears, asking which setup you want to use: *Custom* or *Typical*.

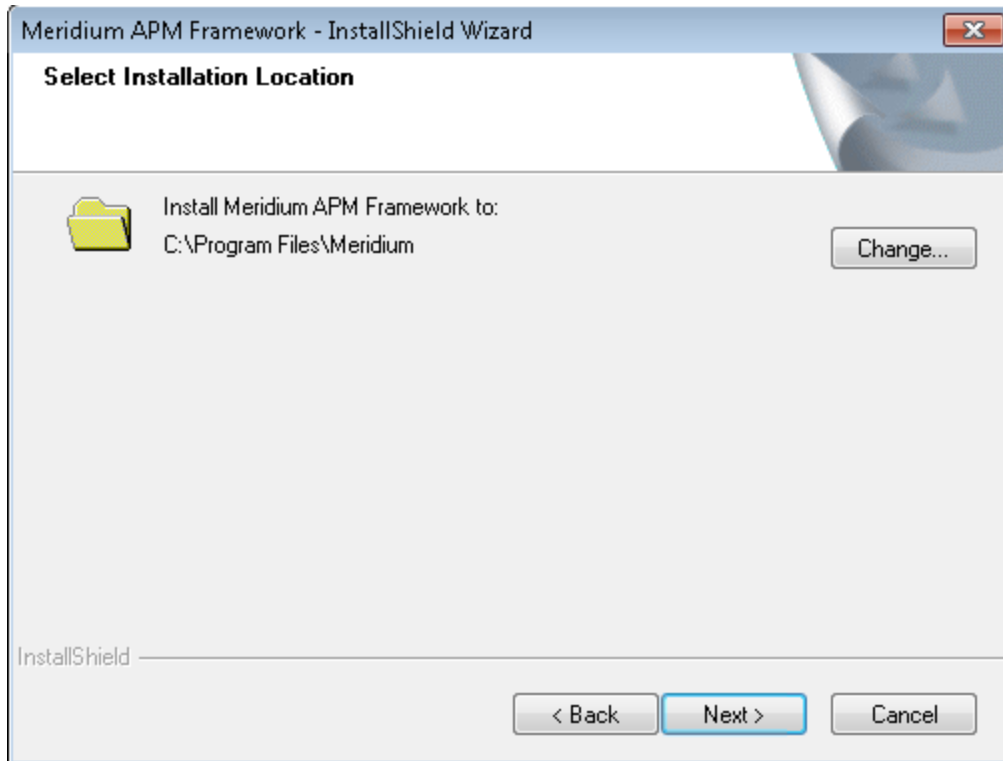


**CE Hint:** Select the options in the left pane to view a description of that option in the **Description** section to the right.

7. Select the **Custom** option, and click the **Next** button.

The **Select Installation Location** screen appears.





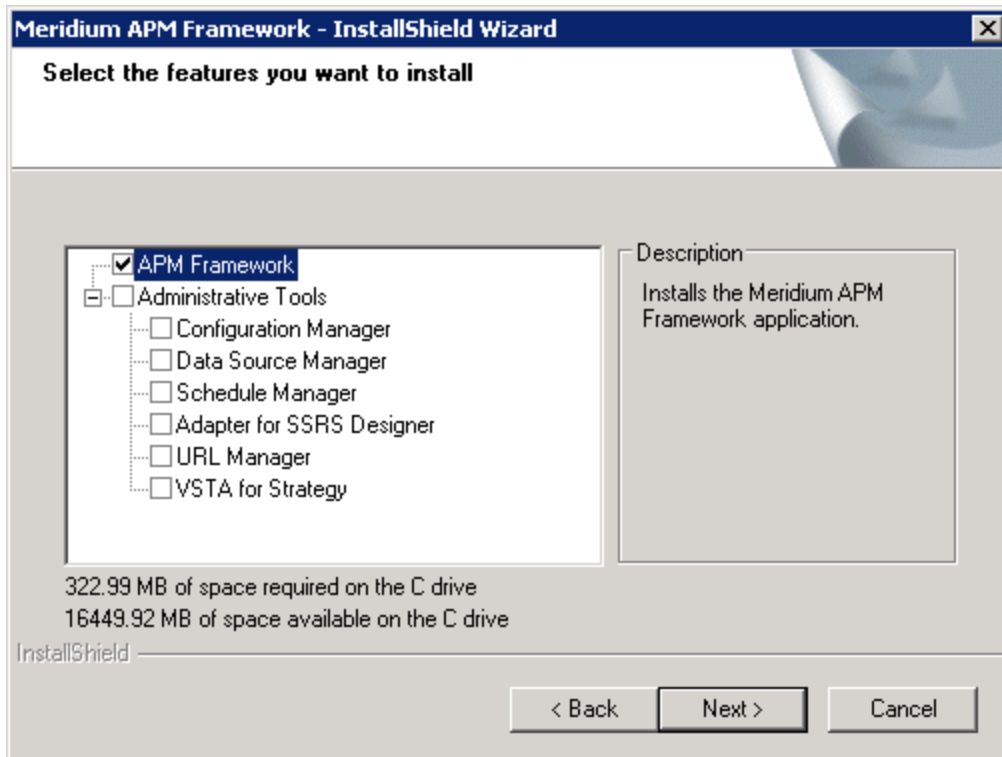
By default, the Meridium APM applications will be installed in the **C:\Program Files\Meridium** folder. You can, however, specify a different location for the files.

8. If you are satisfied with the installation location, click the **Next** button.

*-or-*

If you want to specify a different file path, click the **Change** button, and navigate to the location where you want the applications to be installed. The file path that you select will appear in place of the default file path. When you are satisfied with the file path, click the **Next** button.

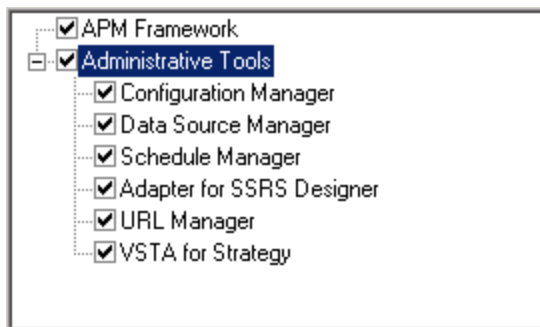
The **Select the features you want to install** screen appears.



The **APM Framework** check box is selected by default.

9. Select the **Administrative Tools** check box.

The subnodes are selected.



**OEHint:** If this machine will be used to create and modify reports, you should select the **Adapter for SSRS Designer** check box. Keep in mind, however, that the installer will check the [corresponding prerequisites](#) before you can complete the installation.

10. Clear the check boxes to the left of the administrative applications that you do *not* want to install.

-or-

If you want to install *all* the administrative applications, accept the default settings.

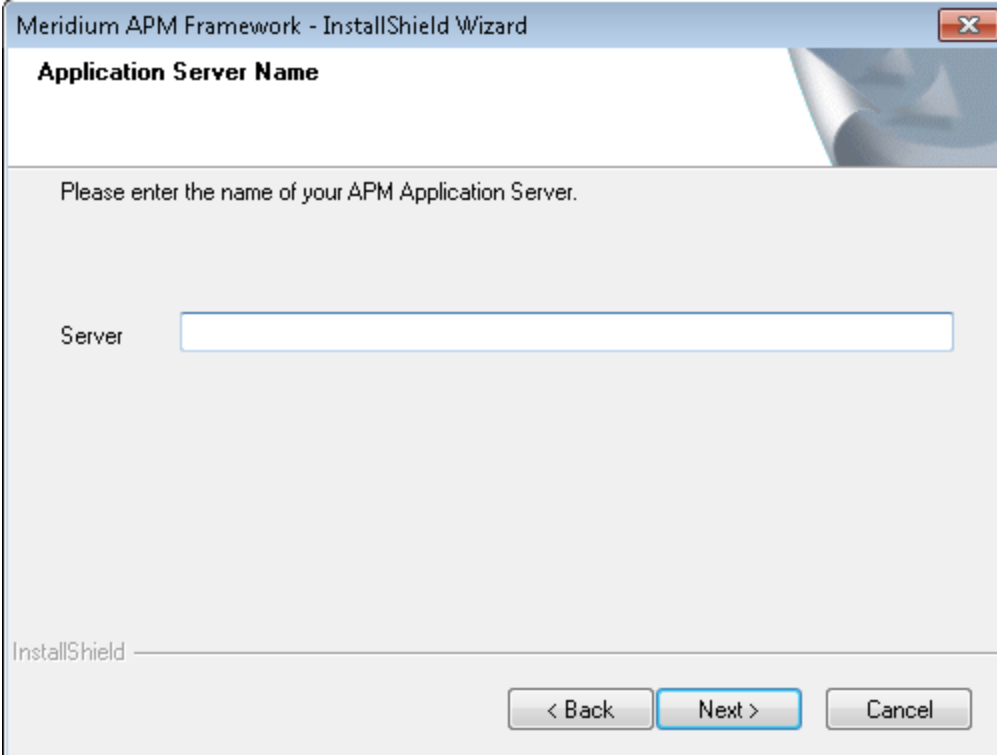
11. Click the **Next** button.

The installer checks your machine for the required prerequisites for the features that you want to install.

- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the feature that is dependent on that prerequisite. This message also indicates what you can do to continue.

If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

- If all the necessary prerequisites are found on your machine, the **Application Server Name** screen appears.



Meridium APM Framework - InstallShield Wizard

**Application Server Name**

Please enter the name of your APM Application Server.

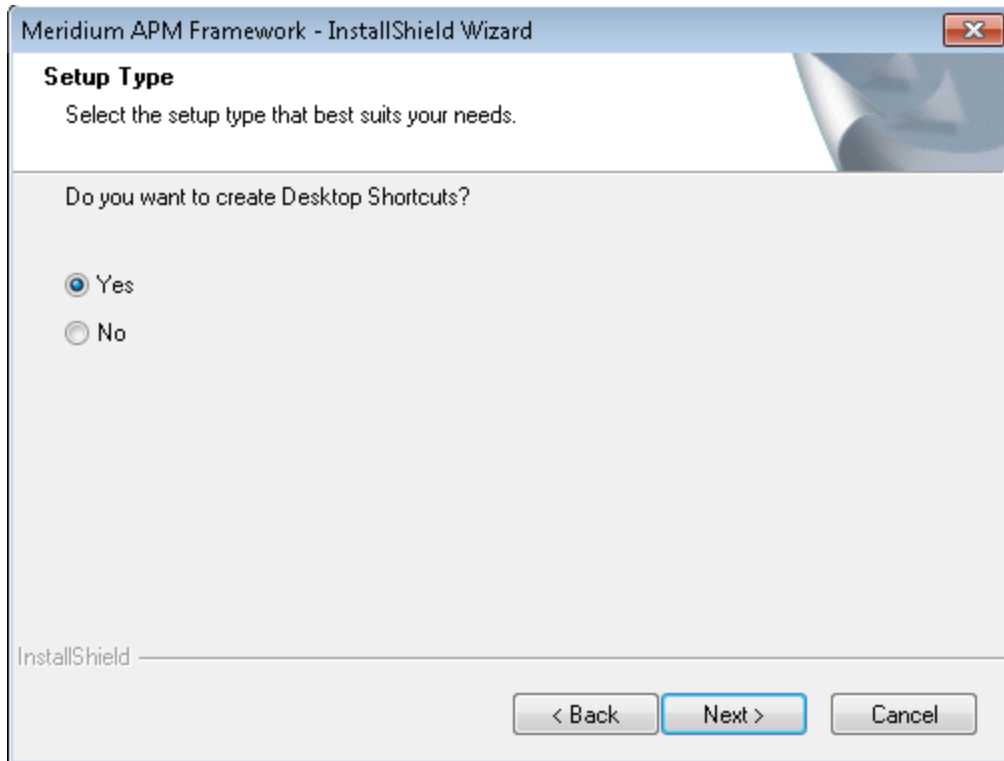
Server

InstallShield

< Back   Next >   Cancel

12. In the **Server** text box, type the name of the machine that serves as the Meridium APM Application Server.
13. Click the **Next** button.

The **Setup Type** screen appears, asking if you want to create shortcuts on your desktop.



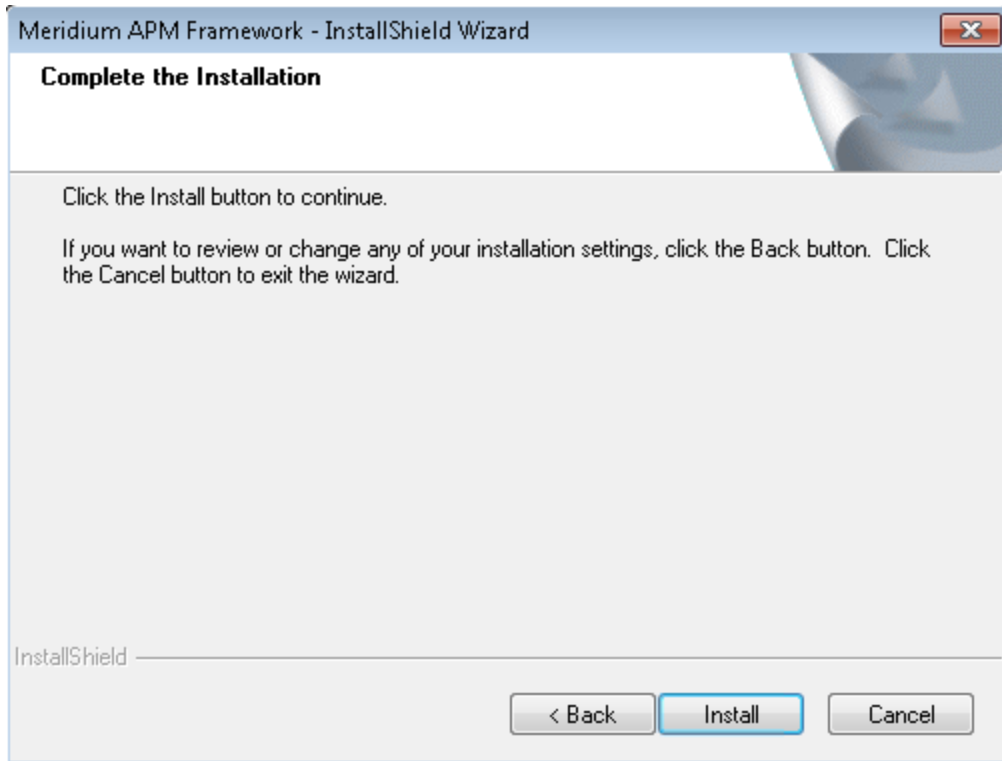
By default, shortcuts will be created on the desktop of the APM Framework machine: one for each application that you install. You can, however, choose not to create the shortcuts.

14. If you want shortcuts to be created on the desktop when the applications are installed, accept the default selection, **Yes**, and click the **Next** button.

-or-

If you do not want shortcuts to be created on the desktop when the applications are installed, select **No**, and click the **Next** button.

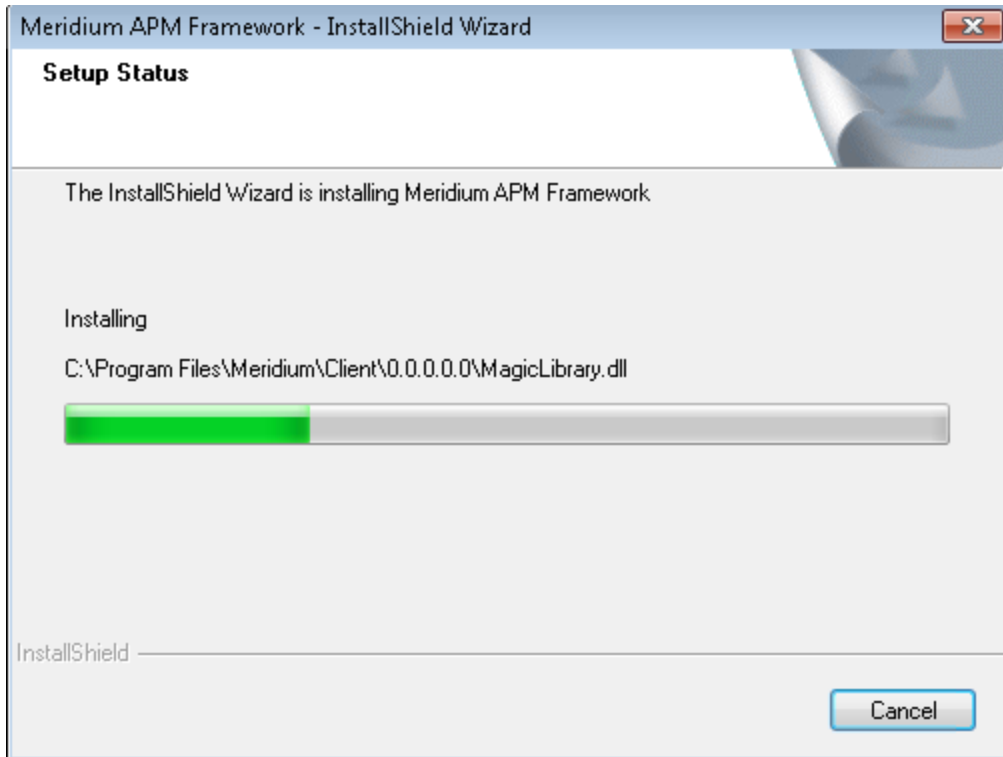
The **Complete the Installation** screen appears.



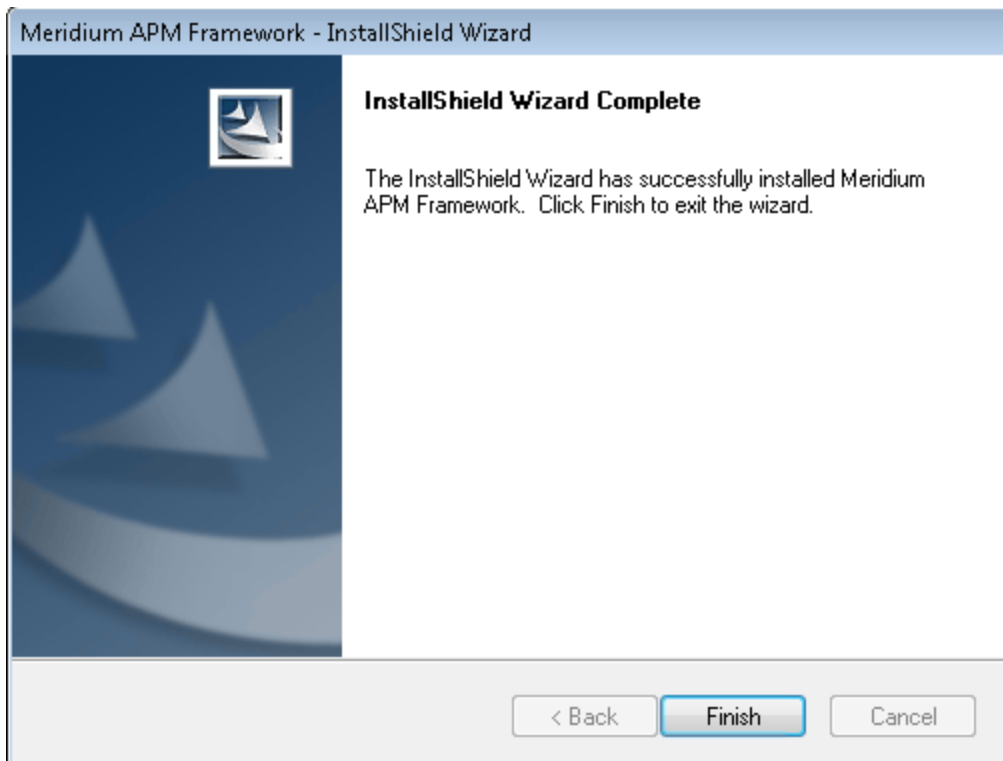
This screen contains a message indicating that you can change your settings on any of the previous screens by clicking the **Back** button, or you can close the installer by clicking the **Cancel** button. If you cancel the installation, however, all your settings will be lost. These instructions assume that you want to complete the installation now.

15. Click the **Install** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the installation process.



After the progress bar reaches the end, a message appears, indicating that the ADOMD.Net is being configured. After ADOMD.Net is configured, the **InstallShield Wizard Complete** screen appears.



16. Click the **Finish** button.

The Meridium APM Framework installer closes. Additionally, if you indicated that shortcuts should be installed with the corresponding applications, those icons will appear on the desktop. At this point, you should [refer back to the checklist](#).

# Performing a Silent Installation on APM Framework Machines

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A *silent installation* is one in which the user of a machine does not interact with the installation process while the Meridium APM applications are installed. To do so, you will need to perform the APM Framework installation once in *record mode*, which will record all the settings that you select in the installer to an ISS file. You can then use the ISS file to silently install on each APM Framework machine an identical installation to the one that was recorded in the ISS file.

The following instructions provide an overview of how you can perform a silent installation. Depending upon the structure of your company and its workstations, you may need to perform additional steps.

These instructions assume that all the APM Framework machines [meet the hardware and software requirements](#).

## To perform a silent installation on APM Framework machines:

1. Copy the Meridium APM Framework installer files to a local drive on an APM Framework machine.
2. On the APM Framework machine, run the Meridium APM Framework installer in *record mode*. This will create an ISS file.

To do so, use the following command prompt: `setup.exe /r /f1 "<folder path>\<ISS file name>"`

...where:

- **<folder path>** is the path to the folder where the Meridium APM Framework installer files were saved and in which you want the ISS file to be created.
- **<ISS file name>** is the name that you want to give to the ISS file that will be created after the Meridium APM Framework installer runs in *record mode*.

As you navigate through the Meridium APM Framework installer in *record mode*, ALL the settings that you specify will be recorded to the ISS file, which you can use to perform an identical installation on any other Meridium APM Framework machine.

**CEHint:** If you want to install different applications on some APM Framework machines, you can run the installer in record mode for each ISS file that you want to create.

3. Copy the ISS file to each APM Framework machine where you want to perform an identical installation to the one that you ran in *record mode*.
4. Run the Meridium APM Framework installer in *silent mode*. This will perform the installation that is recorded in the ISS file.



## Performing a Silent Installation on APM Framework Machines

To do so, use the following command prompt: **setup.exe /s /f1 "<ISS file path>"**, where **<ISS file path>** is the file path to the ISS file on that machine.

The installation will be performed without any interaction from a user.

## Granting Windows Security Permissions

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To use the Meridium APM Framework application, users must have the proper Windows security permissions. You must configure the following permissions for any Windows user or group that should be allowed access to the Meridium APM Framework application:

- Full control to the **HKEY\_CURRENT\_USER\Software\Meridium** hive in the Windows Registry. These permissions are needed so that Meridium APM can add and remove values to this hive in the Windows Registry.
- Full control to the **HKEY\_LOCAL\_MACHINE\Software\Meridium** hive in the Windows Registry. These permissions are needed so that Meridium APM can add and remove values to this hive in the Windows Registry.
- Full control to the root Meridium APM folder (e.g., C:\Program Files\Meridium) and subfolders. Write, modify, and delete permissions are needed to support the Application Updater, which must be able to copy files to and remove files from the Meridium APM folder and its subfolders. Additionally, write and modify permissions are needed to support Configuration Manager tasks, such as working with rule projects. These permissions must be set before users access Meridium APM for the first time.
- Full control to the folder **<root drive>:\Program Files (x86)\Microsoft Visual Studio <version>\Common7\IDE\PrivateAssemblies**, where **Microsoft Visual Studio <version>** is version-specific folder in which the Visual Studio software is installed (e.g., Microsoft Visual Studio 8, 9.0, and so on). These permissions are needed to support the Application Updater and must be set for each version of SQL Server Business Intelligence Development Studio that is installed. If you are using a 32-bit Meridium APM Framework machine, note that you will use the **Program Files** folder (not **Program Files (x86)**).

**Note:** How you grant these permissions will depend upon your security policies and the operating system that is being used. For example, on the Windows XP operating system, these permissions can be granted by making users Administrators on the machine. On the Windows 7 operating system, full control must be granted to the appropriate folders, even for Administrators. Refer to the documentation for your Windows operating system for details on configuring these permissions.

# Installing Microsoft Visual Studio Tools for Applications

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## Why Does This Software Need to Be Installed?

Microsoft Visual Studio 2005 Tools for Applications (VSTA) is a third-party application that Meridium APM uses as the **Meridium APM Rules Editor**. The **Meridium APM Rules Editor** is available in the Configuration Manager application for writing and editing business rules and is also available in the Meridium APM Framework application for working with Strategy rules. This means that VSTA must be installed if you want to:

- Install the Configuration Manager application.
- Work with Strategy rules in the Meridium APM Framework application without installing the Configuration Manager.

If you plan to implement either of the preceding scenarios, VSTA must be installed *before* you install the Meridium APM Framework application. When you run the Meridium APM Framework installer and select either of these options, the installer will check to make sure that VSTA has been installed. These options will not be allowed unless VSTA is already installed.

**Note:** If you are using a 64-bit APM Framework machine and you want to use the debugging feature in VSTA, you will also need to install the [Microsoft Visual Studio 2005 Remote Debugger software](#) on that machine.

## Where Does This Software Need to Be Installed?

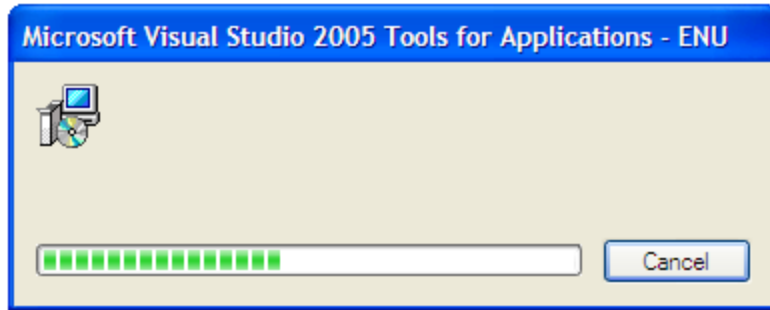
Microsoft Visual Studio 2005 Tools for Applications (VSTA) must be installed on every Meridium APM Framework workstation where you want to install the Data Configuration Manager application or work with Strategy rules in the Meridium APM Framework application without installing the Configuration Manager. Note that MSXML must also be installed on these workstations.

## Performing the Installation

To install Microsoft Visual Studio 2005 Tools for Applications:

1. On the Meridium APM Framework workstation, insert the Required 3rd Party Components DVD, and navigate to the folder **Visual Studio Tools for Applications**.
2. Double-click the file `vsta_aide.msi`.

The installer starts running, and the **Microsoft Visual Studio 2005 Tools for Applications** dialog box appears to show the progress of the installation.



When the installation is complete, the dialog box will close automatically.

# Installing Microsoft Visual Studio 2005 Remote Debugger

---

## Why Does This Software Need to Be Installed?

If you have Microsoft Visual Studio 2005 Tools for Applications (VSTA) installed on a 64-bit Meridium APM Framework machine and you want to use the debugging feature in VSTA, the Microsoft Visual Studio 2005 Remote Debugger software must be installed on that machine. Otherwise, the debugging feature will not work.

## Where Does This Software Need to Be Installed?

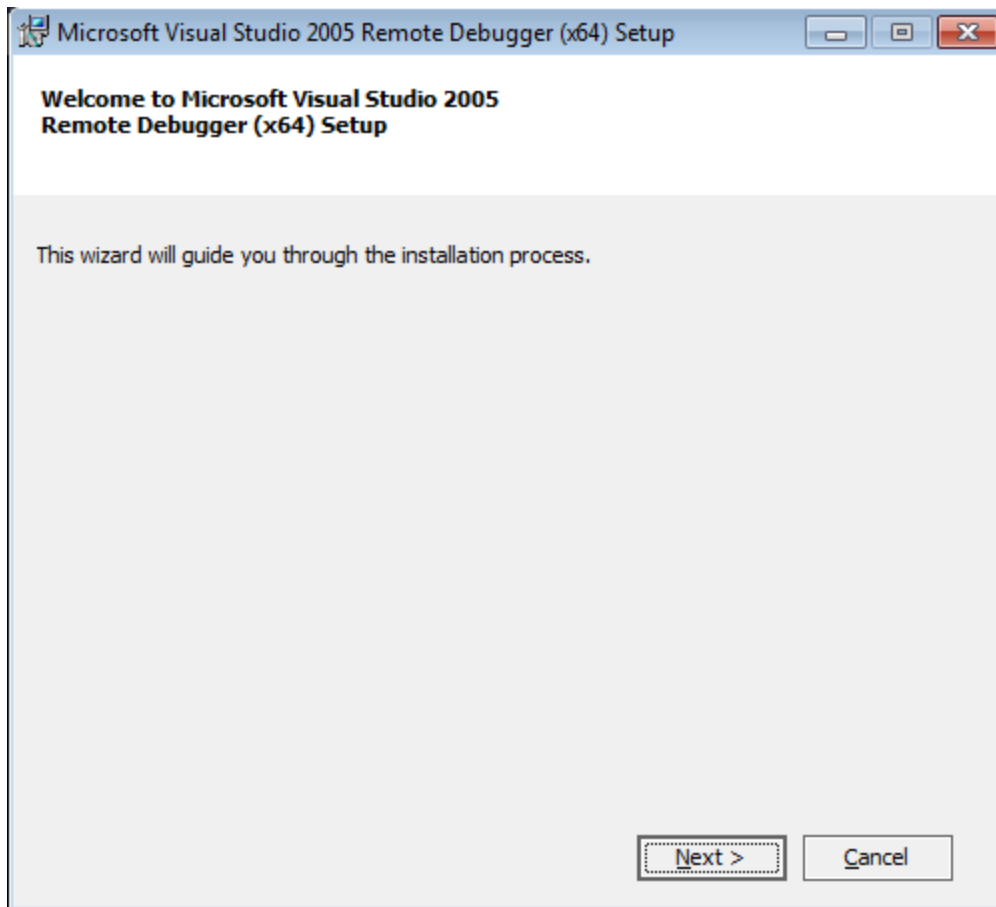
Microsoft Visual Studio 2005 Remote Debugger must be installed on every 64-bit Meridium APM Framework machine where you want to use the debugging feature in VSTA. Microsoft Visual Studio 2005 Tools for Applications (VSTA) must be installed before you can install the Remote Debugger software.

## Performing the Installation

To install Microsoft Visual Studio 2005 Remote Debugger on a 64-bit Meridium APM Framework machine:

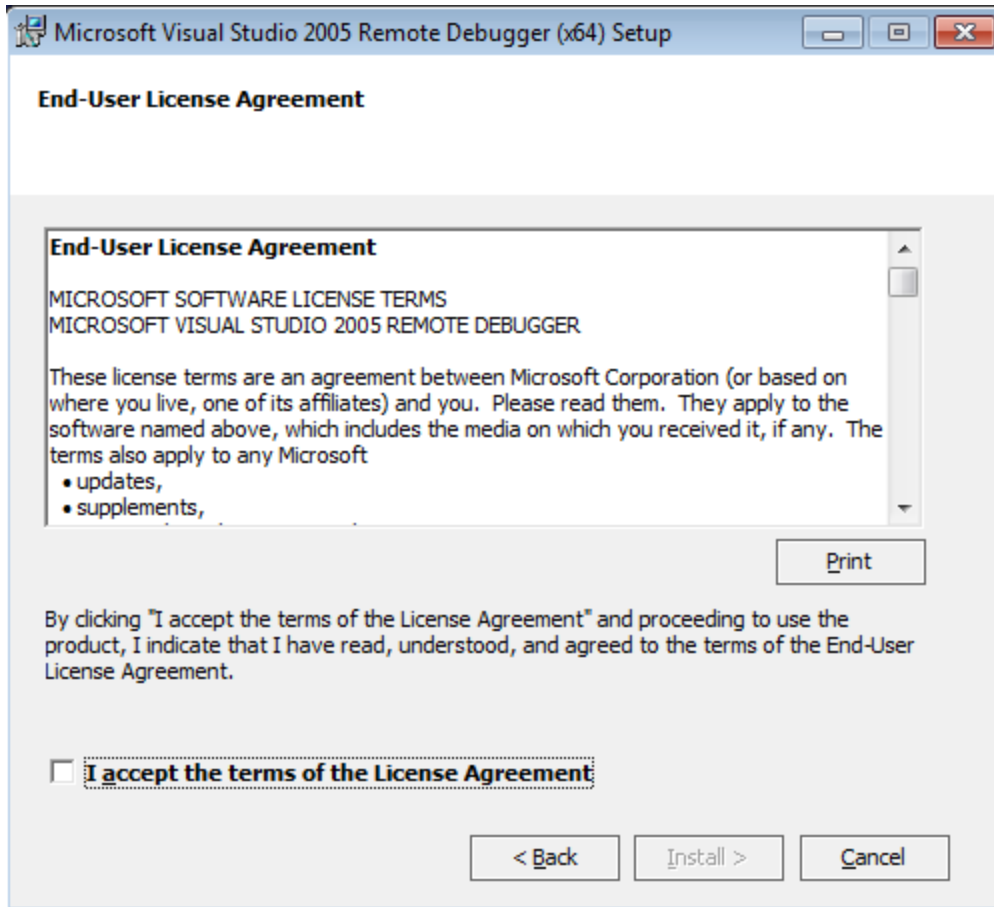
1. On the Meridium APM Framework workstation, insert the Required 3rd Party Components DVD, and navigate to the folder **Visual Studio Tools for Applications**.
2. Double-click the file **rdbgsetup.exe**.  
A message appears, asking if you want to allow rdbgsetup.exe to make changes to your computer.
3. Click the **Yes** button.

A dialog box appears, containing a progress bar. After the progress bar reaches the end, the **Microsoft Visual Studio 2005 Remote Debugger (X64) Setup** installer appears, displaying the Welcome screen.



4. Click the **Next** button.

The **End-User License Agreement** screen appears.

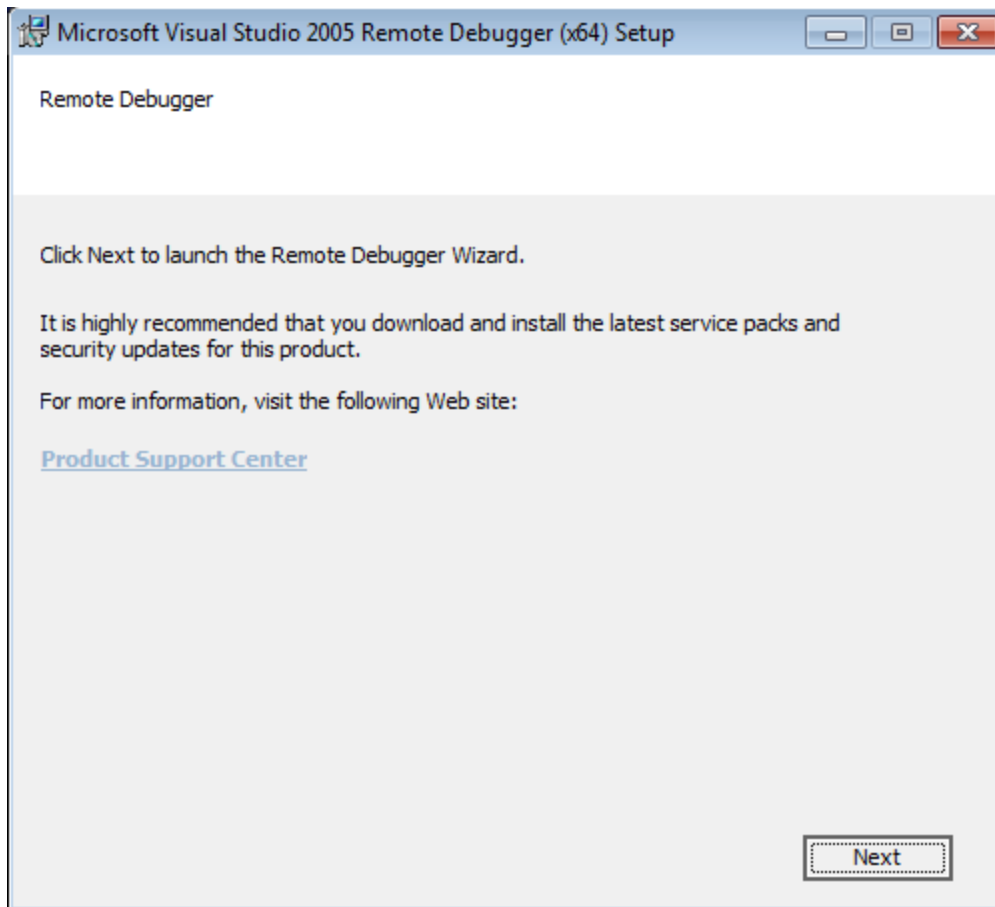


5. Read the end-user license agreement, and then click the **I accept the terms of the License Agreement** check box.

The **Install** button is enabled.

6. Click the **Install** button.

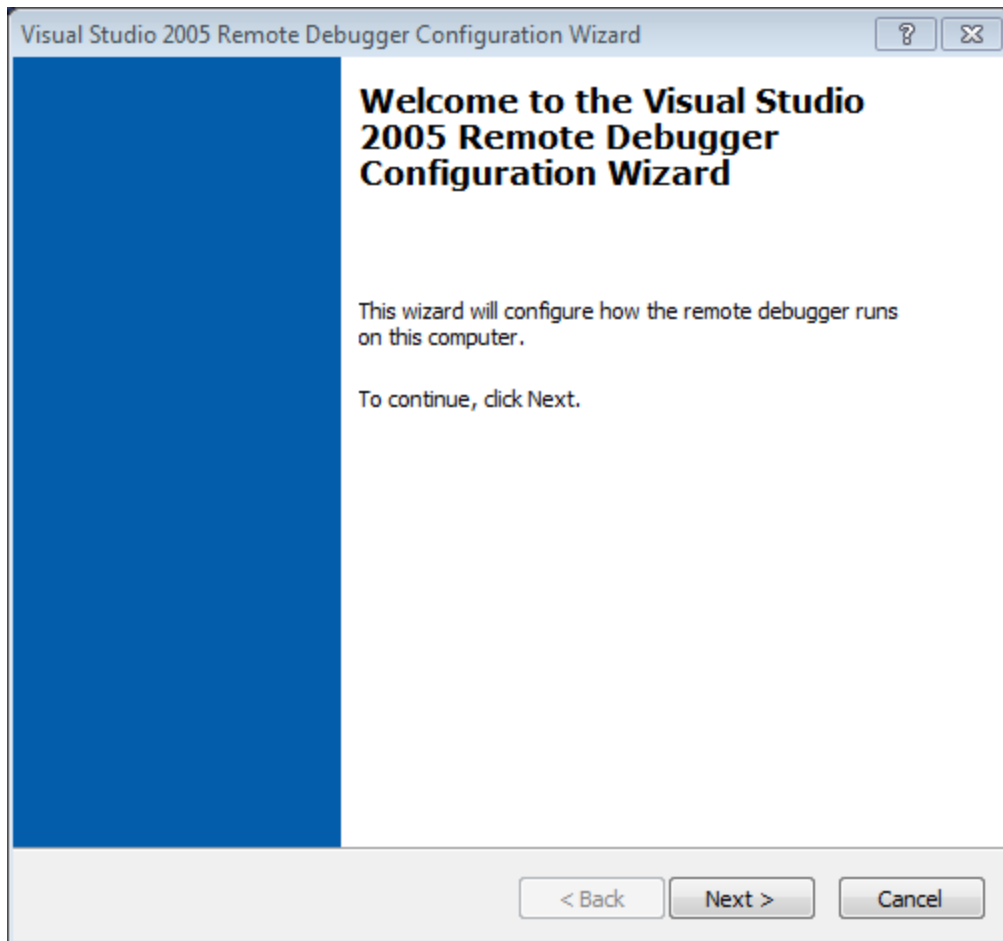
The **Setup** dialog box appears, displaying a progress bar, indicating the progress of the installation process. After the progress bar reaches the end, the **Remote Debugger** screen appears.



7. Click the **Next** button.

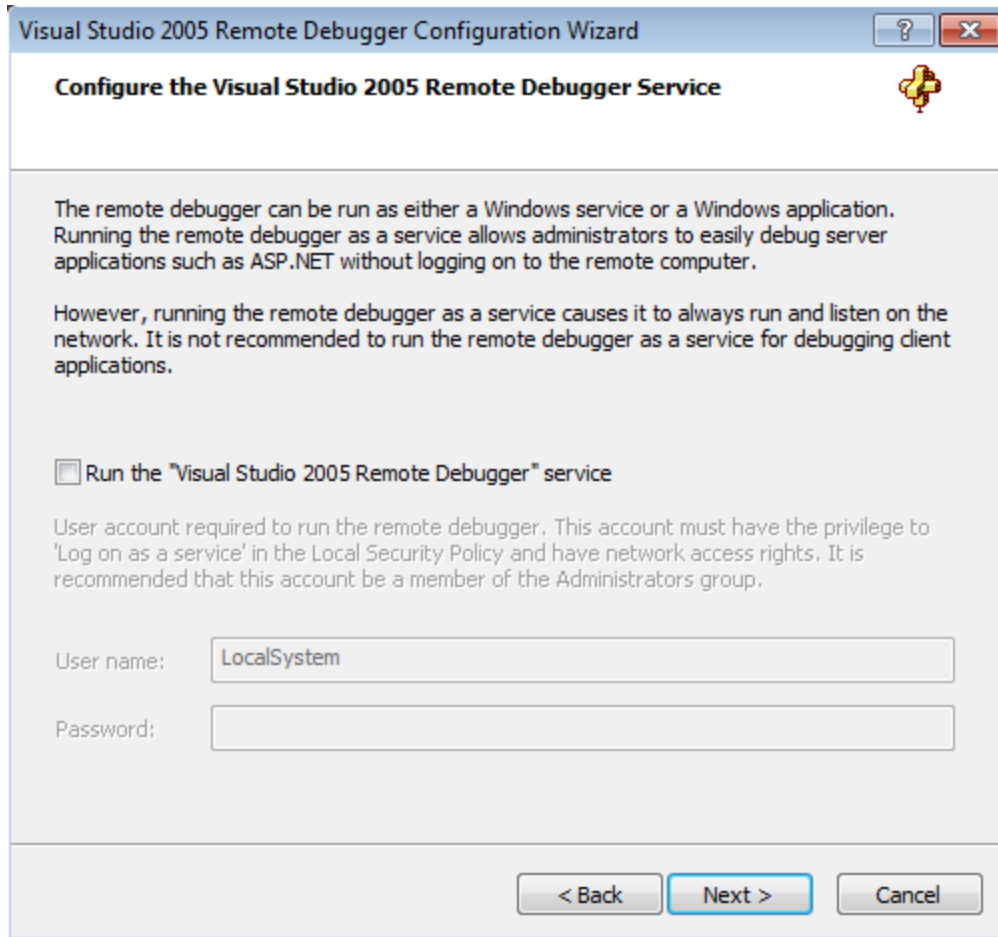
The **Microsoft Visual Studio 2005 Remote Debugger (X64) Setup** installer closes, and the **Visual Studio 2005 Remote Debugger Configuration Wizard** appears, displaying the Welcome screen.





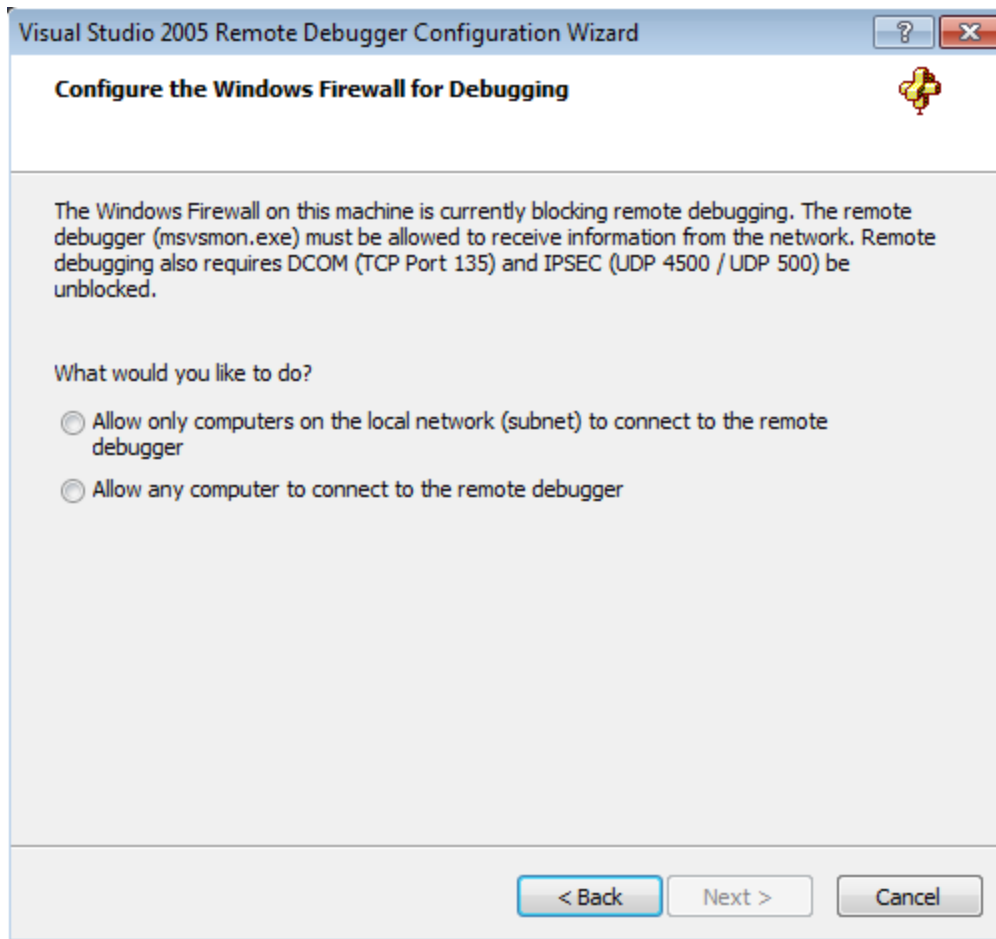
8. Click the **Next** button.

The **Configure the Visual Studio 2005 Remote Debugger Service** screen appears.



9. Accept the default selection, and click the **Next** button.

The **Configure the Windows Firewall for Debugging** screen appears.

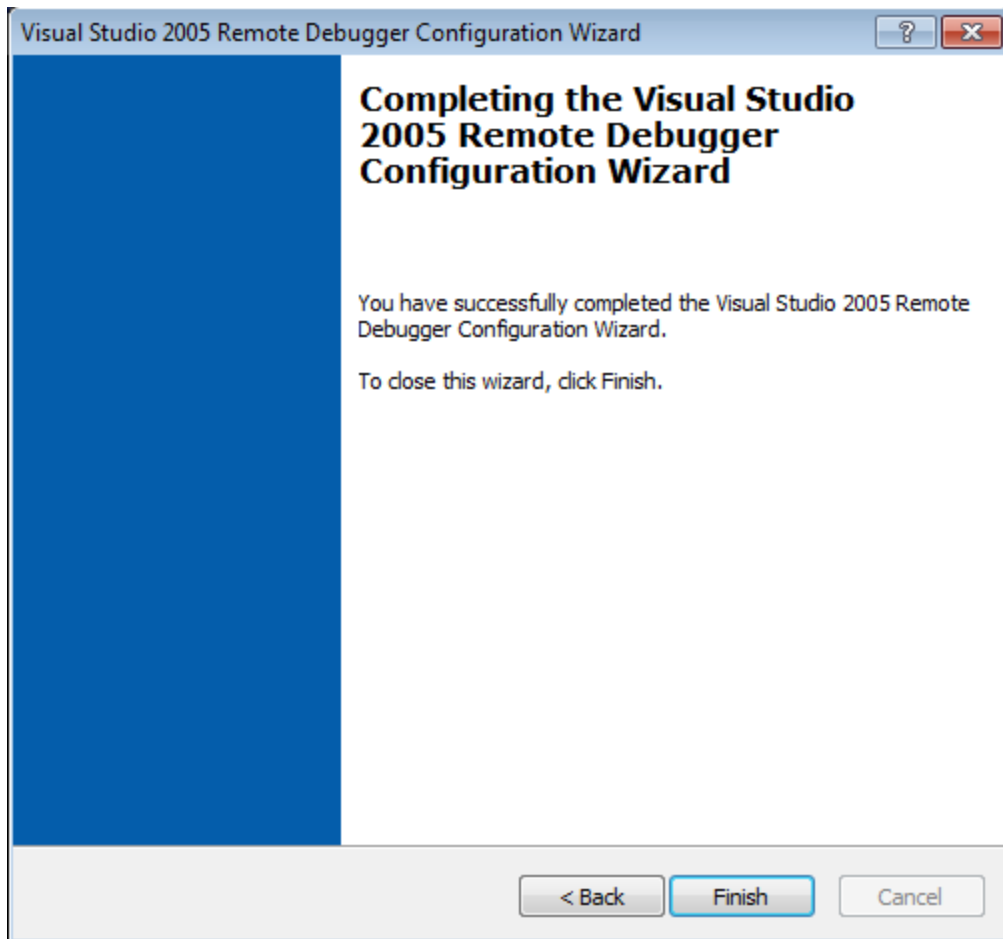


10. Click the **Allow only computers on the local network (subnet) to connect to the remote debugger** option.

The **Next** button is enabled.

11. Click the **Next** button.

The **Completing the Visual Studio 2005 Remote Debugger Configuration Wizard** screen appears, displaying a message indicating that you have successfully completed the configuration process.



12. Click the **Finish** button.

The **Visual Studio 2005 Remote Debugger Configuration Wizard** closes. At this point the Visual Studio 2005 Remote Debugger software is successfully installed and configured.

## Report Server Installation and Configuration Tasks

Microsoft SQL Server Reporting Services is a third-party component that the Meridium APM system uses to support its reporting functionality. After SQL Server Reporting Services has been installed, you will need to configure the Report Server and set it up to be used with Meridium APM. Some of the configuration tasks that you must perform are standard SQL Server Reporting Services procedures that must be performed for any new installation of SQL Server Reporting Services. This documentation does not provide details on configuring standard aspects of the Report Server.

For information on setting up the Report Server, see the SQL Server Setup Help, which you can access on the Report Server via the Reporting Services Configuration Manager, which should have been installed when you installed SQL Server Reporting Services.

For information on how the Report Server works within the Meridium APM system, [click here](#).

After the Report Server has been set up, you will need to complete various additional tasks to ensure the proper functioning of the Report Server with Meridium APM. The following table provides a list of tasks that must be performed.

Step	Task	Location	Required/Optional	Notes
1	Ensure your system <a href="#">meets the hardware and software requirements</a> .	SQL Server Report Server	Required	None
2	<a href="#">Install the Meridium APM Adapter for SSRS</a> .	SQL Server Report Server	Required	None
3	<a href="#">Configure Permissions for the Report Server</a>	SQL Server Report Manager	Required	Meridium APM users must have permission to access the Report Server in order to manage reports in Meridium APM.

## Report Server Installation and Configuration Tasks

Step	Task	Location	Required/Optional	Notes
4	<a href="#">Configuring Meridium APM to Use the Report Server</a>	Configuration Manager	Required	The Meridium APM system must be able to access the Report Server in order for users to manage reports on that server.

Step	Task	Location	Required/Optional	Notes
5	<a href="#">Deploy all reports to the Report Server</a>	Configuration Manager	Optional	<p>Manual deployment of all reports is optional but may be desirable if you prefer not to grant all users the Content Manager role.</p> <p>If you will use translations in Meridium APM, you should deploy your reports <i>after</i> completing the steps for deploying translations. Doing so will ensure that the reports on the Report Server are available for all the languages that you want to use with Meridium APM and that all the latest translated strings are used by reports.</p>

## Installing the Meridium APM Adapter for SSRS

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The Meridium APM Server and Add-ons installer allows you to install various components in addition to the Meridium APM Adapter for SSRS. Instructions for installing other components are provided elsewhere in this documentation.

**Note:** The [APM System Administration tool](#) is installed along with the Meridium APM Adapter for SSRS.

These instructions assume that your system [meets the hardware and software requirements](#).

**Note:** IIS will be reset automatically by the installer before the installation process begins.

### To install the Meridium APM Adapter for SSRS:

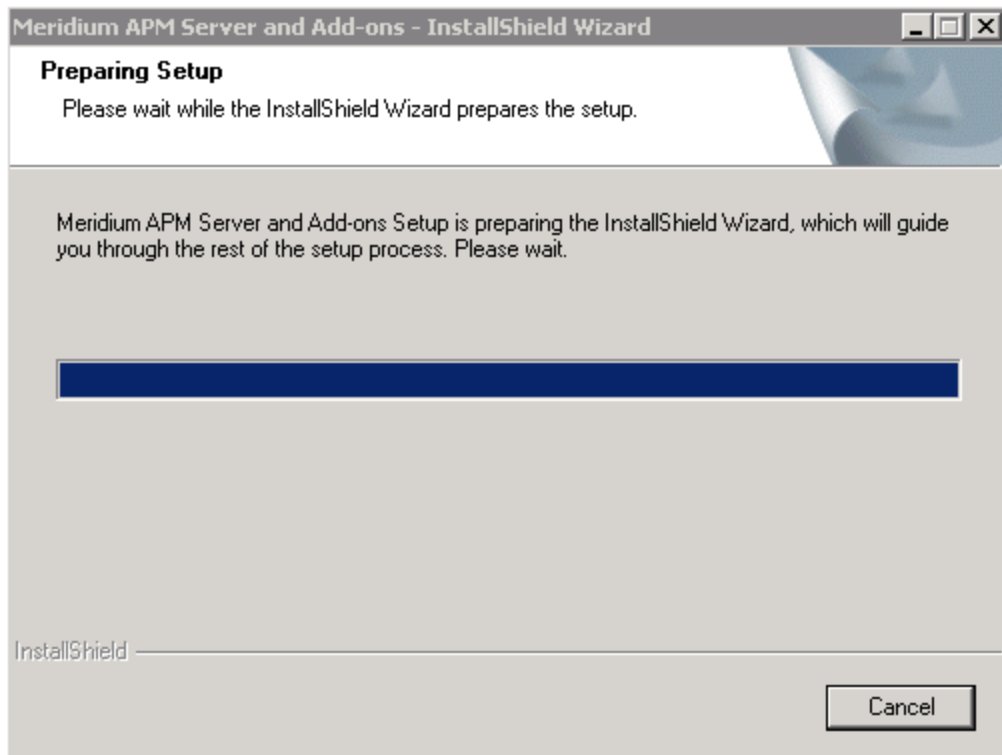
1. On the SQL Server Report Server machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Server and Add-ons**.
2. Double-click the file **Setup.exe**.

A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



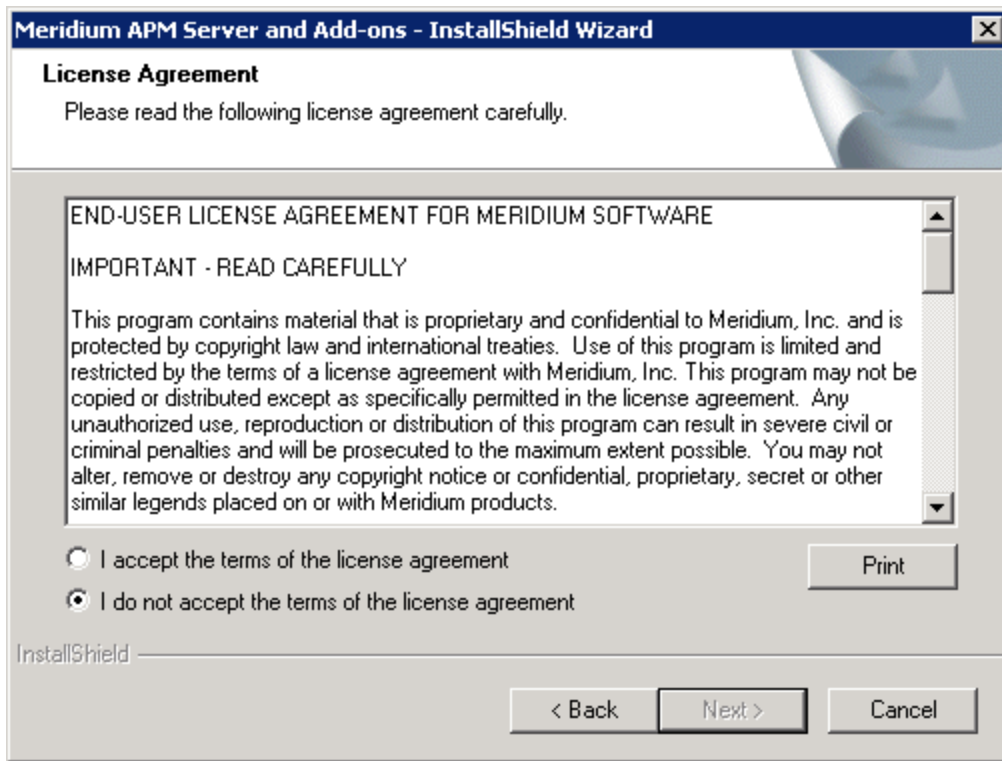


After the progress bar reaches the end, the Welcome screen appears.



4. Click the **Next** button.

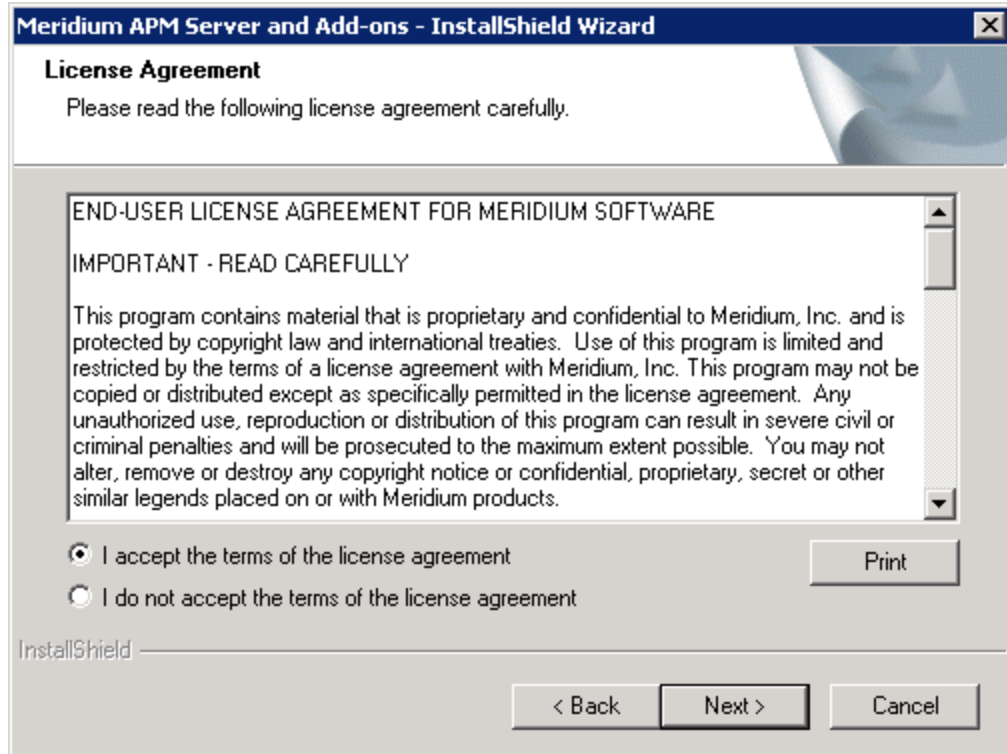
The **License Agreement** screen appears.



5. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

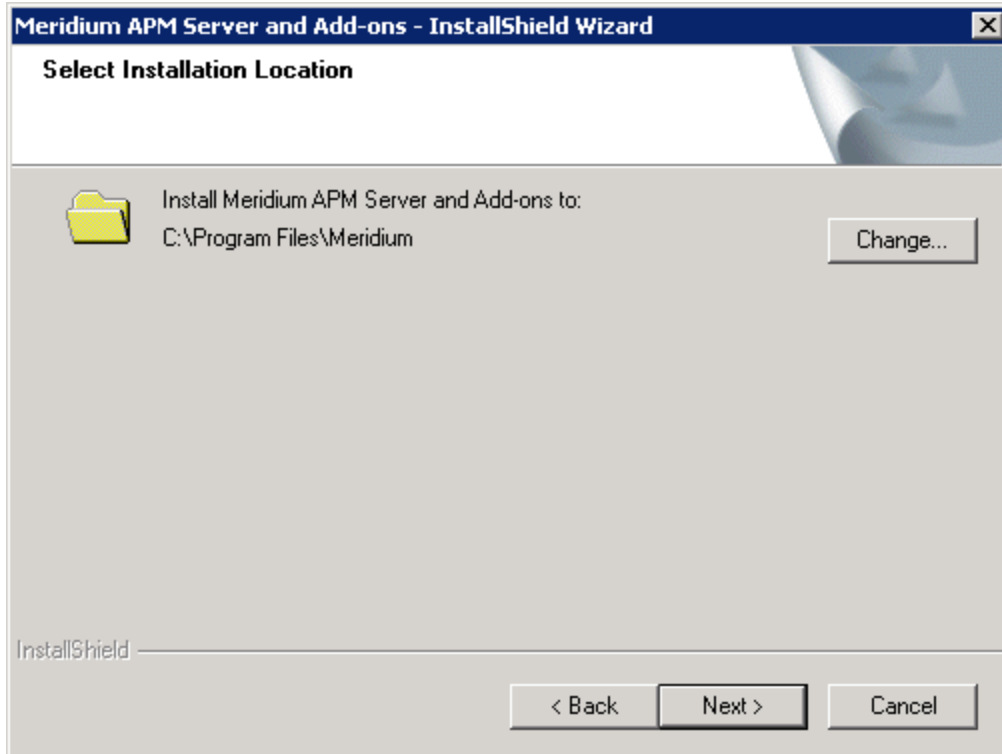
The **Next** button is enabled.



**Hint:** If you want to print the license agreement, click the **Print** button.

6. Click the **Next** button.

The **Select Installation Location** screen appears, prompting you to select the location where the software will be installed. By default, the software will be installed in the following folder: **C:\Program Files\Meridium**.

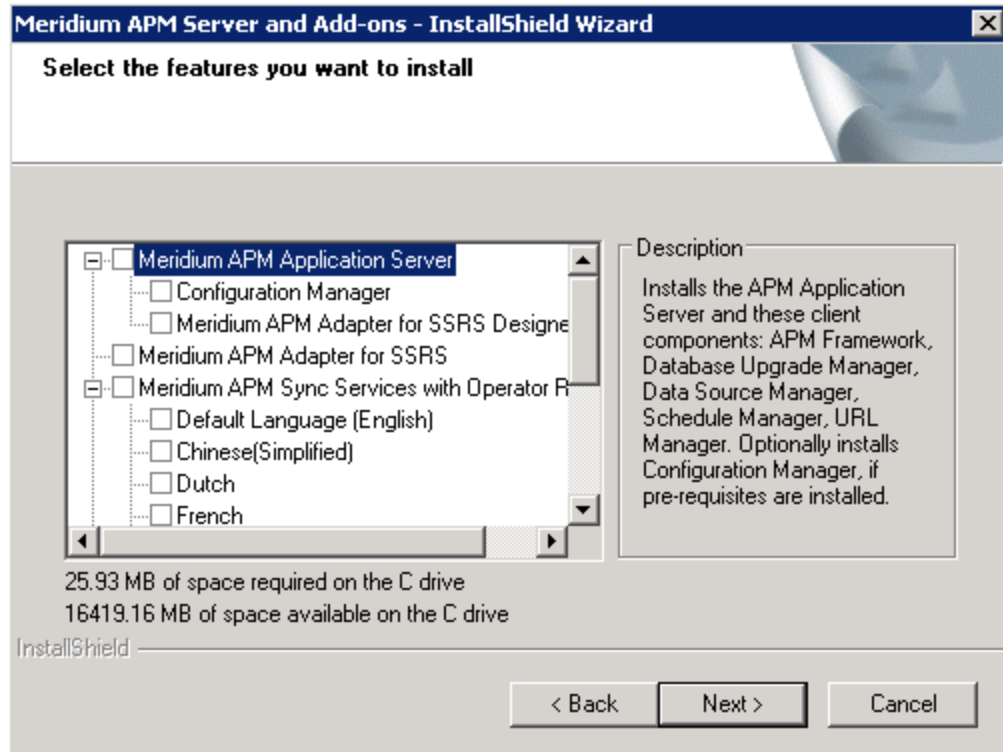


7. If you are satisfied with the default location where the software will be installed, click the **Next** button.

*-or-*

If you want to change the location where the software will be installed, click the **Change** button, and navigate to the location where you want to install the software. The folder path that you select will be displayed in place of the default folder path. When you are satisfied with the installation location, click the **Next** button.

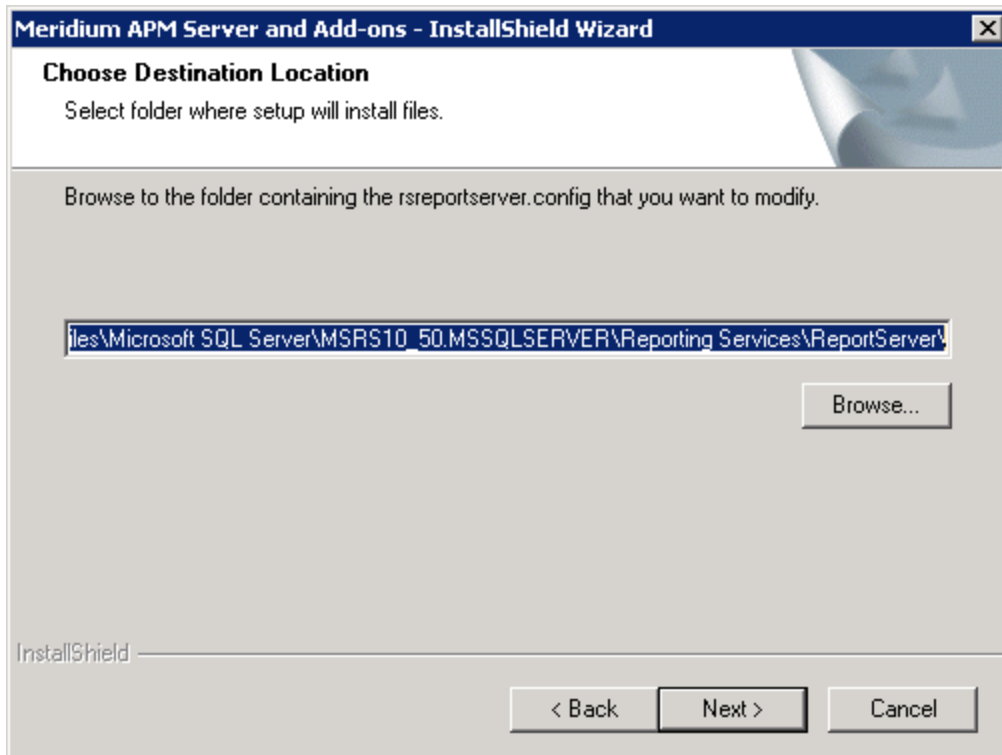
The **Select the features you want to install** screen appears, and the Meridium APM Application Server node is highlighted automatically in the tree.



**IMPORTANT:** The **Select the features you want to install** screen lets you specify which features you want to install on the SQL Server Report Server machine. *These instructions* assume that you want to deploy only Meridium APM Adapter for SSRS option.

8. In the tree, select the **Meridium APM Adapter for SSRS** check box.
9. Click the **Next** button.

The **Choose Destination Location** screen appears.



This screen specifies the location of the file *rsreportserver.config*. The installer will search for the file, and if it finds it, the text box will be populated automatically with the detected location. If the installer cannot find the file, however, the text box will be empty, and you can browse to the location of the file.

10. If you are satisfied with the selected location, click the **Next** button.

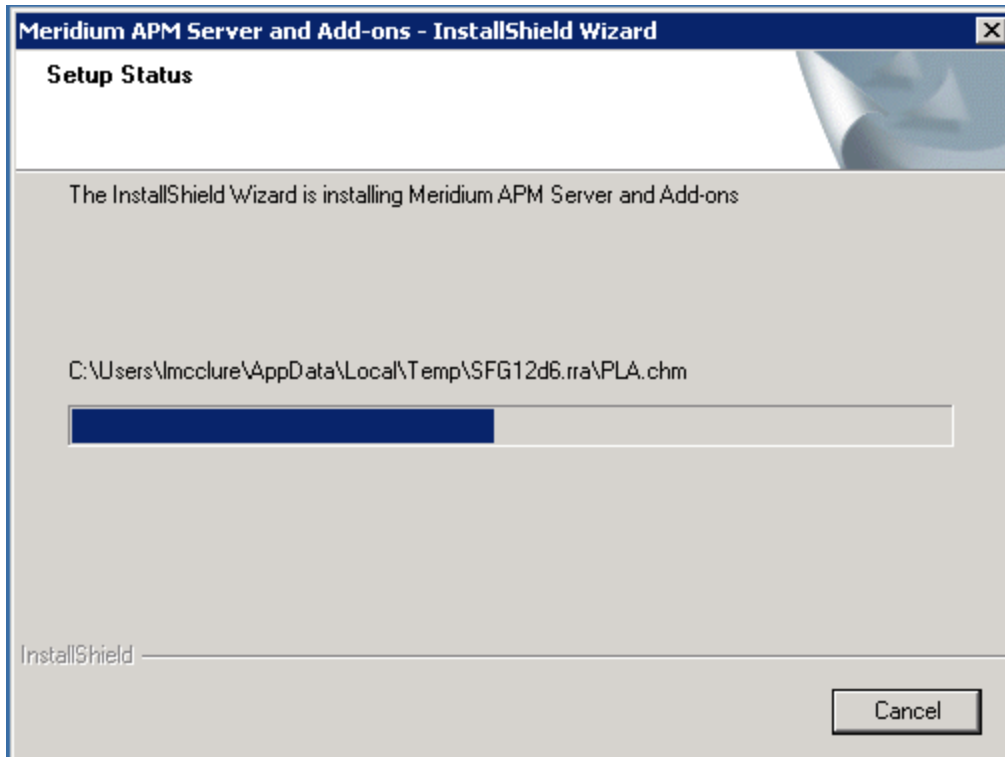
-or-

If you want to select a different file in a different location (if you have multiple instances of Microsoft SQL Server Reporting Services on this machine) or if the installer was unable to find *any* instance of Microsoft SQL Server Reporting Services, click the **Browse** button, and navigate to the appropriate location. The file path that you select will appear in the text box in place of the default file path. When you are finished, click the **Next** button.

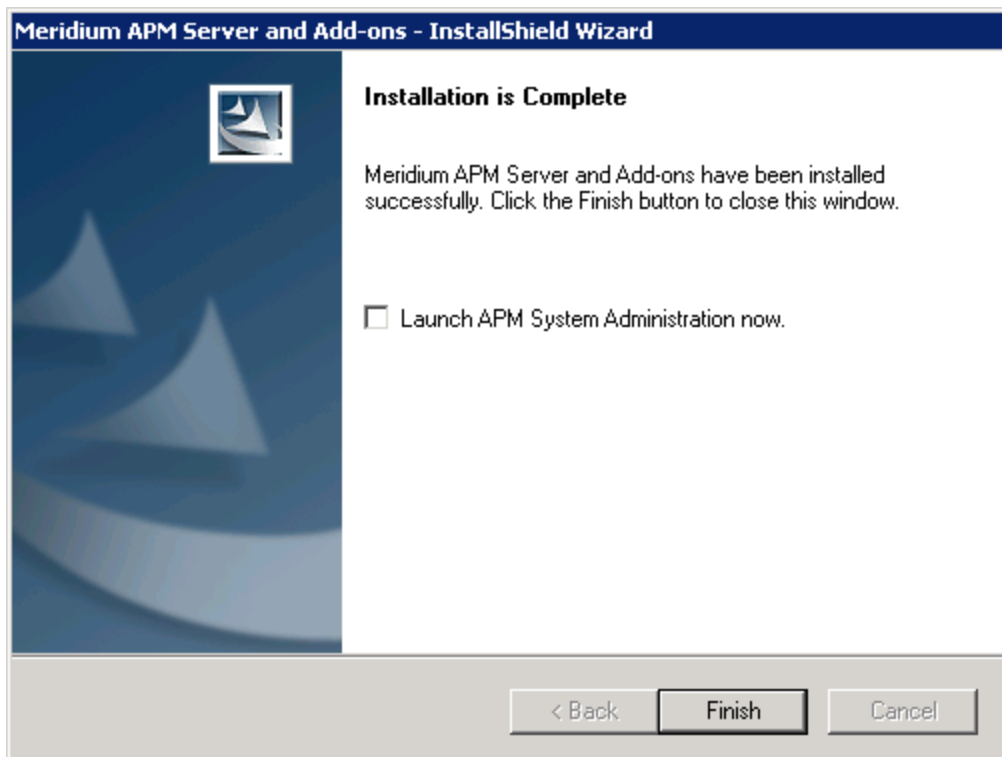
The **Complete the Installation** screen appears, indicating that you can use the **Back** button to modify the settings. In addition, if you do not want to complete the installation at this time, you can click the **Cancel** button to close the installer. If you do so, however, all your settings will be lost.

11. Click the **Install** button.

The **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.



This screen contains a message, indicating that Meridium APM Server and Add-ons has been installed successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to *No*.

12. If you do not want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection.

*-or-*

If you do want the APM System Administration tool to be launched at this time, select the **Launch APM System Administration now** check box.

13. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears. At this point, you should [refer back to the checklist](#).



## Configuring Permissions for the Report Server

SQL Server Reporting Services reports can be created through the Meridium APM Framework application and saved to the Meridium APM Catalog. Reports that exist in the Meridium APM Catalog are stored on the Report Server using a corresponding folder structure, which can be viewed through the [SQL Server Report Manager](#).

All new installations of SQL Server Reporting Services will include a root **\\Home** folder. Subfolders can be created within the **\\Home** folder. When SQL Server Reporting Services reports are accessed through Meridium APM, they are *deployed* to the Report Server within the folder structure defined in the Report Manager. Deploying occurs when a user creates a new report or accesses an existing report from the Meridium APM Catalog for the first time.

The first time a report is deployed to the Report Server, the folder **\\Home\Meridium** is created automatically. Within the folder **\\Home\Meridium**, subdirectories are created automatically as needed, as reports are created and viewed within the system. The following format is used for creating directories to store report files:

**\\Home\Meridium\<<Data Source Name>\<Meridium APM Catalog Path>**

...where:

- **<Data Source Name>** is the name of the data source that was used for creating the report.

**Note:** Any special characters that are included in the data source name will not be included in the corresponding folder on the Report Server as SQL Server Reporting Services does not allow special characters in folder paths. Special characters will be removed from the data source name automatically when the folder is first created.

- **<Meridium APM Catalog Path>** is the full path to the report in the Meridium APM Catalog.

To view and modify reports that are stored on the SQL Server Report Server from the Meridium APM Framework application, Meridium APM users must be logged in to Meridium APM via a Windows user account that has permission to access the folder in which the reports are stored on the Report Server.

- Users who need to be able to create, modify, and deploy reports must be granted the *Content Manager* role at the level **\\Home\Meridium** and lower.
- Users who need to view reports that have already been deployed by other users must be granted the *Browser* role at the level **\\Home\Meridium** and lower. For all users, the *Browser* role is sufficient at the level **\\Home**.

**Note:** Users with the *Browser* role at the level **\\Home\Meridium** and lower will not be able to view reports that have not yet been deployed to the Report Server in those folders, even if they exist in the Meridium APM Catalog.

Permissions can be assigned to users and groups via the [SQL Server Report Manager](#). You can assign permissions to individual Windows users or to Windows security groups. To make configuration easier, you may want to create a group specifically for Meridium APM users, assign the appropriate Windows users to that group, and then assign that group the necessary permissions.

**Note:** All users who are Windows Administrators on the Report Server machine will be able to access all reports without needing any additional privileges. The Content Manager role needs to be assigned only to Windows users who are not Administrators on the Report Server.

## Configuring Meridium APM to Use the Report Server

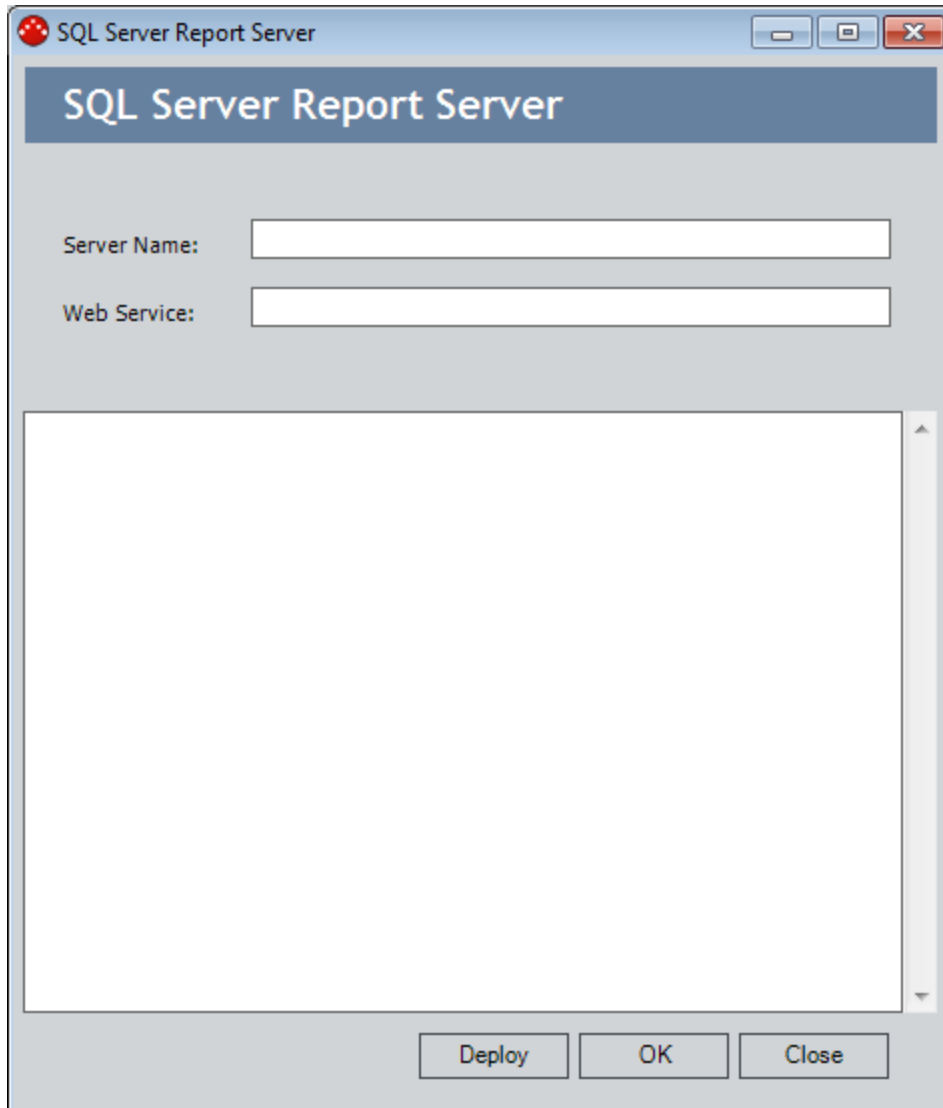
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The SQL Server Report Server stores the SQL Server Reporting Services reports that can be viewed and managed in Meridium APM. To integrate SQL Server Reporting Services with Meridium APM, you must define the SQL Server Reporting Services instance that you want to use for a given Meridium APM database. The Configuration Manager application provides a feature that lets you do so. After you have defined the SQL Server Reporting Services instance that you want to use for a given Application Server and data source, Meridium APM will use that Report Server for storing the reports that are created and accessed on that Application Server and database.

### To define the SQL Server Report Server for a given database:

1. In the Configuration Manager, on the Configuration Manager main menu, click **Tools**, point to **Global Preferences**, and then click **SQL Server Report Server**.

The **SQL Server Report Server** window appears.



2. In the **Server Name** text box, type the name of the server on which the desired instance of SQL Server Reporting Services has been installed and configured.

**Note:** If you do not specify the protocol for the server, HTTP will be assumed. If the SQL Server Report Server is a *secured* server, you can type **HTTPS://[Server Name]** to indicate that an HTTPS connection should be used. If the SQL Server Report Server is not secured, you can type **HTTP://[Server Name]** or you can omit the protocol and simply type the server name.

3. In the **Web Service** text box, type the name of the Report Server Virtual Directory that has been created for the instance of SQL Server Reporting Services that you want to use for the current Meridium APM Application Server and data source. If you have never before defined the SQL Server Report Server for this data source, the Web Service will be set to **ReportServer** by default, which is the name of the

virtual directory created for the first SQL Server Report Server instance that is installed on a given server. You can modify the default value if needed.

If the server specified in the **Report Server** text box contains multiple instances of SQL Server Reporting Services, be sure to specify the virtual directory of the instance that you want to use for the Application Server and data source to which you are currently connected.

4. [If desired, click the \*\*Deploy\*\* button to deploy all existing reports to the specified report server.](#)
5. Click **OK**.

The settings are saved to the database.

## About Report Deployment

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When Meridium APM Security Users access reports in the Meridium APM Framework and Meridium APM Web Framework applications, they are actually viewing reports that are *stored* on the SQL Server Report Server and *referenced* by the Meridium APM Catalog items that identify them. In other words, the reports themselves reside outside of the Meridium APM system but can be viewed from within the Meridium APM Framework and the Meridium APM Web Framework. Before a report can be viewed, it must be deployed to the SQL Server Report Server.

Deployment can be handled in the following ways:

- **Manually for all reports at once.** The user who will manually deploy [reports all at once](#), must be logged in under a Windows user account that has been [granted the Content Manager role to all Meridium folders and subfolders on the Report Server](#). When reports are deployed in this way, you will need to select from a list the Meridium APM Cultures for which the reports should be deployed. The list of cultures includes the Meridium APM Culture settings that are currently specified in any Security User record in your database and the **Invariant Language (Invariant Country)** option, which will deploy the reports in the default culture in which they were created.

For each culture that you select, one version of each report will be deployed to the Report Server and associated with that culture. After reports have been deployed in this way, if the corresponding translations have been installed, when a user runs a report and their Meridium APM Culture setting matches a report on the Report Server, they will see that report. Otherwise, they will see the default version of the report (i.e., the culture in which it was created). For example, assume that the total number of baseline reports is 20 and that you want to deploy all the baseline reports so that users with the following culture settings can view them:

- English
- Spanish
- German

In this case, when you deploy the reports, you will deploy them for the following corresponding cultures:

- Invariant (because baseline reports are associated with the English culture by default)
- Spanish
- German

...and when the reports are deployed for these cultures, the Report Server will contain 60 reports:

- 20 English reports
- 20 Spanish reports
- 20 German reports

You might want to deploy all reports at once:

- When you install Meridium APM for the first time and want to deploy all baseline reports so that they are immediately available for Meridium APM users.
- If you implement a new Report Server and want to deploy all reports (baseline and custom) to the new server so that they will be available for Meridium APM users.
- Whenever you upgrade to a new version of Meridium APM and want to deploy any new reports.
- If you are using translations in Meridium APM and want reports to be available for multiple cultures.
- If you are using translations in Meridium APM and you have created custom translations that you want to be displayed in the reports.

**Note:** Any report that has not been deployed manually will be deployed automatically when a user tries to view it. Therefore, manual deployment of all reports is *optional* but may be desirable if you prefer not to grant all users the Content Manager role. Additionally, when automatic deployment occurs on an as-needed basis, it can take several moments for the report results to appear. If all reports have already been deployed to the server, it may reduce the delay in displaying the report results for the first time.

- **Automatically for individual reports.** Reports are deployed automatically when:
  - They are first created.
  - On an as-needed basis, when the report is run within the Meridium APM Framework or Meridium APM Web Framework applications.

When a user accesses a report, if it does not already exist on the Report Server, it will be deployed automatically to the Report Server. When this happens, the report is deployed using the Meridium APM Culture setting in the Security User record of the user who deploys the report. For example, if a Security User whose culture setting is empty deploys a baseline report, the default version (i.e., the culture in which it was created) of the report will be deployed to the Report Server. Because the baseline reports are created in English, when those reports are deployed, the English version of the report will be deployed. Likewise, if you access a custom report that was created in a non-English language, and your Meridium APM Culture setting is empty, the default version of the report will be deployed.

For deployment to be successful, the user must be logged in under a Windows user account that has been [granted the Content Manager role to the appropriate folder on the Report Server](#).

## Deploying All Reports to the Report Server

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The following instructions provide details on deploying all existing reports to the SQL Server Report Server. Note that this process will deploy to the Report Server ALL the reports that exist in the Meridium APM Catalog in the *Public* and *Baseline* folders for every culture that you specify. You do not have the option to deploy only *some* reports (e.g., reports in certain folders or those that are not already deployed).

Note that the culture of the Security User who creates a report is considered the default culture for that report. In other words, the source culture for the report, which does not change. Baseline Meridium APM reports are created in English. Therefore, to deploy all baseline reports for the English users, you will need to deploy them for the default culture using the *Invariant Language (Invariant Country)* setting. Likewise, if a Security User with a Spanish culture setting creates a report, the default culture for that report is *Spanish*. For users with a German culture to see that report in German, you will need to deploy the reports for the German culture.

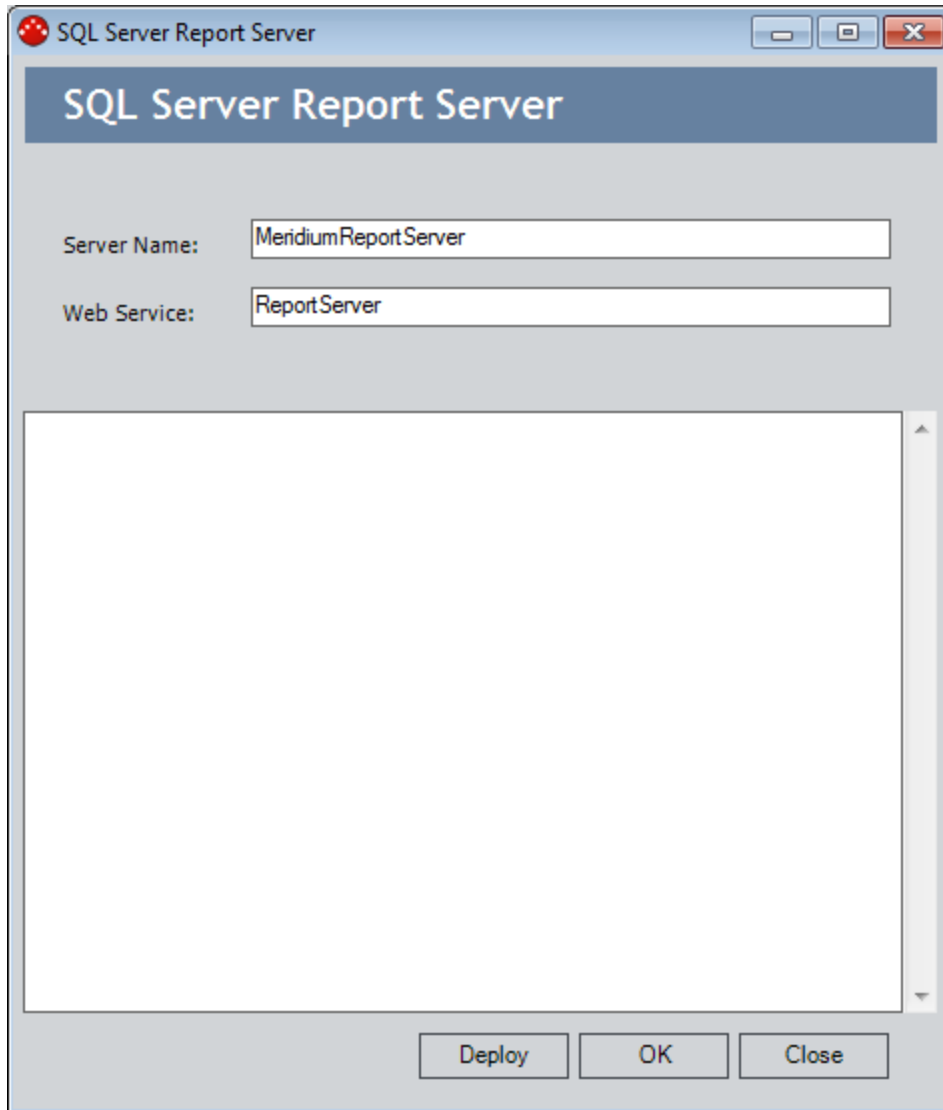
**Note:** While this process will attempt to deploy *all* reports defined in the Catalog, each report will be deployed individually, and each individual deployment operation may take several seconds. If your database contains many reports, the entire process could take several minutes.

### To deploy all reports to the SQL Server Report Server:

1. In the Configuration Manager, on the Configuration Manager main menu, click **Tools**, point to **Global Preferences**, and then click **SQL Server Report Server**.

The **SQL Server Report Server** window appears.





2. [Ensure that the \*\*Server Name\*\* and \*\*Web Service\*\* text boxes are populated with the desired values.](#) These settings identify the Report Server to which reports will be deployed.

**Note:** If you modify these settings, when you click the **Deploy** button, a message will appear, asking if you want to save them. If you save the updated settings, reports will be deployed to the *new* server. If you choose not to save them, reports will be deployed to the *previously defined* server.

3. Click the **Deploy** button.

The **Select Cultures** dialog box appears, displaying the list of cultures that are currently being used in Meridium APM Security User records.



**Hint:** To deploy the reports in their default culture, select the **Invariant Language (Invariant Country)** setting.

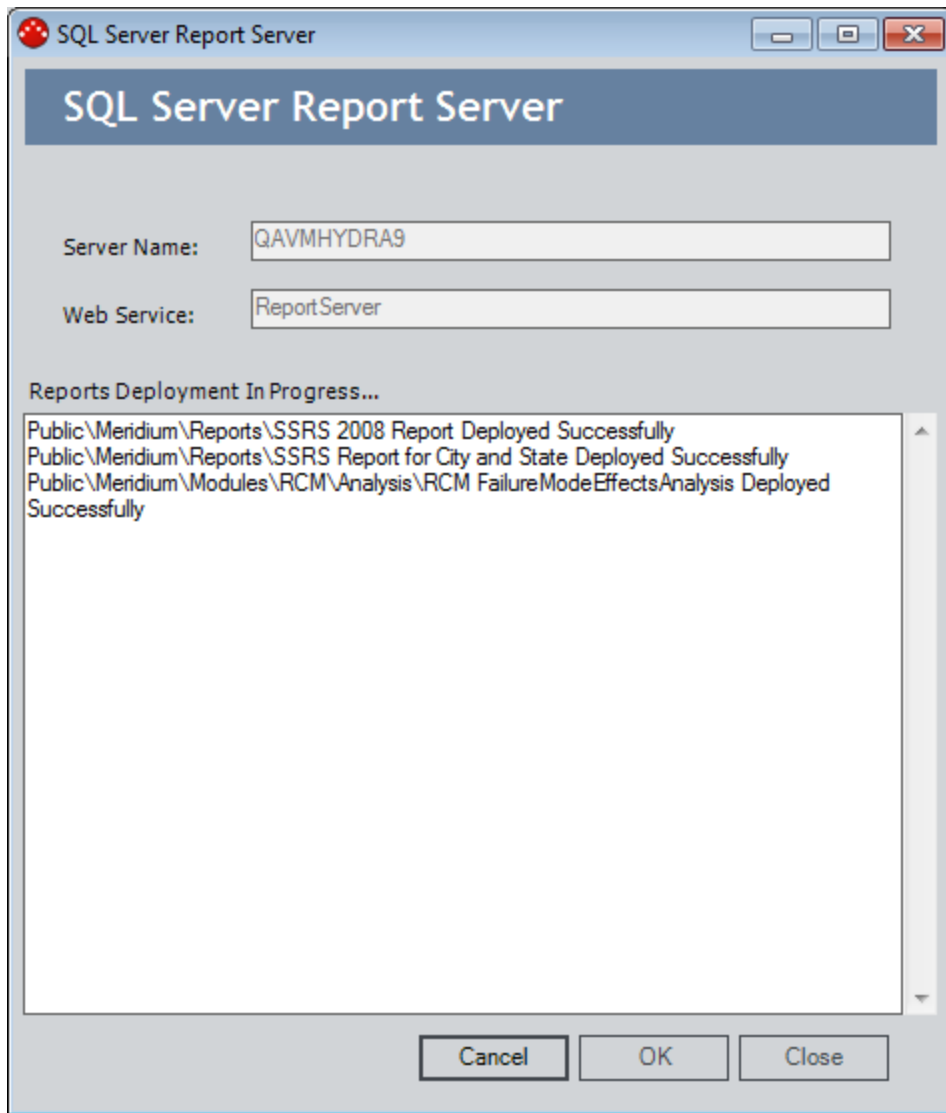
- In the list, double-click the cultures for which you want to deploy reports. The corresponding check boxes become selected.



- Click **OK**.

A message appears above the main display area to indicate that deployment is in progress. As the process continues, the main display area is updated to indicate the success or failure of each deployment attempt on a report-by-report basis. Any unsuccessful attempt will be logged but will not prevent subsequent

deployment attempts. Individual deployment operations may be unsuccessful for various reasons, such as [insufficient permissions to the appropriate Report Server folder](#) or the Report Server becoming unavailable during the process.



When the deployment process is complete, a message will appear at the bottom of the display area indicating that the report deployment is complete.

6. Click **OK**.

The **SQL Server Report Server** window closes.

## About the Meridium APM Database

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The Meridium APM database contains all the data that can be accessed through the Meridium APM applications, including tables that store records, metadata that defines information about items such as families and system codes, and objects that can be accessed through the Meridium APM Catalog. In order to use Meridium APM, you will need to create a Meridium APM database.

Meridium APM supports two types of database servers:

- [Oracle](#)
- [SQL Server](#)

The first step in creating the Meridium APM database is to set up the desired database server. While installing and configuring the database server exceeds the scope of this documentation, you can use the links above to access generic information and guidelines for setting up each type of server. After the database server has been set up and properly configured, you will need to create the Meridium APM database.

The content in the Meridium APM database is segmented according to the license with which it is associated. Licensed content is versioned for each Meridium APM release. You can [view a list of database licenses and the version information for each one](#) in the Meridium APM Framework or Configuration Manager application. [Licenses must be activated before the associated module\(s\) can be used.](#)

# Database Server Installation and Configuration Tasks

Depending upon the type of database that you will connect to, you will need to complete different installation and configuration steps. This topic is organized by database type: Oracle and SQL Server. If you will connect to an Oracle database, use the Oracle checklist. If you will connect to a SQL Server database, use the SQL Server checklist.

## Oracle

The following checklist should be used to install and configure an Oracle Database Server, create the Meridium APM schema, and configure the Meridium APM Application Server for use with Oracle.

How you distribute these tasks within your organization is up to you. You should, however, complete the steps in relatively the same order in which they are listed in the table.

Step	Task	Required/Optional
1	Ensure your system meets the <a href="#">basic Meridium APM system architecture system requirements</a> .	Required
2	Ensure that the <a href="#">Database Server machine meets the system requirements</a> .	Required
3	<a href="#">Install Oracle Server software</a> on the Database Server.	Required
4	<a href="#">Consider Oracle Server Globalization</a> (non-Western European language installs) on the Database Server.	Optional
5	<a href="#">Create and configure the Oracle database</a> on your Database Server.	Required
6	<a href="#">Create the Meridium APM Oracle schema</a> on the Database Server.	Required
7	Modify the default Oracle Client Globalization (non-Western European language installs) on the Application Server.  Note that the Oracle Universal Installer will read the Database Server machine's Code Page and set the NLS_LANG parameters automatically.	Optional

Step	Task	Required/Optional
8	Configure the Meridium APM Application Server for Oracle. This step includes completing the following tasks: <ul style="list-style-type: none"> <li>• <a href="#">Install Oracle Data Access Components (ODAC)</a>.</li> <li>• <a href="#">Configure the TNS_ADMIN Environment Variable</a>.</li> <li>• <a href="#">Configure an Oracle Net Service Name</a>.</li> </ul>	Required
9	On the Application Server, <a href="#">ensure that the operating system is configured to allow network DTC access</a> .	Required
10	In the Data Source Manager application, <a href="#">specify the data source that you want to use with Meridium APM applications</a> .	Required

## SQL Server

The following checklist should be used to install and configure a SQL Server Database Server, create the Meridium APM database, and configure the Meridium APM Application Server for use with SQL Server.

Some steps will need to be performed on the Database Server machine and other steps will need to be performed on other machines. How you distribute these tasks within your organization is up to you. You should, however, complete the steps in relatively the same order in which they are listed in the table.

Step	Task	Required/Optional
1	Ensure your system meets the <a href="#">basic Meridium APM system architecture system requirements</a> .	Required
2	Ensure that the <a href="#">Database Server machine meets the system requirements</a> .	Required
3	<a href="#">Consider SQL Server localization</a> (non-Western European language installs) on the Database Server.	Optional
4	<a href="#">Install the SQL Server software</a> on the Database Server.	Required
5	<a href="#">Create and configure the SQL Server Database</a> on the Database Server.	Required
6	On the Application Server, <a href="#">ensure that the operating system is configured to allow network DTC access</a> .	Required
7	On the Database Server, <a href="#">ensure that the operating system is configured to allow network DTC access</a> .	Required

Step	Task	Required/Optional
8	In the Data Source Manager application, <a href="#">specify the data source that you want to use with Meridium APM applications</a> .	Required

## Installing the Database Upgrade Manager Application

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The Database Upgrade Manager application is installed automatically when you [install the Meridium APM Application Server](#).



## Installing Oracle Server Software

---

**Note:** You will need to complete this step only if you plan to use an Oracle Database Server to host the Meridium APM schema.

The first step in setting up the Database Server for the Meridium APM schema is to install the Oracle Server software on the Database Server machine. Instructions for installing the Oracle Server software exceed the scope of this documentation. For information on performing the installation, refer to the Oracle installation documentation that is specific to your database server platform. If you plan to create a database via the Oracle Universal installer, you should review the section in this guide on [creating and configuring the Oracle Database](#) before proceeding.

## Considering Oracle Server Globalization Software

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The Oracle database must be created with a character set that supports all characters and symbols used by the various Meridium APM Framework machines. The database character set must meet all known language requirements. The character set determines which characters can be used in:

- The data stored in all SQL CHAR data types (CHAR, VARCHAR2, CLOB).
- The identifiers within the database (e.g., table and column names).
- The SQL and PL/SQL program source (including view definition, triggers, stored procedures and packages).

The database character set must be specified when the database is created. When choosing the database character set, identify all languages that must be supported (both immediately and in the long-term), and then select the most efficient character set for all the languages and symbols involved.

Note that because Unicode character sets attempt to support all languages of the world, they may not be the most efficient character set for a particular language. For example, AL32UTF8 is a varying width multi-byte Unicode character set that can support the English, French, and Spanish languages. For example, WE8MSWIN1252 is a western European fixed width eight-bit character set that can also support these languages and do so more efficiently.

**Note:** If you are creating a Unicode database, use the character set *AL32UTF8*. This is the most recent and recommended Unicode database character set.

Before you attempt to modify the database character set, you should review the following Technical Note on Oracle's support website: 225912.1.

**Note:** If you will connect to an Oracle database, you will need to perform certain steps to configure the Application Server machine for globalization support. See the [Oracle checklist](#) for more details.

# Creating and Configuring the Oracle Database

## Creating the Oracle Database

After you have installed the Database Server software on the Database Server machine, you will need to create an Oracle database that will contain the Meridium APM schema. The creation of the Oracle database exceeds the scope of this documentation. For details on creating an Oracle database, consult the Oracle documentation that is specific to your database platform. Note, however, that selecting the [database character set](#) is an important prerequisite to database creation.

## Configuring the Oracle Database

After you have created the Oracle database, you will need to configure it. Details on configuring the Oracle database exceed the scope of this documentation. For details on configuring an Oracle database, consult the Oracle documentation that is specific to your database platform. Note, however, that the Oracle database must meet the following requirements:

- Oracle Text must be installed in the Oracle database. To determine if Oracle Text is installed, you run the following command via SQL\*Plus while connected to the Oracle database as SYSTEM (or a user with comparable privileges):

```
SQL>select comp_name, status, substr(version,1,10) as version from dba_
registry where comp_id = 'CONTEXT';
```

- Execute privileges on the CTX\_DDL package are required. CTX\_DDL is an Oracle-supplied PL/SQL package that is needed to support Text indexes. The Meridium supplied scripts to create roles and users will grant these privileges automatically.
- The following database parameter values are recommended and must persist from one database startup to the next.

Database parameter value	Notes
<b>dml_locks=5000</b>	The <i>dml_locks</i> parameters should be set to a large value to avoid the possibility of waiting for a lock.
<b>job_queue_processes=20</b>	This is the minimum value that we recommend. You can increase this value as necessary for your database. <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <b>CEHint:</b> The default value for Oracle 11 is <i>1000</i>. Therefore, if you are using Oracle 11, you may not need to increase this value at all. </div>

Database parameter value	Notes
<b>open_cursors=500</b>	It is not uncommon for one Meridium APM user to have multiple cursors open simultaneously. For this reason, you should set this value accordingly.
<b>parallel_max_servers=0</b>	The Meridium APM schema is not configured for parallel query. Therefore, we recommend that you disable this feature. Enabling parallel query when the database and schema are not properly configured can severely degrade you system's performance.
<b>parallel_min_servers=0</b>	The Meridium APM schema is not configured for parallel query. Therefore, we recommend that you disable this feature. Enabling parallel query when the database and schema are not properly configured can severely degrade you system's performance.
<b>processes=500</b>	None
<b>query_rewrite_enabled=true</b>	None
<b>timed_statistics=true</b>	Setting <i>timed_statistics</i> allows for minimum maintenance and enables reporting on internal wait events, which can be used to reconfigure your database.
In Oracle 11.2: <b>Memory_target=4G</b>	None

Default values for database parameters that are not mentioned in the above list meet or exceed recommendations for a Meridium APM database configuration. Meridium APM recommends that the database be monitored so that changes can be made as necessary to accommodate the needs of your specific installations. For more information on these and other database parameters, consult your Oracle documentation.

## About Creating the Oracle Schema

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To [create the Oracle schema](#) you will need to complete the following tasks in the following locations:

- Extract files from the release distribution package to the dedicated Application Server machine.
- Create an Oracle Role and Schema in the Oracle database (on the Database Server).
- Import the Oracle schema on the Database Server.

## Creating the Meridium APM Oracle Schema

---

The following instructions provide details on creating the Meridium APM Oracle schema. After you have created the Oracle schema using these instructions, the schema will be referred to as the *Meridium APM database* throughout the documentation.

To perform these steps you will need DBA privileges on the Database Server machine. These instructions assume that:

- You are logged in your Database Server machine with DBA privileges and have a connection to Oracle.
- You are familiar with running SQL scripts and the associated terminology.
- You are familiar with Oracle terminology and functionality.

**To create a Meridium APM Oracle schema:**

1. On the Meridium APM *Application Server* machine, insert the Meridium APM distribution package DVD, and navigate to the **Database** folder in the **Meridium APM Framework and Server Setup** folder.
2. Open the file **MI\_DB\_MASTER\_3600000.zip**, and extract the contents of the file **3600000.zip** to a folder on the C: drive.
3. Open the folder **3600000.zip** and extract the following files:
  - **CRT\_MI\_CONNECT\_ROLE.sql**
  - **CRT\_MI\_USER.sql**
  - **MI\_V3600000.dmp**
4. In the folder to which you extracted the files, open the subfolder **\\Setup\\NewInstall\\Oracle**.

This folder contains the extracted files that will need to be run by the database administrator on the Database Server (via the remaining steps).

5. On the *Database Server* machine:
  - A. Locate and run the script **CRT\_MI\_CONNECT\_ROLE.sql**. This script creates the Meridium APM role (MI\_CONNECT\_ROLE), which contains several of the Oracle privileges that are necessary to run the Meridium APM applications. This script does not require any parameters. You will need to run this script one time per database.
  - B. Locate and run the script **CRT\_MI\_USER.sql**. This script creates the Oracle user and grants to the user the role MI\_CONNECT\_ROLE that you created in the preceding step.

The schema is created.

For example, if you were to define the parameters as shown in the following command:

```
SQL> @CRT_MI_USER MERIDIUM_PROD MERIDIUM_PROD 1000M Meridium_
DATA
```

...it would automatically:

- Create a user called *MERIDIUM\_PROD*.
- Set the user's password to *MERIDIUM\_PROD*.
- Set the user's default tablespace to *MERIDIUM\_DATA*.
- Grant 1GB of quota on the default tablespace.

**Note:** This example assumes that the *MERIDIUM\_DATA* tablespace already exists.

6. Import the Oracle schema you created in the preceding steps. To do so:
  - A. On the *Database Server* machine, import the Oracle schema by locating and using the file **MI\_V3600000.dmp**.
  - B. Set the session level *NLS\_LANG* to <Language>\_<Territory>.AL32UTF8 (to avoid unnecessary data conversion).
  - C. Update the schema statistics.

The schema is imported. You should note and resolve any errors that appear in the import log. We recommend that you save a copy of the Oracle import log for future reference.

## Considering SQL Server Localization

---

Meridium APM supports using multiple languages in a SQL Server database only if the following requirements are met:

- All the languages that you want to use (i.e., Windows locales) must be supported by the same database collation.
- The collation cannot be a Unicode collation.
- The collation must be case insensitive.
- All client machines must use the same Windows Code Page, and the Code Pages must be compatible with the designated database collation.

If these requirements cannot be met and you want to use multiple languages in your database, Meridium APM must be installed with Oracle as the Database Server.

This documentation provides only brief information about localization with SQL Server as it relates to Meridium APM. For more information about SQL Server localization, including a list of Windows collation designators as they relate to Windows locales and Code Pages, see the SQL Server Books Online, which can be installed with SQL Server.



## Installing the SQL Server Software

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If you will connect to a SQL Server database, the first step is to install the SQL Server software on the Database Server machine. This documentation assumes that your system meets [Database Server system requirements](#). The installation of the SQL Server software exceeds the scope of this documentation. For information on performing the installation, refer to the SQL Server documentation.

When you prepare to install SQL Server on the Database Server, you should consider the following notes:

- Meridium APM requires mixed-mode authentication for SQL Server installations. The documentation and scripts supplied by Meridium APM assume that the SQL Server instance allows mixed-mode authentication.
- The SQL Server Full-Text component must be installed on the SQL Server Database Server. To determine if the SQL Server Full-Text component is installed, you can run the following command via a SQL Server Management Studio query window:

```
IF (SELECT FULLTEXTSERVICEPROPERTY ('IsFulltextInstalled')) = 0 PRINT 'Error: Full Text component not installed'
```

- The SQL Server FullText Search service must be running on the Database Server.
- The Meridium APM database *must* be owned by the SQL Server login referenced in the Meridium APM datasource. Being a member of the SQL Server **db\_owner** role is not sufficient. Meridium provides a script to properly configure the SQL Server database for use with Meridium APM.
- The database supplied by Meridium APM (via a .BAK file) was created with the SQL Server collation **Latin1\_General\_CI\_AS**. This collation requires Windows Code Page 1252.

## About Creating and Configuring the SQL Server Database

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After you have installed the SQL Server software on the Database Server machine, you can create the Meridium APM database by restoring a database backup file that is provided by Meridium, Inc. Specific instructions for creating the Meridium APM database are not included in this documentation.

After you have created the database, you will need to configure it. To create and configure the Meridium APM database, you must have access to:

- Microsoft SQL Server Management Studio.
- A privileged SQL Server account with *sysadmin* rights in the target instance.
- Two files from the Meridium APM Framework and Server Setup DVD that will be extracted on the Meridium APM Application Server:
  - **MI\_V3600000.bak**, which is included in the Meridium\_Database.zip file on the Meridium APM Framework and Server Setup DVD.
  - and-
  - **MI\_SQL\_DB\_Configure.sql**, which is installed on the Application Server machine in the following folder: **C:\MeridiumAPMDatabase\Setup\NewInstall\SQLServer**.

These instructions assume that you are familiar with SQL Server Management Studio or another 3rd party tool for running SQL scripts.

[Click here for details on creating the Meridium APM SQL Server database.](#)

[Click here for details on configuring the Meridium APM SQL Server database.](#)

**Note:** If you do not have sufficient privileges to restore or configure the database, ask the person responsible for creating the database to create the database and complete [the configuration steps](#). That person will need a copy of these instructions, the .BAK file, and a copy of the MI\_SQL\_DB\_Configure.sql script.

## Creating the SQL Server Database

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The following instructions provide details on locating the files that are needed for creating and configuring the SQL Server database. To create the database, you will restore a backup file that is included in your Meridium APM distribution. Instructions on creating the SQL Server database from scratch are not included in this documentation. This documentation assumes that you can restore the file provided using your company's standard process for restoring backup files.

The backup file that you need to restore is included in **Meridium\_Database.zip**, which is located on the Meridium APM Framework and Server Setup DVD in the **\\Database** folder.

### To obtain the file that you will restore to create the SQL Server database:

1. On the Application Server machine, insert the Meridium APM Framework and Server Setup DVD, and navigate to the folder **\\Database**.
2. In the **Database** folder, open the file **Meridium\_Database.zip** and extract its contents to a local folder.

**IMPORTANT:** The folder to which you extract the files must not contain any spaces.

3. In the Windows explorer, in the folder to which you extracted the files, navigate to the **\\Setup\\NewInstall\\SQLServer** folder and locate the file **MI\_V3600000.bak**.
4. Place the BAK file in a location where it can be referenced by the SQL Server service.
5. On the Database Server machine, restore the file **MI\_V3600000.bak** to create the SQL Server database.

After the Meridium APM database has been created, you will need to [configure it for use with the Meridium APM software](#).

## Configuring the SQL Server Database

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The following instructions explain how to configure a SQL Server database for use by Meridium APM. These instructions assume that the SQL Server database has already been created by restoring a backup file using SQL Server Management Studio or another 3rd party tool.

These instructions provide details on configuring the Meridium APM SQL Server database using the script `MI_SQL_DB_Configure.sql`, which is included in your Meridium APM distribution package. This script ensures that the database will be properly configured for use with Meridium APM.

When you run the script `MI_SQL_DB_Configure.sql`, the following database settings will be configured automatically:

- The database will be set to read/write mode.
- The database will be configured to allow multiple users.
- Query notification will be enabled.
- The database compatibility level will be set to SQL Server 2008 R2 or SQL Server 2012, as appropriate.
- The database will be set to Full recovery mode.
- A SQL Server login will be created, and this login will own the database.
- The SQL Server database name, SQL Server login name, and password will all match.

### To configure the baseline Meridium APM SQL Server database:

1. On the Application Server machine, open a Windows explorer window, and navigate to the folder `C:\MeridiumAPMDatabase\Setup\NewInstall\SQLServer`.
2. Open a SQL Server Management Studio query window that is connected via a privileged login.
3. In the `\\SQLServer` folder in the Windows explorer, open the file `MI_SQL_DB_Configure.sql`, and copy its contents into the SQL Server Management Studio query window.
4. Set the `@dbname` variable to the name of the SQL Server database that you created using previous instructions.
5. Execute the edited script.

This code creates a SQL Server login that matches the database name and sets the password to match the login name.

6. Use SQL Server Management Studio to modify the password as appropriate.

**IMPORTANT:** These are the same login credentials that will be used when you create the Meridium APM data source that will connect to this database.

7. Create the custom server-level error messages, which are required by the Meridium APM system. These error messages must be created at the instance level. Creating them requires a privileged login assigned to either the System Administrator (sysadmin) or Server Administrator (serveradmin) fixed server roles. To create the Meridium APM error messages:
  - a. Make sure that you are connected to the Database Server with SQL Server Management Studio as a System Administrator or Server Administrator user.
  - b. Execute the stored procedure MI\_ERRORS\_CRT\_ALL\_MSGS. This procedure was supplied with the Meridium APM baseline database and can be executed using the following command:

```
exec <databasename>..MI_ERRORS_CRT_ALL_MSGS
```

Where **<databasename>** is the name of the database you created in the preceding steps.

## Installing Oracle Data Access Components (ODAC)

The Oracle Data Access Components (ODAC) package is required on the Meridium APM Application Server machine so that it can connect to the Oracle database on the Database Server machine. The following ODAC software is required on the Application Server:

- **Oracle Data Provider for .NET (ODP.NET):** A database connectivity layer for use with .NET applications, like Meridium APM. You can use these instructions to install both the required 32-bit and 64-bit versions.
- **Oracle Services for Microsoft Transaction Server (MTS):** An Oracle component that the Meridium APM Application Server uses to manage database transactions.

### To install ODAC:

1. In the Meridium APM Required 3rd Party Components distribution package, open the folder `\\Oracle\ODAC_12101`.
2. On your machine, create the following folder: `C:\Temp\ODAC_12101`.
3. Copy the contents of the folder `\\Oracle\ODAC_12101` to the folder `C:\Temp\ODAC_12101`.
4. In the folder `C:\Temp\ODAC_12101`, right-click the file `Install_ODAC.cmd`, and then click **Run as Administrator**.

A message appears, asking if you want to allow the Windows Command Process to make changes to your computer.

5. Click the **Yes** button.

A windows command prompt window appears.

6. Press any key.

The *32-bit* installation process begins, and the status of the installation process is displayed in the command prompt window. After the installation process is complete, messages appear in the command prompt window, indicating that the process is complete and prompting you to press any key to continue.

7. Read the 32-bit **Post Installation** information, and complete any necessary steps, as indicated in the command prompt window. For example, you may need to change the `NLS_LANG` to a value that is compatible with the Database Server. If you are asked to restart the machine, *do not* do so until after the 64-bit version is installed.

**Note:** You can also read all the information via the files stored in the `ODAC32_12101` subfolder. For example, you may need to reference troubleshooting information, if you encounter any issues.

8. Press any key.

The *64-bit* installation process begins, and the status of the installation process is displayed in the command prompt window. After the installation process is complete, messages appear in the command prompt window, indicating that the process is complete and prompting you to press any key to continue.

9. Read the 64-bit **Post Installation** information, and complete any necessary steps, as indicated in the command prompt window. For example, you may need to change the NLS\_LANG to a value that is compatible with the Database Server.

**Note:** You can also read all the information via the files stored in the **ODAC64\_12101** subfolder. For example, you may need to reference troubleshooting information, if you encounter any issues.

10. Press any key to close the command prompt window.

At this point, you should [refer back to the checklist](#).

## Configuring the TNS\_ADMIN Environment Variable

If you will connect to an Oracle database or use the Oracle EBS eAM Interfaces module, you will need to configure the file *tnsnames.ora* on the Application Server. You can do so by specifying the connection to the Oracle database or the Oracle EBS eAM database. After you install the Oracle Client software (ODAC) or the Oracle EBS eAM database software, you may end up with multiple *tnsnames.ora* files in multiple locations. All *tnsnames.ora* entries must be combined into a single *tnsnames.ora* file located in the folder to which the TNS\_ADMIN global environment variable is pointing. The TNS\_ADMIN global environment variable should have been created and defined when the ODAC software was installed. You can determine if it was created or not using the following instructions. If it was not created, these instructions also provide details on creating it.

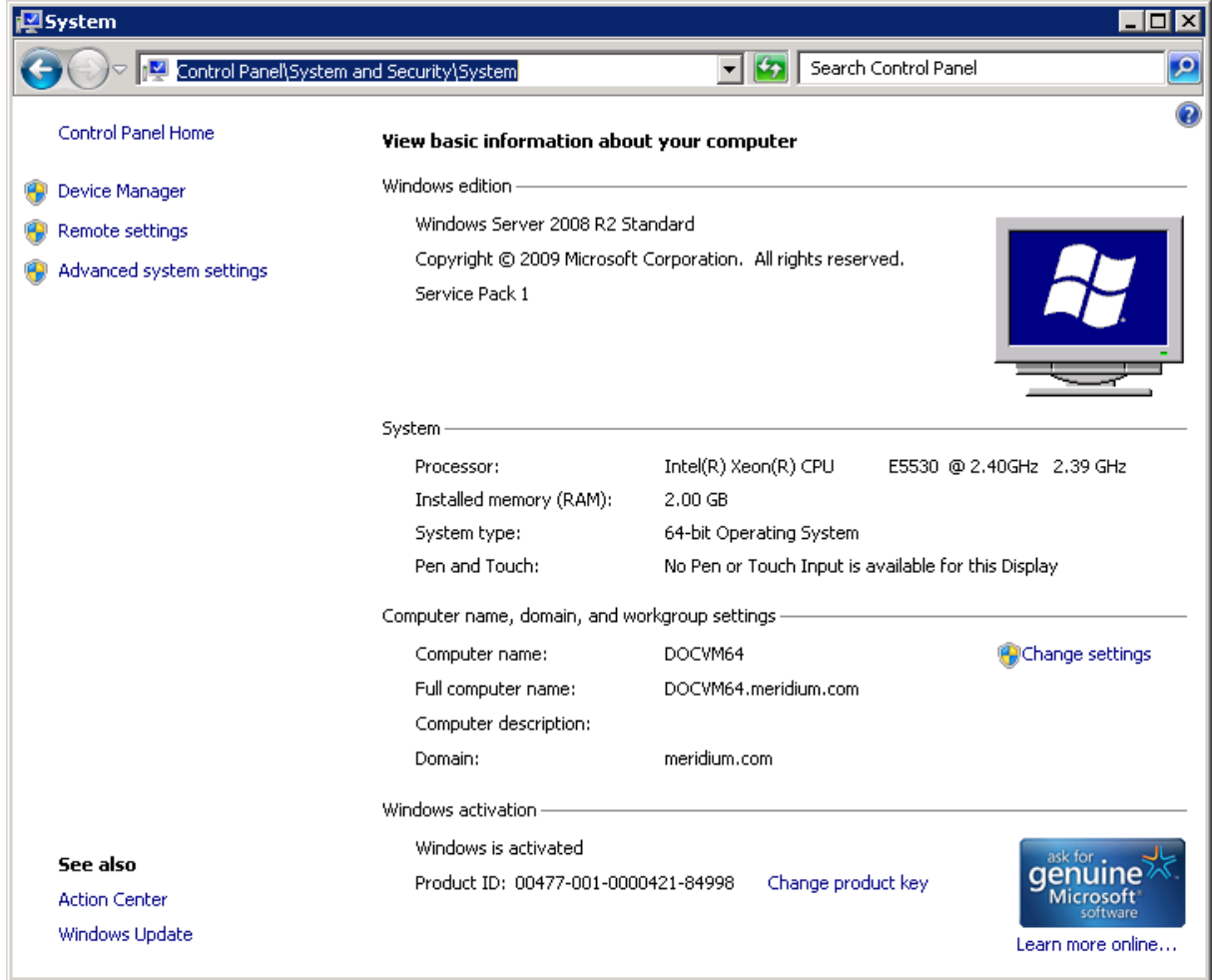
**Note:** In some cases, the TNS\_ADMIN global environment variable may not be visible until the machine is restarted.

To configure the TNS\_ADMIN Environment variable:

1. On the Meridium APM Application Server machine, access the following location via the Control Panel: **Control Panel\System and Security\System**.

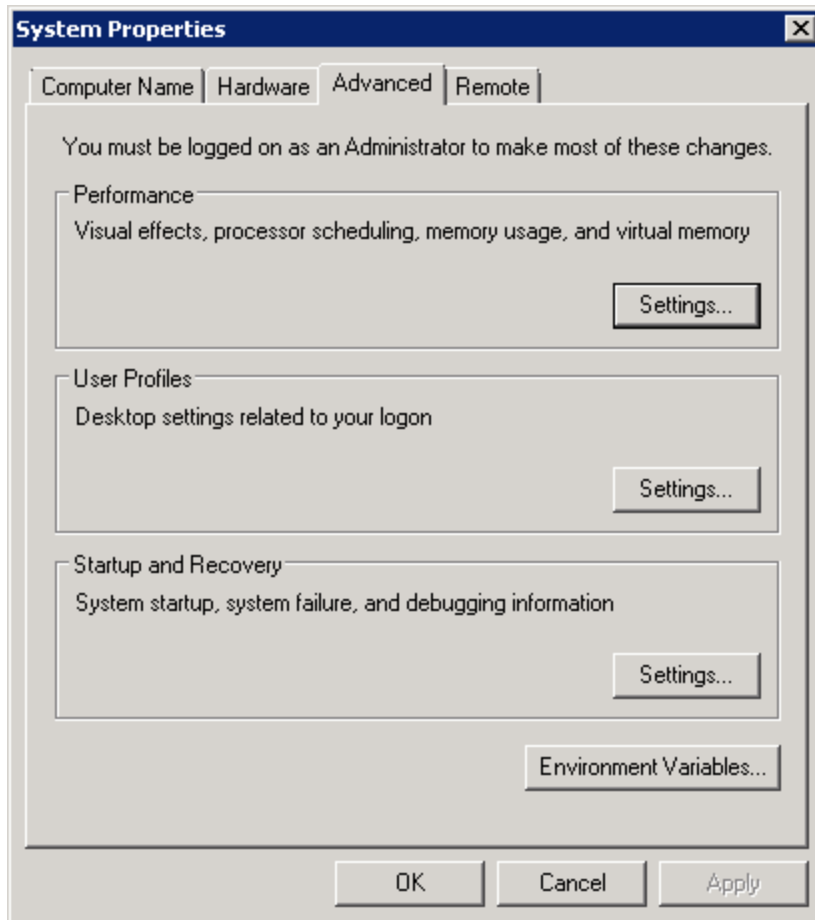
The **System** window appears.





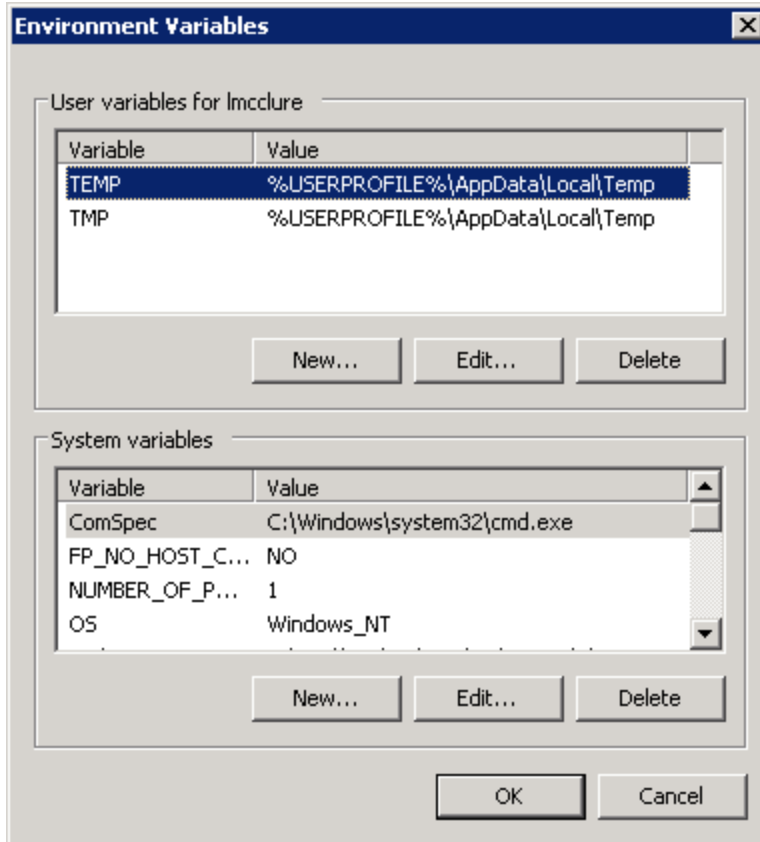
2. On the menu to the left, click the **Advanced system settings** link.

The **System Properties** window appears, and the **Advanced** tab is displayed by default.

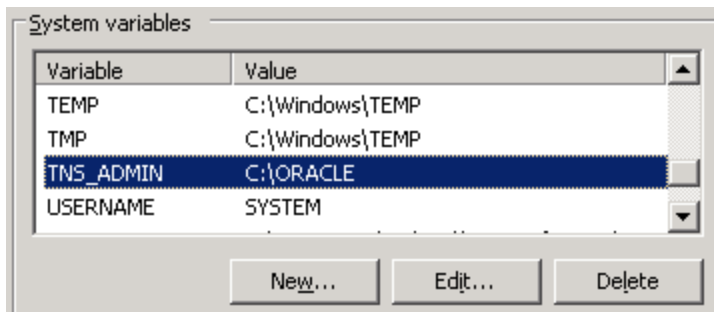


3. Click the **Environment Variables** button.

The **Environment Variables** window appears.



- In the **System variables** section, review the list of system-level variables, and determine whether the variable **TNS\_ADMIN** exists.
  - If it *does* exist, take note of the folder path that is defined as the variable value. These instructions will later ask you to navigate to this location.
  - If it does not exist, create a new system variable with the following properties:
    - **Variable name:** TNS\_ADMIN
    - **Variable Value:** C:\oracle



- Click **OK** on the **Environment Variables** window.  
The **Environment Variables** window closes.

6. Click **OK** on the **System Properties** window.

The **System Properties** window closes.

7. Open a Windows explorer window, and navigate to the folder that is defined as the variable value for the TNS\_ADMIN environment variable. If you created the TNS\_ADMIN environment variable using these instructions, the folder path will be **C:\oracle**. If the folder does not exist, create it.
8. Within this folder, create a file with the name **tnsnames.ora**, or copy an existing tnsnames.ora file into this folder. At this point, you will need to [configure an Oracle Net Service Name](#), which specifies the connection to either the Oracle database or the Oracle EBS eAM database.

## Configuring An Oracle Net Service Name

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For Meridium APM to work properly with an Oracle database or with Oracle EBS eAM Interfaces, you must create an Oracle Net Service Name that defines the connection information to the Database Server or the Oracle EBS eAM database. To do so, you will need to modify the [tnsnames.ora file on the Meridium APM Application Server machine](#).

The Oracle Net Service that you create will be used later when you create a Meridium APM Data Source or when you specify the URL to the Oracle EBS eAM database in CMMS Interface records. Note that one Net Service Name must be created for *each* Oracle database that you want use with Meridium APM.

Instructions for modifying the file tnsnames.ora exceed the scope of this documentation. For details on modifying this file, consult your Oracle documentation.

## Upgrading Application Server Instances to 3.6.1.0.0

The following instructions provide details on upgrading a Meridium APM Application Server instance on a 64-bit Application Server machine. The Meridium APM Application Server machine is part of the [basic Meridium APM system architecture](#).

### Upgrade from any version V3.5.0 and later

You can also use these instructions for applying 3.6.1.0.0 to the Sync Server with Operator Rounds and Web Framework machines if a supporting instance of the Meridium APM Application Server is not installed on those machines.

**Note:** If you are prompted to install prerequisites, you should do so.

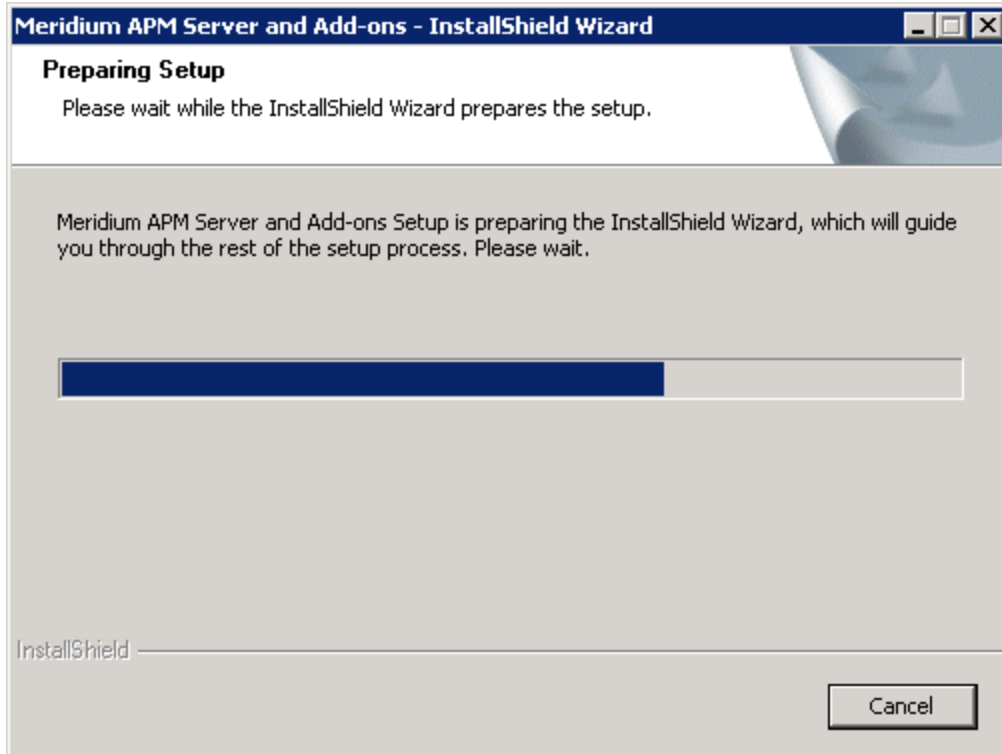
#### To upgrade an Application Server instance:

1. Restart the machine containing the Application Server instance that you want to upgrade.
2. On the same machine, open the 3.6.1.0.0 distribution package, and navigate to the folder **\\Setup\Meridium APM Server and Add-ons**.
3. Double-click the file **setup.exe**.

A message appears, asking if you want to allow the installer to make changes to your machine.

4. Click the **Yes** button.

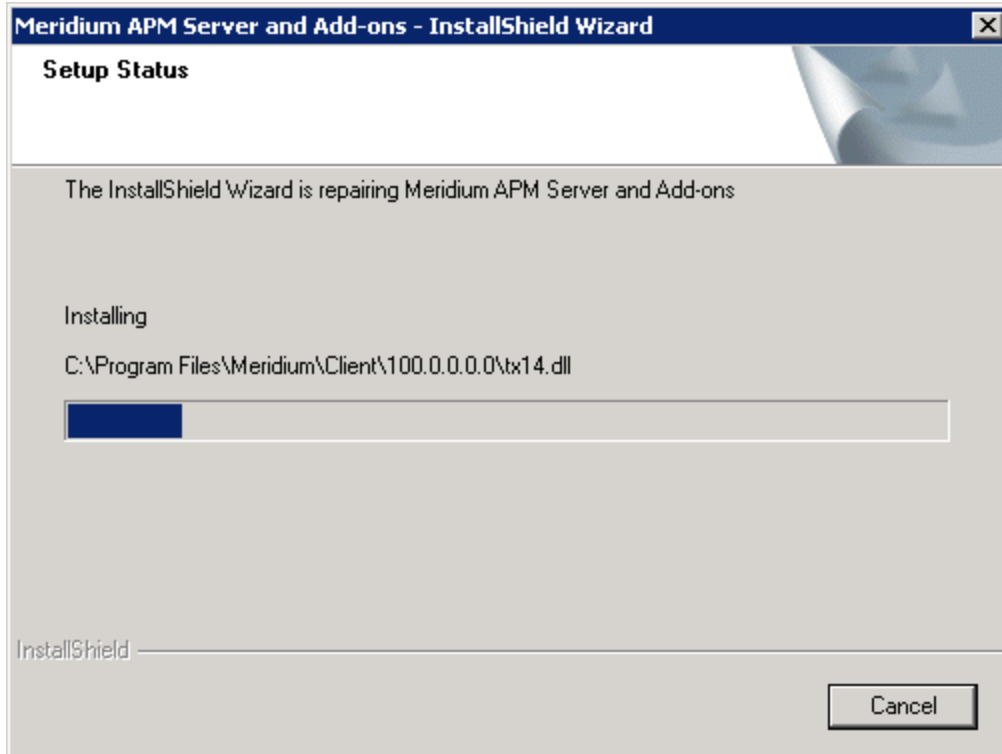
The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen. The **Preparing Setup** screen contains a progress bar that indicates when the installer is ready to upgrade components on your machine.



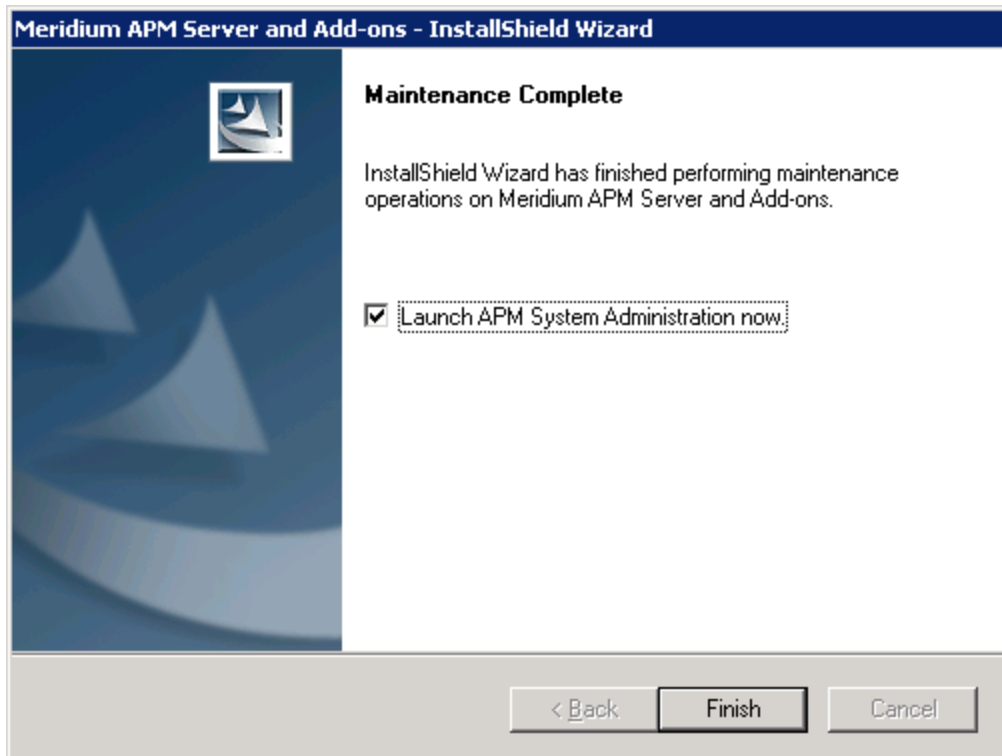
After the progress bar reaches the end, a message appears, asking if you want to upgrade your server.

5. Click the **Yes** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the upgrade process.



After the progress bar reaches the end, the **Maintenance Complete** screen appears.





The screen contains a message, indicating that Meridium APM Server and Add-ons has been upgraded successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to Yes.

6. Clear the **Launch APM System Administrator now** check box.
7. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. At this point, you should [refer back to the checklist](#).

## Upgrade from V3.4.5

These instructions assume that:

- Your system meets the hardware and software requirements for the Application Server machine.

**Note:** If your system does meet certain software requirements, a message may be displayed during the upgrade process that indicates the software requirement that is missing. Some software requirements, however, will be installed automatically if they are missing. For more information, see the hardware and software requirements for the basic Meridium APM system architecture.

- You have read and understand how to combine steps in the Application Server installation process if you are [upgrading other Meridium APM components](#) on the Application Server machine.
- You understand that the older version of the Meridium APM Application Server and Add-Ons will be uninstalled automatically before the system is upgraded.

**Note:** IIS will be reset automatically by the installer before the old version of Meridium APM is uninstalled and before the installation process begins.

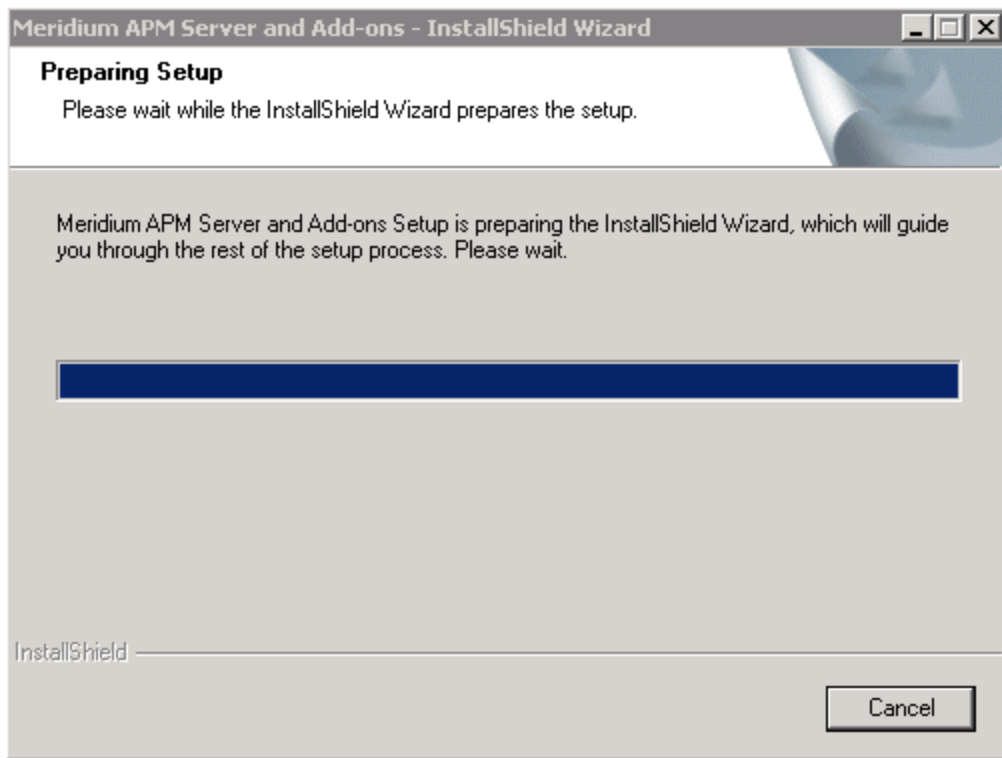
### To upgrade the Meridium APM Application Server and Add-ons:

1. On the APM Application Server machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Server and Add-ons**.
2. Double-click the file **Setup.exe**.

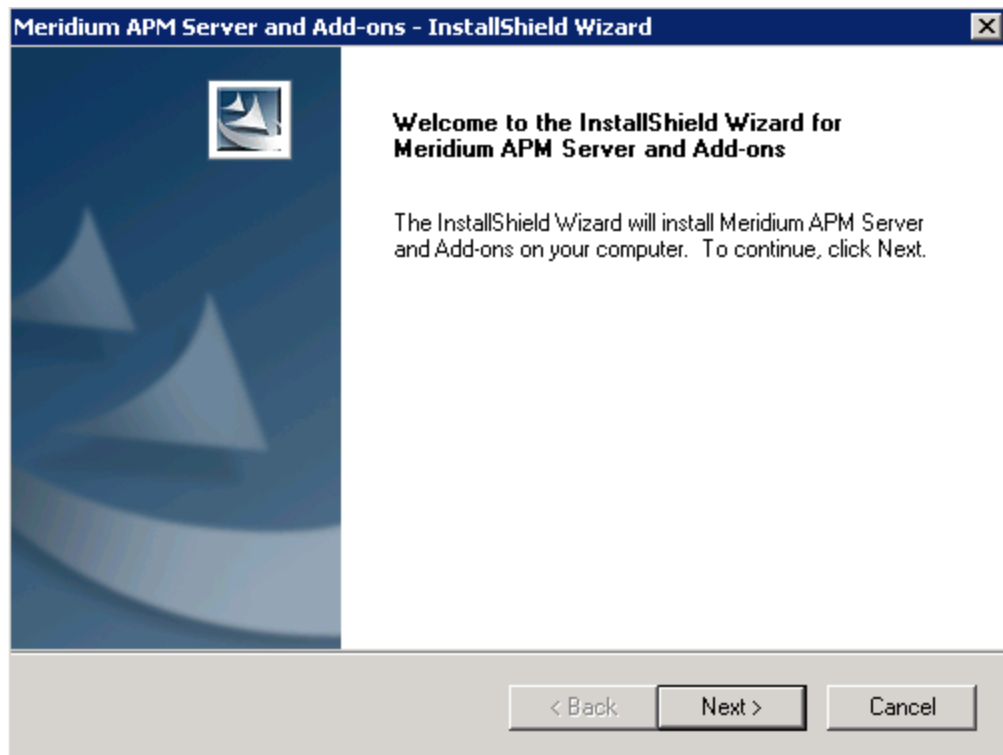
A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen. The **Preparing Setup** screen contains a progress bar that indicates when the installer is ready to upgrade components on your machine.



After the progress bar reaches the end, the Welcome screen appears.

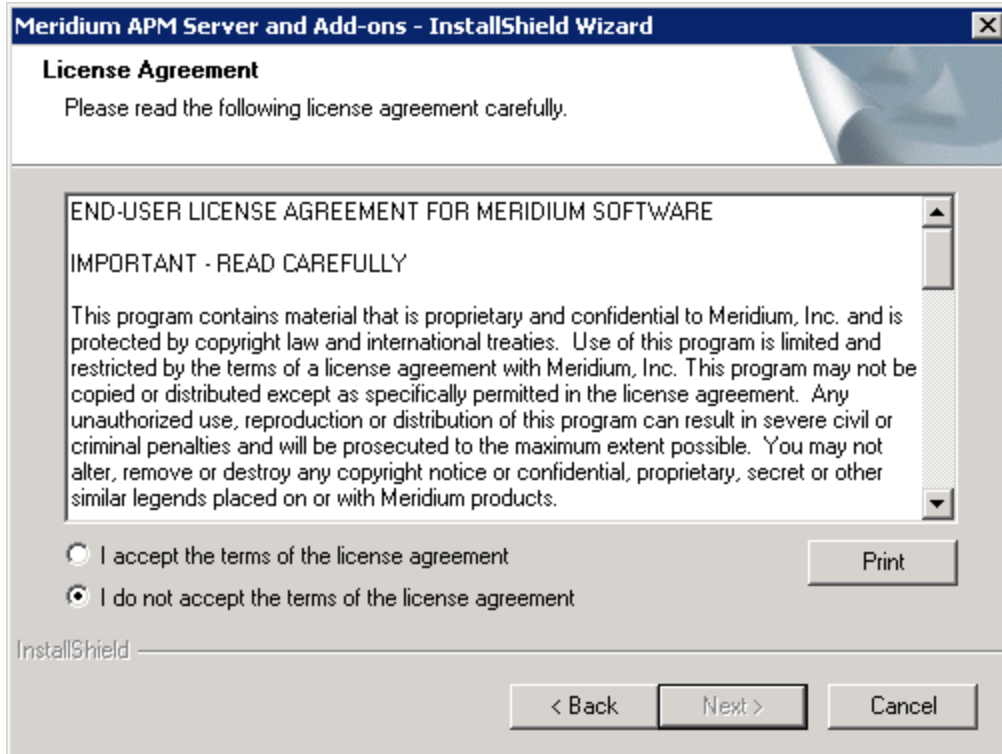


4. Click the **Next** button.

A message appears indicating that an older version of Meridium APM has been detected on the machine. This message also indicates that the older version will be uninstalled automatically before the newer version is installed and asks if you want to continue.

5. Click the **Yes** button.

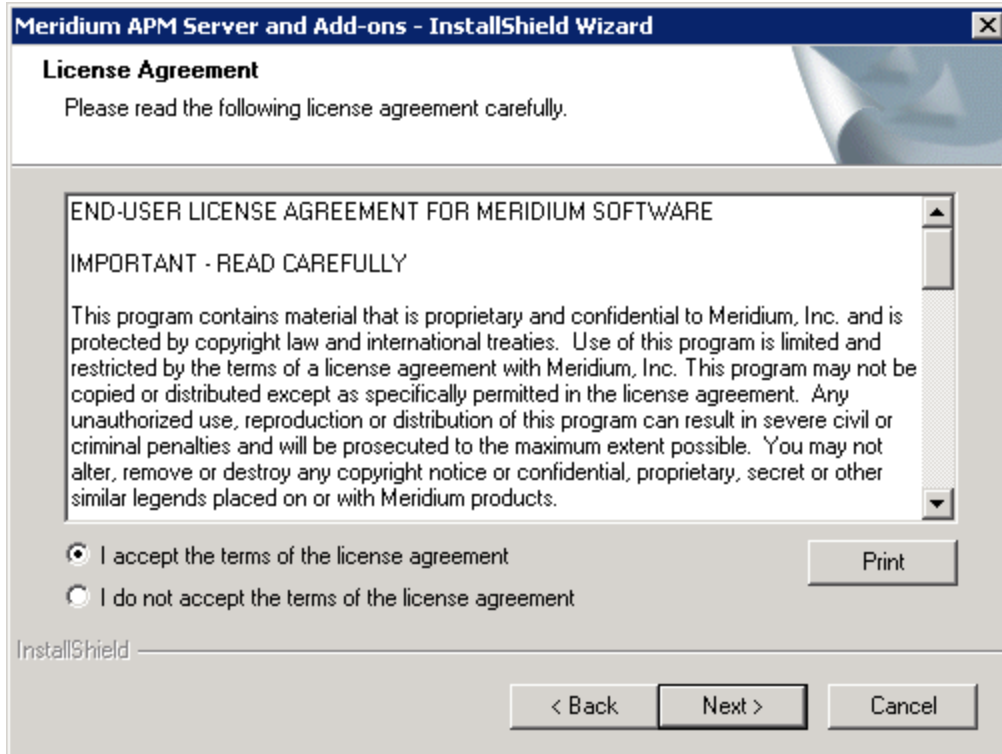
The **License Agreement** screen appears.



6. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

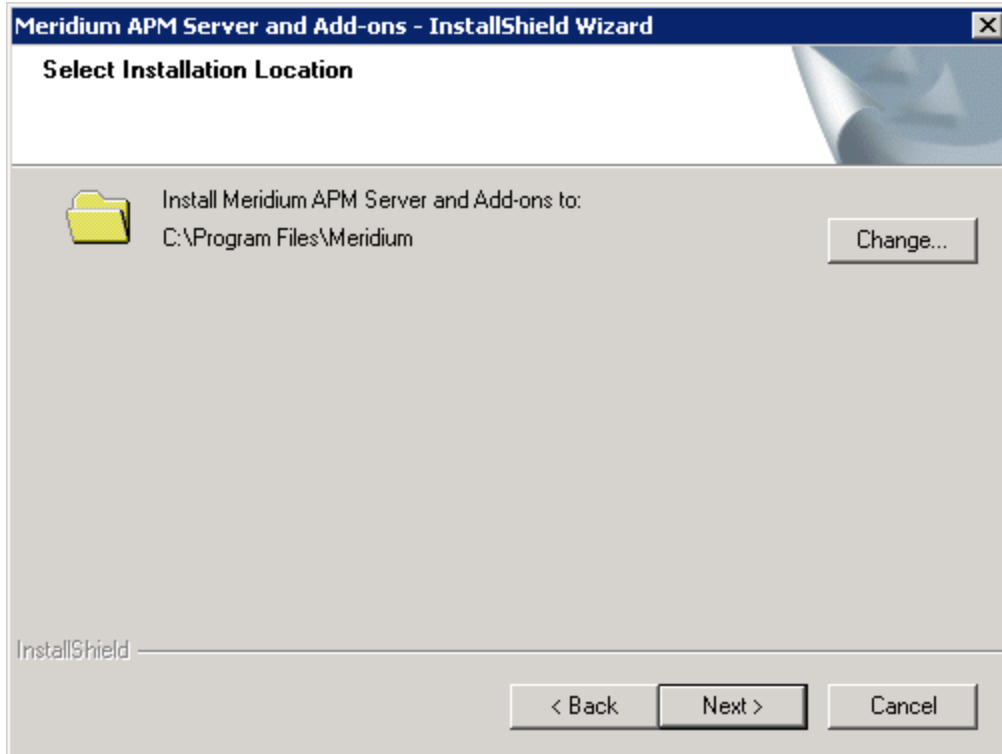
The **Next** button becomes enabled.



**OEHint:** If you want to print the license agreement, click the **Print** button.

7. Click the **Next** button.

The **Select Installation Location** screen appears, prompting you to select the location where the new version of the Meridium APM Server and Add-ons will be installed after the older version is uninstalled. By default, the Meridium APM Server and Add-ons software will be saved to the following folder: **C:\Program Files\Meridium**.

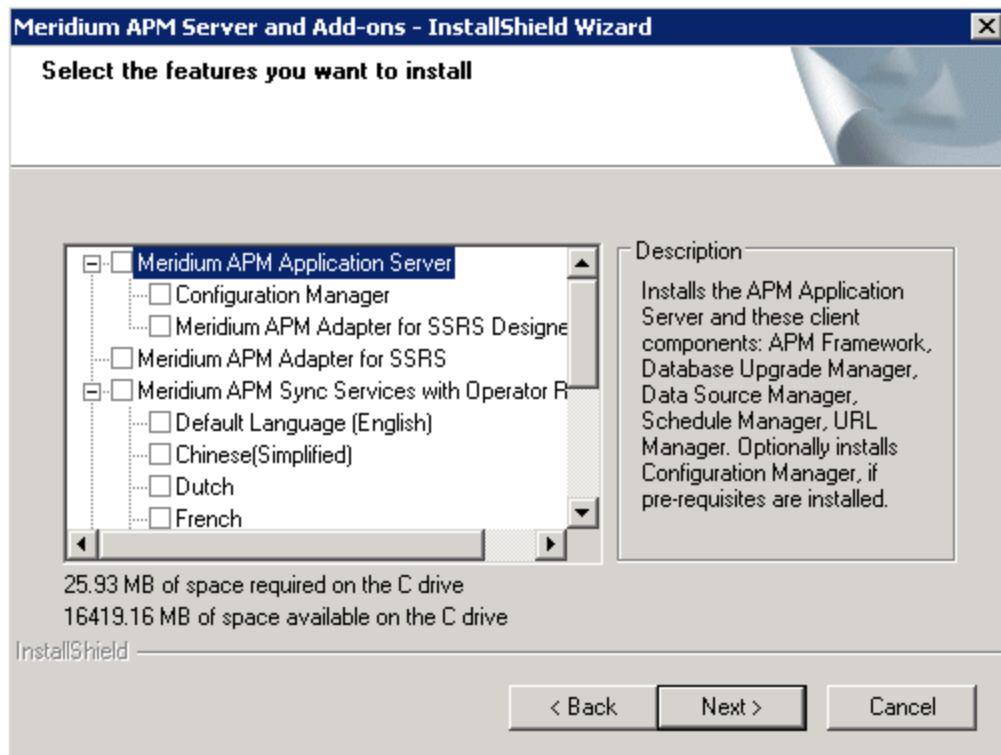


8. If you are satisfied with the default location where the software will be installed, click the **Next** button.

-or-

If you want to change the location where the software will be installed, click the **Change** button, and navigate to the location where you want to install the Meridium APM Server and Add-ons software. The folder path that you select will be displayed in place of the default folder path. When you are satisfied with the installation location, click the **Next** button.

The **Select the features you want to install** screen appears, and the **Meridium APM Application Server** node is highlighted automatically in the tree.



**IMPORTANT:** The **Select the features you want to install** screen lets you specify which features you want to install on the Application Server machine after the older version is uninstalled. *These instructions* assume that you want to deploy only Meridium APM Application Server software. When the Meridium APM Application Server software is installed, the Meridium APM System Administration Tool and the following APM Framework applications are also installed automatically: APM Framework, Database Upgrade Manager, Data Source Manager, Schedule Manager, and URL Manager. Corresponding options for these applications are not listed in the tree because these components must be installed with the Meridium APM Application Server software. You can optionally install the *Configuration Manager* and the APM Framework adapter, *Meridium APM Adapter for SSRS Designer*.

- In the tree, select the **Meridium APM Application Server** check box.

The subnodes are selected automatically.



10. If you want to install the Meridium APM Configuration Manager application on the APM Application Server machine, accept the default selection.

-or-

If you do not want to install the Meridium APM Configuration Manager application on the APM Application Server machine, clear the **Configuration Manager** check box. Keep in mind that you can run this installer again and install the Configuration Manager at a later time.

**Note:** The Configuration Manager application can be installed on the APM Application Server machine only if the necessary prerequisites are installed on that machine.

11. If you want to install the Meridium APM Adapter for SSRS Designer on the APM Application Server machine (used by the Meridium APM Framework application for reports), accept the default selection.

-or-

If you do not want to install the Meridium APM Adapter for SSRS Designer on the APM Application Server machine, clear the **Meridium APM Adapter for SSRS Designer** check box. Keep in mind that you can run this installer again and install the Configuration Manager at a later time.

**IMPORTANT:** While additional options are available for selection in the tree on the **Select the features you want to install** screen, these options are not meant to be installed on the [APM Application Server machine within the basic Meridium APM system architecture](#), and these instructions are limited to installing the Meridium APM Application Server and Add-ons software (with APM Framework applications). This installer is also used to install the additional components *on other machines*.

12. Click the **Next** button.

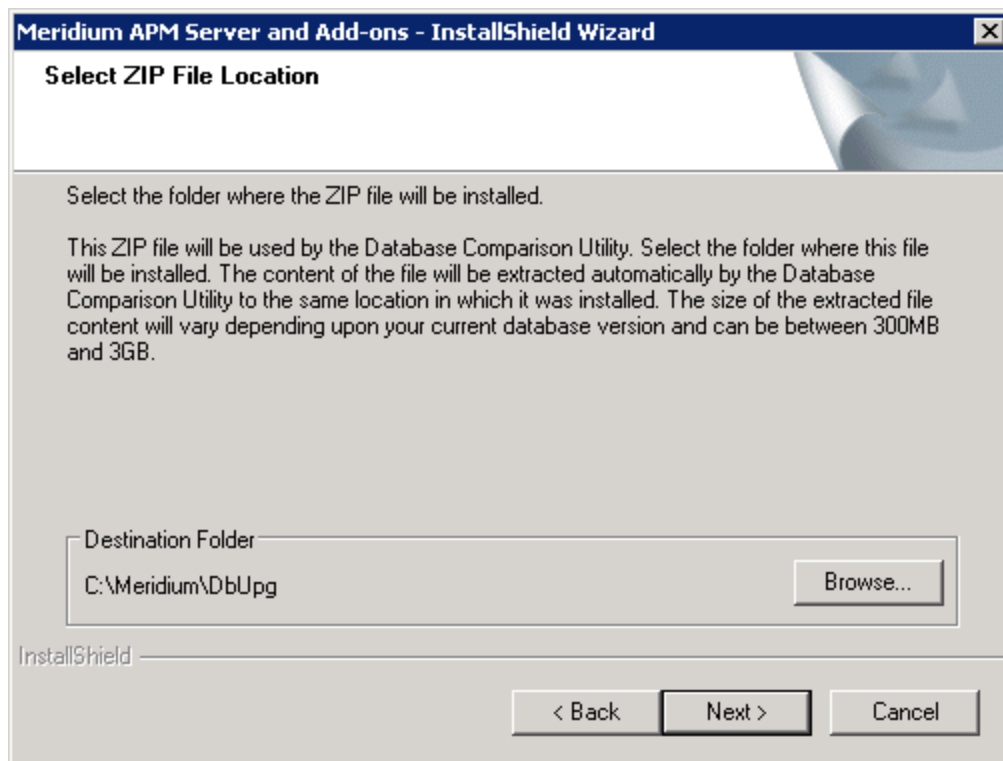


A message appears, indicating that the installer is checking your machine for the required prerequisites for the features that you want to install after the older version is uninstalled.

- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the feature that is dependent on that prerequisite. This message also indicates what you can do to continue.

If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

- If all the prerequisites for the selected components are installed on the machine, or you have selected components that do not require any prerequisites, the **Select ZIP File Location** screen appears.



The **Select ZIP File Location** screen lets you specify the location where you want the ZIP file of database content to be installed. This ZIP file is used by the Data-

base Comparison Utility. By default, the ZIP file will be installed in the folder **C:\Meridium\DbUpg**. You can, however, select a different location.

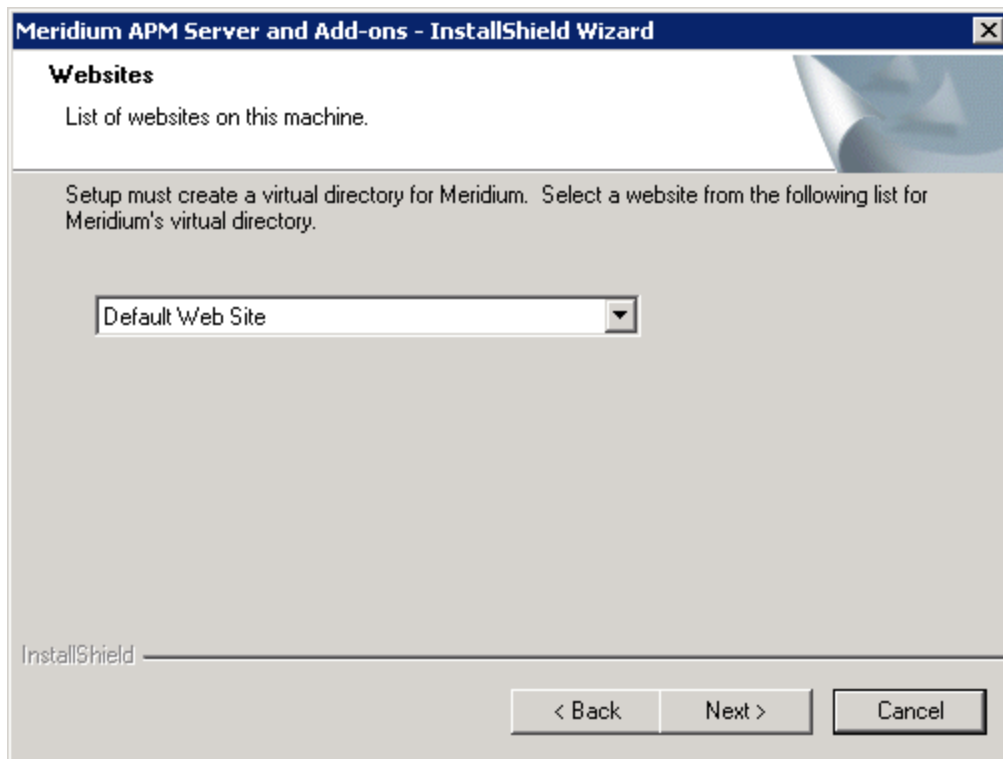
13. Read the information on this screen and note the estimated size of the extracted files from this ZIP file. You should use this information to determine where you want install the ZIP file.
14. If you want the ZIP file to be installed in the default location, accept the default setting.

-or-

If you want the ZIP file to be installed in a different location, click the **Browse** button, and navigate to the location where you want to ZIP file to be installed. The selected file path will appear in the **Destination Folder** section in place of the default file path.

15. Click the **Next** button.

The **Websites** screen appears.

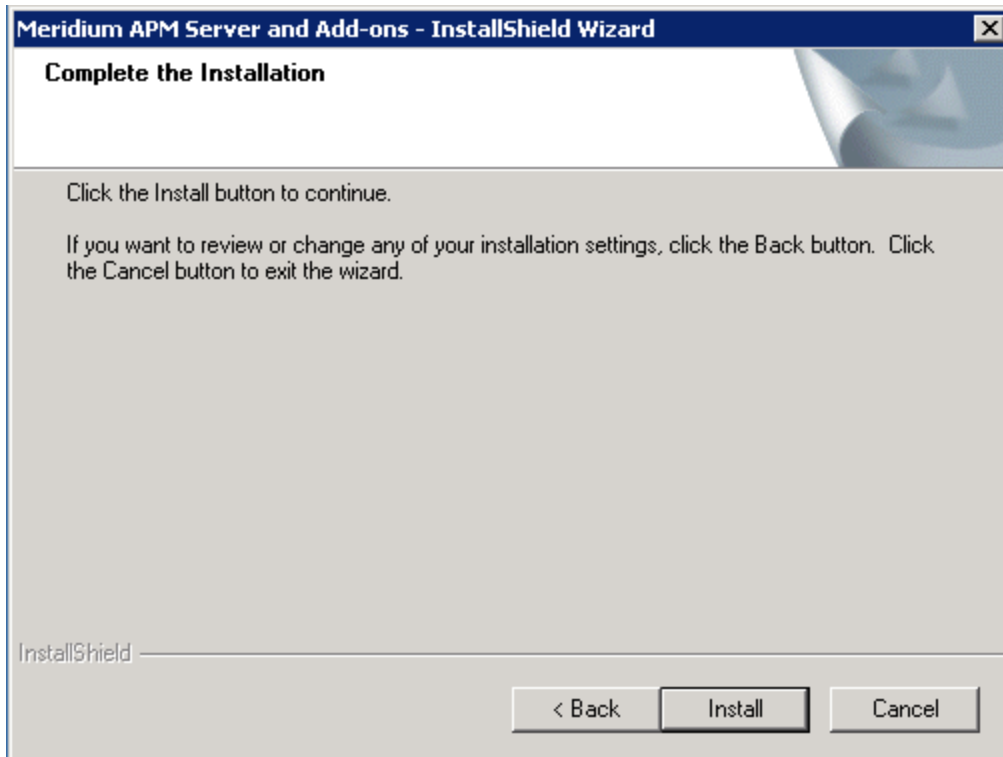


The **Websites** screen lets you specify where the installer will create a virtual directory for Meridium APM. This website is configured in the IIS Manager on the APM Application Server machine. The websites list contains all the websites that

are configured on the APM Application Server machine. The default website is *Default Web Site*. Throughout this documentation, we assume that you have chosen to install Meridium APM under the *Default Web Site*.

16. In the list of websites, select the website where you want the installer to create a virtual directory.
17. Click the **Next** button.

The **Complete the Installation** screen appears.

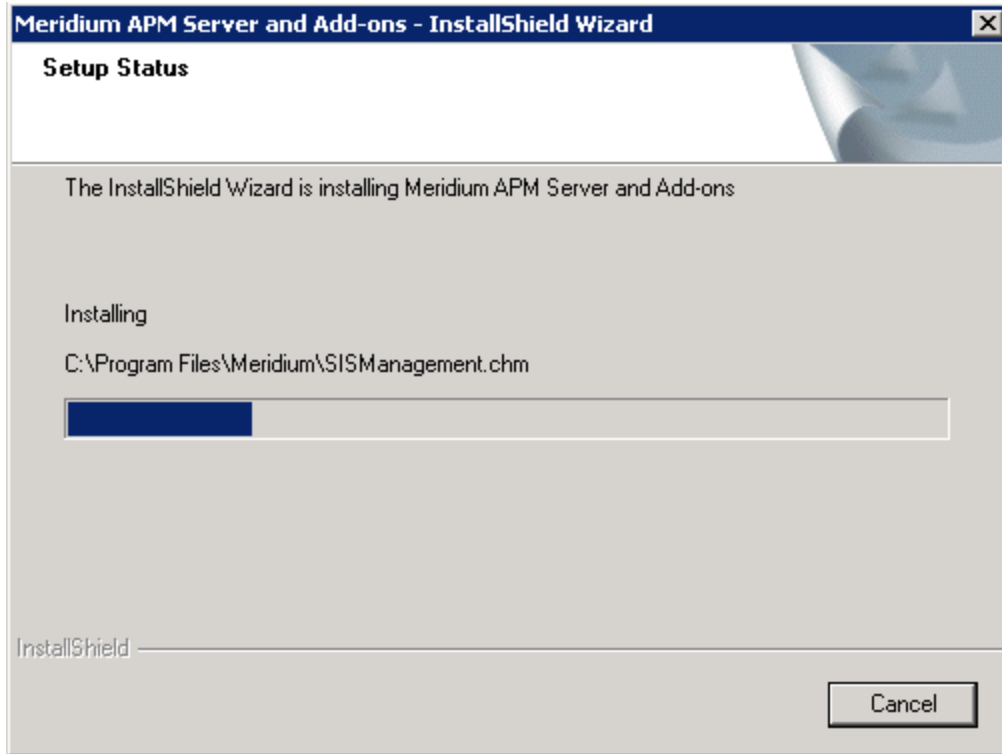


The **Complete the Installation** screen contains a message, indicating that if you want to modify any of the settings that you specified in the preceding screens in the installer, you can use the **Back** button to do so, or if you do not want to complete the upgrade process, you can click **Cancel**.

These instructions assume that you are ready to complete the upgrade process.

18. Click the **Install** button.

A message appears, indicating that the older version of Meridium APM is being removed. After the older version is removed, the **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.



This screen contains a message, indicating that Meridium APM Server and Add-ons has been installed successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to Yes.

19. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

-or-

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

20. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears. At this point, you should [refer back to the checklist](#).

# About Upgrading Meridium APM Framework Machines

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## Upgrade from any version V3.5.0 and later

You can upgrade a Meridium APM Framework machine [manually using the Meridium APM Framework installer](#). When you do so, only the applications that are already installed on that machine will be upgraded. More specifically, only the files that have been updated for 3.6.1.0.0 will be replaced on the Meridium APM Framework machine.

Alternatively, you can [upgrade Meridium APM Framework workstations automatically](#). This section of the documentation provides details on using the Meridium APM Framework installer to upgrade Meridium APM Framework machines manually.

**Note:** If the Meridium APM Framework machine was last upgraded using an application update, you will also need to upgrade it to 3.6.1.0.0 [using an application update](#).

## Upgrade from V3.4.5

You can upgrade Meridium APM Framework machines manually using the Meridium APM Framework installer. When you do so, the previous version of Meridium APM will be *uninstalled automatically* and then the new version will be installed. Alternatively, you can [upgrade Meridium APM Framework workstations automatically](#). This section of the documentation provides details on using the Meridium APM Framework installer to upgrade Meridium APM Framework machines manually.

When you use the Meridium APM Framework installer, you can also install any of the administrative applications during the upgrade process:

- **Configuration Manager**

An administrative application that lets you define how you want data to be stored in Meridium APM. Using the Configuration Manager, you can define field properties, create entity families, set up relationships between families, create views, create business rules, design datasheets, copy objects from one database to another view, view the data directory, and generate the tables that store data.

- **Data Source Manager**

An administrative application that lets you define the data sources that will be accessible in the Meridium APM applications. Using the Data Source Manager, you can define connection information for data sources and define a default data source for the Meridium APM applications.

- **Schedule Manager**

An administrative application where you can view and manage all the schedule items that exist in Meridium APM.

- **URL Manager**

An administrative application that is used to register URLs and to manage *Associated Pages*.

- **Meridium Adapter for SSRS Designer**

Software that allows Meridium APM to work with SQL Server Reporting Services.

- **VSTA for Strategy**

Software that provides access to Strategy rules.

This installer will run on both 32-bit and 64-bit APM Framework machines. Before you run the Meridium APM Framework installer, you should ensure that the machine [meets the hardware and software requirements](#).

The Meridium APM Framework installer provides two options for the applications that you can install during an upgrade on an APM Framework machine:

- [Install only the Meridium APM Framework application and no administrative applications.](#)
- [Select which applications will be installed, including administrative applications.](#)

**Note:** Beginning in V3.5.0, Crystal reports are not supported. As a result, when you upgrade, Crystal 10 for Meridium will be uninstalled automatically.

## Upgrading Meridium APM Framework Machines to 3.6.1.0.0

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The following instructions provide details on upgrading a Meridium APM Framework machine. These instructions assume that the Meridium APM Framework machine you want to upgrade contains at least the Meridium APM Framework application. You can use these instructions to upgrade a Meridium APM Framework machine that contains administrative applications in addition to the APM Framework application.

**Note:** For the application update process to run successfully, the user who launches the APM Framework application and triggers the automatic update must be logged in as a Windows User with an *Administrator account* to the machine where the update will be performed.

### Upgrade from any version V3.5.0 and later

To upgrade a Meridium APM Framework machine:

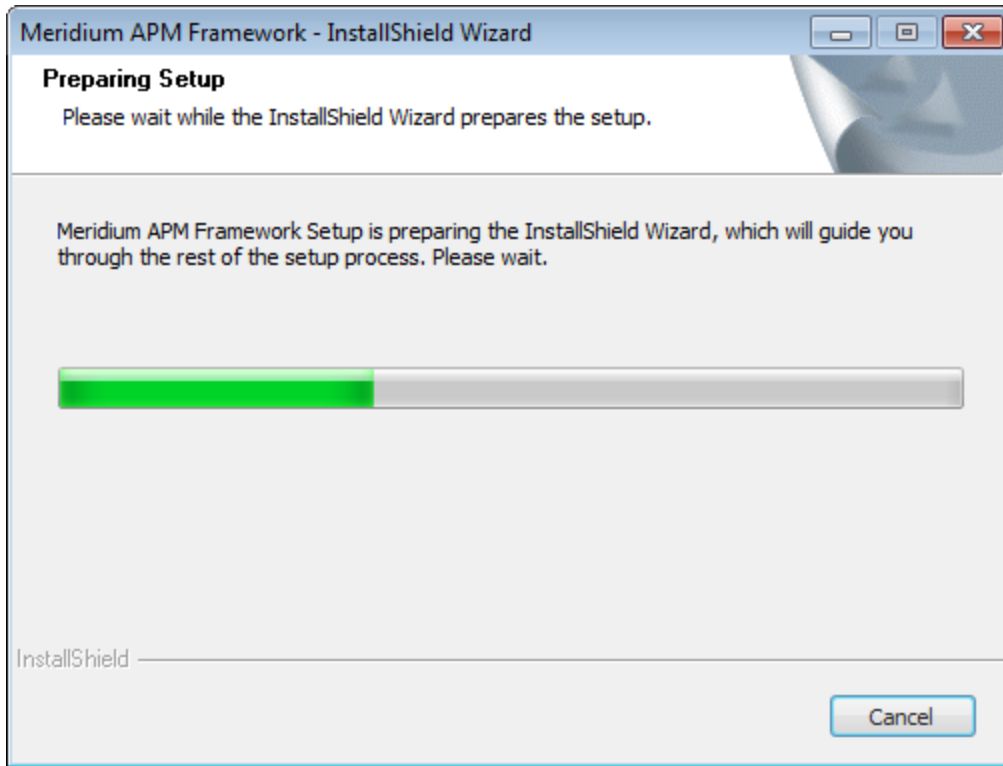
1. Restart the Meridium APM Framework machine that you want to upgrade to 3.6.1.0.0.
2. On the same machine, open the 3.6.1.0.0 distribution package, and navigate to the folder `\\Setup\Meridium APM Framework`.
3. Double-click the file `setup.exe`.

A message appears, asking if you want to allow the installer to make changes to your machine.

Click the **Yes** button.

The **Meridium APM Framework** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.

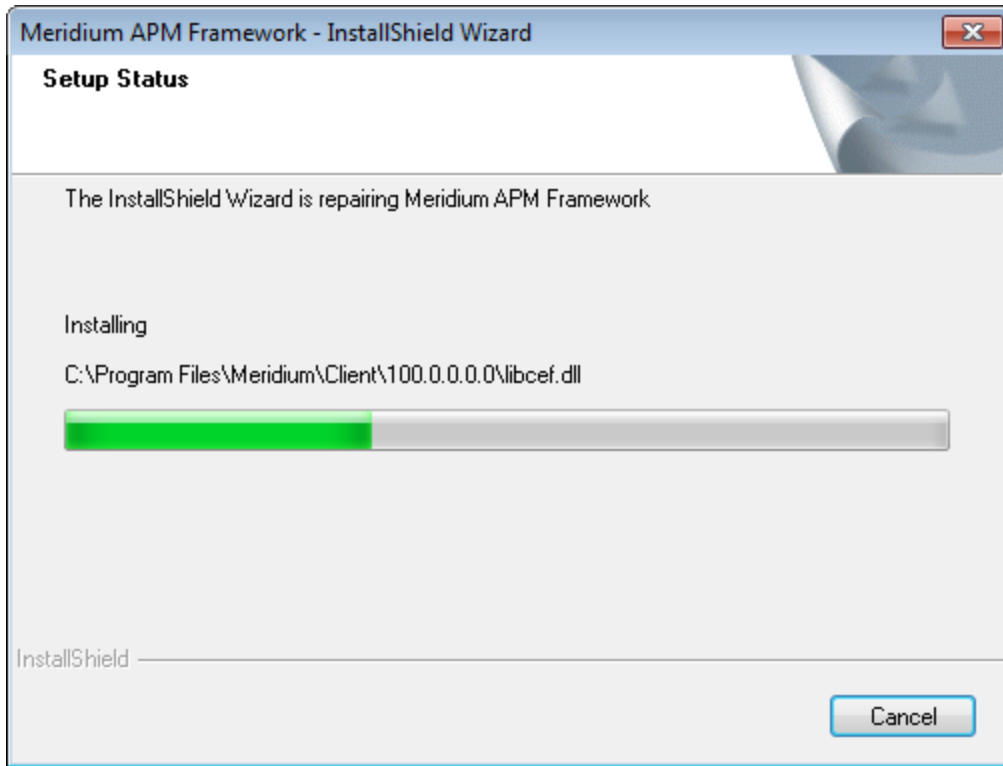




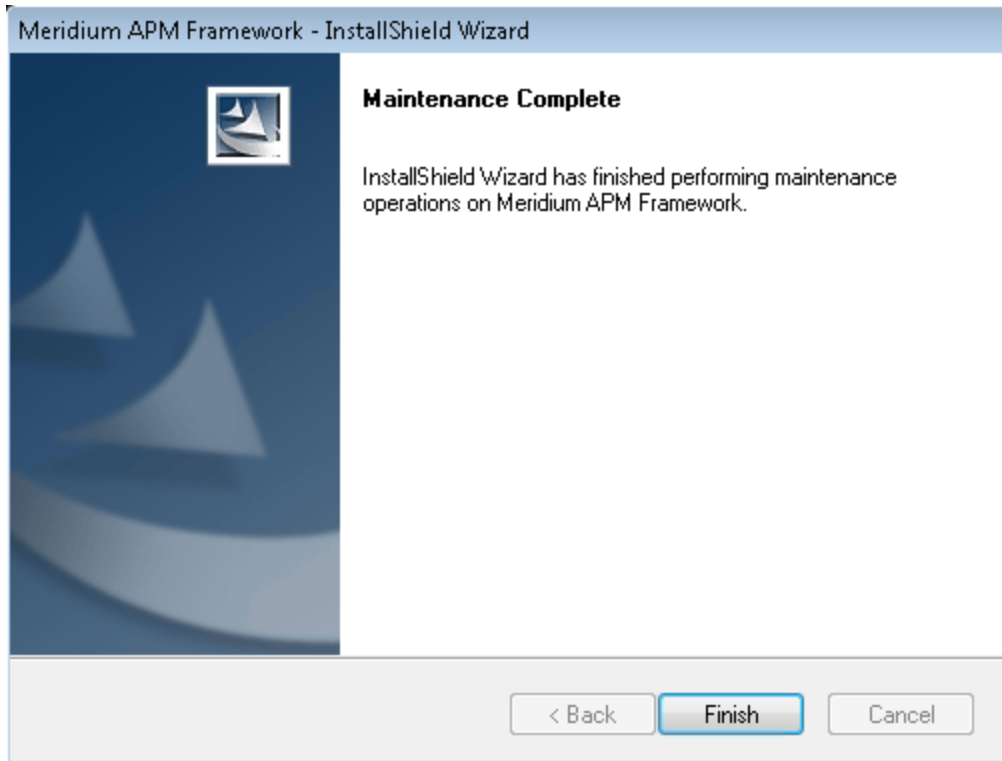
After the progress bar reaches the end, a message appears, asking if you want to upgrade the APM Framework machine.

4. Click the **Yes** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the upgrade process.



After the progress bar reaches the end, the **Maintenance Complete** screen appears, displaying a message indicating that the upgrade is complete.



5. Click the **Finish** button.

The **Meridium APM Framework** installer closes. At this point, you should [refer back to the checklist](#).

## Upgrade from V3.4.5

The following instructions provide details on upgrading a Meridium APM Framework machine manually, using the Meridium APM Framework installer. These instructions assume:

- You understand that your older version of Meridium APM will be uninstalled automatically before the new version is installed.
- That you want to install only the Meridium APM Framework application after the older version is uninstalled.
- Your system meets the hardware and software requirements.
- The Meridium APM Application Server has already been upgraded.

**Note:** For the [application update](#) process to run successfully, the user who launches the APM Framework application and triggers the automatic update must be logged in

as a [Windows User with an Administrator account](#) to the machine where the update will be performed.

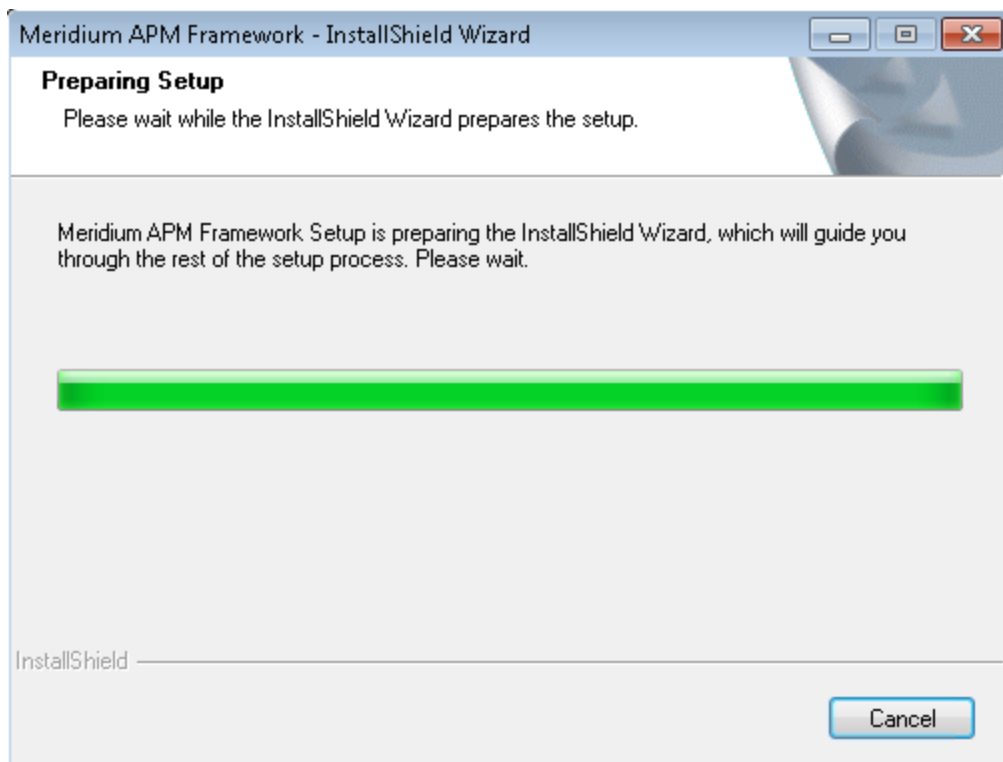
**To manually upgrade the Meridium APM Framework application:**

1. On the APM Framework machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Framework**.
2. Double-click the file **Setup.exe**.

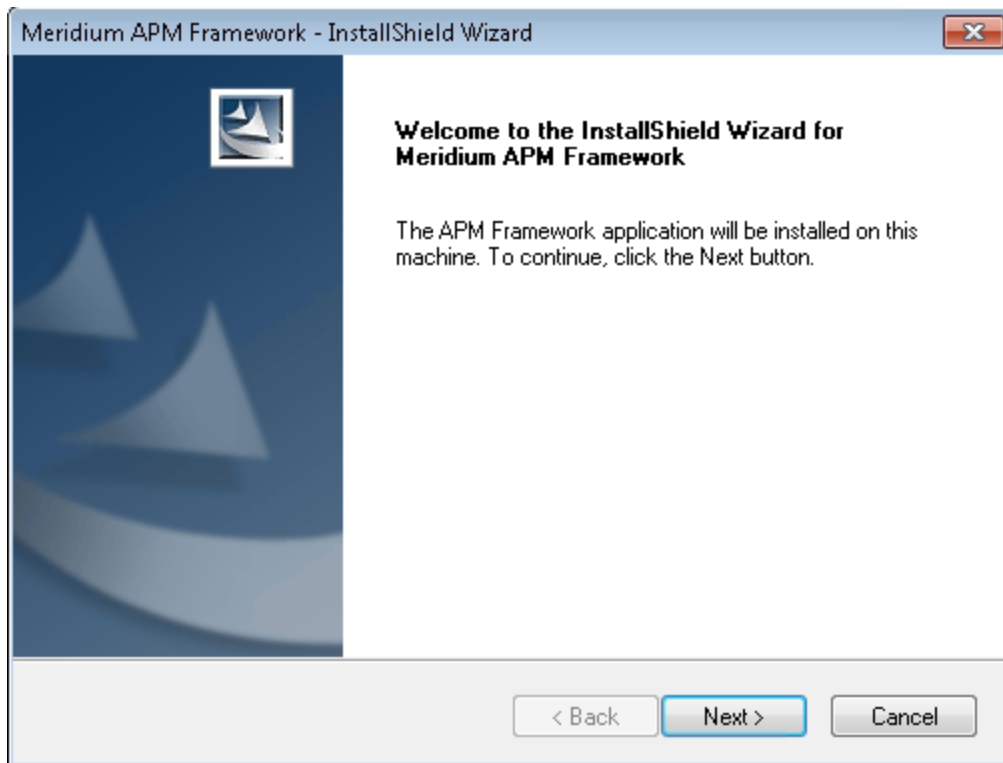
A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The **Meridium APM Framework** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



After the progress bar reaches the end, the Welcome screen appears.

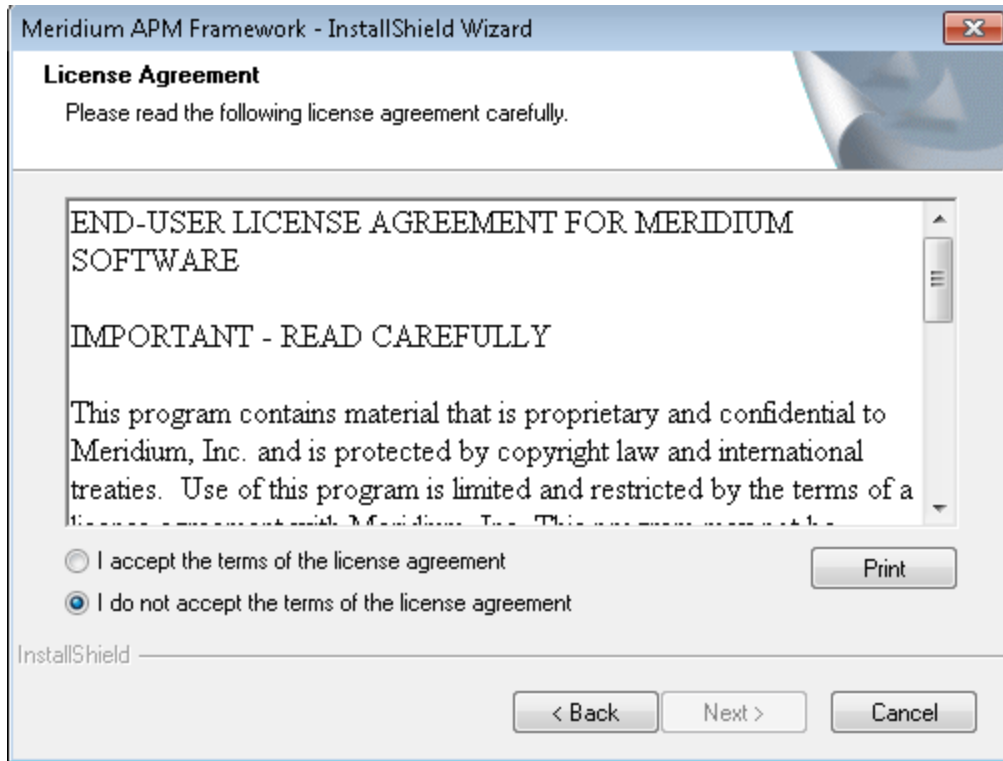


4. Click the **Next** button.

A message appears, indicating that an older version of Meridium APM is installed on the machine and informs you that the older version will be uninstalled before the new version is installed.

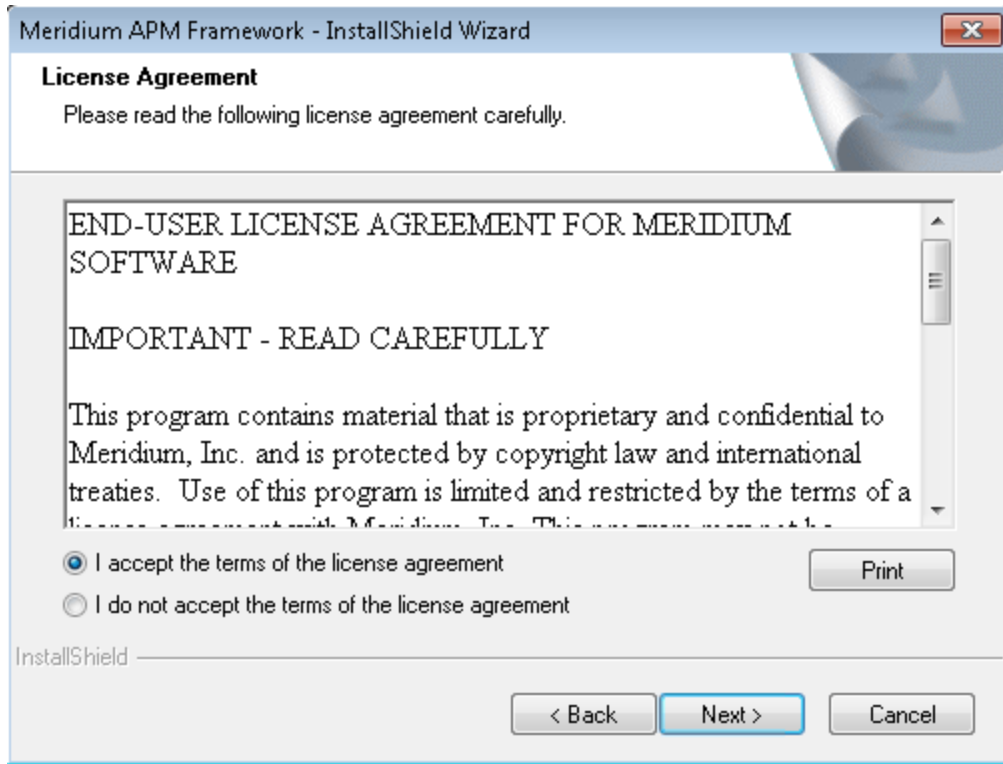
5. Click the **Yes** button.

The **License Agreement** screen appears.



6. Read the entire license agreement, and then select one of the following options:
- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
  - **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

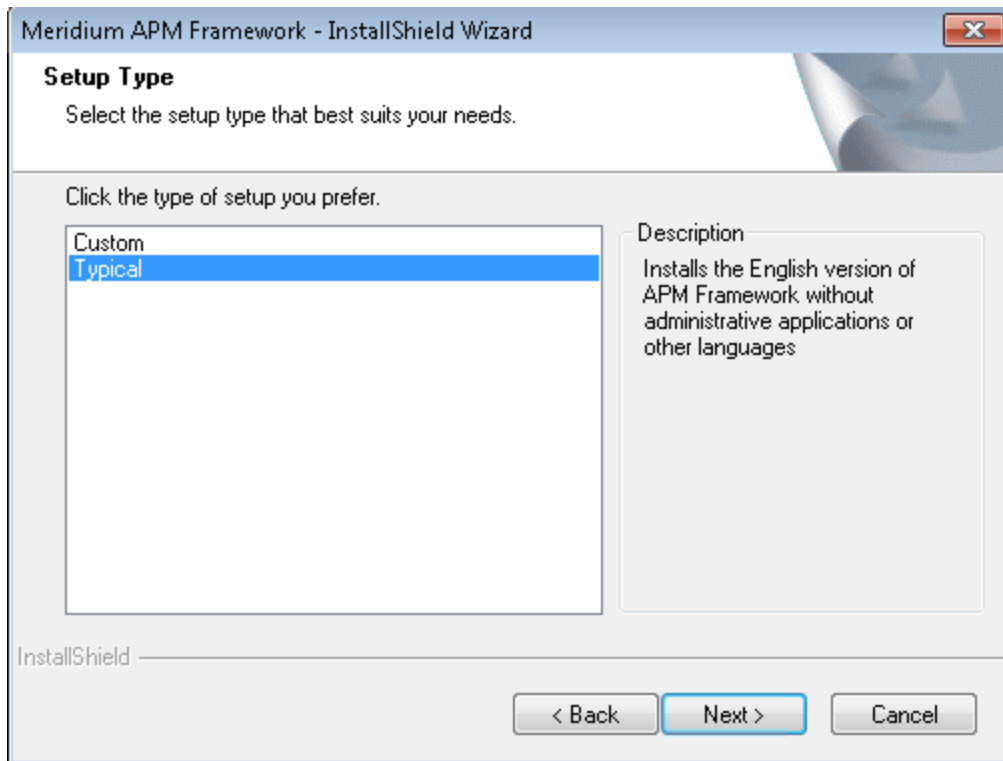
The **Next** button becomes enabled.



**CEHint:** If you want to print the license agreement, click the **Print** button.

7. Click the **Next** button.

The **Setup Type** screen appears, asking which setup you want to use: *Custom* or *Typical*.

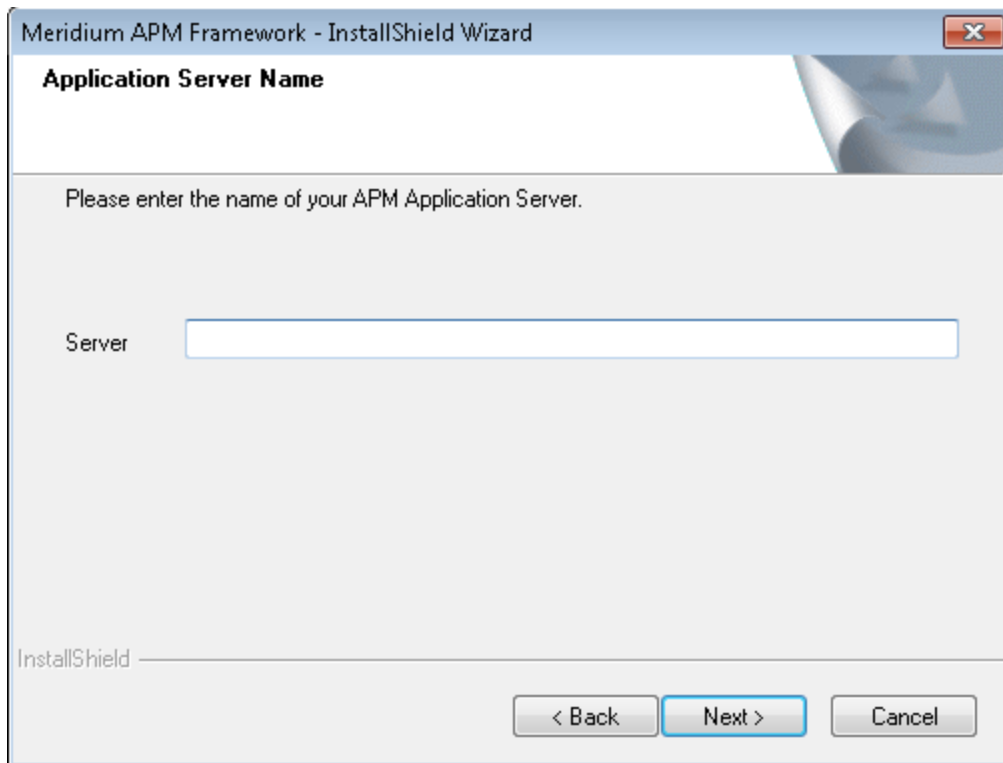


**OEHint:** Select the options in the left pane to view a description of that option in the **Description** section to the right.

8. Accept the default selection, **Typical**, and click the **Next** button.

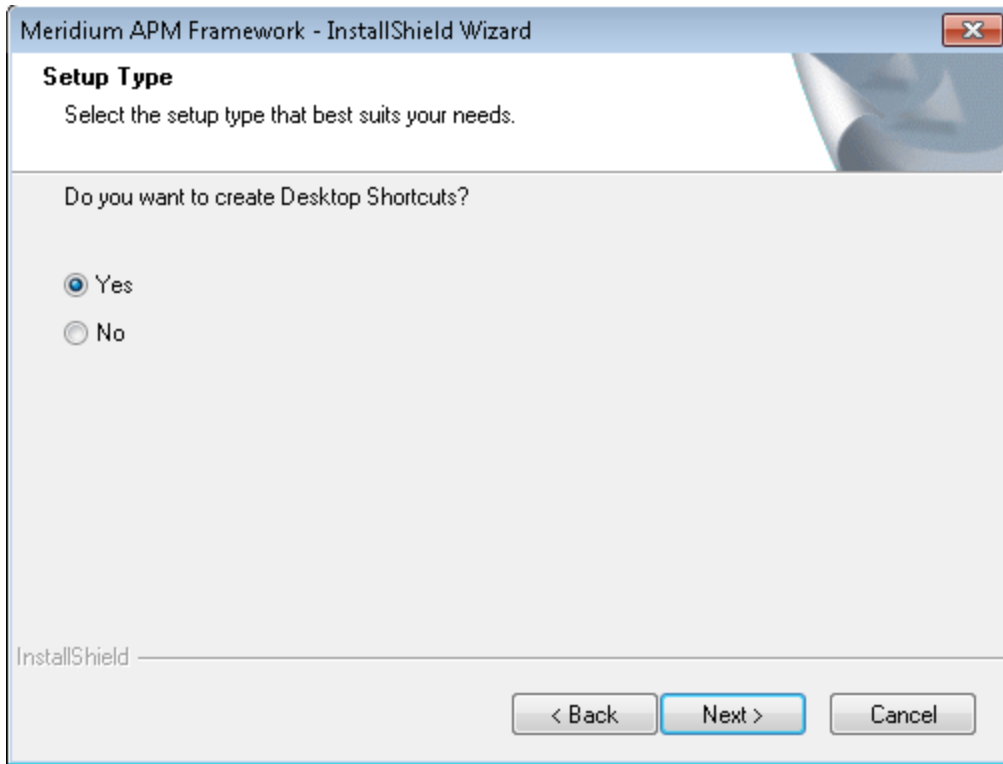
The **Application Server Name** screen appears.





9. In the **Server** text box, type the name of the machine that serves as the dedicated Meridium APM Application Server.
10. Click the **Next** button.

The **Setup Type** screen appears, asking if you want to create a shortcut on your desktop.



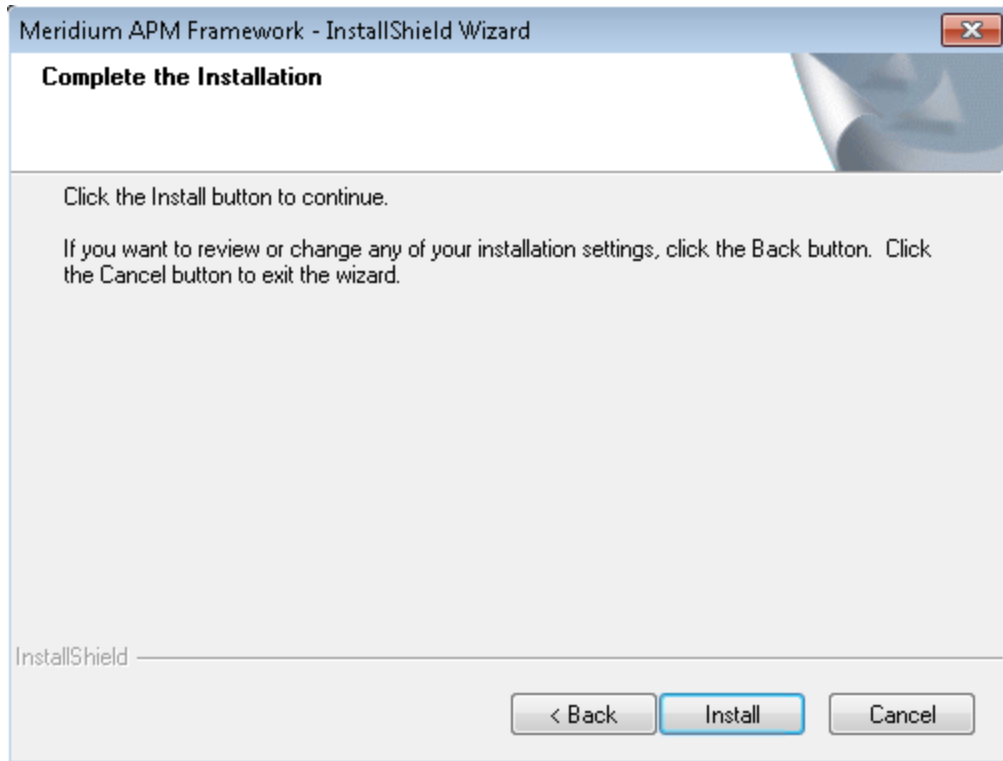
By default, a shortcut will be created on the desktop of the APM Framework machine. You can, however, choose not to create the shortcut.

11. If you want a shortcut to be created on the desktop when the Meridium APM Framework application is installed, accept the default selection, **Yes**, and click the **Next** button.

*-or-*

If you do not want a shortcut to be created on the desktop when the application is installed, select **No**, and click the **Next** button.

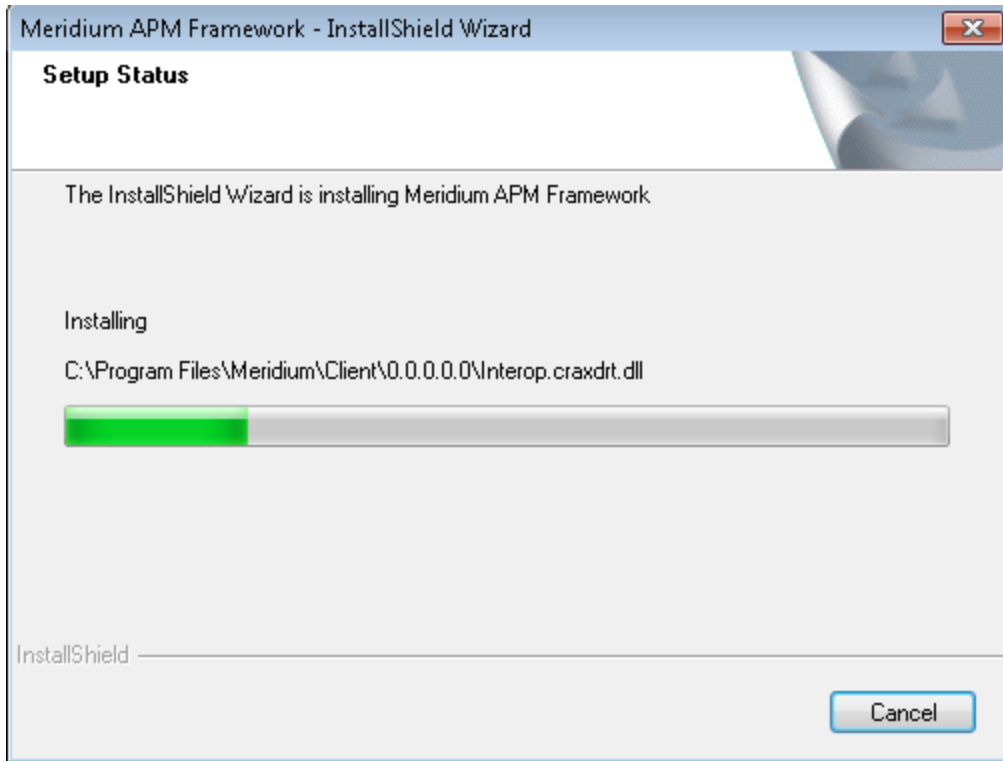
The **Complete the Installation** screen appears.



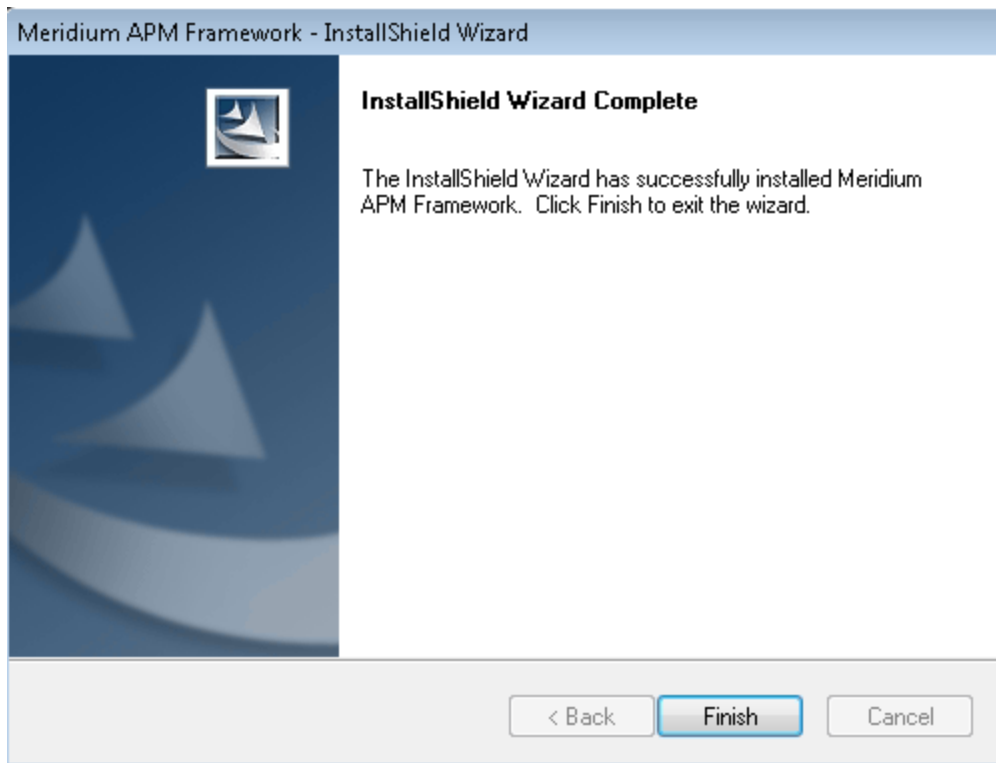
This screen contains a message indicating that you can change your settings on any of the previous screens by clicking the **Back** button, or you can close the installer by clicking the **Cancel** button. If you cancel the upgrade, however, all your settings will be lost. These instructions assume that you want to complete the upgrade process now.

12. Click the **Install** button.

A message appears, indicating that the older version of Meridium APM Framework applications are being uninstalled. After the older version is uninstalled, the **Setup Status** screen appears, displaying a progress bar that indicates the status of the installation process.



After the progress bar reaches the end, the **InstallShield Wizard Complete** screen appears.



13. Click the **Finish** button.

The Meridium APM Framework installer closes. Additionally, if you indicated that a shortcut should be installed with the Meridium APM Framework application, the icon will appear on the desktop. At this point, you should [refer back to the checklist](#).

## Upgrading the Meridium APM Framework and Select Administrative Applications From V3.4.5 to 3.6.1.0.0

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The following instructions provide details on upgrading a Meridium APM Framework machine manually, using the Meridium APM Framework installer. These instructions assume:

- You understand that your older version of Meridium APM will be uninstalled automatically before the new version is installed.
- That you want to install the Meridium APM Framework application and administrative applications after the older version is uninstalled.
- Your system meets the hardware and software requirements.
- The Meridium APM Application Server has already been upgraded.

**Note:** For the [application update](#) process to run successfully, the user who launches the APM Framework application and triggers the automatic update must be logged in as a [Windows User with an Administrator account](#) to the machine where the update will be performed.

**To manually upgrade a Meridium APM Framework application containing the Meridium APM Framework and administrative applications:**

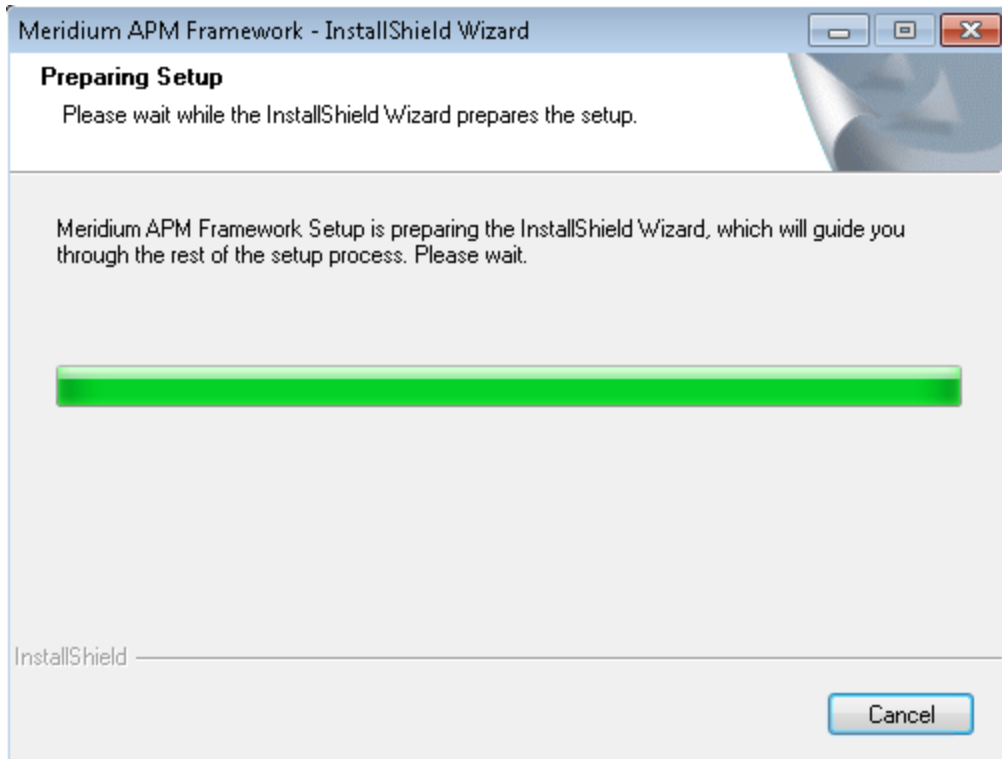
1. On the APM Framework machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Framework**.

2. Double-click the file **Setup.exe**.

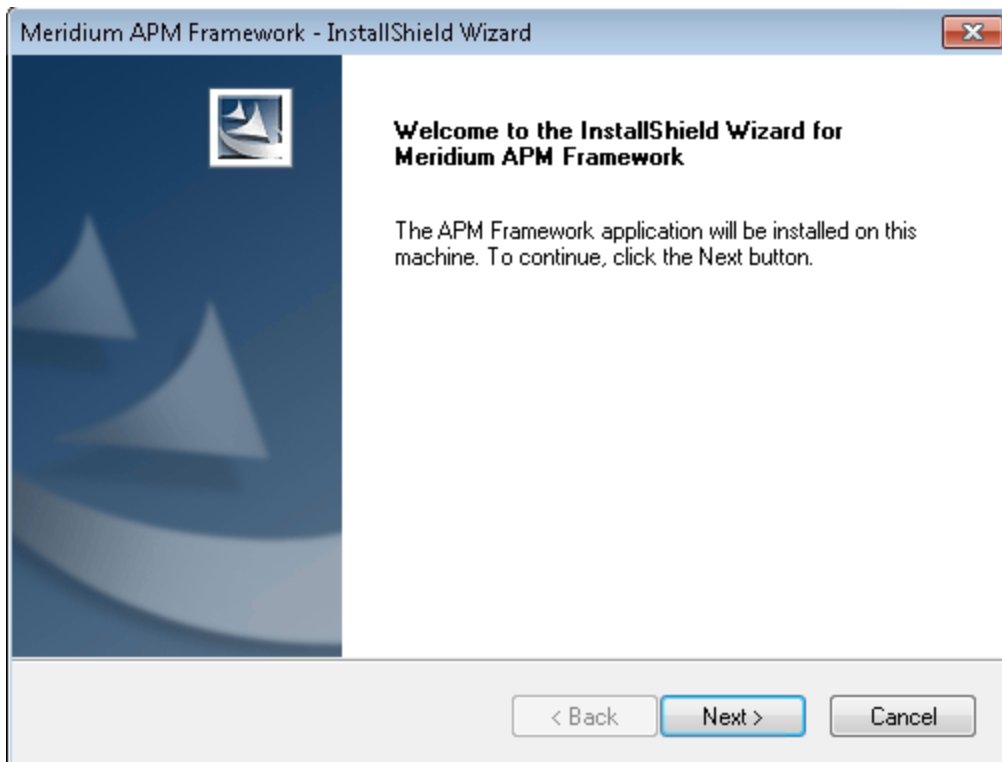
A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The Meridium APM Framework installer appears, displaying the **Preparing Setup** screen.



After the progress bar reaches the end, the Welcome screen appears.

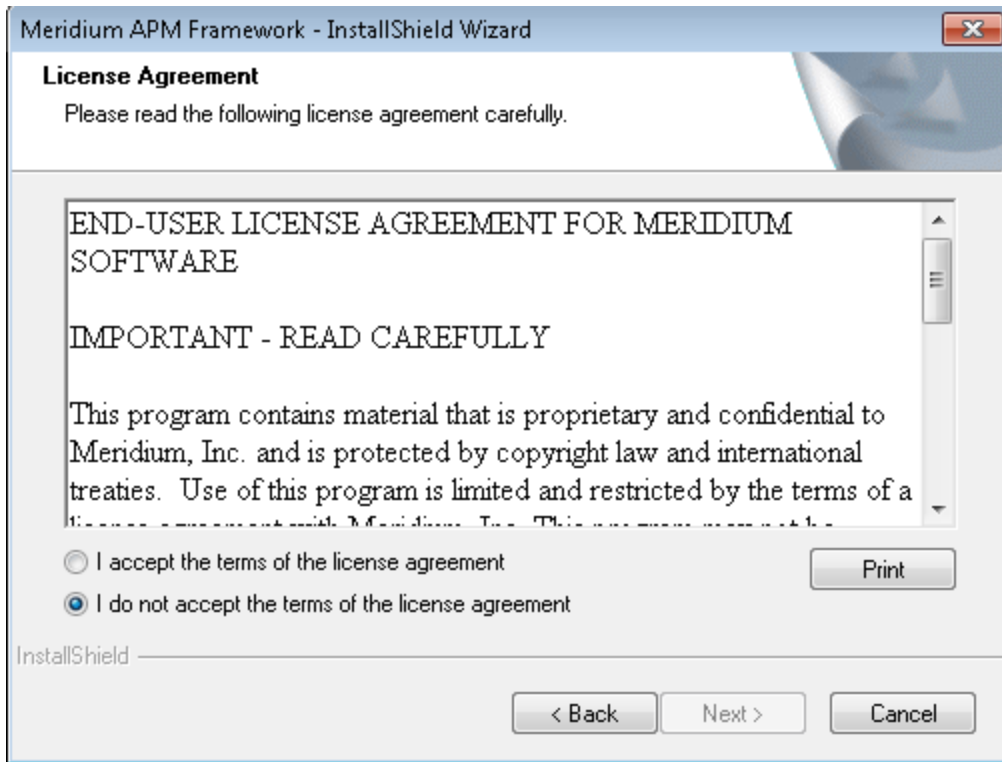


4. Click the **Next** button.

A message appears, indicating that an older version of Meridium APM is installed on the machine and informs you that the older version will be uninstalled before the new version is installed.

5. Click the **Yes** button.

The **License Agreement** screen appears.

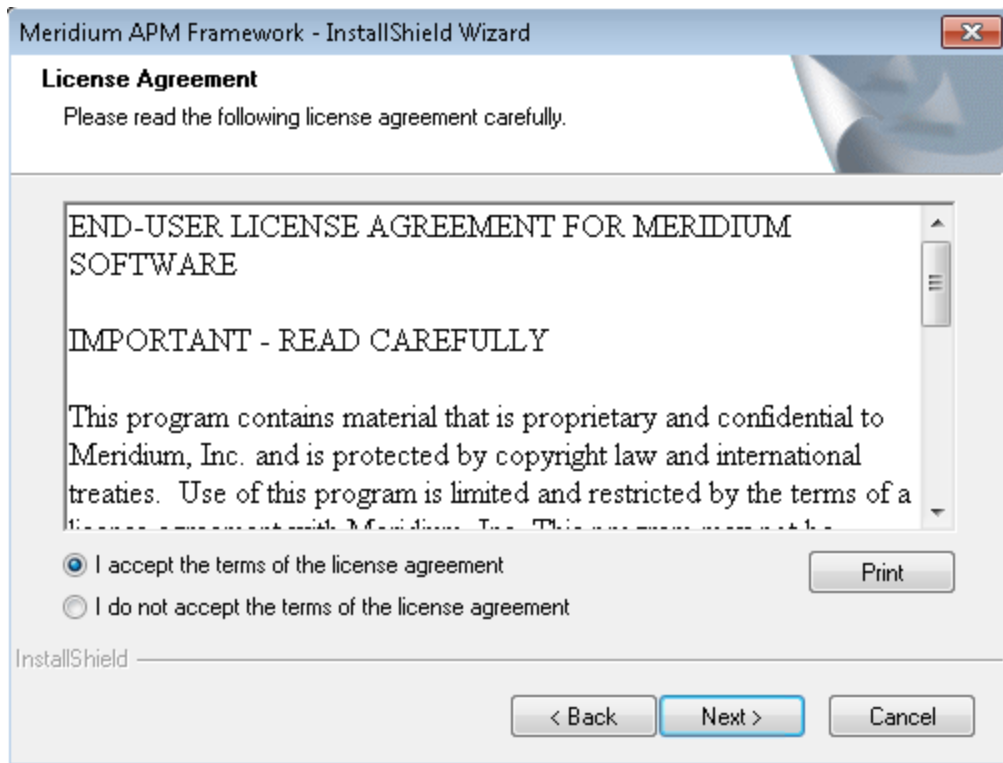


6. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

The **Next** button becomes enabled.

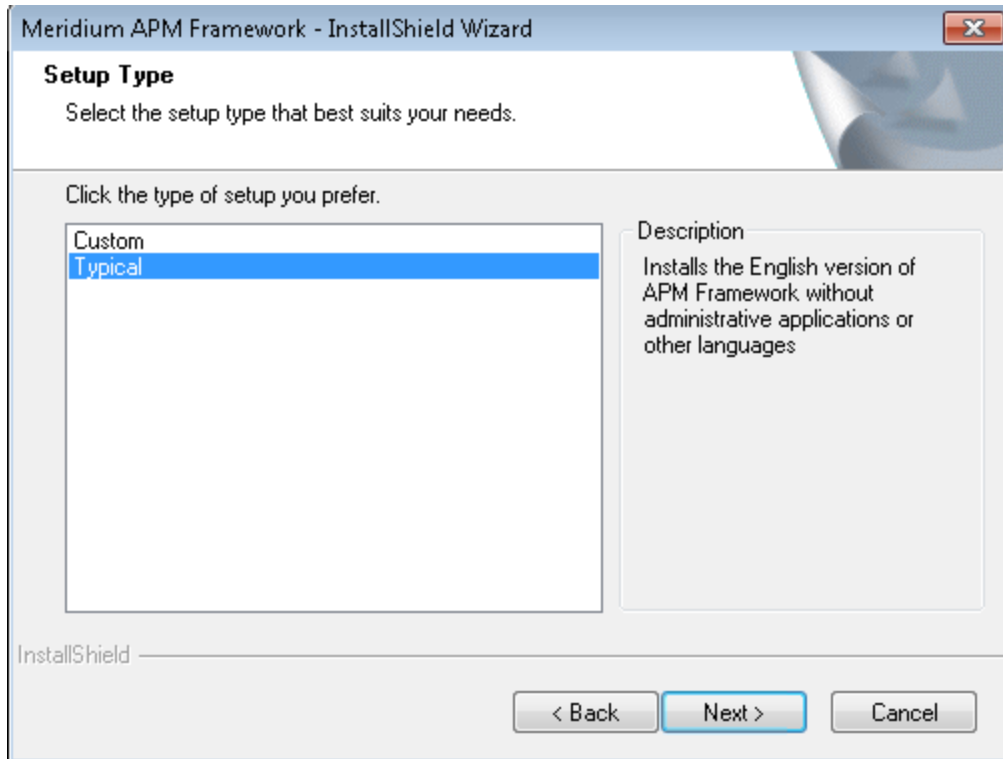




**CE Hint:** If you want to print the license agreement, click the **Print** button.

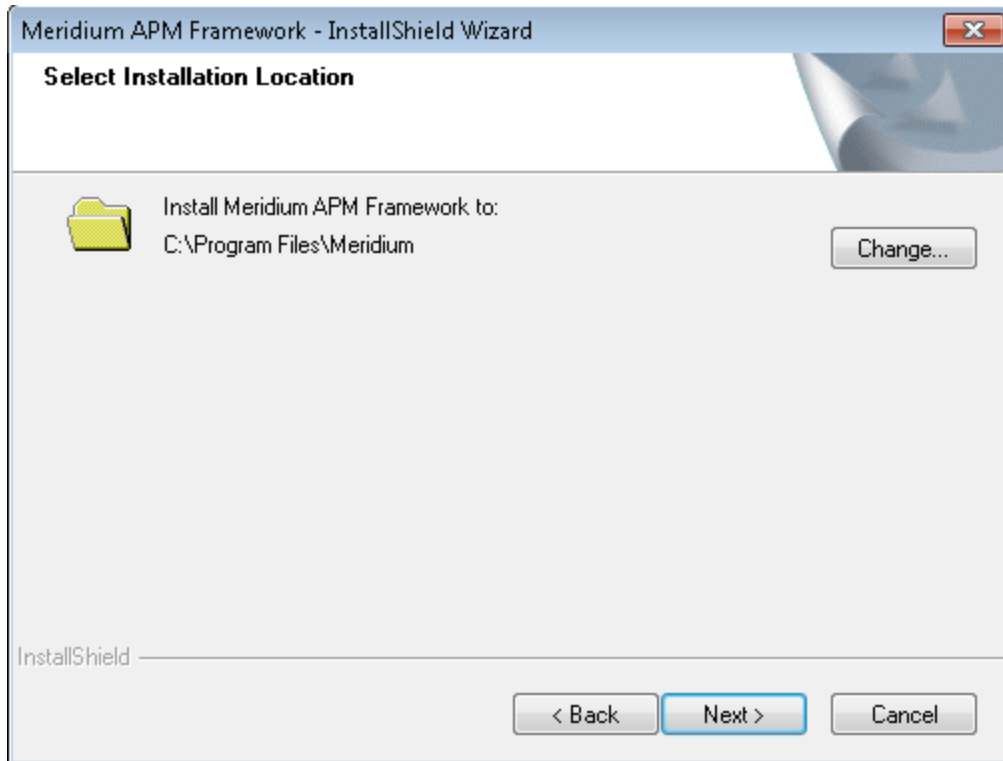
7. Click the **Next** button.

The **Setup Type** screen appears, asking which setup you want to use: *Custom* or *Typical*.



**CE Hint:** Select the options in the left pane to view a description of that option in the **Description** section to the right.

8. Select the **Custom** option, and then click the **Next** button.  
The **Select Installation Location** screen appears.



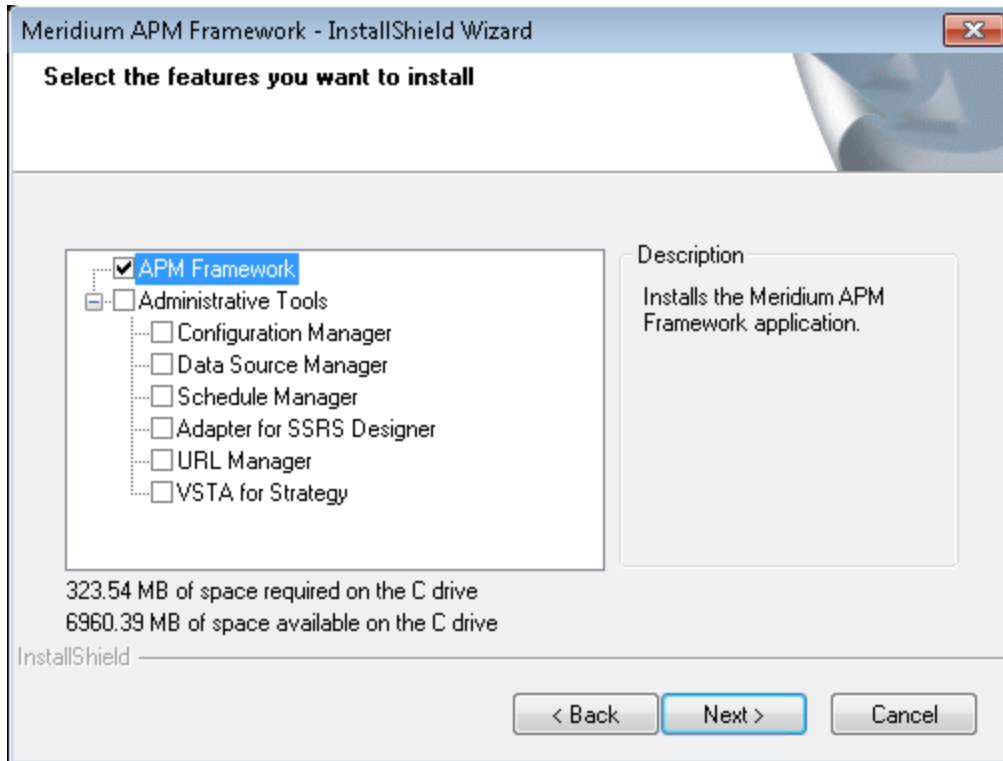
By default, the Meridium APM applications will be installed in the **C:\Program Files\Meridium** folder after the older version is uninstalled. You can, however, specify a different location for the files.

9. If you are satisfied with the installation location, click the **Next** button.

*-or-*

If you want to specify a different file path, click the **Change** button, and navigate to the location where you want the applications to be installed. The file path that you select will appear in place of the default file path. When you are satisfied with the file path, click the **Next** button.

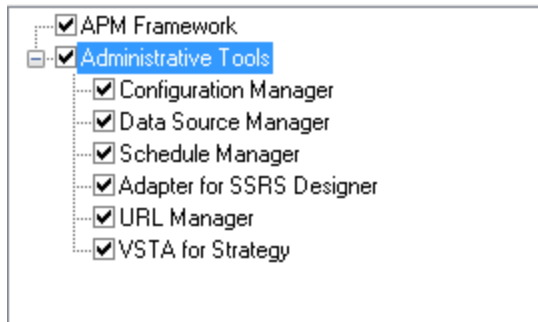
The **Select the features you want to install** screen appears.



The **APM Framework** node is selected by default.

10. Select the **Administrative Tools** check box.

The subnodes are selected.



11. Clear the check boxes to the left of the administrative applications that you do *not* want to install.

-or-

If you do want to install all the administrative applications, accept the default settings.

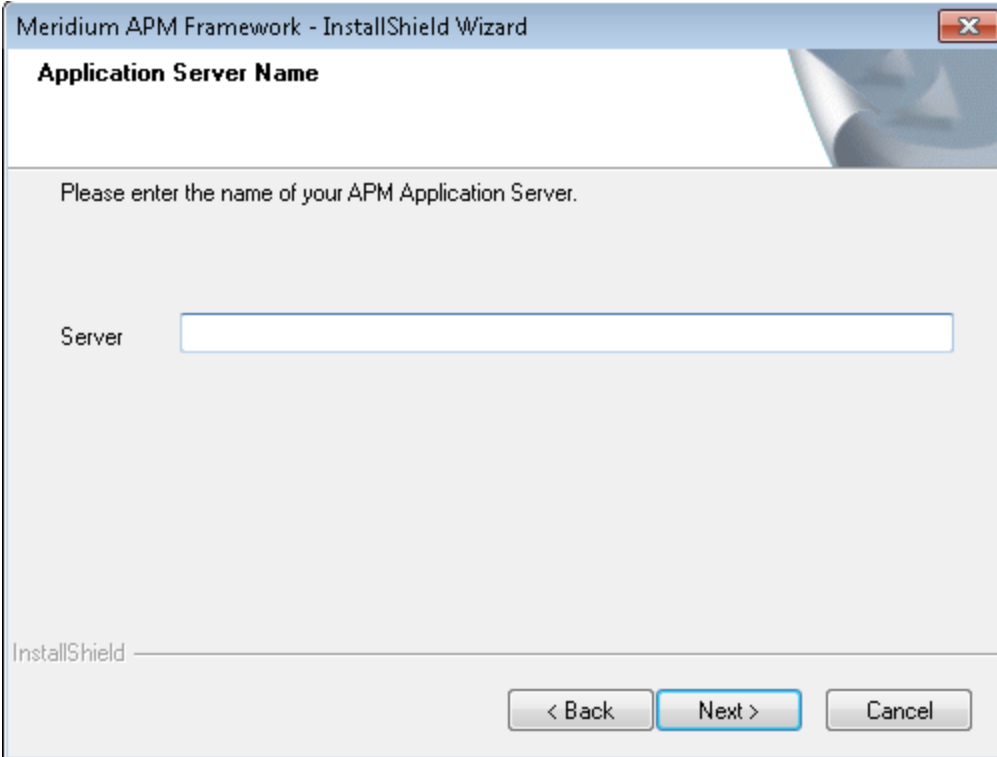
12. Click the **Next** button.

The installer checks your machine for the required prerequisites for the features that you want to install after the older version is uninstalled.

- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the feature that is dependent on that prerequisite. This message also indicates what you can do to continue.

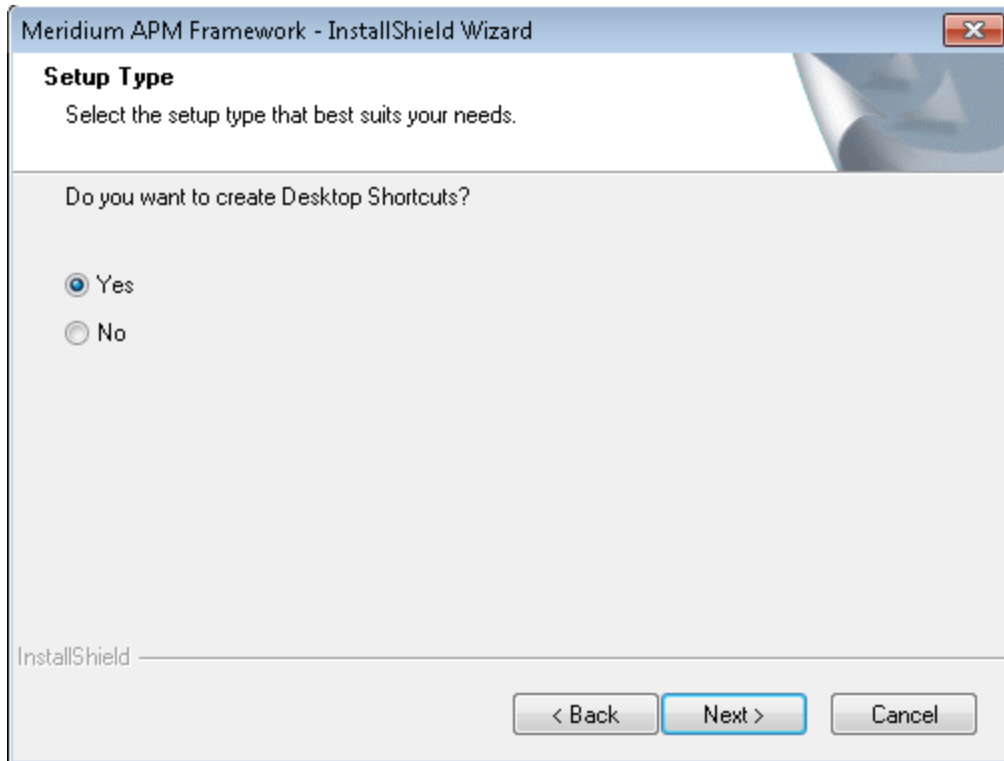
If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

- If all the prerequisites are found on your machine, the **Application Server Name** screen appears.



13. In the **Server** text box, type the name of the machine that serves as the dedicated Meridium APM Application Server.
14. Click the **Next** button.

The **Setup Type** screen appears, asking if you want to create shortcuts on your desktop.



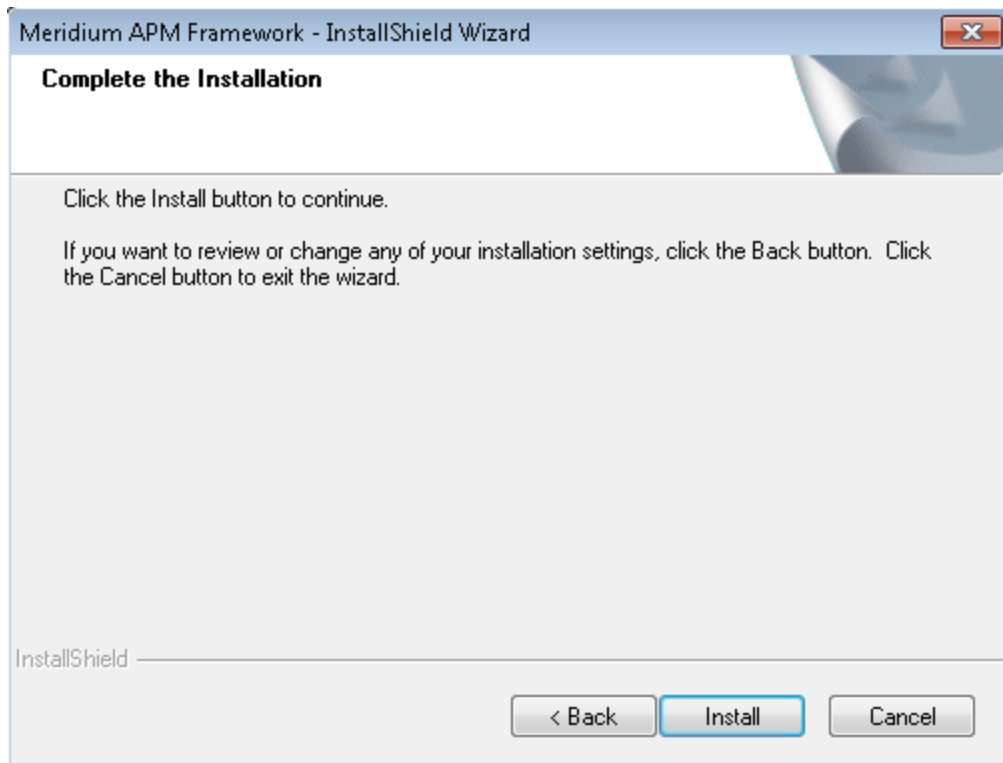
By default, shortcuts will be created on the desktop of the APM Framework machine: one for each application that you install. You can, however, choose not to create the shortcuts.

15. If you want shortcuts to be created on the desktop when the applications are installed, accept the default selection, **Yes**, and click the **Next** button.

-or-

If you do not want shortcuts to be created on the desktop when the applications are installed, select **No**, and click the **Next** button.

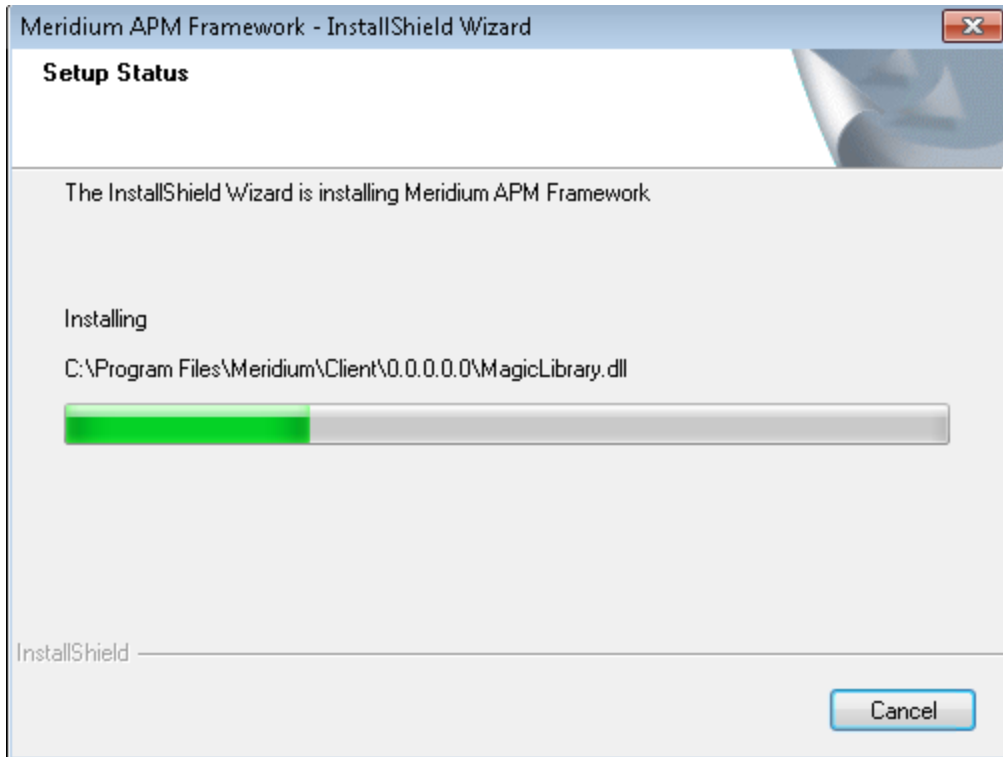
The **Complete the Installation** screen appears.



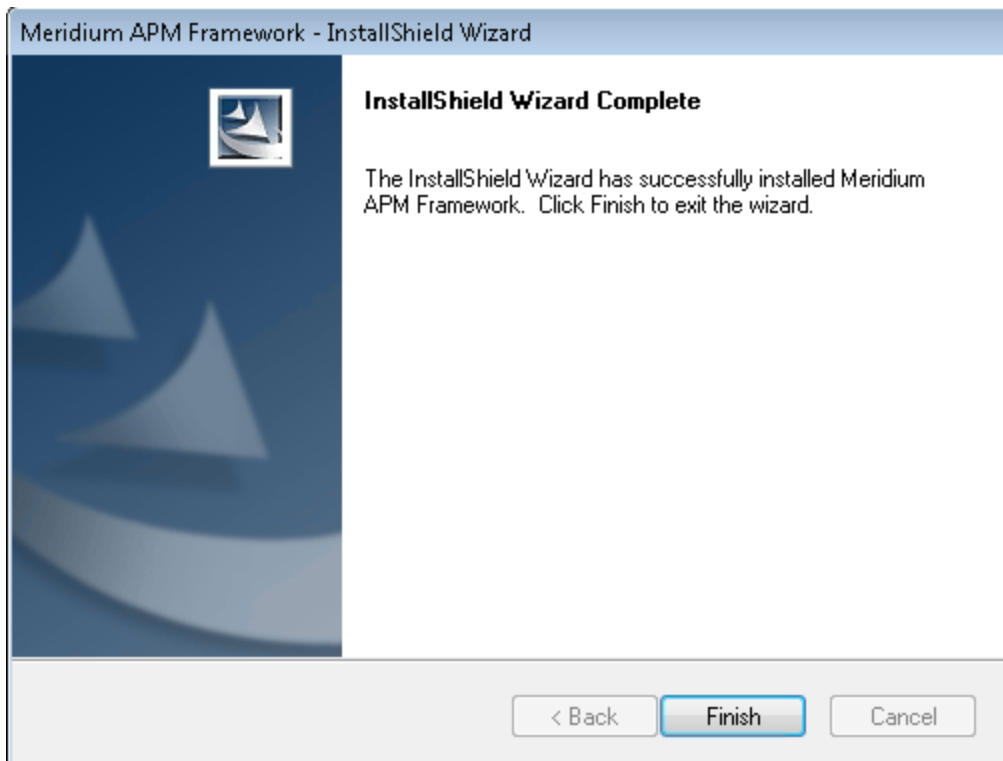
This screen contains a message indicating that you can change your settings on any of the previous screens by clicking the **Back** button, or you can close the installer by clicking the **Cancel** button. If you cancel the upgrade, however, all your settings will be lost. These instructions assume that you want to complete the upgrade process now.

16. Click the **Install** button.

A message appears, indicating that the older version of Meridium APM is being removed. After the older version is removed, the **Setup Status** screen appears, displaying a progress bar that indicates the status of the installation process.



After the progress bar reaches the end, a message appears, indicating that the ADOMD.Net is being configured. After ADOMD.Net is configured, the **InstallShield Wizard Complete** screen appears.





17. Click the **Finish** button.

The Meridium APM Framework installer closes. Additionally, if you indicated that shortcuts should be installed with the corresponding application(s), those icons will appear on the desktop. At this point, you should [refer back to the checklist](#).

## Upgrading the Meridium APM Adapter for SSRS

The following instructions assume that you were using the 64-bit Meridium APM Adapter for SSRS in your previous version. If you were using the 32-bit Meridium APM Adapter for SSRS, you will need to uninstall the older 32-bit version and [install the new 64-bit version on a 64-bit SQL Server Report Server](#).

### Upgrade from any version V3.5.0 and later

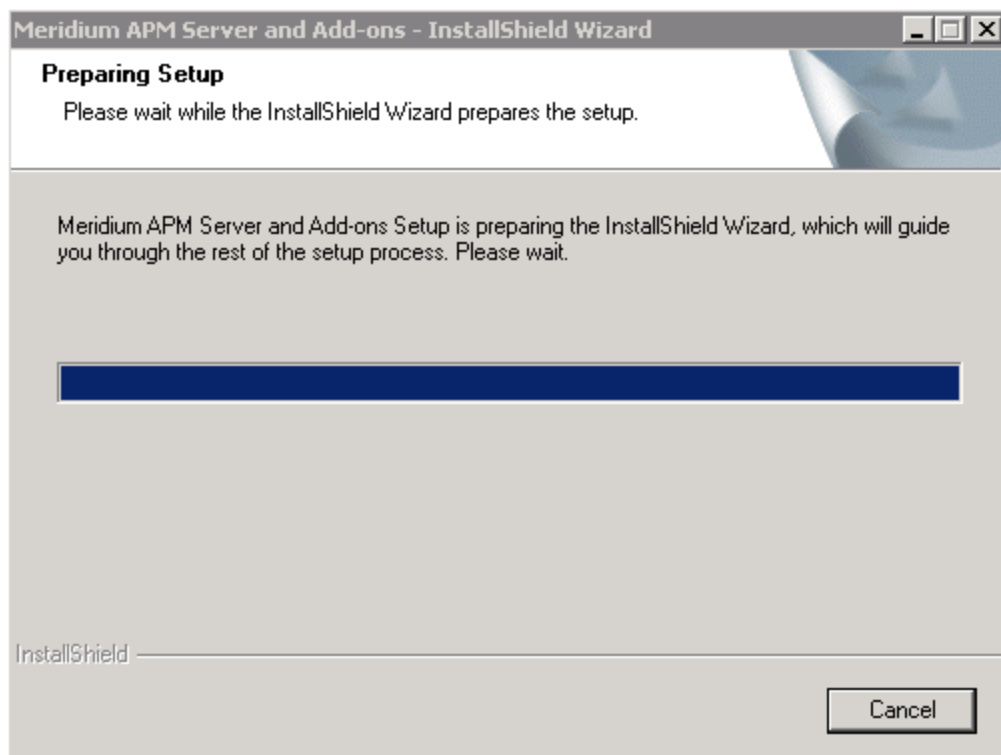
To upgrade Adapter for SSRS:

1. On the SQL Server Report Server machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Server and Add-ons**.
2. Double-click the file **Setup.exe**.

A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

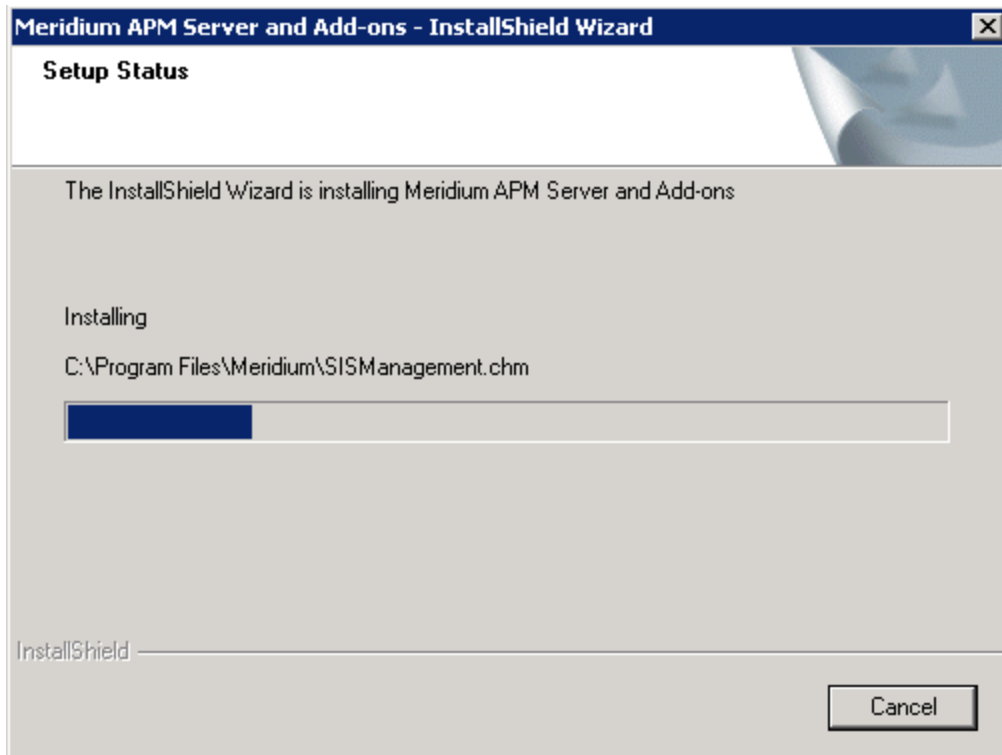
The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen. The **Preparing Setup** screen contains a progress bar that indicates when the installer is ready to upgrade components on your machine.



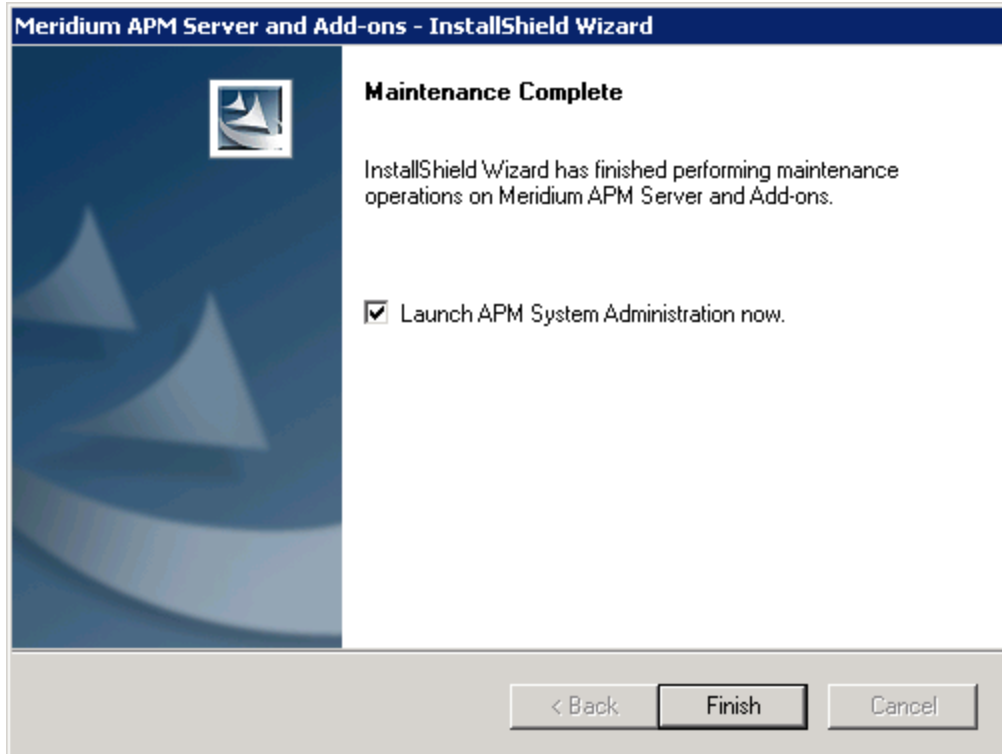
After the progress bar reaches the end, a message appears, asking if you want to upgrade your server.

4. Click the **Yes** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the upgrade process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Maintenance Complete** screen appears.



This screen contains a message, indicating that Meridium APM Server and Add-ons has been upgraded successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to Yes.

5. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

-or-

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

6. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears. At this point, you should [refer back to the checklist](#).

## Upgrade from V3.4.5

To upgrade the Meridium APM Adapter for SSRS:

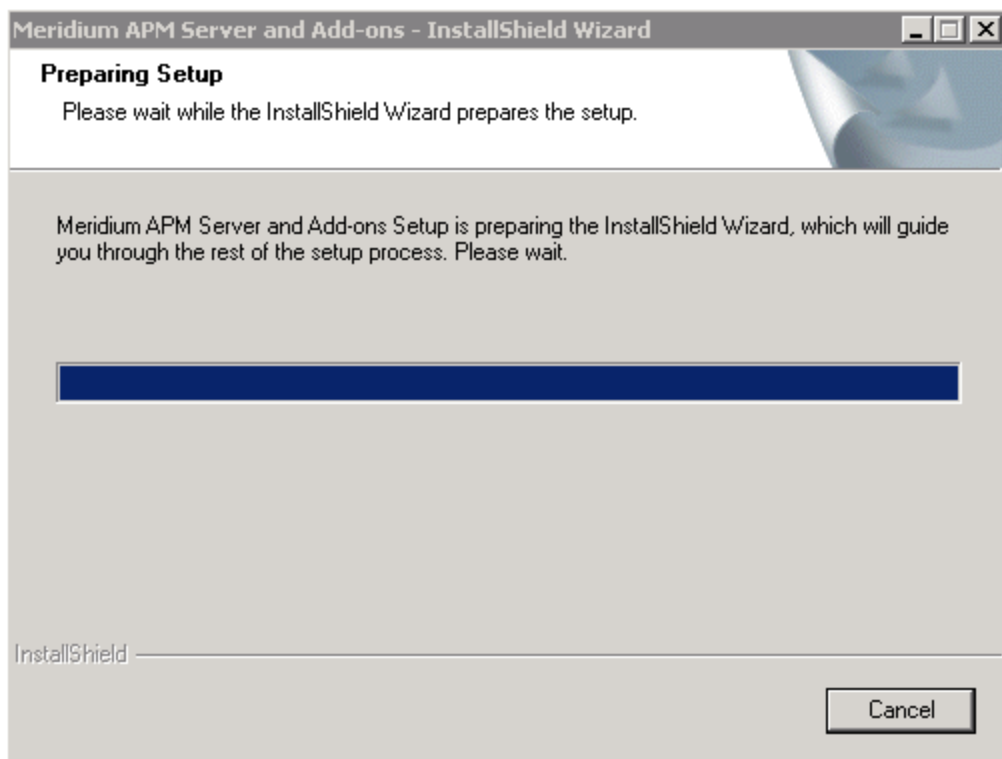
1. On the SQL Server Report Server machine, insert the Meridium APM distribution DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Setup\Meridium APM Server and Add-ons**.

2. Double-click the file **Setup.exe**.

A message appears, asking if you want to allow the installer to make changes to your machine.

3. Click the **Yes** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



After the progress bar reaches the end, the Welcome screen appears.

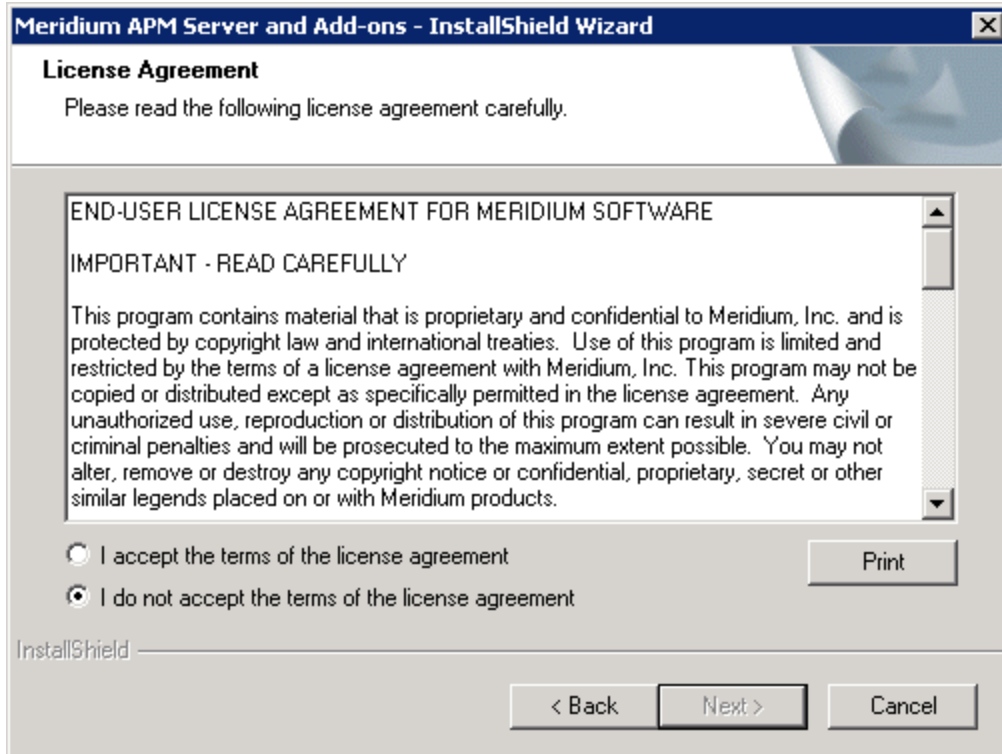


4. Click the **Next** button.

A message appears indicating that an older version of Meridium APM has been detected on the machine. This message also indicates that the older version will be uninstalled automatically before the newer version is installed and asks if you want to continue.

5. Click the **Yes** button.

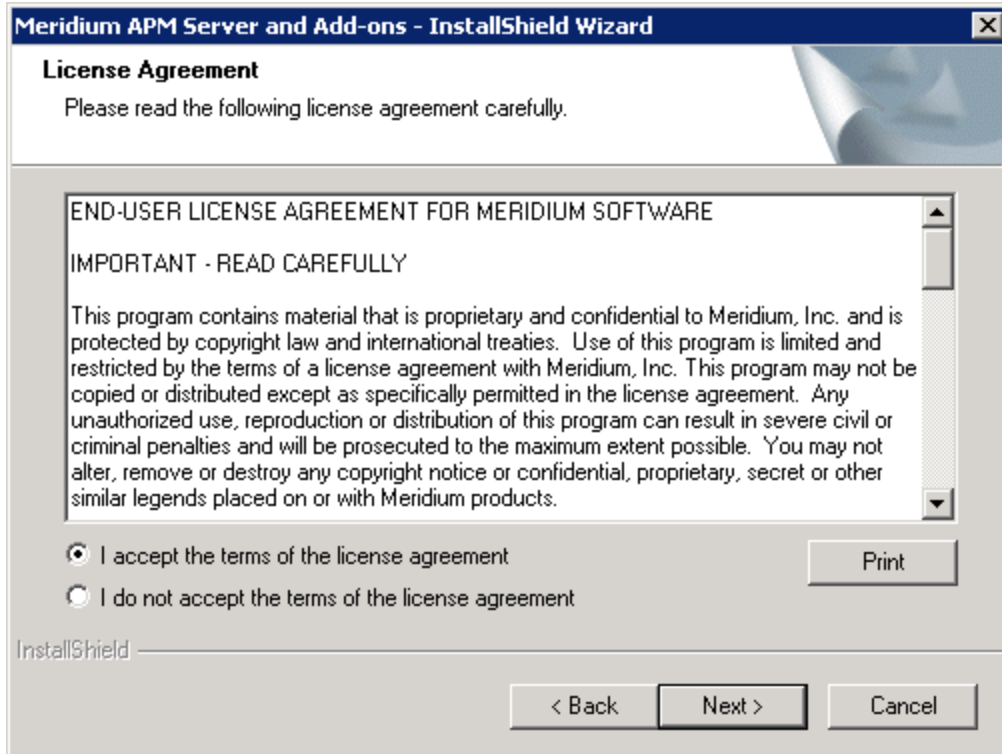
The **License Agreement** screen appears.



6. Read the entire license agreement, and then select one of the following options:

- **I accept the terms of the license agreement**, if you agree to the terms of the license agreement and want to continue. These instructions assume that you want to continue.
- **I do not accept the terms of the license agreement**. This option is selected by default. If you do not agree to the terms of the license agreement and do not want to continue, click the **Cancel** button to exit the installer.

The **Next** button becomes enabled.

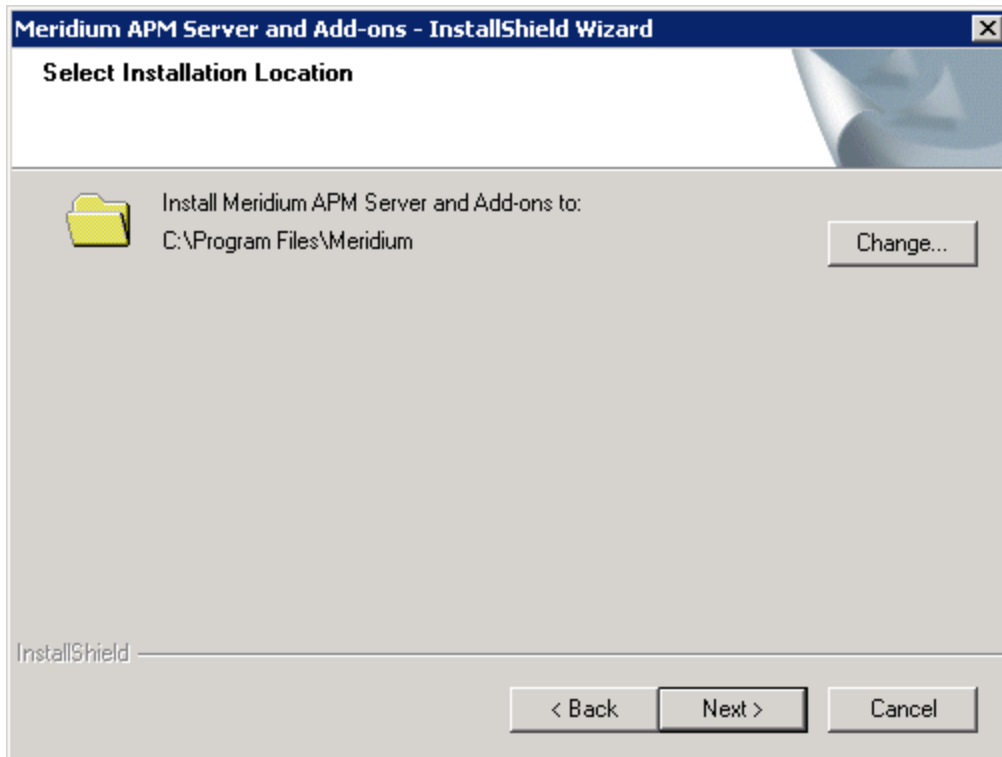


**OEHint:** If you want to print the license agreement, click the **Print** button.

7. Click the **Next** button.

The **Select Installation Location** screen appears, prompting you to select the location where the new version of the Meridium APM Server and Add-ons will be installed after the older version is uninstalled. By default, the Meridium APM Server and Add-ons software will be saved to the following folder: **C:\Program Files\Meridium**.



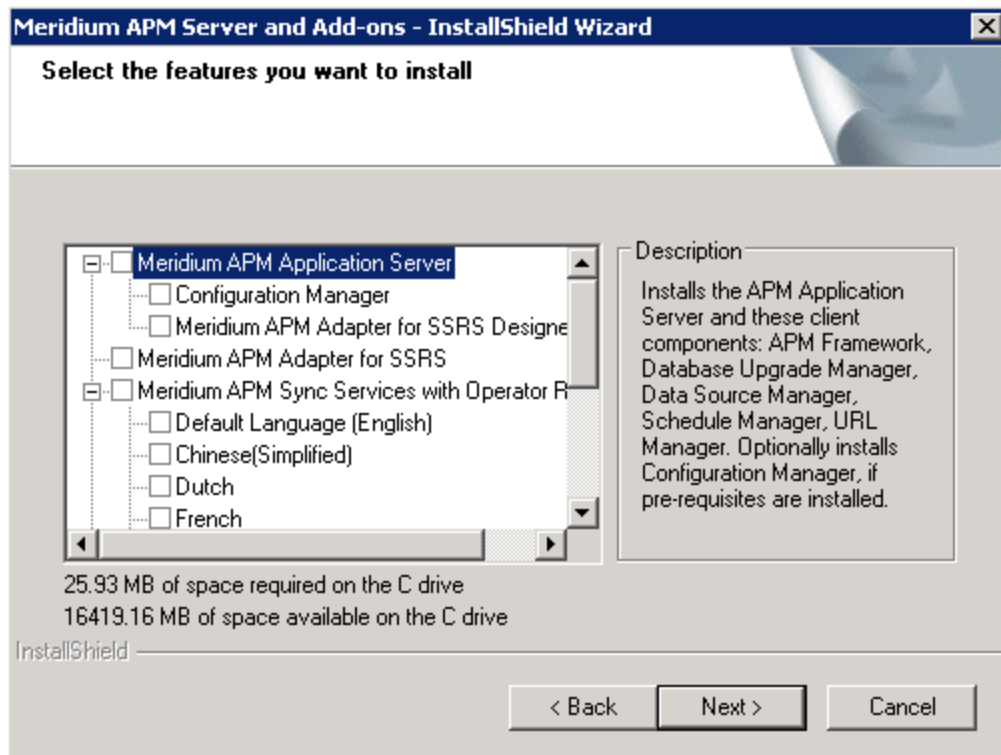


8. If you are satisfied with the default location where the software will be installed, click the **Next** button.

-or-

If you want to change the location where the software will be installed, click the **Change** button, and navigate to the location where you want to install the software. The folder path that you select will be displayed in place of the default folder path. When you are satisfied with the installation location, click the **Next** button.

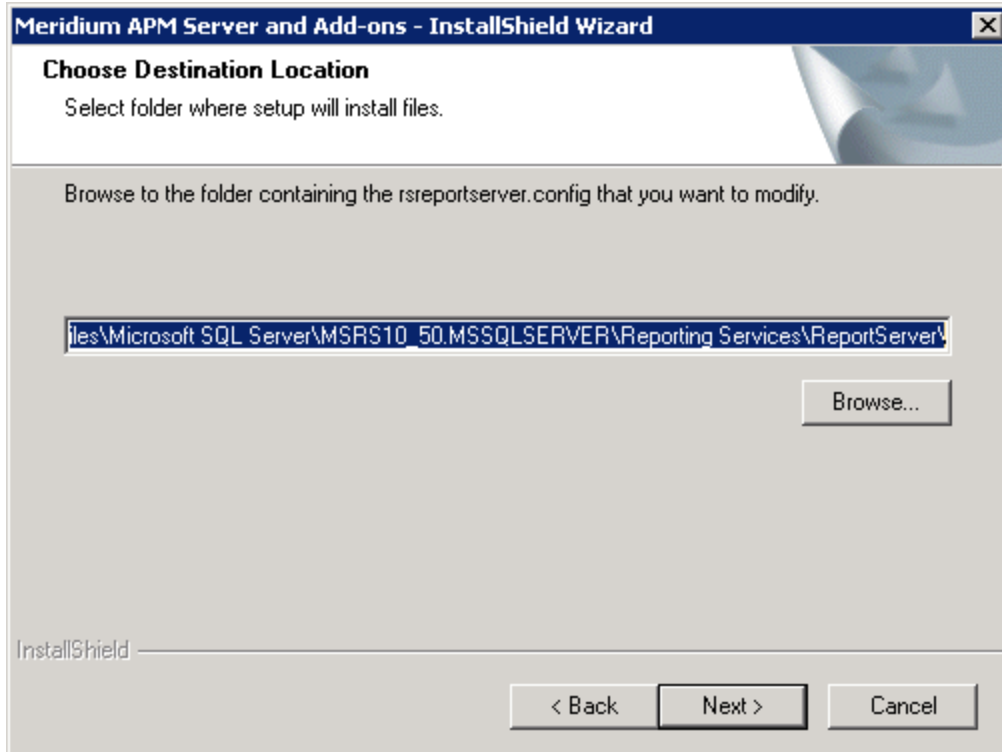
The **Select the features you want to install** screen appears, and the **Meridium APM Application Server** node is highlighted automatically in the tree.



**IMPORTANT:** The Select the features you want to install screen lets you specify which features you want to install on the SQL Server Report Server machine after the older version is uninstalled. *These instructions* assume that you want to deploy only *Meridium APM Adapter for SSRS* software. When the Meridium APM Application Server software is installed, the Meridium APM System Administration Tool is also installed automatically.

9. In the tree, select the **Meridium APM Adapter for SSRS** check box.
10. Click the **Next** button.

The **Choose Destination Location** screen appears.



You can use this screen to specify where the `rsreportserver.config` file exists. By default, the installer assumes that the file exists in the following location: `c:\Program Files\Microsoft SQL Server\MSRS10_50.MSSQLSERVER\Reporting Services\ReportServer\`.

11. If you are satisfied with the default location, click the **Next** button.

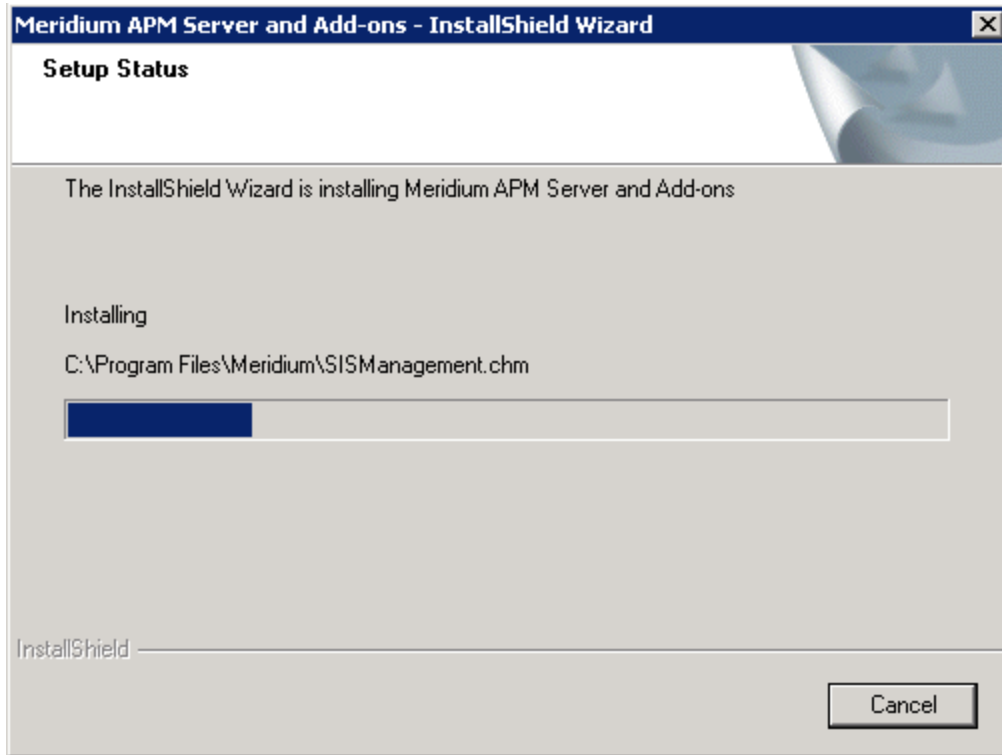
-or-

If the file exists in a location other than the default location, click the **Browse** button, and navigate to the appropriate location. The file path that you select will appear in the text box in place of the default file path. When you are finished, click the **Next** button.

The **Complete the Installation** screen appears, indicating that you can use the **Back** button to modify the settings. In addition, if you do not want to complete the upgrade at this time, you can click the **Cancel** button to close the installer. If you do so, however, all your settings will be lost. These instructions assume that you want to complete the upgrade process.

12. Click the **Install** button.

A message appears, indicating that the older version of Meridium APM is being removed. After the older version is removed, the **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.



This screen contains a message, indicating that the software has been upgraded successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to *Yes*.

13. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

-or-

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

14. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Launch APM System Administration now** check box was selected, the **APM System Administration** window appears.

15. Restart the IIS Service. The web service for the Report Server runs under IIS. After you install the Meridium APM Adapter for SSRS on the Report Server, you should restart the IIS Service to apply the changes that were made on the Report Server.

At this point, you should [refer back to the checklist](#).

## How Can I Tell What Version is Currently Installed?

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Before you upgrade a Meridium APM machine, you may want to determine first if that machine has been upgraded already. To do so, you can check to see which version is currently installed on that machine.

You can determine the version that is currently installed using the following methods:

- Log in to the Meridium APM Framework or Configuration Manager application and view the **About Meridium APM** dialog box. Using this method, you can also view the [licenses that are currently active in the Meridium APM database](#).
- In the Control Panel on that machine, in the list of installed programs, select the *Meridium APM* item. The product version will be displayed below the list of programs. This section of the Help assumes that you are familiar with your operating system and therefore does not provide instructions for accessing the control panel for this purpose.

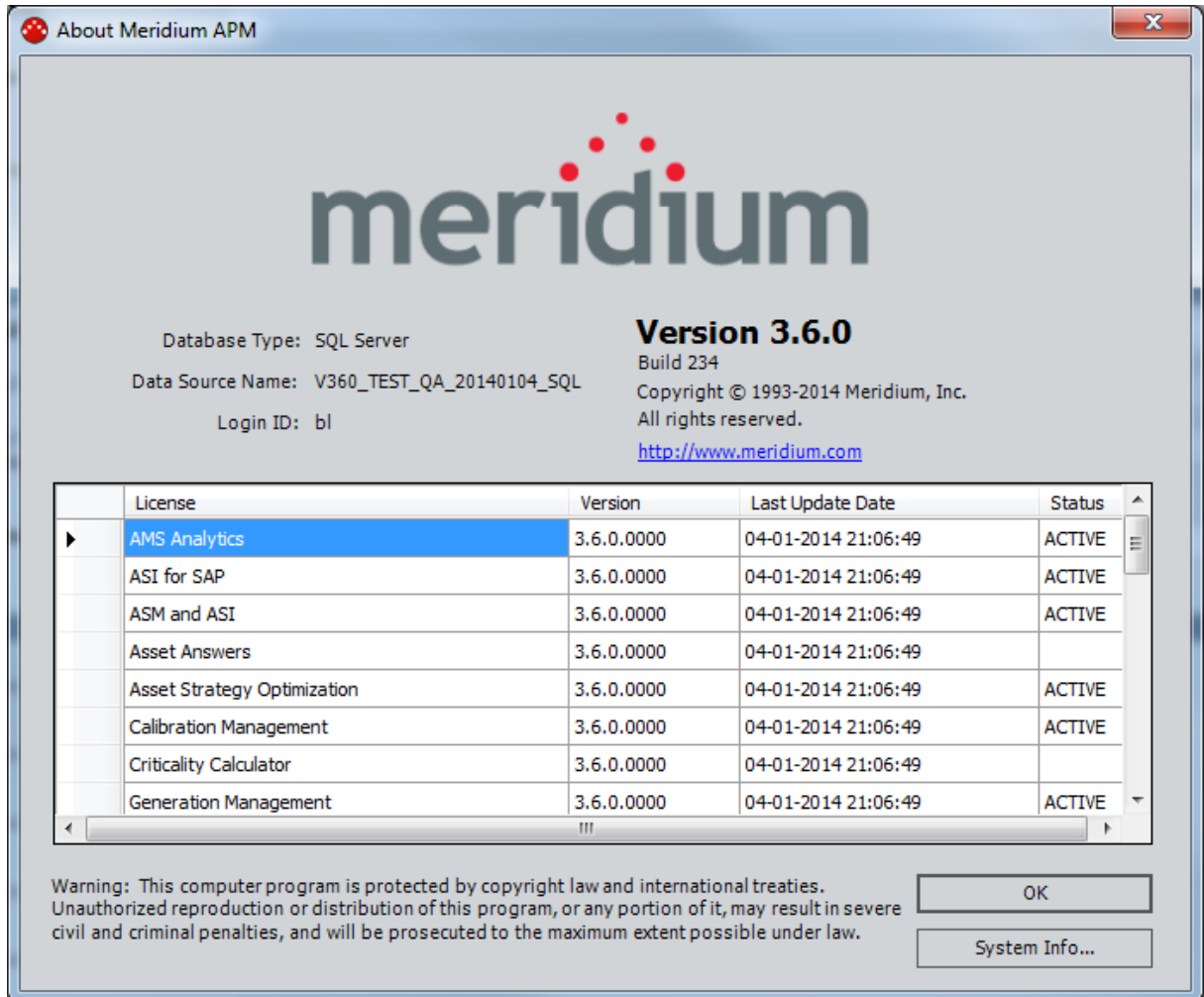
The following sections provide details on determining which version of Meridium APM is currently installed on a Meridium APM machine the Meridium APM applications.

### **To view the product version and license status information via the About Meridium APM dialog box:**

1. Log in to the Meridium APM Framework application or the Configuration Manager application.
2. On the **Help** menu, click **About Meridium APM**.

The **About Meridium APM** dialog box appears.

## How Can I Tell What Version is Currently Installed?



The grid on the **About Meridium APM** dialog box displays a list of available Meridium APM licenses. For each item in the list, the following columns of information are displayed:

- **License:** The name of the license. Multiple products may appear as a single entry if the products are licensed together (e.g., ASM and ASI).
- **Version:** The current version of the database content associated with the license.
- **Last Update Date:** The date the database content was last upgraded.
- **Status:** An indication of whether the license is [active](#) or not. The text *ACTIVE* indicates that the license is active. No text indicates that the license is inactive.

## Merging Configuration Files After an Upgrade or an Update

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For any baseline configuration files that Meridium, Inc. has changed between your current version and the release version that you are applying, you must merge the changes in the updated baseline files with your existing, customized configuration files. Click [here](#) for more information about [configuration files and server upgrades](#).

### To merge configuration files:

1. For each configuration file that was changed in any version *later than* your current version, navigate to the file location and open the **.config** file. This is your customized, pre-upgrade configuration file.
2. In the same folder, open the corresponding **.config.merbak** file. This is the updated baseline file.
3. Reconcile the differences in these files. The Meridium APM system will use only the settings stored in files with the **.config** file extension.

**CE Hint:** You can use WinMerge, which is installed automatically on the Meridium APM Application Server, to facilitate this process.

4. Save and close both files.



## About Automatic Upgrades

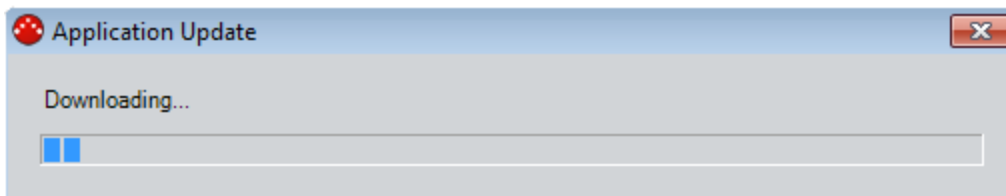
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After you have upgraded the Meridium APM Application Server and Add-ons software on the dedicated Application Server machine(s), you will need to upgrade the Meridium APM Framework applications on the APM Framework machines that are pointing to the Application Server machine(s). Rather than upgrading each Meridium APM Framework machine manually, by running the Meridium APM Framework installer, you can upgrade them automatically through an *application update*. An application update will synchronize the APM Framework machine with the release that is installed on the Application Server machine by updating DLL files on the APM Framework machine.

In addition, after an upgrade is complete, if the Meridium APM Framework application files become out of sync with the application files on the Meridium APM Application Server, the application update process will run automatically when you launch a Meridium APM Framework application.

When an application update process runs, a message will appear, indicating that an application update is running and displaying a progress bar. When the progress bar reaches the end, an additional message appears, indicating that an application update has been completed, and you will need to click **OK** to close the message. At that point, the **Meridium APM Login dialog box** will appear, where you can log in to the application.

For example, the following image shows what you will see while an application update process is running.



**Note:** For the application update process to run successfully, the user who launches the APM Framework application and triggers the automatic update must be logged in as a [Windows User with an Administrator account](#) to the machine where the update will be performed.

## Running the ALT\_MI\_USER Script

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The ALT\_MI\_USER script must be run by a Database Administrator on the Database Server machine *before* you upgrade your database. This script is provided in your Meridium APM distribution package.

The following instructions provide guidance on obtaining the ALT\_MI\_USER script. The method you use to access your Database Server is up to you. These instructions assume that you are either a Database Administrator or an administrative user who will provide the script to the Database Administrator.

### To run the ALT\_MI\_USER script:

1. In the Meridium APM distribution package, locate the file **ALT\_MI\_USER.sql**. This file is stored in the following location: **\\Meridium APM Framework and Server Setup\Database\MI\_DB\_MASTER\_<database version>.zip\<Database Version>.ZIP\Setup\NewInstall\Oracle**, where **<database version>** is your target database version (i.e., the version to which you are upgrading). For example, if you are upgrading to V3.5.1, the database version folder names are **3510000.zip**.
2. Run the script **ALT\_MI\_USER.sql** on the Database Server machine.

**CEHint:** Instructions on running this script are provided within the script file (i.e., in the header).

At this point, you can refer back to the [upgrade checklist](#).

## Terms Used in this Documentation

The following table lists the common terms that are used throughout the database upgrade documentation and their definitions.

Term	Definition	Examples
<b>Database content</b>	<p>Items that exist in the Meridium APM database and are displayed in some form via the Meridium APM interface. There are two versions of database content that exist in your database at a given time:</p> <ul style="list-style-type: none"> <li>• <b>Baseline content:</b> The database content that matches the baseline Meridium APM database. With the exception of rules and Catalog items, you cannot view baseline content in the Meridium APM interface. This content is stored in a separate location from the corresponding public version of that content.</li> <li>• <b>Public content:</b> The database content that you interact with in the Meridium APM interface. This content may be the same as the baseline content <i>or</i> it may be the baseline content plus your customizations.</li> </ul>	<p>Queries</p> <p>Entity families</p>
<b>Customized database content</b>	Baseline database content to which you have made changes in your database.	<p>Added a field to a baseline data-sheet.</p> <p>Modified an Entity family description.</p>
<b>Baseline database content</b>	The database content as it is developed and delivered to you by Meridium, Inc. in the baseline Meridium APM database.	<p>Query in the Baseline Catalog folder</p> <p>Equipment family</p>
<b>Custom content</b>	Database content that exists only in your database and not in the baseline Meridium APM database.	<p>New query</p> <p>New Entity family and fields</p>

Term	Definition	Examples
<b>Pre-upgrade public version</b>	In the context of the upgrade process, <i>pre-upgrade public version</i> refers to the <a href="#">public version of the database content</a> that exists in your database (prior to upgrading it to the later version).	Query in the Public Catalog folder  Datashheet (customized or not)
<b>Pre-upgrade baseline version</b>	In the context of the upgrade process, <i>pre-upgrade baseline version</i> refers to the baseline version of the database content that exists in your database (prior to upgrading it to the later version).	Query in the Baseline Catalog folder.  Datashheet with no customizations
<b>Content protection</b>	The process by which the custom changes that you apply to baseline database content are preserved during the database upgrade process. Note that after you apply changes to baseline database content, the database content is considered <i>customized database content</i> .	Added field to a baseline datashheet in your pre-upgrade database also appears in your upgraded database.

## About Upgrading Your Database

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To upgrade your Meridium APM database, you will use the [Meridium APM Database Upgrade Manager application](#), which works like a builder to guide you step-by-step through the database upgrade process.

During the database upgrade process, the Meridium APM Database Upgrade Manager will:

1. Replace all the baseline database content in your database with the updated baseline Meridium APM database content.
2. Compare your public database content to the baseline Meridium APM database content and then:
  - Retain any database content that you *have* customized in your database (i.e., protect it).
  - Replace any database content that you have *not* customized in your database with the updated baseline database content.
3. Record every event in the database upgrade log and display a status on the interface.
4. Report errors as they occur.
5. Compile the new database when the upgrade is complete.
6. Display a confirmation message when the database upgrade process is complete.

This process can take some time to complete, and the progress of this process will be displayed while it is running. When it is finished, a message will appear, indicating that it is finished and displaying a summary of the upgrade process, including the number of failures that occurred during the upgrade process.

### Before you upgrade your database...

The table in this section of the help lists the prerequisite tasks that must be completed *before* you [initiate the database upgrade process](#). These instructions assume that your Application Server and Database Server machines meet the [Meridium APM hardware and software requirements](#). While you can use the Database Upgrade Manager to upgrade a database from *V3.4.0 SP3 or later* to your target version, details on upgrading from a starting version that is earlier than V3.4.5 are not provided in this documentation. For more information on upgrading your database from a version earlier than V3.4.5, contact Meridium, Inc.

**IMPORTANT:** If your starting database version is *earlier than* V3.4.0 SP3, you must obtain the V3.4.5 distribution package from Meridium, Inc. and upgrade your database to V3.4.5 using the Database Upgrade Manager application available with that version. After your database is upgraded to V3.4.5, you can use the upgrade instructions available in this documentation to upgrade your database to the target version. For

example, if your database is currently on V3.3.3, and your target version is V3.6.0.0.0, you will need to upgrade your V3.3.3 database to V3.4.5 using the V3.4.5 distribution package, and then upgrade the V3.4.5 database to V3.6.0 using the V3.6.0.0.0 distribution package.

Step	Task	Notes
1	<p>Upgrade the Meridium APM Application Server software (on the dedicated Application Server) to the version that corresponds to your target database version.</p> <p style="text-align: center;">-and-</p> <p>Complete any necessary pre-upgrade tasks (as indicated in the upgrade checklist), if any.</p>	<p>For example, if you are upgrading your system to V3.6.0.0.0, you should upgrade your dedicated Application Server to V3.6.0.0.0 before attempting to upgrade your database to the V3.6.0.0.0 database version. Doing so ensures that your machine contains the latest database content file, which is a compressed folder containing the content of the baseline Meridium APM database for the target database version.</p>
2	<p><a href="#">Read and understand how your customizations will be protected during the upgrade process.</a></p>	<p>You will need to understand how your content is protected to determine what, if any, content you should export from your pre-upgrade database before initiating the database upgrade process.</p>
3	<p>Create a backup of your database.</p>	<p>You should always back up the database before beginning any upgrade process. If any problems occur during the upgrade, the database can then be restored to its original state from the backup copy.</p>

Step	Task	Notes
4	<p><b>IMPORTANT:</b> If your starting database version is V3.5.1 through V3.6.0.6.0 and you are planning to use Oracle Server 12.1.0.2 or higher, you must complete the following steps prior to upgrading:</p> <ol style="list-style-type: none"> <li>a. Make a copy of your production database.</li> <li>b. Drop the PL/SQL package <b>MI_DBUMS_MAIN</b> from the copy of your production database using the following command: <b>SQL&gt;drop package MI_DBUMS_MAIN;</b></li> <li>c. Export the modified database copy.</li> <li>d. Import the database copy into Oracle Server 12.1.0.2 or higher.</li> </ol>	None
5	<p><a href="#">Perform the upgrade</a> in a test environment, using a backup copy of your database.</p>	<p>We recommend that you perform the upgrade in a test environment so that you can assess any issues that you may encounter and correct them before you upgrade your database in a production environment.</p> <p><b>Note:</b> Before you upgrade your database in a production environment, all the issues that were discovered during the test upgrade(s) must be resolved. Otherwise, your database could end up in an unstable state.</p>

## How Customized Database Content is Protected

---

The content in your database is stored much like Catalog items in the Meridium APM Catalog: there is a baseline version and a public version of each item. The public version can be customized and is the version used by the product, while the baseline version *cannot* be customized. Unlike Catalog items, where you can view both the baseline and public version, you cannot view the baseline version of most other database content types via the Meridium APM interface. The baseline version of your database content is used, however, during the database upgrade process.

During the database upgrade process, the Meridium APM system will compare each pre-upgrade baseline item in your database with the corresponding pre-upgrade public item in your database to determine whether you have customized a given item. Based on the outcome of that comparison, the database upgrade process will either replace or protect that item. With some exceptions, all your [database content will be protected](#) based upon the following criteria:

- If the pre-upgrade public version of an item is different from the pre-upgrade baseline version of that item, the Meridium APM system:
  - Will *not* overwrite your public version of that item with the new baseline version of the item.

-but-

- Will *will* overwrite the baseline version of that item in your database.

In this way, your customizations will be maintained in the upgraded database.

- If the pre-upgrade public version of an item *matches* the pre-upgrade baseline version, both the pre-upgrade public version and the pre-upgrade baseline version of that item will be overwritten with the new baseline version of the item.
- If only a public version of an item exists, it indicates that the item is custom content, and that content is not overwritten.

In other words, your baseline version of database content is always overwritten with the updated item that is delivered in the new baseline Meridium APM database.

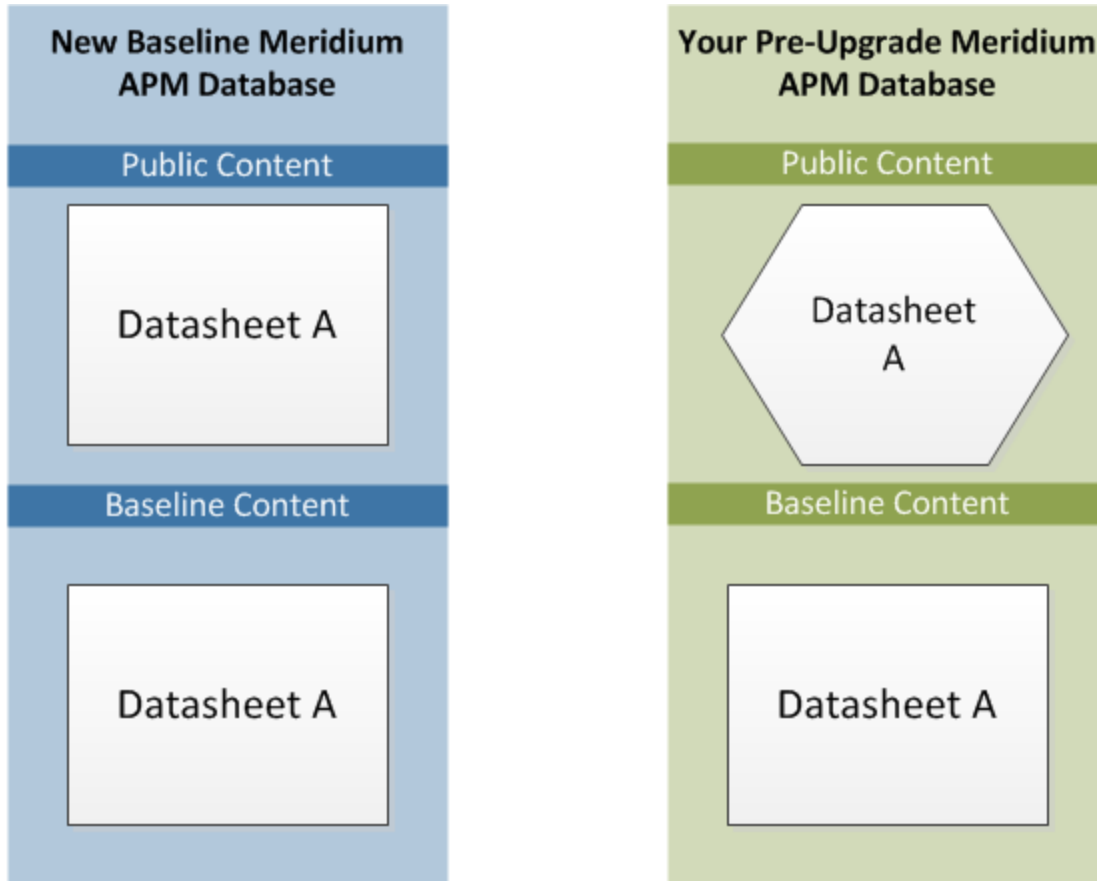
In some cases, the Meridium APM system does *not* overwrite your public version of an item (i.e., your customized content). This means that to take advantage of the changes that *Meridium, Inc. has made* to a given item, you will need to apply those changes to that item manually. For example, if Meridium, Inc. adds a field to a datasheet that you have already customized, after you upgrade your database, you will need to manually add that field to your customized datasheet. To determine which items have been protected in your database and which baseline Meridium APM changes you want to apply to your customized database content, you will need to consult the [Meridium APM Database Comparison Tool and the Meridium APM Release notes for your target version](#).

### Illustration of content protection

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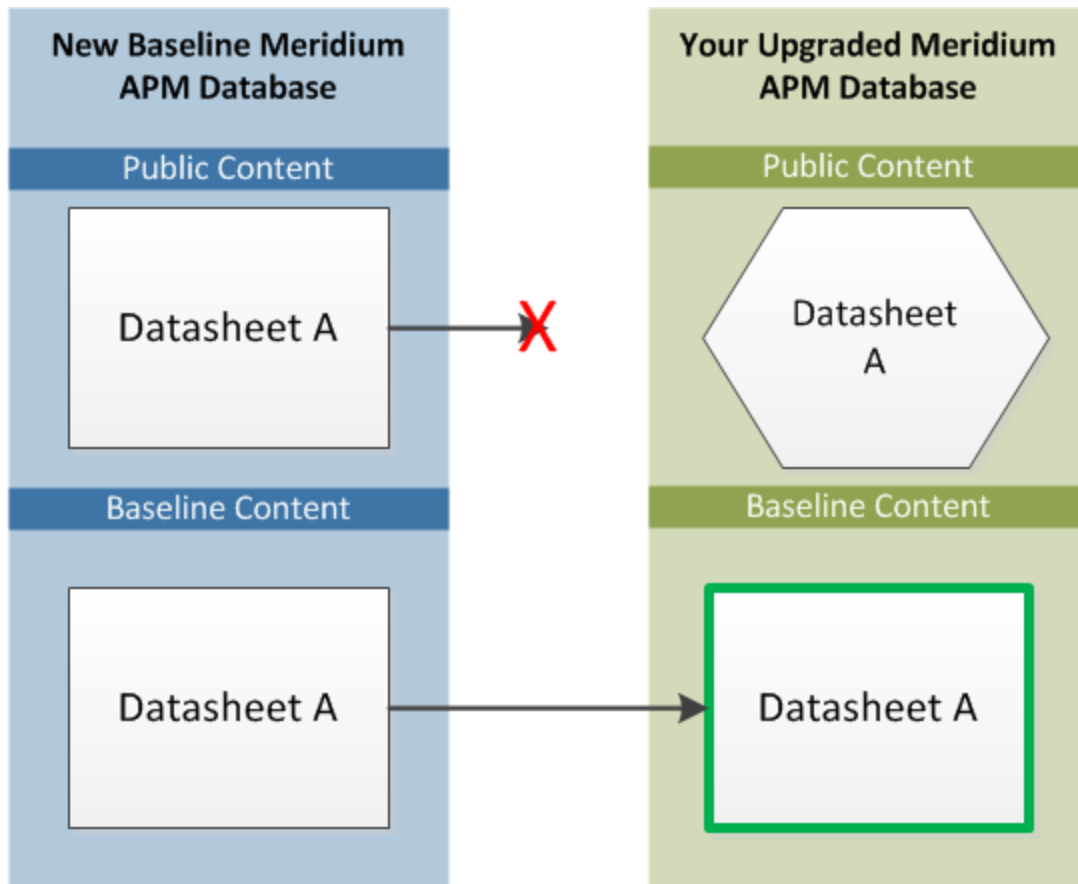


Consider a scenario where Datasheet A exists in the baseline Meridium APM database and you want to upgrade your database in which Datasheet A has been customized (e.g., you added a new field). The following diagram illustrates what the two databases would contain in this case, where the squares represent the unchanged baseline datasheet and the hexagon indicates the same baseline datasheet with your customizations.



**Note:** As indicated by this illustration, in the baseline Meridium APM database, the public and baseline versions of an item are always identical.

When this database is upgraded to the new database version, only the baseline version of Datasheet A will be replaced in your database, as illustrated in the following diagram.



In this way, all your custom changes are retained. Likewise, however, your database will not contain the baseline changes that Meridium, Inc. delivers in a given release. For this reason, you will want to determine which database items will be retained in your database so that you can determine which baseline changes your database will *not* contain after you upgrade. With that information, you can determine whether you want to:

- Continue to use your database content as is, without Meridium, Inc.'s changes
- or-
- Apply Meridium, Inc.'s changes manually to your already customized database content.

## Protected Database Content

The following table lists the types of content that exist in your database and indicates whether customizations to an existing baseline item of that type will be protected during the database upgrade process.

For items where your customizations will *not* be protected during an upgrade, to maintain your customizations, you will need to export your customized items from your pre-upgrade database using the Import/Export tool, and then import them into the upgraded database. Alternatively, you can customize the items again, manually, in the upgraded database.

For some attributes of families and family fields, Meridium, Inc. may make a change in the baseline database that will be applied to your database, regardless of whether you have customized that item or not. In these cases, the affected content will *not* be protected. Meridium, Inc. will, however, communicate such changes via the release notes for that version (i.e., in the content changes section). For example, if a family caption changes in the baseline database, your database should contain this change. Therefore, if you have made changes to the same family's caption, your customization will be overwritten. You can, however, [obtain the baseline content after you upgrade your database](#).

Baseline Database Content Type	Protected?	Notes
<b>Family attributes (Entity and Relationship)</b>		
Associated Pages	Yes	Associated Pages are considered one database item per family. This means that if you customize one Associated Page (of many), the database upgrade process will consider <i>all</i> the Associated Pages for that family as customized.
Family description	Yes	None
Family captions	Yes	None
ID Template	Yes	None
Family help text	Yes	None
Datasheets	Yes	A single datasheet is considered one database item. This means that if you customize any attribute of a datasheet, the database upgrade process will consider the entire datasheet as customized.
<b>Field attributes</b>		

Baseline Database Content Type	Protected?	Notes
<ul style="list-style-type: none"> <li>• Caption</li> <li>• Description</li> <li>• Help text</li> <li>• Override parent flag</li> <li>• ID flag</li> <li>• UTC</li> </ul>	Yes	The <i>UTC property</i> will be protected based on whether records exist for the family to which the field belongs. If records exist in a family, the field property will be protected. In other words, if Meridium, Inc. sets the UTC property in a baseline field to <i>True</i> , and you already have records in the family to which that field belongs, you will <i>not</i> receive the updated property setting automatically.
<b>Catalog Items</b>		
Metric Views	No	Baseline Metric Views are always overwritten with the updated baseline Metric View.
Queries	Yes	None
Reports	Yes	None
Graphs	Yes	None
<b>Security Groups</b>		
Security Group caption	Yes	None
Security Group ID	Yes	None
Security Group description	Yes	None
Security Group privileges	No	Baseline Security Group privileges are always overwritten with the updated baseline Security Group privileges.
<b>Records and links between records</b>		

Baseline Database Content Type	Protected?	Notes
Records	Yes (with some exceptions)	<p>After baseline records for a given family exist in your database, the records in that family will never be overwritten or updated during the database upgrade process, even if you have <i>not</i> customized them in any way. This means that if Meridium, Inc. delivers updates to the existing baseline records or adds additional baseline records in a given family, you will <i>not</i> receive those changes by default. If this occurs, you can choose to perform an <a href="#">additional step to manually obtain the new records or revert your existing records to baseline</a>.</p> <p>There are, however, several families whose records are <i>not</i> protected in this way. The following baseline families are considered <i>recurring</i> exceptions to the rule that all records and links are protected. This means that the database upgrade process will overwrite the baseline records in these families. In other words, <i>all</i> the baseline records in the following families will always be overwritten in your database with the updated baseline records:</p> <ul style="list-style-type: none"> <li>• Analysis Services Cube</li> <li>• CMMS System</li> <li>• Device</li> <li>• Device Data Presentation</li> <li>• Device Mapping</li> <li>• Device Mapping Family</li> <li>• Device Mapping Field</li> <li>• Pipe Properties</li> <li>• Security Group</li> <li>• Calibration Template Defaults</li> </ul> <p>This means that if you have customized <i>any</i> baseline record in one of the families in the preceding list, because <i>all</i> the baseline records are overwritten, your changes will be overwritten.</p>

Baseline Database Content Type	Protected?	Notes
Links between records	Yes	When the records are protected, the relationships that link the records together are also maintained with that record.
Groups of records and links that make up a single entity (e.g., Baseline Risk Matrix)	Yes	A group of records and links that make up a single entity is treated as one entity for the purposes of the database upgrade process and content protection. After such an entity exists in your database, it will never be overwritten or updated during the database upgrade process, even if you have <i>not</i> customized the records and links in any way.
<b>State Configuration</b>		
State Configuration Roles	No	Baseline State Configuration Roles are always overwritten with the updated baseline State Configuration Roles.
State Configuration Role Description	Yes	None
State Configuration Role Caption	Yes	None
State Role Security Group assignments	Yes	None
Strategy Rules and Strategies	Yes	None
<b>Other content</b>		
System Codes and System Code Tables	Yes	None
Preferences	Yes	None
UOMs and UOM Conversion Sets	Yes	None
Scheduled Items	Yes	None

Baseline Database Content Type	Protected?	Notes
Rules Library projects	Yes	The Rules Library projects in the <b>Meridium</b> folder are always replaced, like the Baseline Catalog folder. The baseline Rules Library projects that exist in the <b>Client</b> folder, however, are <i>never</i> overwritten, even if you have <i>not</i> customized them. This means that if Meridium, Inc. delivers updates to the existing baseline Rule Library projects in the <b>Client</b> folder, you will <i>not</i> receive those changes by default.

## How Do I Determine What Will be Replaced and What Will be Protected?

In general, you can assume that all the *custom* changes you have made to your database content will be retained in your upgraded database. In addition, you can assume that for any custom change that is protected in your database, your database will *not* contain any baseline changes that Meridium, Inc. delivers [for that item](#) in a given release. In other words, if Meridium, Inc. delivers updated changes to the baseline version of an item that you have customized in your database, you will not receive those changes because your custom changes will take precedent over the baseline changes. As a result, you should evaluate each *baseline* change that is delivered to determine if you want to [apply those changes to your database content](#).

**Note:** In a given release, there may be exceptions to the content protection criteria. These exceptions will be communicated via the Meridium APM Release Notes for that version. For example, if Meridium, Inc. changes a baseline field caption, it is possible that Meridium, Inc. can choose to forcibly replace that field caption in your database, even if you have customized that field caption already. Keep in mind that these cases are exceptions.

You can use the Database Comparison Tool (in pre-upgrade mode) to determine which [content will be protected](#) in your database. The output of this tool indicates:

- The baseline Meridium APM database content that has been updated in the target version (i.e., content that includes new baseline changes from Meridium, Inc.).
- and-
- Among the content that has been updated in the baseline Meridium APM database, which ones you have customized in your pre-upgrade database.

Using a combination of the results from the Database Comparison Tool and your understanding of the [content protection criteria](#), you can predict which *baseline* database content changes will *not* be available in your upgraded database. For example, consider the following scenario in which the Database Comparison Tool indicates that the baseline query *Available Recommendations* has been updated in the baseline Meridium APM database for your target version *and* that you have customized the *Available Recommendations* query in your pre-upgrade database.

Item Name	Item Path	Type	Baseline Changes	Custom Changes
<a href="#">Available Recommendations</a>	Public\Meridium\Modules\Rec	Query	●	●

In this case, you can assume that your upgraded database will contain:

- Your public version of the *Available Recommendations* query with all your customizations (in the Public Catalog folder).
- The updated baseline *Available Recommendations* query only in the Baseline folder.



## How Do I Determine What Will be Replaced and What Will be Protected?

Before you upgrade your database, you can use the Database Comparison Tool to view the specific differences between the *Available Recommendations* query in the baseline Meridium APM Database for the target version with the same baseline query as it existed in the source version. For example, you could see that Meridium, Inc. has added the Asset Description column to the baseline query. At this point, you can decide whether or not you want to either manually apply that change to your custom query after you upgrade or manually replace your public query with the baseline query in the Baseline folder.

## About Obtaining Baseline Content After an Upgrade

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After you have upgraded your database, due to the way in which your [content was protected](#), you might want to obtain Meridium, Inc.'s baseline content that was not imported into your database automatically. The following scenarios may warrant obtaining baseline content:

- A. You have customized database content for which Meridium, Inc. has delivered baseline changes. Therefore, your content was protected, and your database does not contain the baseline changes.
- B. Baseline records have been added or updated for an existing family in your database. Therefore, your content was protected, and your database does not contain the new baseline records or baseline changes to existing records.

With the exception of rules and Catalog items, you cannot view the baseline version of database content. This means that you will need to use the Import/Export Metadata tool in the Configuration Manager application to obtain the updated baseline version of any other content type.

This documentation does *not* provide details on reverting the content types for which the Import/Export Metadata tool is *not needed* to overwrite a public version of a content item with the baseline version (i.e., Catalog items and rules). These instructions assume that you are familiar with the Meridium APM applications and can determine how to revert these content types on your own.

After you have determined which baseline database items you want in your database instead of your public item, you will need to:

1. Locate the baseline version of the items that were delivered within the compressed database content file and then unzipped during the database upgrade process. This file is installed automatically in the following location when you upgrade the Meridium APM Application Server: **<root>\Meridium\DbUpg\Versions\<database version>**, where **<root>** is the root drive and location in which the compressed database content file was installed, and **<database version>** is the upgraded database version. For example, if you accept the default installation location for the V3.5.1 release, the folder path would be C:\Meridium\DbUpg\Versions\3510000.
2. Import the baseline database content item using the [Import/Export Metadata tool](#).

The following table provides the information that you will need to locate baseline database content within the compressed database content file so that you can import it into your database. This table lists only those content types that must be obtained using the Import/Export Metadata tool. For all of these items, you can use the *All* or *Some* option to import all or only some of the items of that type.

Item Type	File Location (<root>\Meridium\DbUpg\Versions\<version>)
Associated Pages	\\20_IEU\50_Other\1_AssociatedPages
Datasheets	\\20_IEU\20_Families
Records and links between records	\\20_IEU\50_Other\2_RecordsLinks
Rule Library projects	\\20_IEU\30_Rules\1_LibraryProject <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p><b>Note:</b> The Client Rule Library project file names are appended with <i>client</i>.</p> </div>
System Codes	\\20_IEU\10_Prerequisites\1_SystemCodes
Units of Measure	\\20_IEU\10_Prerequisites\1_UOMs

## About the Database Upgrade Manager

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**Note:** To use the Database Upgrade Manager application, you must be logged in as a Windows user with an *Administrator* account to the machine where Database Upgrade Manager is installed.

The Meridium APM Database Upgrade Manager is installed automatically when you install the Meridium APM Application Server software. The interface works like a builder, whose screens are dependent upon one another and appear in succession. You can use this application to [initiate](#) and then [monitor the database upgrade process](#) as it runs.

Specifically, the Meridium APM Database Upgrade Manager consists of the following screens:

### Connection Information

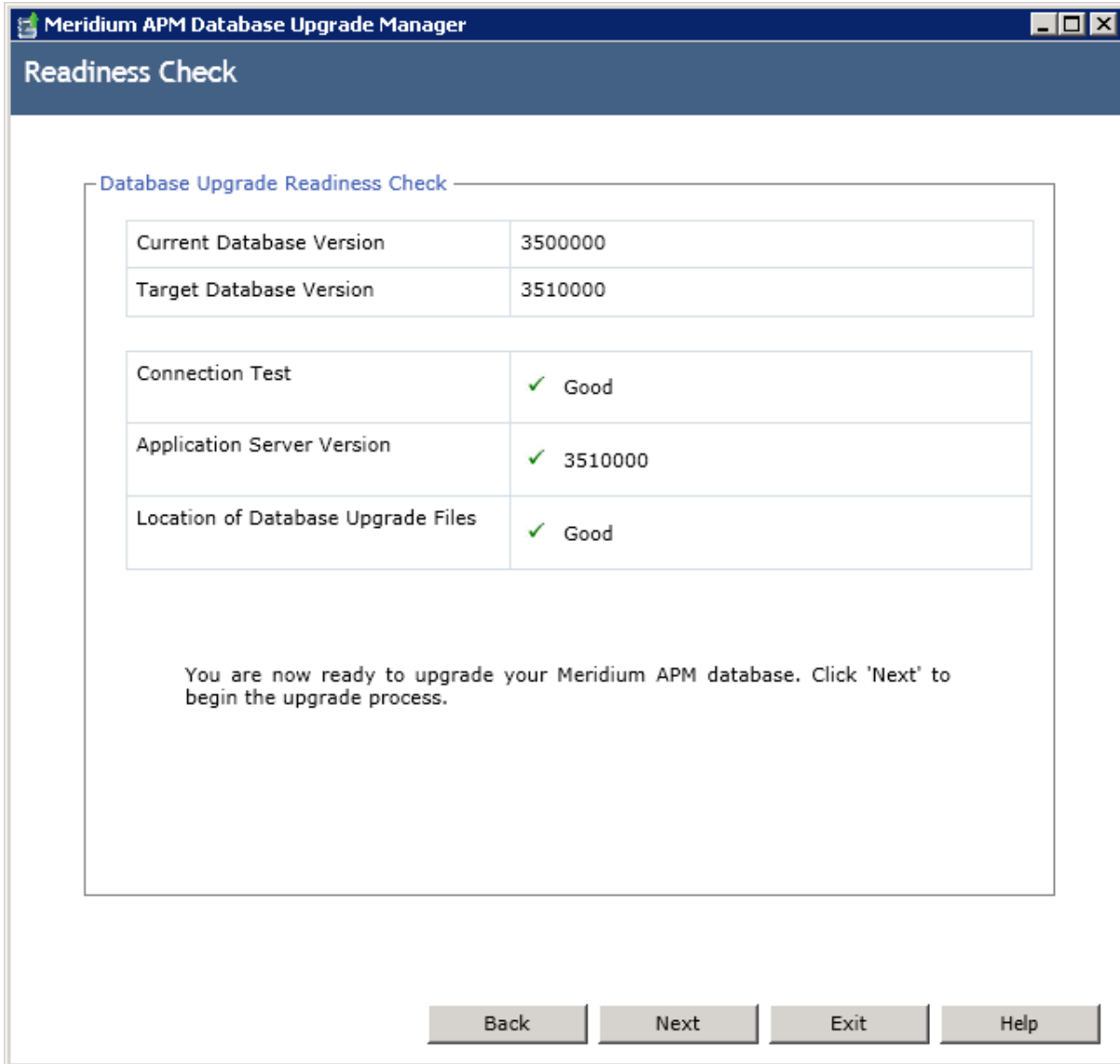
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The **Connection Information** screen is the first screen in the Meridium APM Database Upgrade Manager. This screen contains one section, **Database Server Connection Information**, and several buttons. You can use these items to enter the connection information for the database that you want to upgrade, so that the Meridium APM system can access your database, and then check to make sure that the Meridium APM system can successfully connect to the database using the connection information that you provided. The following image shows an example of what the **Connection Information** screen looks like when it is first accessed.

The screenshot shows a window titled "Meridium APM Database Upgrade Manager" with a sub-header "Connection Information". Inside the window is a section titled "Database Server Connection Information" containing several input fields: "Type" (a dropdown menu), "User Name", "Password", "Alias", "Database Server", "Database Name", and "Path to Database Upgrade content" (a text box containing "C:\Meridium\DbUpg" and a browse button "..."). At the bottom right of the window are three buttons: "Check Setup", "Exit", and "Help".

## Readiness Check

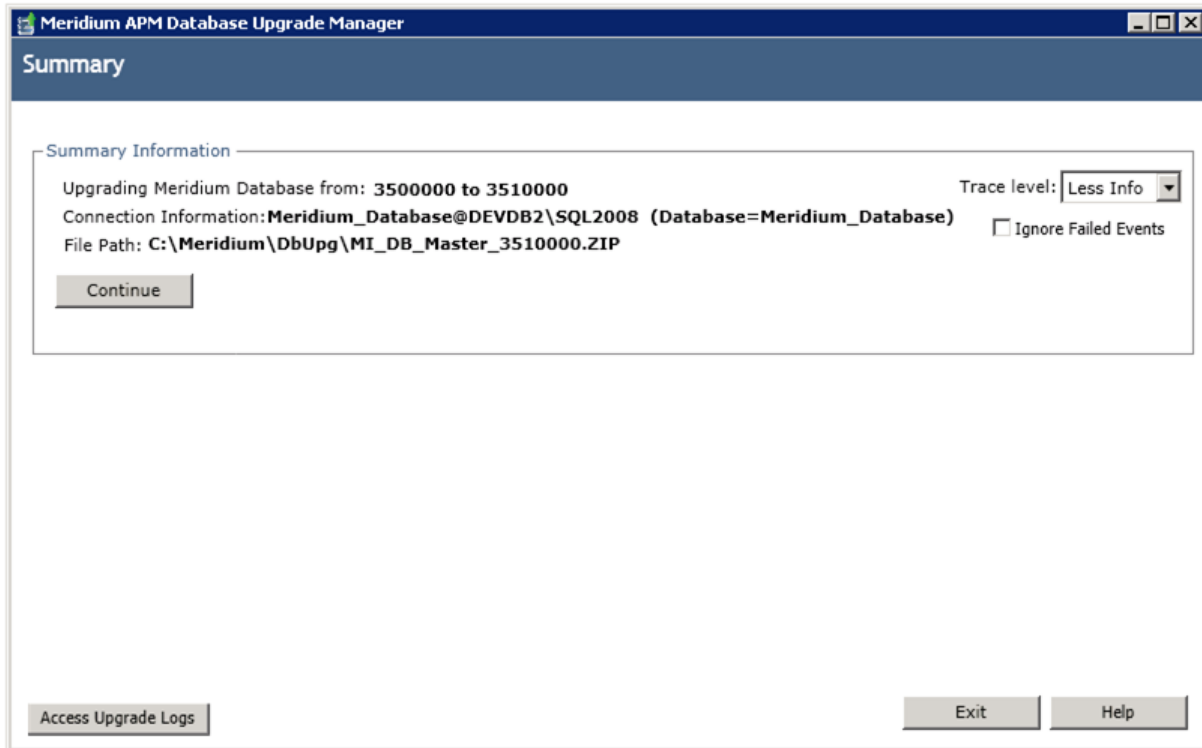
The **Readiness Check** screen is the second screen in the Database Upgrade Manager, which appears after you click the **Check Setup** button on the **Connection Information** screen. The **Readiness Check** screen contains one section, **Database Upgrade Readiness Check**, in which the Meridium APM system will indicate whether you can [proceed with upgrading your database](#). After the Meridium APM system indicates that you can proceed with upgrading your database, you can navigate to the final screen in the Database Upgrade Manager, where you can initiate and track the database upgrade process.



## Summary

The **Summary** screen is the final screen in the Database Upgrade Manager. From this screen, you can [initiate](#) and [monitor the database upgrade process](#), including viewing the details of each individual process. When you first access the **Summary** screen, it contains only the **Summary Information** section and several buttons (as shown in the following image).

## About the Database Upgrade Manager



After you initiate the database upgrade process, the interface will change and display additional elements (as shown in the following image).

## About the Database Upgrade Manager

Summary Information

Upgrading Meridium Database from: **3500000 to 3510000**

Connection Information: **Meridium\_Database@DEVDB2\SQL2008 (Database=Meridium\_Database)**

File Path: **C:\Meridium\DbUpg\MI\_DB\_Master\_3510000.ZIP**

Trace level:   Ignore Failed Events

Step 4 of 4 - Processing: 3%

Upgrade Details

Advanced Details	Detail Key	Status	Version	Database Item Name
Events	1	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\010_TOGGLE_INTEGRITY_CHECKS.MS.SQL
Events	2	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\020_UPG_CONTENT_TBLS.MS.SQL
Events	3	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\021_UPD_CONTENT_TBLS.GEN.SQL
Events	4	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\045_INS_MI_EXCLUDE_COLUMNS.MS.SQL
Events	5	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\049_DRP_VIEWS_CONTENT_PROTECTION.MS.SQL.LINK
Events	6	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_DATASHEETS.GEN.SQL.LINK
Events	7	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_HYPERLINKS.GEN.SQL.LINK
Events	8	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PREFERENCES.GEN.SQL.LINK
Events	9	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PRIVILEGES.GEN.SQL.LINK
Events	10	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SM_STATE_MACHINES.GEN.SQL.LINK
Events	11	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SYCD_TABLES.GEN.SQL.LINK
Events	12	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_UNITS_OF_MEASURE.GEN.SQL.LINK
Events	13	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\080_CRT_PKG_MI_SM.MS.SQL
Events	14	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\081_CLEANUP_STATE_MACHINES.MS.SQL
Events	15	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\110_CRT_TBLS_DBUMS.MS.SQL
Events	16	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\120_CRT_PKG_MI_DBUMS_UTIL.MS.SQL



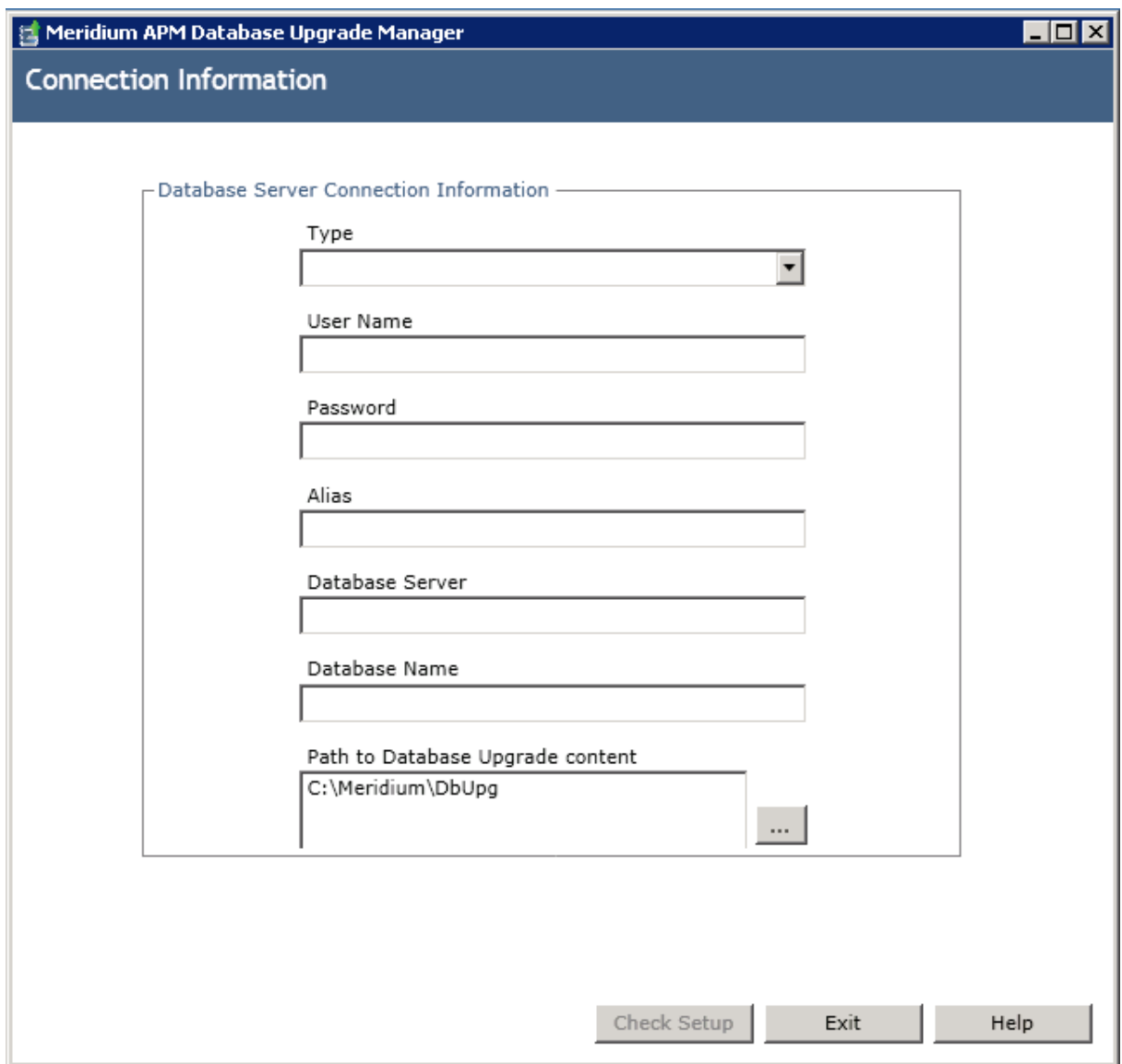
## Accessing the Database Upgrade Manager

These instructions assume that your dedicated Meridium APM Application Server already contains the version of the Meridium APM software that corresponds to the database version to which you want to upgrade your database.

To access the Database Upgrade Manager application:

1. On the dedicated Meridium APM Application Server machine, on the Start menu, expand the **Meridium APM Applications** folder.
2. Click the **Database Upgrade Manager** option.

The Meridium APM Database Upgrade Manager application appears, displaying the **Connection Information** screen.



The screenshot shows a window titled "Meridium APM Database Upgrade Manager" with a "Connection Information" header. The main area is titled "Database Server Connection Information" and contains several input fields: "Type" (a dropdown menu), "User Name", "Password", "Alias", "Database Server", "Database Name", and "Path to Database Upgrade content" (a text box containing "C:\Meridium\DbUpg" with a browse button). At the bottom right, there are three buttons: "Check Setup", "Exit", and "Help".

## Initiating the Database Upgrade Process

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You can initiate the database upgrade process only from the **Summary** screen in the Database Upgrade Manager. When you do so, the Meridium APM system will begin upgrading your database, which consists of the following steps:

1. Unzipping the compressed database content folder and extracting its contents.
2. Checking the extracted files against the list of baseline files to determine if all the expected files are available.
3. Importing the baseline database content into your database.
4. Processing each file and protecting your customized items according to the content protection process. When step 4 begins, you should refer to the instructions on monitoring the database upgrade process.

The following instructions assume that you are ready to upgrade your database in either a test *or* production environment.


**IMPORTANT:** The database upgrade process can take several hours to complete, depending upon the size of the database, available memory, and other factors. After you start the database upgrade process, you should *not* close the window unless you want to stop the database upgrade process.

**To initiate the database upgrade process:**

1. Access the Database Upgrade Manager application.
2. On the **Connection Information** screen, in the **Database Server Connection Information** section, enter the following information about the database that you want to upgrade to the new version:
  - A. In the **Type** list, select the database type: *SQL Server* or *Oracle*.

Depending on the value that you select, the remaining cells may be hidden. The behavior of each cell is described in the step that corresponds to each cell.
  - B. In the **User Name** cell, type the user name or schema name that can be used to log in to your database.
  - C. In the **Password** cell, type the password associated with the user name in the **User Name** cell, which can be used to log in to your database.

As you type, a **•** will appear in place of each character.
  - D. In the **Database Server** cell, type the path to the Database Server machine where your database resides. This step applies only to SQL Server database types and is hidden if you selected *Oracle* in the **Type** list.
  - E. In the **Database Name** cell, type the name of the database that you want to upgrade. This step applies only to SQL Server database types and is hidden if you selected *Oracle* in the **Type** list.

- F. In the **Alias** cell, type the database alias for the database that you want to upgrade. This step applies only to Oracle database types and is hidden if you selected *SQL Server* in the **Type** list.
- G. The **Path to Database Upgrade content** cell contains the folder path in which the compressed database content file was installed when the Application Server software was upgraded. For example, if you accepted the default location during the Application Server upgrade, the compressed file is installed in the folder **C:\Meridium\DbUpg**. In this cell, click the  button, navigate to the compressed database content file whose file name contains **MI\_DB\_Master**, and select it.

**Note:** The **Path to Database Upgrade content** folder path cannot contain periods. If it does, the database upgrade will not work.

The following image shows an example of what the **Connection Information** screen looks like after you have entered connection information. In this example, the connection details apply to a SQL Server database. As you can see in the **Path to the Database Upgrade content** cell, the compressed file that contains the baseline Meridium APM database content is named according to the database version. This value will change with each subsequent Meridium APM release.

The screenshot shows a 'Connection Information' dialog box. The title bar is dark blue with the text 'Connection Information' in white. The main content area is white and contains a section titled 'Database Server Connection Information' in blue. Below this title are several input fields: 'Type' is a dropdown menu with 'SQL Server' selected; 'User Name' is a text box containing 'Meridium\_Database'; 'Password' is a text box with 12 black dots; 'Database Server' is a text box containing 'DEVDB2\SQL2008'; 'Database Name' is a text box containing 'Meridium\_Database'; and 'Path to Database Upgrade content' is a text box containing 'C:\Meridium\DbUpg\MI\_DB\_Master\_3510000.ZIP' with a browse button (three dots) to its right. At the bottom of the dialog are three buttons: 'Check Setup', 'Exit', and 'Help'.

3. Click the **Check Setup** button.

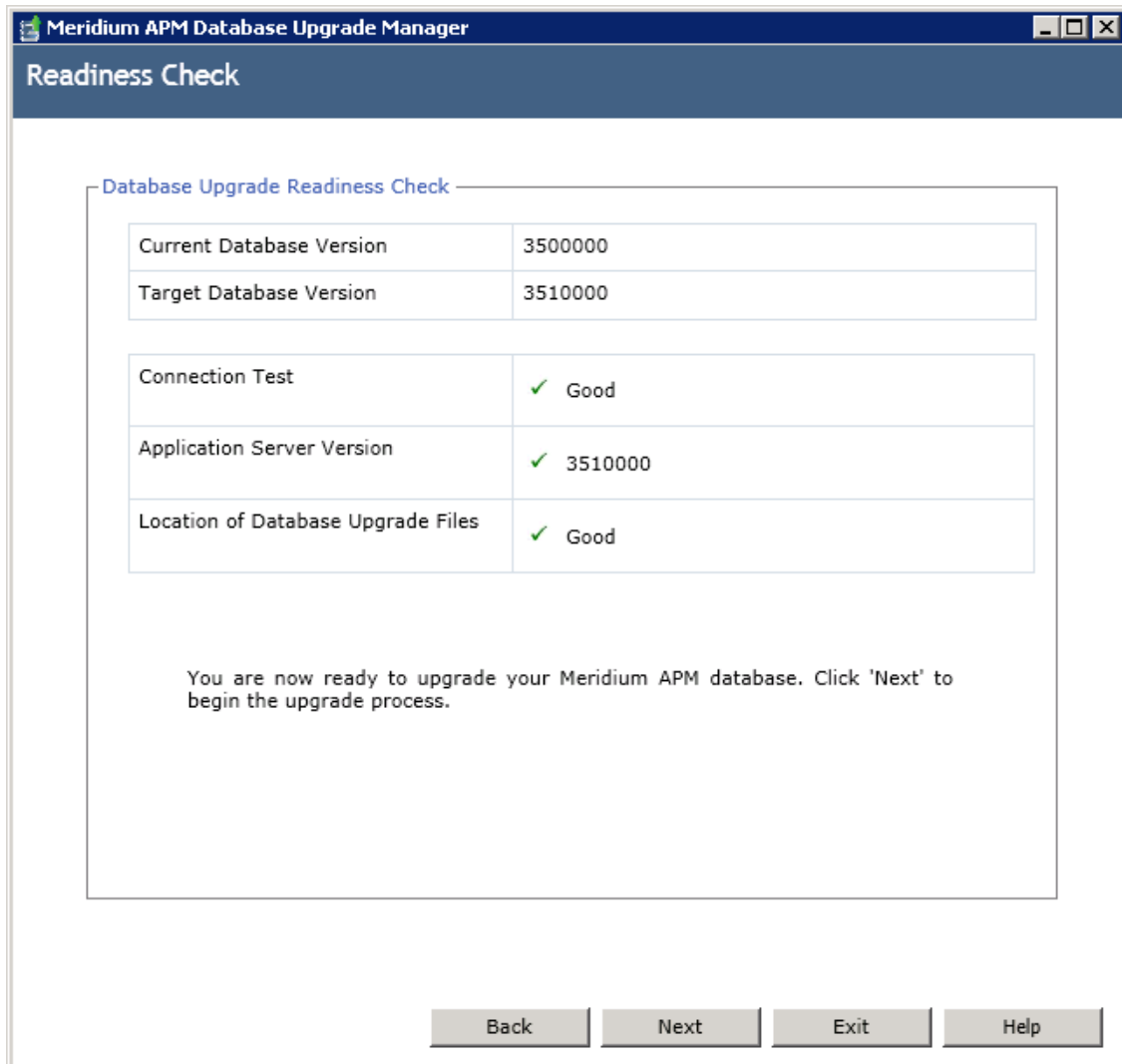
The Database Upgrade Manager performs the following checks in the order in which they are listed here:

- Attempts to connect to the database whose connection information is stored in the **Database Server Connection Information** section.
- Attempts to locate the compressed database content file specified in the Path to Database Upgrade content cell.

**Note:** If the Meridium APM system encounters issues during the first two checks, corresponding messages will be displayed on the **Connection Information** screen. If you see an error message, you should correct the issue as indicated by the message, and then click the **Check Setup** button again.

- Checks the version of the Meridium APM Application Server software on the machine where you are working to see if the first three digits match the first three digits in the target database version, indicated by the compressed database content file specified in the **Path to Database Upgrade content** cell. The first three digits in the compressed database content file must match the first three digits in the Application Server software version. The result of this check is displayed *only* on the **Readiness Check** screen.

The results of these checks are displayed on the **Readiness Check** screen. The following image shows an example of what the **Readiness Check** screen looks like when you are ready to upgrade a V3.5.0 database version to a V3.5.1 database version. The *Current Database Version* value is determined after the Meridium APM successfully connects to the database that you want to upgrade. Likewise, the *Target Database Version* value is determined by the version of the compressed database content file whose path is stored in the **Path to Database Upgrade content** cell on the **Connection Information** screen.

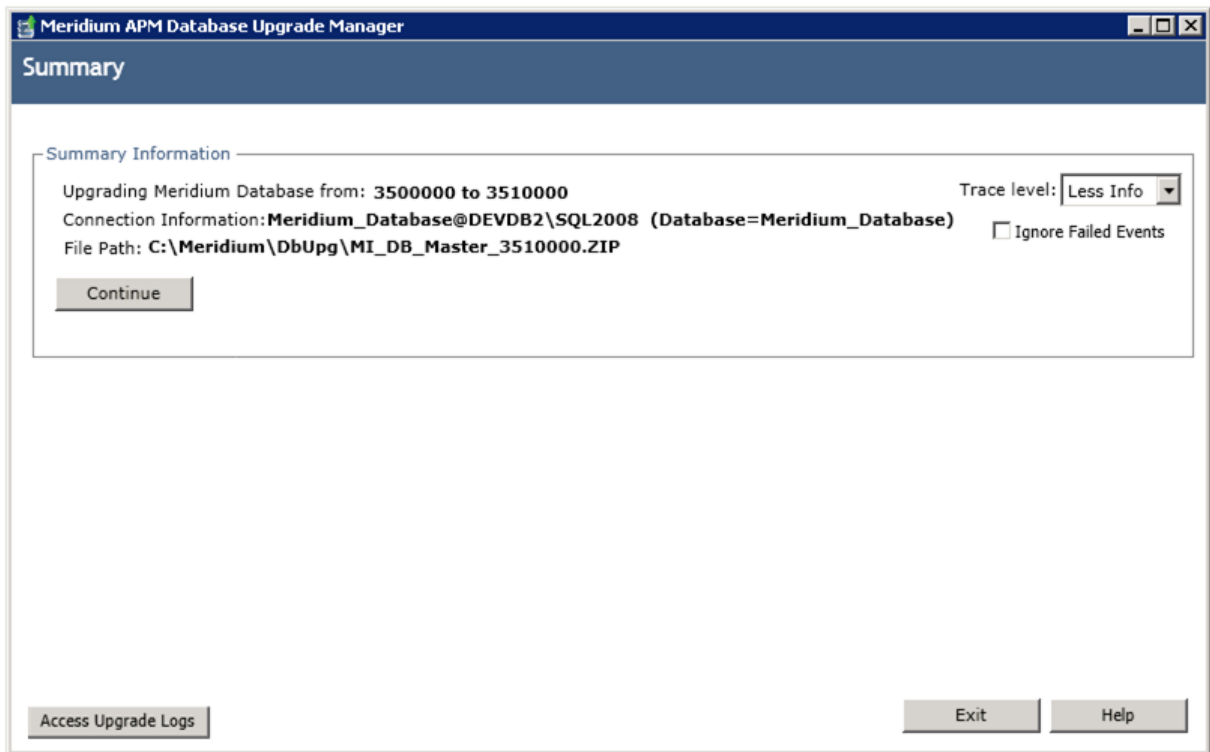


**Note:** If the first three digits of the database content file name does *not* match the first three digits of the Application Server software version, the indicator, ✖ **<Version>**, will be displayed, where **<Version>** is the version of the Application Server software that is installed on that machine. In addition, an error message will be displayed at the bottom of the **Database Upgrade Readiness Check** section, indicating that the system is unable to determine the version to which you want to upgrade and asks you to check the database content file name and location on the **Connection Information** screen.

**IMPORTANT:** After you click the **Next** button on this screen, you cannot come back. Your only options after continuing past the **Readiness Check** screen will be to initiate the upgrade process or exit the application.

4. Click the **Next** button.

The **Summary** screen appears and expands to the full size of your screen. For the purposes of this documentation, the **Summary** screen has been resized manually to a smaller size. This screen displays a summary of the information that you provided on the **Connection Information** screen.



5. In the **Summary Information** section:
  - A. In the **Trace Level** list, select the value indicating the amount of detail that you want to include in the upgrade logs for each operation that occurs during the database upgrade process. You can choose from the following

options:

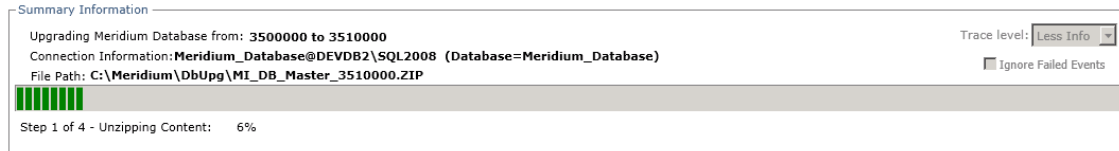
- **Less Info:** This is the default setting. When this option is selected, the database upgrade logs will contain enough information for you to determine where an error occurred but may not contain enough information for you to determine how to correct the issue.
  - **More Info:** When this option is selected, the database upgrade logs will contain more information for you to determine where an error occurred and may contain enough information for you to determine how to correct the issue. Keep in mind that using this option can cause the upgrade logs to become quite large.
- B. For the **Ignore Failed Events** check box, indicate whether you want the database upgrade process to pause automatically if a failure occurs. This check box is clear by default.
- If you are running the database upgrade process in a *test* environment, and you want the Meridium APM system to continue processing your database even if a failure occurs, select the **Ignore Failed Events** check box. This will provide you with a comprehensive list of failures after the database upgrade process is complete, which you can use to review and correct the failures.
  - If you are running the database upgrade process in a *test* environment, and you want to review each failure as it occurs, accept the default selection. This means that if a failure occurs during the upgrade process, the upgrade process will pause automatically, allowing you to review and correct the failures as they occur.
  - If you are running the database upgrade process in a *production* environment, accept the default selection (clear). At this point, you should have already run the database upgrade process in a test environment and resolved any errors that occurred. In other words, you should not expect any errors to occur during the database upgrade process in your production environment. Using this option, however, will ensure that *if an error does occur*, the upgrade process will *not* continue.
6. Click the **Continue** button to initiate the database upgrade process.

The **Summary Information** section refreshes and the following interface elements change:

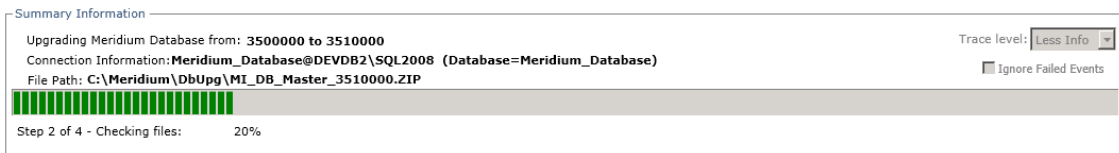
- The **Trace Level** and **Ignore Failed Events** options are disabled. At any point during the upgrade process, however, you can change these settings. To do so, you will need to pause the database upgrade process, and then the Meridium APM system will use the new settings, starting with the first operation that is processed after you resume the upgrade process.
- The **Pause** button will appear, to which you can use to pause the upgrade process at any point. If you pause the database upgrade process, the button text will change to **Resume**, which you can click to start the database upgrade process where it left off.

- The **Upgrade Details** grid will appear below the **Summary Information** section when step four begins, which displays the status of each file that is processed during the database upgrade process.

In addition, this section displays the progress of the first step of 4 in the database upgrade process, in which the Meridium APM system unzips the compressed database content file and extracts its contents.

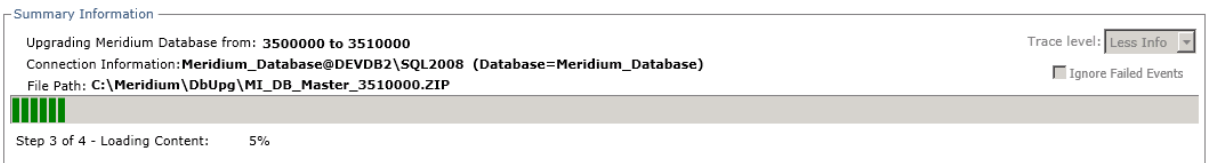


After the progress bar reaches the end, the **Summary Information** section refreshes and displays the progress of the second step of 4 in the database upgrade process, in which the Meridium APM system checks the extracted files against a manifest to determine if all the expected files are available.



**Note:** If an expected file is not found during this process, an error message will appear, and then you can use the **View Log** button to see which file is missing. If this issue occurs, you should contact Meridium, Inc.

After the progress bar reaches the end, the **Summary Information** section refreshes and displays the progress of the third step of 4 in the database upgrade process, in which the Meridium APM system imports the baseline database content into your database.

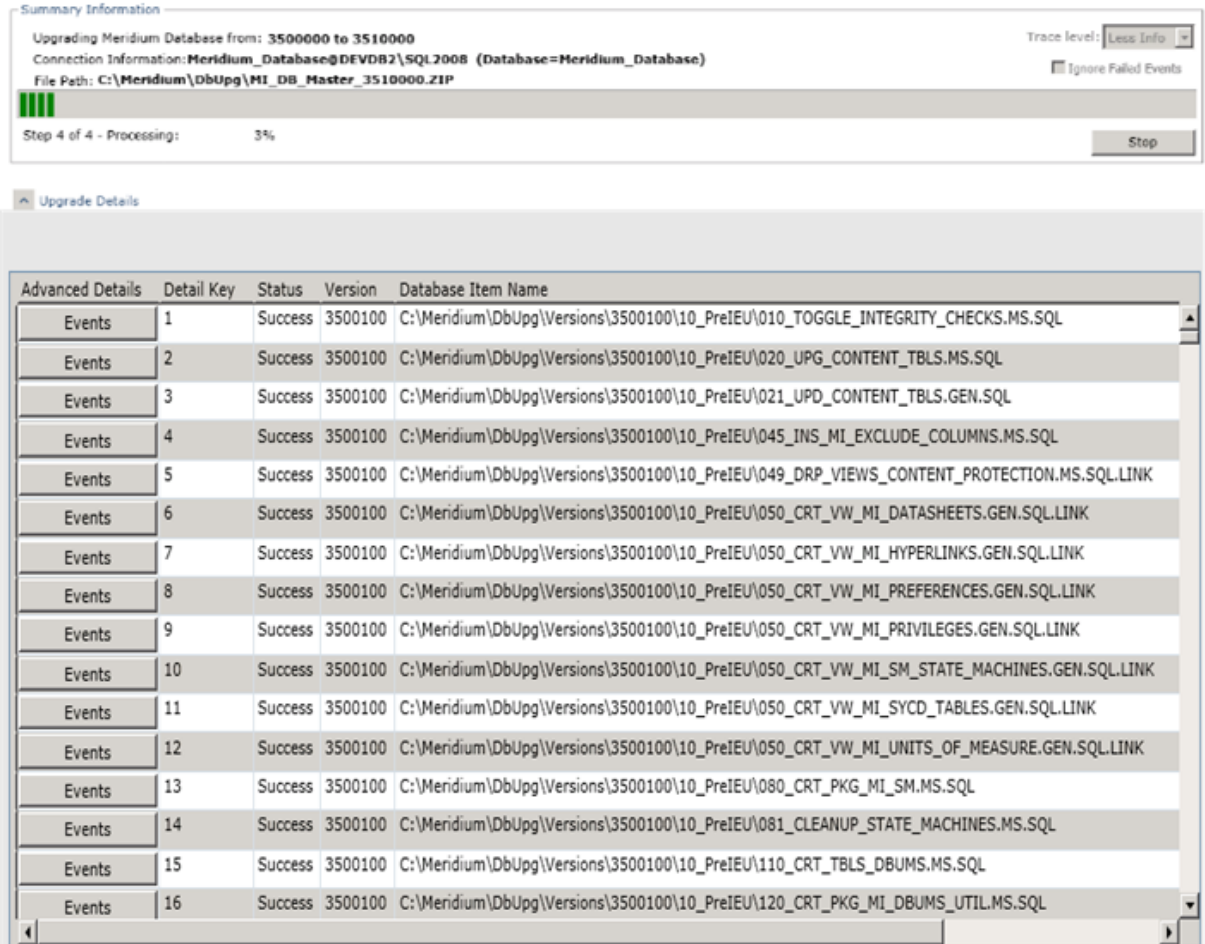


After the progress bar reaches the end:

- The **Summary Information** section refreshes and displays the fourth step of 4 in the database upgrade process, in which the Meridium APM system processes each file and protects your customized items according to the content protection process.
- and-
- The **Upgrade Details** grid appears below the **Summary Information** section and displays the status of each event (i.e., processing a file or set of files) as it occurs. Each row in the grid represents one event.



## Initiating the Database Upgrade Process



Summary Information

Upgrading Meridium Database from: 3500000 to 3510000

Connection Information: Meridium\_Database@DEVDB2\SQL2008 (Database=Meridium\_Database)

File Path: C:\Meridium\DbUpp\MI\_DB\_Master\_3510000.ZIP

Trace level: Less Info

Ignore Failed Events

Step 4 of 4 - Processing: 3%

Stop

Upgrade Details

Advanced Details	Detail Key	Status	Version	Database Item Name
Events	1	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\010_TOGGLE_INTEGRITY_CHECKS.MS.SQL
Events	2	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\020_UPG_CONTENT_TBLS.MS.SQL
Events	3	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\021_UPD_CONTENT_TBLS.GEN.SQL
Events	4	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\045_INS_MI_EXCLUDE_COLUMNS.MS.SQL
Events	5	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\049_DRP_VIEWS_CONTENT_PROTECTION.MS.SQL.LINK
Events	6	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_DATASHEETS.GEN.SQL.LINK
Events	7	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_HYPERLINKS.GEN.SQL.LINK
Events	8	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PREFERENCES.GEN.SQL.LINK
Events	9	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PRIVILEGES.GEN.SQL.LINK
Events	10	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SM_STATE_MACHINES.GEN.SQL.LINK
Events	11	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SYCD_TABLES.GEN.SQL.LINK
Events	12	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\050_CRT_VW_MI_UNITS_OF_MEASURE.GEN.SQL.LINK
Events	13	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\080_CRT_PKG_MI_SM.MS.SQL
Events	14	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\081_CLEANUP_STATE_MACHINES.MS.SQL
Events	15	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\110_CRT_TBLS_DBUMS.MS.SQL
Events	16	Success	3500100	C:\Meridium\DbUpp\Versions\3500100\10_PreIEU\120_CRT_PKG_MI_DBUMS_UTIL.MS.SQL

At this point, you should monitor the progress of the database upgrade process.

While your database is being upgraded, various files and folders are created automatically. You do not need to interact with these files, with the exception of the Microsoft Excel files in the folder <root drive>\Program Data\Meridium\Translations\Legacy Translations. These files contain translated strings that were stored in your database. These files will be created only if you have existing translations stored in your database (i.e., if you are upgrading from a release earlier than V3.5.0 SP1 LP). If these files are created, and you want to use your existing translations, you will need to perform an additional step to upload those translations to the Meridium APM system.

## About Monitoring the Database Upgrade Process

The Database Upgrade Manager provides features that help you monitor the database upgrade process. The following table lists these tools and explains how they can be used to help you monitor the database upgrade process for your database.

Tool Name	Description	Why It's Useful
<b>Upgrade Details</b> grid	Displays the <a href="#">status of each file that is being processed</a> during step 4 of 4 in the database upgrade process.	As each file is processed, the grid will display a <a href="#">status value indicating if the file was successfully processed in the upgrade database or if it failed</a> . Using this information, you can determine if you need to investigate the details of the database upgrade process and where to find the details.
<b>Events</b> button	Lets you <a href="#">view the details of a specific event</a> using the Events log.	As each event occurs, the details of what the Meridium APM system is doing is recorded in the Events log. You can use this log to troubleshoot issues.  The amount of information that is available here is determined by the <i>Trace Level</i> setting.
<b>Pause</b> button	<a href="#">Pauses the database upgrade process.</a>	If you have the <b>Ignore Failed Events</b> check box selected but you notice a failure that you want to review, you can pause the upgrade process and review the details of that failure. When you are finished, you can click the <b>Resume</b> button to <a href="#">start the database upgrade process at the point at which you paused it</a> .
<b>Resume</b> button	<a href="#">Starts the database upgrade process after it has been paused.</a>	When you start the database upgrade process again in this way, it will start where it left off when the process was paused.

Tool Name	Description	Why It's Useful
<p><b>Trace Level</b> option</p>	<p>Lets you specify how much detail you want the upgrade logs to contain. You can choose from the following options:</p> <ul style="list-style-type: none"> <li>• <i>More Info</i></li> <li>• <i>Less Info</i></li> </ul>	<p>The information that is recorded in the logs can be helpful if a <a href="#">process fails</a>. You can use this information to investigate the issue.</p>
<p><b>Ignore Failed Events</b> option</p>	<p>Lets you specify whether you want the database upgrade process to pause automatically if a failure occurs or continue processing the remaining files.</p>	<p>Depending upon the setting that you use, you may need to monitor the database upgrade process more closely.</p> <p>For example, if you run the database upgrade process with the <b>Ignore Failed Events</b> check box cleared, the database upgrade process will pause itself automatically <a href="#">when a failure occurs</a> and write the failure to the upgrade log. In this case, you will need to correct the error before you can resume the upgrade process.</p> <p>If, however, you are running the database upgrade process with the <b>Ignore Failed Events</b> check box selected, the database upgrade process will continue processing the database content files despite any failures that occur (i.e., it will log the details and then move on). In this case, it is not necessary for you to closely monitor the database upgrade process because it will continue until it is finished, and then you can review the <b>Upgrade Details</b> grid and event logs for details on any failures that occurred.</p>

Tool Name	Description	Why It's Useful
<b>View Current Log</b>	Displays the upgrade log for the upgrade process that is currently running.	The information that is written to the current upgrade log represent the details of the upgrade process, which you can use to <a href="#">troubleshoot issues</a> .
<b>View All Logs</b>	Displays the folder containing <i>all</i> the logs that are associated with the database upgrades that you have run.	These logs should be <a href="#">sent to Meridium, Inc.</a> either upon completion of your database upgrade or if you are experiencing issues that you are unable to resolve on your own.

## Aspects of the Upgrade Details Grid

The **Upgrade Details** grid appears on the **Summary** screen in the Database Upgrade Manager application after you [initiate the database upgrade process](#) and the first three operations are finished. At this point, the Meridium APM system begins processing each file in your database (i.e., step four in the database upgrade process).

The **Upgrade Details** grid shows the status of each file being processed and provides access to the details of that operation. The following image shows what the **Summary** screen looks like when the **Upgrade Details** grid is displayed.

The screenshot shows the Summary Information window at the top, indicating the upgrade progress from version 3500000 to 3510000. Below this, the Upgrade Details grid is displayed, listing 16 items with their status, version, and database item names.

Advanced Details	Detail Key	Status	Version	Database Item Name
Events	1	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\010_TOGGLE_INTEGRITY_CHECKS.MS.SQL
Events	2	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\020_UPG_CONTENT_TBLS.MS.SQL
Events	3	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\021_UPD_CONTENT_TBLS.GEN.SQL
Events	4	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\045_INS_MI_EXCLUDE_COLUMNS.MS.SQL
Events	5	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\049_DRP_VIEWS_CONTENT_PROTECTION.MS.SQL.LINK
Events	6	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_DATASHEETS.GEN.SQL.LINK
Events	7	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_HYPERLINKS.GEN.SQL.LINK
Events	8	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PREFERENCES.GEN.SQL.LINK
Events	9	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_PRIVILEGES.GEN.SQL.LINK
Events	10	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SM_STATE_MACHINES.GEN.SQL.LINK
Events	11	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_SYCD_TABLES.GEN.SQL.LINK
Events	12	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\050_CRT_VW_MI_UNITS_OF_MEASURE.GEN.SQL.LINK
Events	13	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\080_CRT_PKG_MI_SM.MS.SQL
Events	14	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\081_CLEANUP_STATE_MACHINES.MS.SQL
Events	15	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\110_CRT_TBLS_DBUMS.MS.SQL
Events	16	Success	3500100	C:\Meridium\DbUpg\Versions\3500100\10_PreIEU\120_CRT_PKG_MI_DBUMS_UTIL.MS.SQL

Each row in the **Upgrade Details** grid represents a file or set of files that are being processed by the database upgrade process. The grid contains the following columns:

- **Advanced Details:** Contains the **Events** button, which displays the **Meridium APM Database Upgrade Event** window, where you can [view detailed information about how the item in that row was processed by the Meridium APM system](#). You cannot sort the values in this column.
- **Detail Key:** Contains a number representing the order in which the item in that

row is being processed in relation to the others in the grid, starting with 1 (one). The values in this column are sorted in ascending order by default.

- **Status:** Contains one of the following values, which indicate the status of that item within the database upgrade process:
  - **Loaded:** The Meridium APM system is processing the item in that row. This is the first status for each item.
  - **Success:** The item in that row has been successfully processed in your database. This is the final status for each item.
  - **Failure:** An error occurred while processing the item in that row, and it was not successfully processed.
  - **In Progress:** The item is currently being processed.

You can sort the values in this column by clicking the column header.

- **Version:** The database version of the item in that row. Because you can upgrade across multiple versions, the Meridium APM system will process each version of the item in each row, and this value will change as the Meridium APM system processes the successive versions of the file in that row. After an item is successfully processed, the version number value will match the target database value.
- **Database Item Name:** The file path and name of the file being processed. You can sort the values in this column by clicking the column header.
- **Process Date and Time:** The date and time on which the Meridium APM system finished processing the item in that row. You can sort the values in this column by clicking the column header.

You can change the sort that is applied to the values in any column except the **Advanced Details** column by clicking the column header. When you do so, an icon will appear in the column header, indicating the sort that is applied to the values:

- ▲ Indicates that an ascending sort is currently applied. You can click this icon to sort the values in *descending* order.
- ▼ Indicates that a descending sort is currently applied. You can click this icon to sort the values in *ascending* order.

The grid is hidden by default. You can collapse and expand the grid using the button that appears to the left of the **Upgrade Details** label above the grid. This button changes depending upon the current state of the grid.

- ▲ Indicates that the grid is expanded, and you can click that button to collapse it.
- ▼ Indicates that the grid is hidden, and you can click that button to expand the grid. This is the default setting.

## Pausing the Database Upgrade Process

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The database upgrade process can be paused in the following ways:

- Automatically, if a failure occurs and the **Ignore Failed Events** check box is cleared.
- Manually, if you want to pause the process to view the details of a failure or to change your settings (e.g., Trace Level).

The following instructions provide details on pausing the database upgrade process manually. When you do so, the database upgrade process will stop after it completes its current operation and wait for you to resume the process. When you [start it again](#), it will continue processing where it left off when it was paused.

These instructions assume that a database upgrade process is currently running.

**To pause the database upgrade process:**

- In the **Summary Information** section on the **Summary** screen, click the **Pause** button.

The database upgrade process stops running, and the **Pause** button is renamed **Resume**.

## Resuming a Paused Database Upgrade Process

---

The database upgrade process can be paused in the following ways:

- Automatically, if a failure occurs and the **Ignore Failed Events** check box is cleared.
- Manually, if you want to pause the process to view the details of a failure or to change your settings (e.g., Trace Level).

The following instructions provide details on starting a paused database upgrade process. These instructions assume that the database upgrade process has been paused either automatically or manually and that you are ready to resume the database upgrade process again.

**To resume a paused database upgrade process:**

- In the **Summary Information** section on the **Summary** screen, click the **Resume** button.

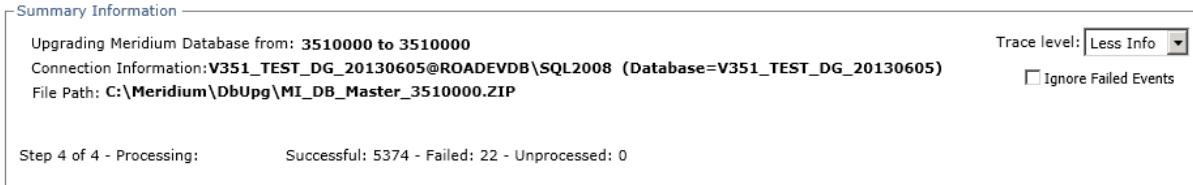
The database upgrade process starts again where it left off when the process was paused.



## The Final Stage of the Database Upgrade Process

After the database upgrade process finishes, a message will appear, displaying a summary of the upgrade process, and the **Summary Information** section will be refreshed and display a similar summary.

For example, the following image shows what the **Summary Information** section looks like after an unsuccessful database upgrade process completed in a test environment.



## About Reviewing the Log for Duplicate Records

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When you upgrade your database (either as a test or in production), the database upgrade process will process all the records in your database and identify records that Meridium, Inc. has delivered as part of earlier releases (i.e., baseline records). During this process, the records that are identified as baseline records are flagged as *baseline* so that in future releases, the upgrade process can apply baseline changes to the appropriate baseline records without inadvertently changing your custom records.

To distinguish the baseline records from your custom records, the database upgrade process looks for specific field values in the records in a given family, and if a match is found, the record is flagged as *baseline*. It is possible that one of your custom records could contain the same combination of values as the baseline record. In these cases, the database upgrade process will:

- Flag the *oldest* of the duplicate records as the baseline record (i.e., the one that was created first).
- Create an entry in the upgrade log for the family in which the duplicate records were found. This entry indicates that the family has duplicate records and provides SQL syntax for a query that you can run to see which records are duplicates and which record the database upgrade process flagged as the baseline record.

This means that it is possible that one of your custom records could be flagged unintentionally as a baseline record. To ensure that the upgrade process has flagged the appropriate records as baseline, you will need to perform a manual step. More specifically, after the database upgrade process is complete, you will need to:

- Review the log entry to see if you have duplicate records in any of the families in your database.
- If duplicate records exist in your database, you will need to review those duplicate records and determine whether or not the upgrade process flagged the correct record as baseline. If the upgrade process has flagged a record incorrectly as baseline, the next steps will vary depending upon how the record is used within the product. These steps exceed the scope of this documentation.

**IMPORTANT:** Reviewing the duplicate records will require someone to look at the actual data, including the field values and relationships to other records. We recommend that the person who reviews the data be familiar with the area of the product with which the family is associated.

## Reviewing the Log for Duplicate Records

---

The following instructions provide guidelines on reviewing duplicate records and assume that the database upgrade process (test or production) has completed.

To review duplicate records:

1. In the **Upgrade Details** grid, locate the row representing the event with the following Database Item Name, and [view its details](#):

**C:\Meridium\DbUpg\Versions\<>version>\\_99\_PostProcess\70\_RecordAndLinksValidation.cmd**

...where **<version>** is the target database version. For example, the following image shows what this event looks like for a V3.5.1 upgrade.



Events	19436	Success	3510000	C:\Meridium\DbUpg\Versions\3510000\_99_PostProcess\70_RecordAndLinksValidation.cmd
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2. On the **Meridium APM Database upgrade Event** window, in the **Event Details** pane, locate the section **Families with Duplicate records**, as shown in the following image.



If this section contains subsections with names of families, this means that duplicate records were identified for that family. For example, in the preceding image, you can see the **Data Mapping Column-Field Pair** subsection, which indicates that there are duplicate records in the Data Mapping Column-Field Pair family.

Each subsection includes the SQL code for a query that will return the duplicate records and indicate which of the duplicates was flagged as the baseline record.

At this point, if duplicate records have *not* been identified in your database, you can ignore the remaining instructions and return to the upgrade checklist. The remaining instructions assume that duplicate records have been identified in your database.

3. For each family in which duplicate records were identified, copy the entire SQL code statement from the log, and run the query using that code. The query cannot be run in the Meridium APM Framework. You can run the query using a database query tool such as SQL Server Management Studio.
4. Review the query results. Specifically, you should look at the **BaselineRecord**

column. A value of *Y* indicates that the record in that row was flagged as the baseline record. A value of *N* indicates that the record is a record that you created and is not flagged as a baseline record.

At this point, if you have records in your database that have been flagged incorrectly as baseline records, the steps that need to be taken will vary depending upon how the record is used in the Meridium APM system. These steps exceed the scope of this documentation.

## Sending the Database Upgrade Logs to Meridium, Inc.

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After you have upgraded your database (or if you encounter errors that you cannot resolve on your own), you will need to send the upgrade logs associated with the upgrade process to Meridium, Inc.

### To send database upgrade log files to Meridium, Inc.:

1. In the Database Upgrade Manager application, on the **Summary** screen, click the **View All Logs** button.

A Windows Explorer instance appears, displaying the folder in which the collection of upgrade log files are stored.

2. Send to Meridium, Inc. all of the files in this folder. When you do so, be sure to provide the following information:
  - Your company name
  - and-
  - That the files are database upgrade log files

## I see a Failure. Now What?

---

During the database upgrade process in your test environment, you may see the status *Failure*. This indicates that an error occurred while processing the event in that row, and it was not successfully processed. Depending upon the state of the **Ignore Failed Events** check box, these errors may cause the database upgrade process to pause itself automatically or continue running despite the errors. In either case, the errors will be written to the upgrade log.

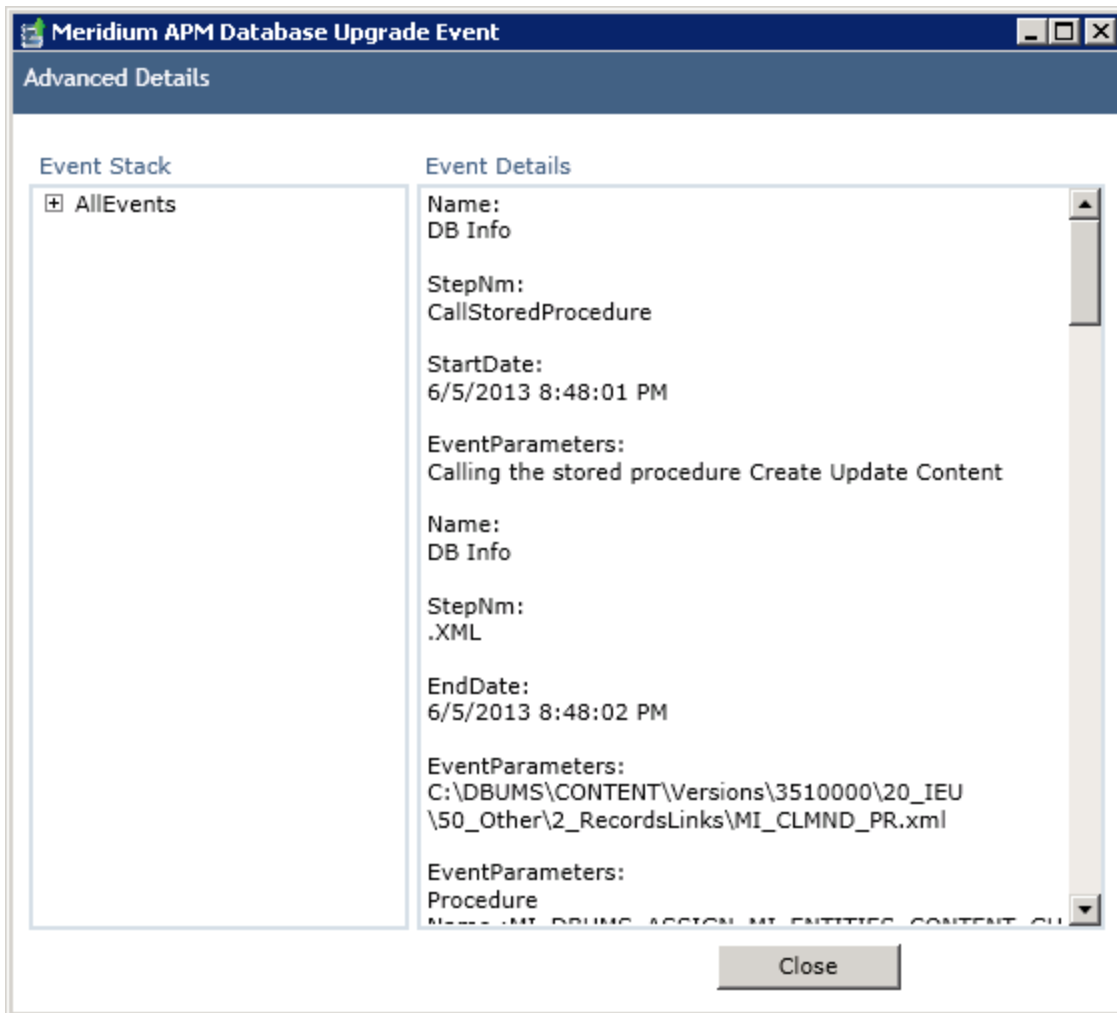
If you see a failure, you should use the following workflow to troubleshoot the associated error:

1. Review the Events log. Use the **Events** button in the same row as the *Failed* status to [access the Events log](#) associated with that item. The Events log contains the processing details associated with that item, which you can use to determine the cause for the error. At this point, if you are able to correct the error, you can do so, and then resume the database upgrade process again.
2. Review the current upgrade log. If you are unable to determine the cause of the failure using the Events log, or you are unable to correct the issue using only the information in the Events log, use the **View Current Log** button to access the current upgrade log for the upgrade process. The current upgrade log contains processing details for all operations that have been completed so far, including the failed item. You can use the current upgrade log to determine the cause for the error.  
At this point, if you are able to correct the error, you can do so, and then resume the database upgrade process again.
3. If you are unable to troubleshoot or correct a given failure on your own, you should send all available upgrade log files to Meridium, Inc. You can use the **View All Logs** button to access the location where all the logs associated with the upgrade process are stored.

## The Events Log

As each event occurs during the database upgrade process, the details of what the Meridium APM system is doing is recorded to the Events log. You can use this log to troubleshoot issues. You can access the Events log via the **Events** button in each row in the **Upgrade Details** grid. Doing so displays the Events log for the event in that row. The amount of information that is available in the Events log is determined by the *Trace Level* setting.

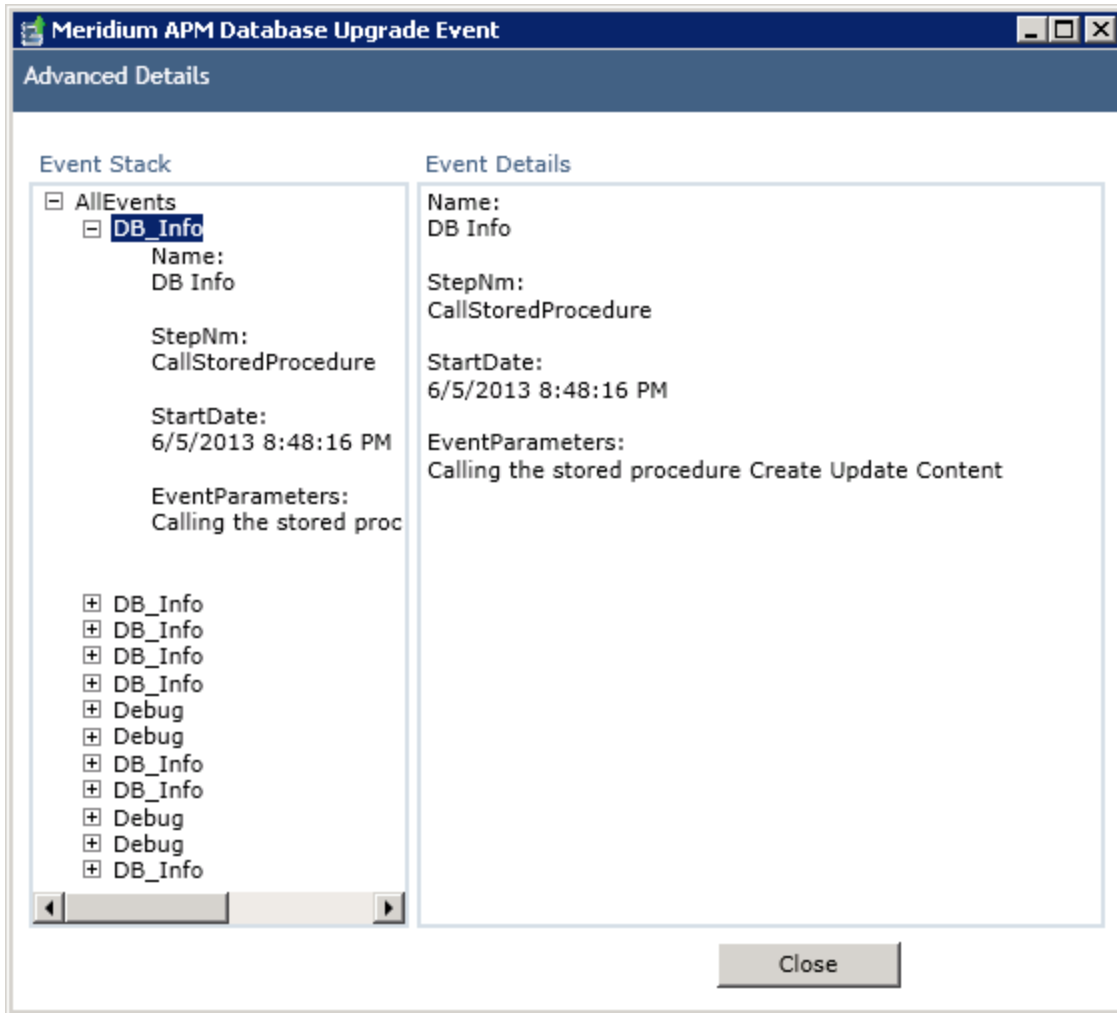
The content of the Events log is displayed on the **Meridium APM Database Upgrade Event** window. The following image show an example of what the Events log looks like when it is first accessed.



All the available details for a given event are displayed by default. You can expand the nodes in the **Event Stack** pane and select a subnode to view smaller chunks of details in the **Event Details** pane. Further, you can expand a subnode to view only those details in the **Event Stack** pane.



For example, the following image shows what the Events log looks like when the first subnode is selected.

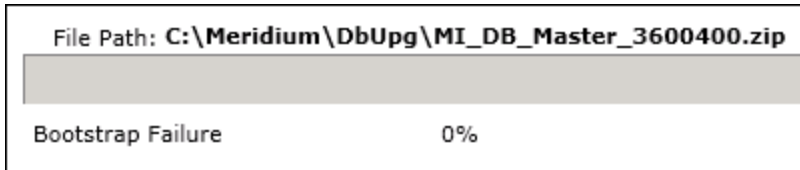


You can close the Events log using the **Close** button on the bottom of the window.

## Bootstrap Error

---

When compiling a database during the upgrade procedure, you may encounter a *Bootstrap error* that prevents the operation from being completed. This issue only occurs if you are using a SQL Server database.



To mitigate this issue, complete the following steps:

1. Open the V3.6.0.4.0 distribution package, and navigate to the folder **\\Database**.
2. In a separate folder window, navigate to the **Bootstrap**. Typically, the folder is located here: **C:\Program Files\Meridium\Client\100.0.0.0\DBUpgrade\Bootstrap**.
3. Replace the file **CRT\_PRC\_MI\_DBUMS\_BOOTSTRAP.MS.SQL** in your Meridium directory with the version included in the V3.6.0.4.0 distribution package.
4. Repeat the [database upgrade procedure](#).

The database should compile normally. If you continue to [see a Failure](#), you should contact Meridium, Inc. with all [available upgrade logs](#).

**Note:** This issue is also addressed by Meridium Knowledge Base Article 1990, which is available from <https://www.meridium.com/support>.

## Configuring the Application Server for Oracle Components

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In previous releases, you were instructed to modify the following files on the dedicated Meridium APM Application Server machine to bind the 64-bit .Net Framework to the Oracle.DataAccess component:

- C:\WINDOWS\Microsoft.NET\Framework64\V2.0.50727\CONFIG\machine.config
- C:\Windows\Microsoft.NET\Framework64\V4.0.30319\CONFIG\machine.config

The modifications from previous releases are no longer necessary with ODAC version 11.2.0.3 and *must be removed*. The following instructions provide details on removing the modifications from these files.

To modify the machine configuration file to undo the binding of 64-bit .Net Framework to the Oracle.DataAccess component:

1. On the Application Server machine, open two Windows explorer windows.
2. In one window, navigate to the folder C:\WINDOWS\Microsoft.NET\Framework64\V2.0.50727\CONFIG  
-and-  
In the other window, navigate to the folder C:\Windows\Microsoft.NET\Framework64\V4.0.30319\CONFIG
3. From each folder, open the file `machine.config` in a text editor (e.g., Notepad).
4. In each file, between the opening and closing `<configuration>` tags, delete the following content.

```
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity name="Oracle.DataAccess"
        publicKeyToken="89b483f429c47342" />
      <bindingRedirect oldVersion="2.0.0.0-10.9.9.9"
        newVersion="2.112.1.0" />
    </dependentAssembly>
  </assemblyBinding>
</runtime>
```

5. Save the files, and then close them.

At this point, you should refer back to the [upgrade checklist](#).

## About Comparing Databases






The *Meridium APM Database Comparison Tool* lets you view the [differences that exist between two databases](#). You can use the tool to compare the content of the baseline Meridium APM database for the version *to which* you are upgrading (i.e., *target* version) against:

- The content of the baseline Meridium APM database for the version *from which* you are upgrading (e.g., baseline V3.5.0 database to baseline V3.5.0 SP1 LP database).
- and-
- The content of your customized *pre-upgraded* database (e.g., customized V3.5.0 database to baseline V3.5.0 SP1 LP database).
- and-
- The content of your customized *upgraded* database (e.g., customized V3.5.0 SP1 LP database to baseline V3.5.0 SP1 LP database).

In all three comparison scenarios, there is a *constant* and a *variable*, where:

- The *constant* is always the baseline Meridium APM database for the target version. The constant database can be V3.5.0 and later.
- The *variable* is the database that is being compared to the baseline Meridium APM database for the target version. The variable database can be V3.4.5 or later.

For example, consider the following scenarios, where the **Allowed?** column indicates whether or not this comparison is supported using the Meridium APM Database Comparison Tool, and the **Reason** column indicates the reason why the comparison is or is not supported.

Comparison	Allowed?	Reason
V3.4.5 to V3.5.0		The variable version is V3.4.5 or later, and the target version is V3.5.0 or later.
V3.3.2 to V3.5.0		The variable version is earlier than V3.4.5.
V3.3.3 to V3.4.5		The target version is earlier than V3.5.0.
V3.4.5 to V3.5.0 HF2		The variable version is V3.4.5 or later, and the target version is V3.5.0 or later. <sup>1</sup>
V3.5.1 to V3.5.1.1.0		The variable version is V3.4.5 or later, and the target version is V3.5.0 or later.

Hot fix-specific zip files do not exist for pre-V3.5.1 hot fix versions. When you compare your database to pre-V3.5.1 hot fix versions, the Database Comparison Tool uses the zip file for the *main* version to generate the comparison.

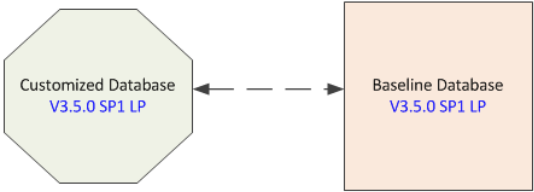
The Meridium APM Database Comparison Tool must be accessed from the APM Application Server, which must contain Microsoft.net 4.0. You may be launching the tool from a version of the APM Application Server that already requires Microsoft.net 4.0 (V3.5.0). If, however, you are launching the tool from a version of the APM Application Server that does not require Microsoft.net 4.0 (V3.4.5), you will need to obtain it before running the database comparison.

## Database Comparison Options

Using the Meridium APM Database Comparison Tool, you can compare different databases. The following table identifies the comparison options that are available through the tool, the purpose of each comparison, an example of each comparison, and when you need to initiate each comparison.

**Note:** All comparisons are made against the same constant: the baseline Meridium database for the target version (shaded orange in the examples).

Variable	Purpose of Comparison	Example	When to Perform Comparison
The content of the <i>baseline</i> Meridium APM database for the source version.	Allows you to see the changes that Meridium, Inc. has made since releasing the version from which you are upgrading.		<a href="#">Before upgrading your database.</a>
The content of your <i>customized</i> database for the source version.	Allows you to see how the content of the baseline database for the target version compares to the changes you have made in the source version.		<a href="#">Before upgrading your database.</a>

Variable	Purpose of Comparison	Example	When to Perform Comparison
<p>The content of your <i>customized</i> database for the target version.</p>	<p>Allows you to see how the content of the baseline database for the target version compares to the changes you have made in that version.</p>	 <p>The diagram illustrates a comparison between two databases. On the left is a light green octagon labeled 'Customized Database V3.5.0 SP1 LP'. On the right is a light orange rectangle labeled 'Baseline Database V3.5.0 SP1 LP'. A horizontal dashed line with arrowheads at both ends connects the two shapes, indicating a bidirectional comparison or relationship between the customized and baseline states.</p>	<p><a href="#">After upgrading your database.</a></p>

## About Accessing the Meridium APM Database Comparison Tool

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The Meridium APM Database Comparison Tool can be accessed in two ways, depending upon which [type of comparison](#) you want to initiate.

- If you want to compare the baseline Meridium APM database for the target version to the database for the *source* version (either the baseline database or your customized database), you must complete two steps:
  1. [Deploy the tool manually using the files on the distribution DVD.](#)
  - or-
  2. [Access the tool by running a file manually.](#)
- If you want to compare the baseline Meridium APM database for the target version to your customized database for the *target* version, the tool is deployed automatically when you install the Meridium APM Application Server, so you can [access the tool via an option in the Configuration Manager.](#)



## Deploying the Tool Manually

---

You will need to complete the following instructions if you want to compare the content of the baseline Meridium APM database for the target version to the content of the database for the *source* version (either the baseline database or your customized database). For example, you would need to use these instructions to compare the baseline V3.5.0 database to your customized V3.4.5 database.

**IMPORTANT:** You will need to complete these steps *before* you upgrade your Meridium APM Application Server.

To deploy the Meridium APM Database Comparison Tool manually:

1. On the APM Application Server, create the following folders:
  - C:\Meridium\_Comparison
  - C:\Meridium
  - C:\Meridium\DbUpg

**Note:** The folder path C:\Meridium\DbUpg may already exist if you are upgrading from a previous version in which you did not delete this folder path after it was created by the installer.

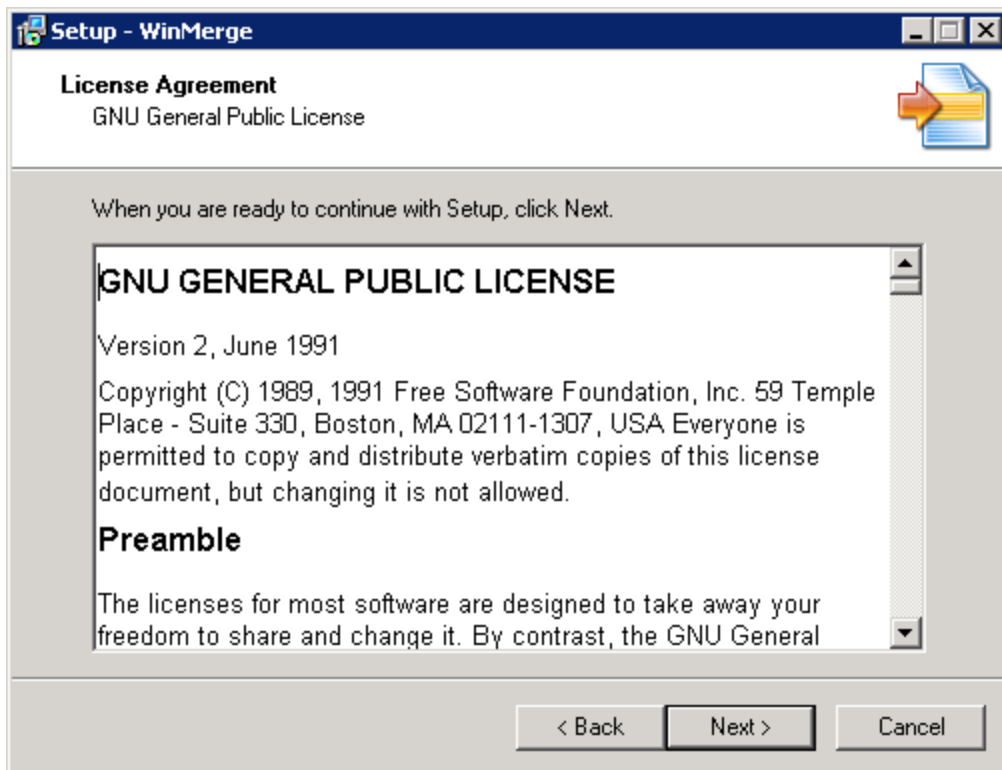
2. Insert the Meridium APM DVD, and navigate to the folder **General Release\Meridium APM Framework and Server Setup\Database\Database\_Comparison**.
3. Extract the contents of the file **PreUpgradeComparisonReport.zip** to the folder **C:\Meridium\_Comparison**.
4. Navigate to the folder **C:\Meridium\_Comparison\DbUpg**, and copy the file **MI\_DB\_Master\_<version>.zip**, where **<version>** represents the target version to which you are upgrading (e.g., MI\_DB\_Master\_3500000.zip).
5. Paste the copied file to the folder **C:\Meridium\DbUpg**.
6. Navigate to the folder **C:\Meridium\_Comparison\Winmerge**.
7. Double-click the file **WinMerge-2.12.4-Setup**.

The WinMerge Setup Wizard appears, displaying the Welcome screen.



8. Click the **Next** button.

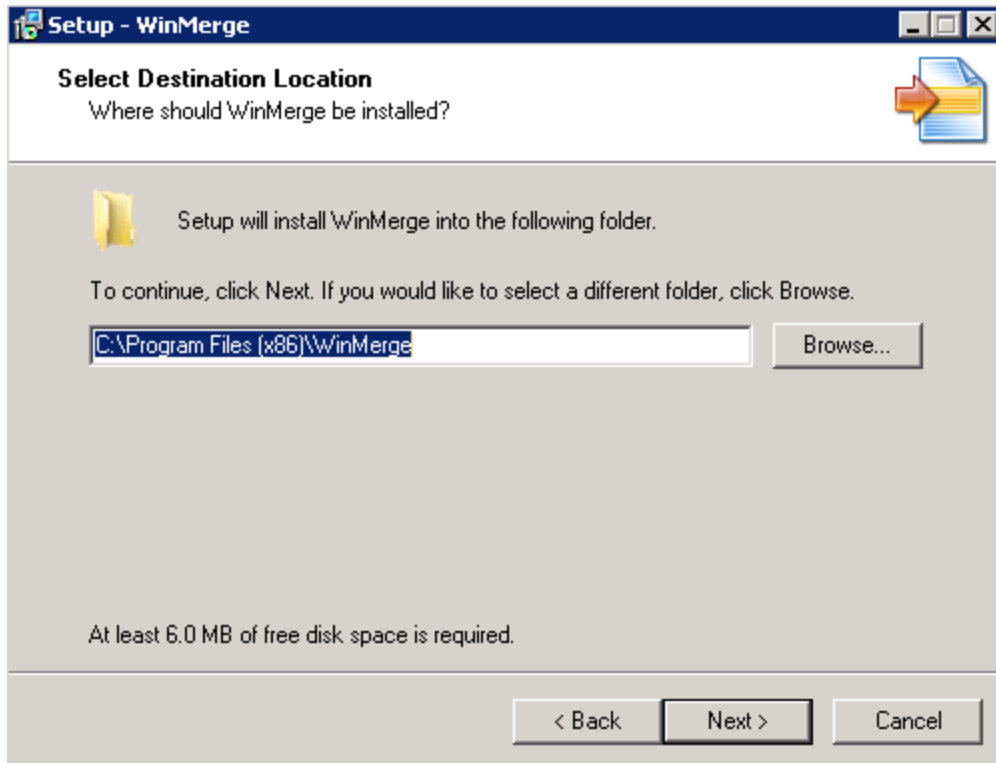
The **License Agreement** screen appears.



9. Read the license agreement, and if you accept the agreement, click the **Next** button.

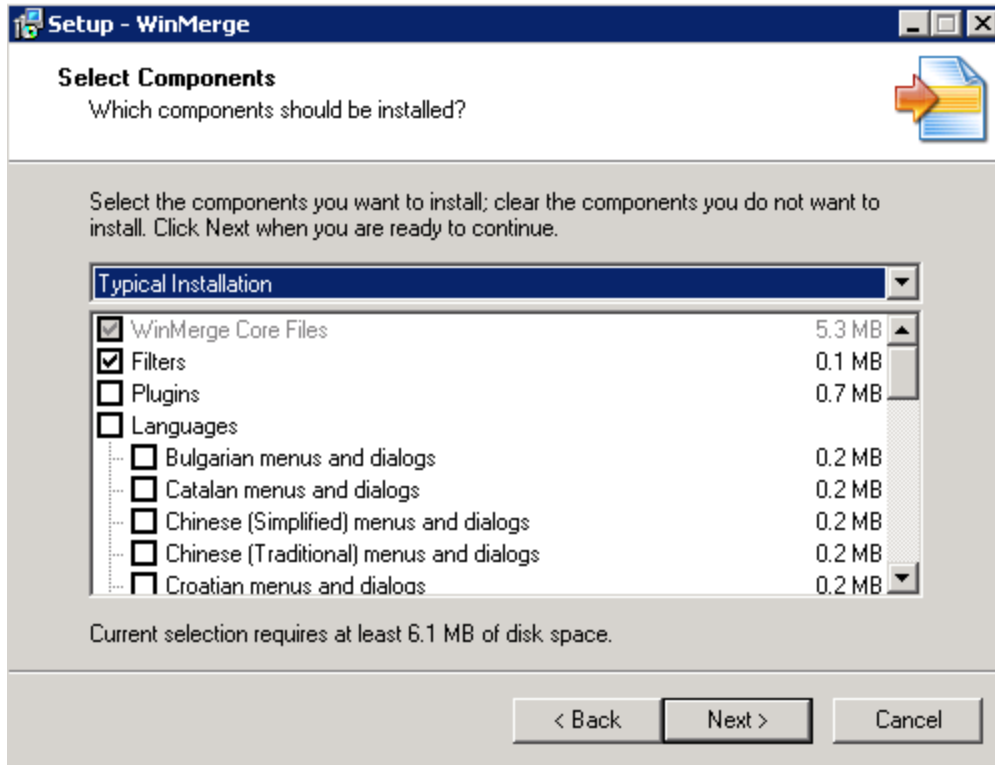
**Note:** You cannot continue with the deployment process unless you accept the license agreement.

The **Select Destination Location** screen appears.



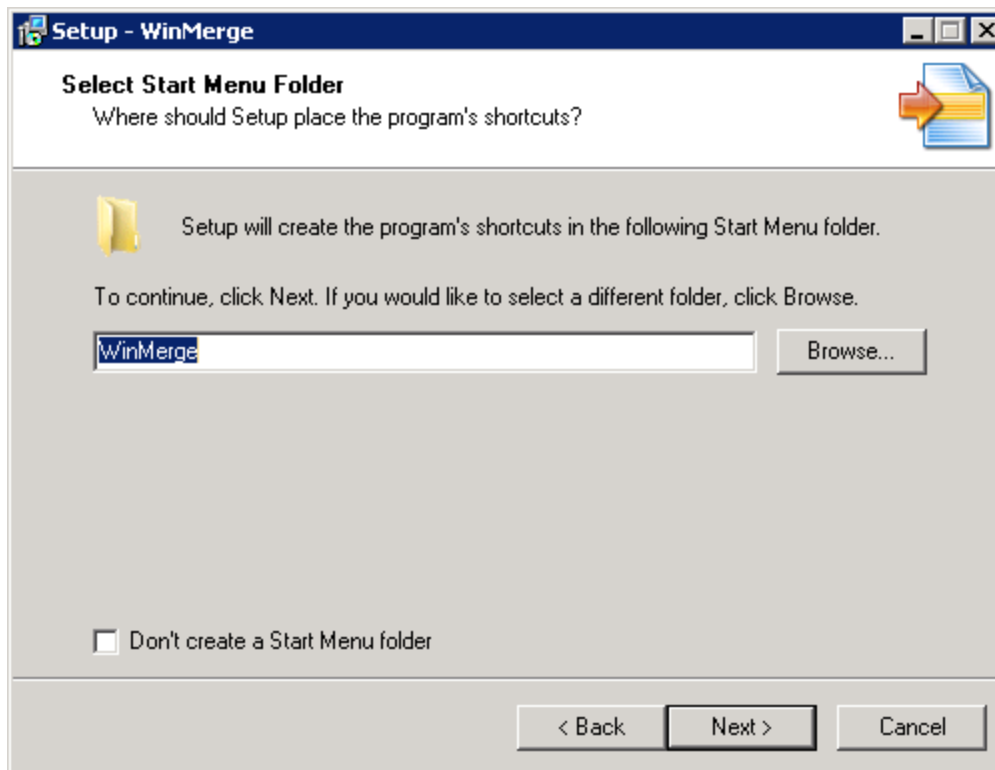
10. Accept the default location, and click the **Next** button.

The **Select Components** screen appears.



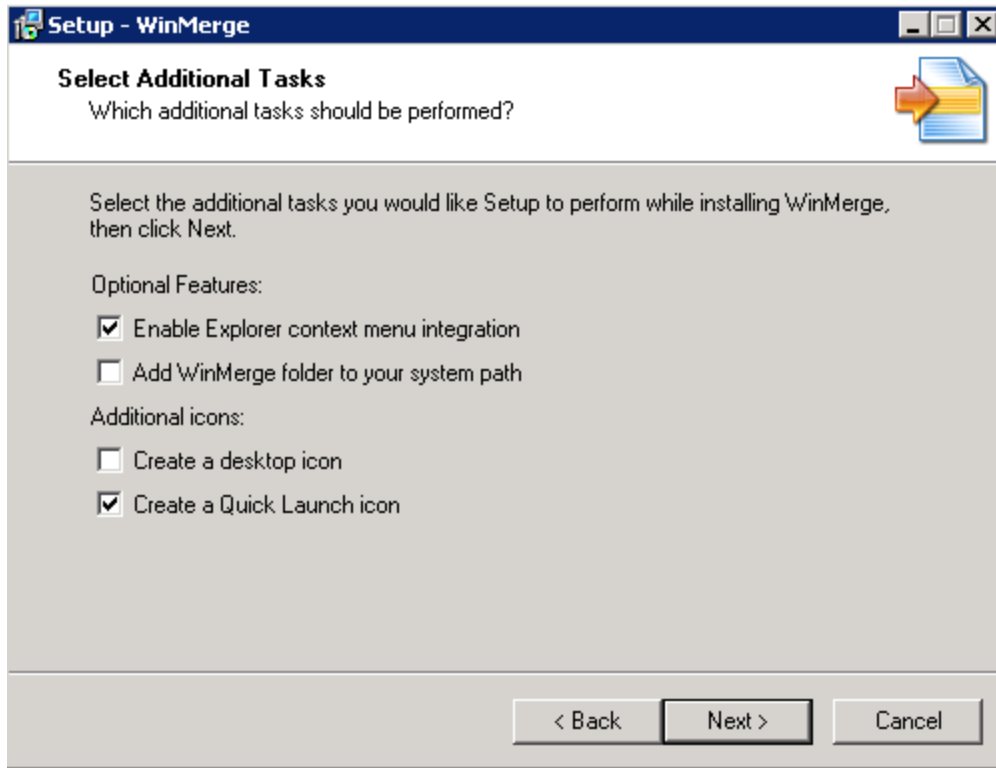
11. Accept the default selections, and click the **Next** button.

The **Select Start Menu Folder** screen appears.



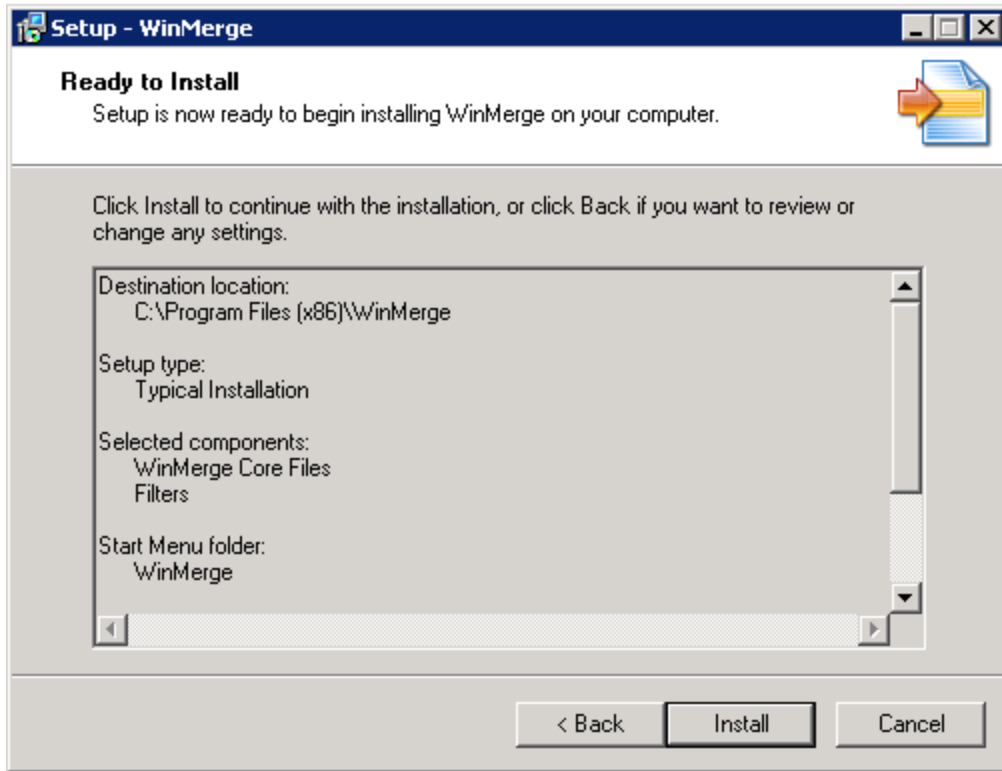
12. Accept the default setting, and click the **Next** button.

The **Select Additional Tasks** screen appears.



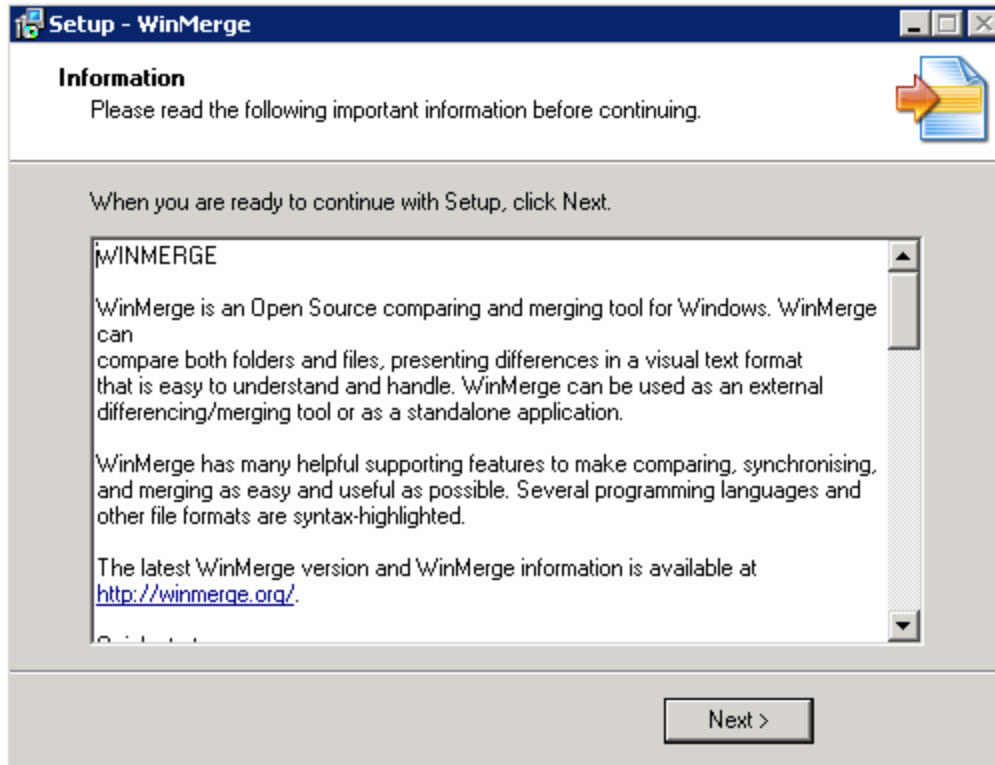
13. Accept the default selections, and click the **Next** button.

The **Ready to Install** screen appears.



14. Click the **Install** button.

The installation process begins, and a progress bar appears. When the process is complete, the **Information** screen appears.



15. Click the **Next** button.

The **Completing the WinMerge Setup Wizard** screen appears.



16. Clear the **Launch WinMerge** check box, and click the **Finish** button.

The Meridium APM Database Comparison Tool is deployed successfully.

However, if you have deployed the Meridium APM Database Comparison Tool on an Application Server that does not currently have the 64-bit version of the Oracle.DataAccess component, you must also [complete additional configuration steps before running a pre-upgrade database comparison](#).

**IMPORTANT:** Do not delete the folder **C:\Meridium\DbUpg**.



## Configuring the Application Server for a Pre-Upgrade Database Comparison

Before running a pre-upgrade database comparison, on the Application Server, navigate to **C:\Windows\assembly** to verify that the 64-bit version of the Oracle.DataAccess component is installed. [Install the 64-bit version of Oracle.DataAccess](#) if needed.

If you are using an Oracle database, note the version number of the 64-bit version of the Oracle.DataAccess component so that you can also modify the machine configuration file to bind the 64-bit .Net Framework to the Oracle.DataAccess component:

1. On the Application Server, navigate to the folder **C:\Windows\Microsoft.NET\Framework64\V4.0.30319\CONFIG\**.
2. Open the file **machine.config** in a text editor (e.g., Notepad).
3. Between the opening and closing <configuration> tags, add the following content.

```
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentify name="Oracle.DataAccess"
        publicKeyToken="89b483f429c47342" />
      <bindingRedirect oldVersion="<Version Number
        Noted Above>" newVersion="2.112.1.0" />
    </dependentAssembly>
  </assemblyBinding>
</runtime>
```

4. Save the file, and then close it.
5. Restart IIS.

At this point, you are ready to [access the Meridium Database Comparison Tool manually](#) and to [run a comparison against a pre-upgraded database](#).

**Note:** The **machine.config** file on the [upgraded Application Server](#) should not contain [this modification](#).

## Accessing the Tool Manually

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You will need to complete the following instructions if you want to compare the content of the baseline Meridium APM database for the target version to the content of the database for the *source* version (either the baseline database or your customized database). For example, you would need to use these instructions to compare the baseline V3.5.0 database to your customized V3.4.5 database.

**IMPORTANT:** You will need to complete these steps *before* you upgrade your Meridium APM Application Server. After you have upgraded your Meridium APM Application Server, you should *not* access the tool manually. Doing so will cause the comparison results to be invalid.

### To access the Meridium APM Database Comparison Tool manually:

1. On the APM Application Server, navigate to the folder **C:\Meridium\_Comparison**.
2. Double-click the file **DatabaseReport.exe**.

A message appears, asking if you want to allow DatabaseReport.exe to make changes to your machine.

3. Click **OK**.

The Meridium APM Database Comparison Tool appears, displaying the **Connection Information** screen.

The screenshot shows a window titled "Meridium APM Database Comparison Tool" with a sub-header "Connection Information". The main area is titled "Database Server Connection Information" and contains five input fields: "Meridium Data Source", "Meridium User Name", "Meridium Password", "Source Version", and "Path to Database Upgrade content (.zip file)". The last field has a browse button with three dots. At the bottom, there are four buttons: "Load Results", "Next", "Exit", and "Help".

At this point, you can [initiate a new database comparison](#) or [reload previous database comparison results](#) that were [saved to a .ZIP file](#).

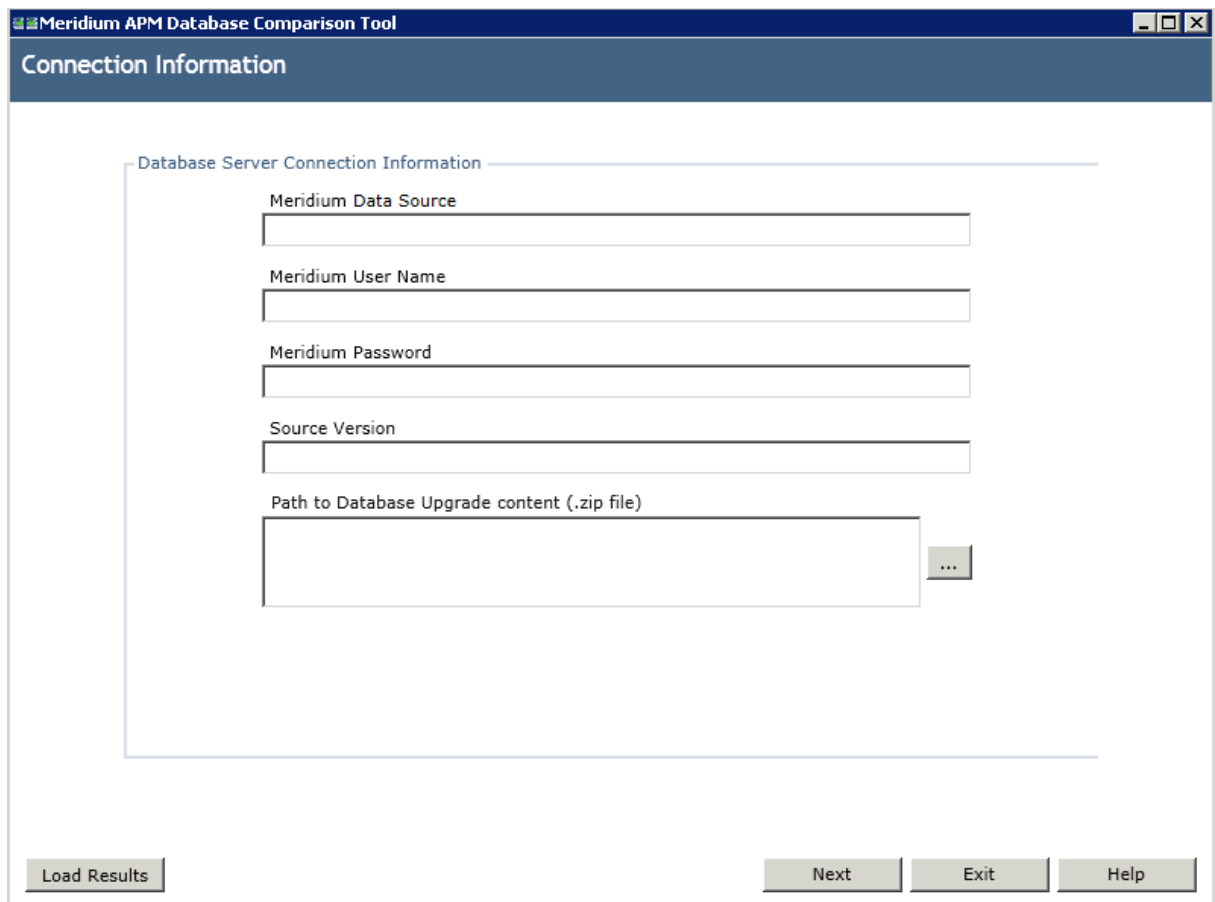
## Accessing the Tool From the Configuration Manager

You will need to complete the following instructions if you want to compare the content of the baseline Meridium APM database for the target version to the content of your customized database for the target version. For example, you would need to use these instructions to compare the baseline V3.5.0 database to your customized V3.5.0 database.

To access the Meridium APM Database Comparison Tool through the Configuration Manager:

1. On the APM Application Server, access the Configuration Manager as a Super User.
2. In the Configuration Manager, on the **Tools** menu, click **Database Comparison Utility**.

The **Meridium APM Database Comparison Tool** window appears, displaying the **Connection Information** screen.



The screenshot shows a window titled "Meridium APM Database Comparison Tool" with a "Connection Information" header. The main area is titled "Database Server Connection Information" and contains five input fields: "Meridium Data Source", "Meridium User Name", "Meridium Password", "Source Version", and "Path to Database Upgrade content (.zip file)". The "Path" field has a browse button (three dots). At the bottom, there are four buttons: "Load Results", "Next", "Exit", and "Help".

At this point, you can [initiate a new database comparison](#) or [reload previous database comparison results](#) that were [saved to a .ZIP file](#).

## About the Meridium APM Database Comparison Tool

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The Meridium APM Database Comparison Tool allows you to [compare databases](#) to identify differences between the content of those databases. You can access the tool [before upgrading your database](#) or [after upgrading your database](#), where the [comparison options](#) are different depending upon when you access the tool.

You can use the Meridium APM Database Comparison Tool to:

- **Initiate a new database comparison.** The options that are available in the tool depend upon whether you are running the comparison against a [pre-upgraded database](#) or an [upgraded database](#).

-or-

- **Load results from a previous database comparison.**

The Meridium APM Database Comparison Tool works like a builder, which contains two screens, which are presented in the order in which they are presented in the following list:

- **Connection Information:** Lets you specify the connection information to the database whose content you want to compare against the content of the baseline database for the target version.

The screenshot shows a window titled "Meridium APM Database Comparison Tool" with a sub-header "Connection Information". Inside the window, there is a section titled "Database Server Connection Information" which contains five input fields: "Meridium Data Source", "Meridium User Name", "Meridium Password", "Source Version", and "Path to Database Upgrade content (.zip file)". The "Path" field has a browse button with three dots. At the bottom of the window, there are four buttons: "Load Results", "Next", "Exit", and "Help".

- **Comparison Details:** Lets you run the comparison to see information about the difference between the content of the two databases that you are comparing.

## About the Meridium APM Database Comparison Tool

The screenshot displays the 'Meridium APM Database Comparison Tool' window. The title bar reads 'Meridium APM Database Comparison Tool'. The main window has a dark blue header with the text 'Comparison Details'. Below the header, there is a 'Summary Information' section with a light blue border. This section contains three fields: 'Comparison From:' with the value '3500000 to 3500100', 'User:' with the value 'MAYBERRY\aduncan', and 'Last Comparison Time:' with the value '12/19/2012 12:18 PM'. To the right of these fields are three buttons: 'Run Comparison', 'Save Results', and 'Export'. Below the summary information, the text '615 differences found.' and 'Upgrade Comparison' is displayed. The main area of the tool is a table with the following columns: 'Item Name', 'Item Path', 'Type', 'Baseline Changes', and 'Custom Changes'. The table contains 15 rows of data, with the first row highlighted in yellow. The first row is 'MaintenanceItem\_CNF', with 'Item Path' 'Public\Rules Library\Meridium\Asset Str', 'Type' 'Rule Library', and 'Baseline Changes' indicated by a solid black circle. The other rows have 'Baseline Changes' indicated by a hollow black circle. At the bottom of the window, there are three buttons: 'Back', 'Exit', and 'Help'.

Item Name	Item Path	Type	Baseline Changes	Custom Changes
MaintenanceItem_CNF	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
MaintenanceItem_EM	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
MaintenancePlan_EM	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
MI_InspectionTasksUpdate	Public\Rules Library\Meridium\Strategy I	Rule Library	○	
Notification_CNF	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
ObjectListItem_CNF	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
TaskList_CNF	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
TaskList_EM	Public\Rules Library\Meridium\Asset Str	Rule Library	○	
MI Security User	Public\Rules Library\Meridium\Root Entit	Rule Library	○	
MI_EQUIP000	Public\Rules Library\Meridium\Root Entit	Rule Library	○	
MI_FNCLOC00	Public\Rules Library\Meridium\Root Entit	Rule Library	○	
MI_IMPACTCD	Public\Rules Library\Meridium\Root Entit	Rule Library	○	
MI_MRBIANAL	Public\Rules Library\Meridium\Root Entit	Rule Library	○	
MI_OPR_AL_VL	Public\Rules Library\Meridium\Root Entit	Rule Library	○	

On this screen, you can also:

- [Save the results to a .ZIP file](#), which can be [reloaded](#) into the tool later via the **Connection Information** screen.
- [Export the results to an Excel file](#).

# Running the Comparison Against a Pre-Upgraded Database

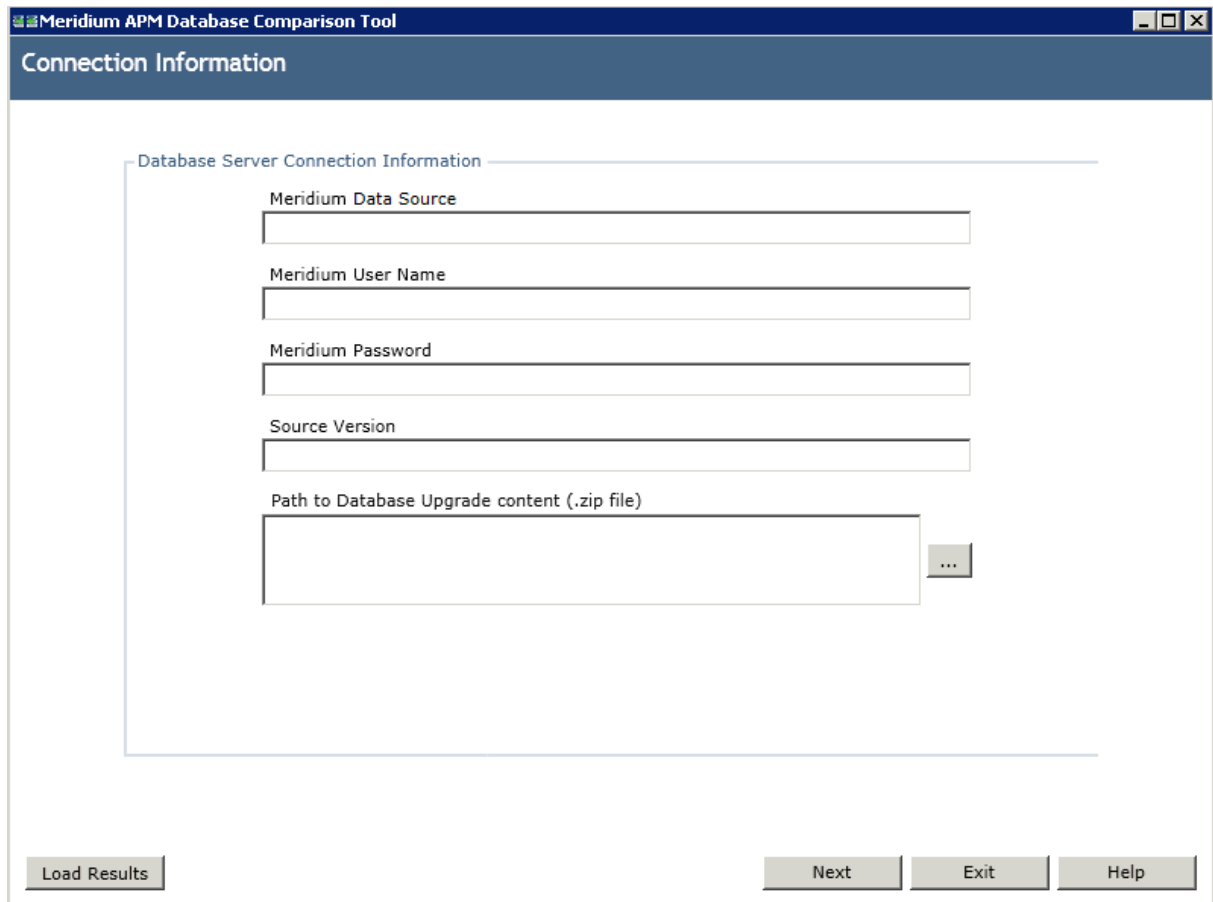
These instructions assume that you want to compare the content of the baseline database for the target version against the content of the baseline or customized database for the source version (e.g., comparing the V3.5.0 baseline database content against V3.4.5 baseline or customized database content).

**IMPORTANT:** The comparison process can take *an hour or longer*, depending upon the size of the databases being compared, available memory, and other factors. After you start the process, you should *not* close the progress window unless you want to stop the comparison process. You can continue working in other windows while the process is running.

To run the comparison:

1. [Access the Meridium APM Database Comparison Tool.](#)

The Meridium APM Database Comparison Tool appears, displaying the **Connection Information** screen.



The screenshot shows the 'Meridium APM Database Comparison Tool' window with the 'Connection Information' tab selected. The window contains a form with the following fields:

- Meridium Data Source
- Meridium User Name
- Meridium Password
- Source Version
- Path to Database Upgrade content (.zip file) with a browse button (...)

At the bottom of the window, there are four buttons: 'Load Results', 'Next', 'Exit', and 'Help'.



2. In the **Meridium Datasource** text box, type the name of the data source that you want to use in the comparison.
3. In the **Meridium User Name** text box, type the User ID for a Security User that can log in to the specified data source.

**Note:** The specified Security User must be a Super User.

4. In the **Meridium Password** text box, type the password associated with the specified Security User. The characters you type will be replaced with the character •. For example, the password *TEST* would appear like this:

Meridium Password

5. In the **Source Version** text box, type the database version for the database that you want to use in the comparison. You must type the version in the format **xxxxyyzz**, where:
  - **xxx** is a three-digit number representing the main version.
  - **yy** is a two-digit number representing the service pack version, if applicable. If the service pack version is a single digit, you must prepend zero (0) to it. If there is no service pack version, you must type *00*.
  - **zz** is a two-digit number representing the hot fix version, if applicable. If the hot fix version is a single digit, you must prepend zero (0) to it. If there is no hot fix version, you must type *00*.

For example, the database version number for **V3.3.2SP2HF1** would be **3320201**.

 [I do not know my database version.](#)

If you do not know the main version, service pack version, and hot fix version of your database, you can find it by using either of the following methods:

- Run the following query against the database:

```
Select modl_ver_nbr from mi_modules where modl_nm = 'Meridium Core';
```

- In the Configuration Manager, on the **About Meridium APM** window (accessed from the **Help** menu), for the Meridium APM Framework Tools license, locate the value in the **Version** column. The database version you should type in the **Source Version** text box is this version number *without* the periods.

Meridium APM Framework Tools	3.5.0.0100	10/17/2012 11:23:26 PM	ACTIVE
------------------------------	------------	------------------------	--------

6. In the **Path to Database Upgrade content** text box, if a path is provided, confirm that it is the correct path.

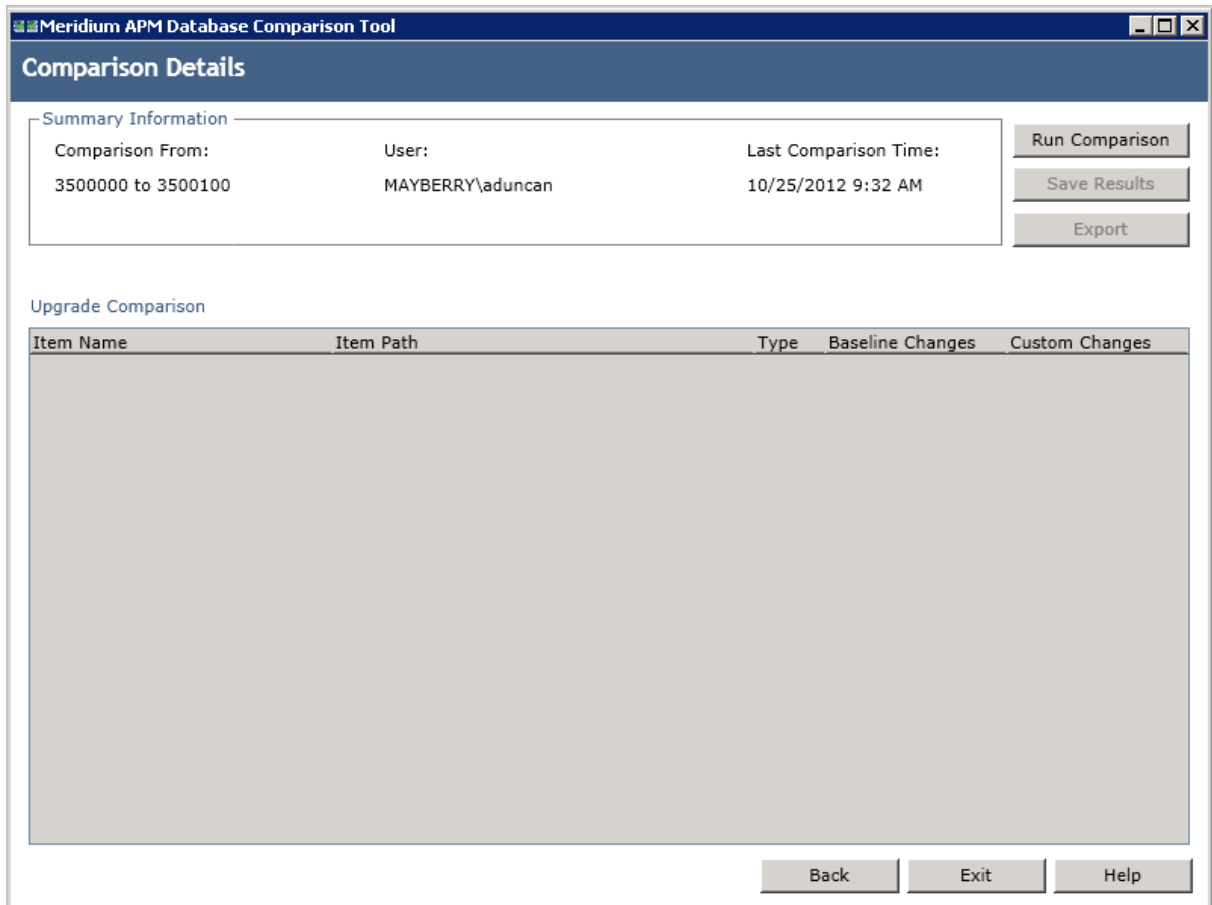
-or-

If a path is not provided, type the appropriate path.

The path identifies the location of the baseline database content file (e.g., mi\_db\_master\_3500000.zip) for the version *to which* you are upgrading. The default path is **C:\Meridium\DbUpg**, but this path could have been changed manually via the Meridium APM Server and Add-ons installer when the Meridium APM Application Server was installed or upgraded.

7. When you are finished specifying connection information, click the **Next** button.

The **Comparison Details** screen appears.



The following information appears in the **Summary Information** section:

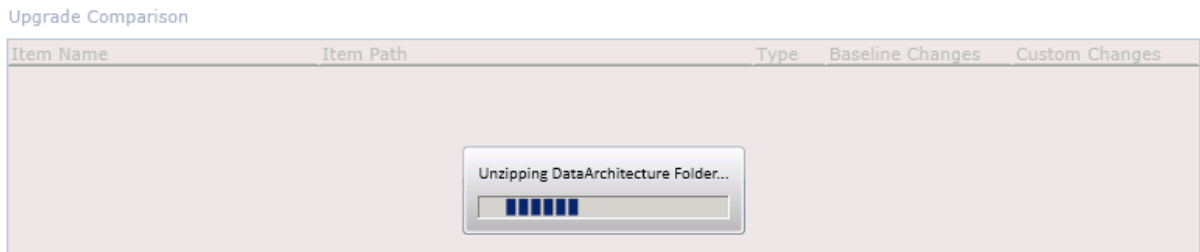
- **Comparison From:** The database versions that will be compared, using the format:
  - <variable version> to <target version>
  - ...where:
    - <variable version> is the version of the database that you are comparing to the baseline target database (specified in the **Source Version** text box on the **Connection Information** screen).
    - <target version> is the version of the database to which you are upgrading

(determined by the file that you specified in the **Path to Database Upgrade content** text box on the **Connection Information** screen).

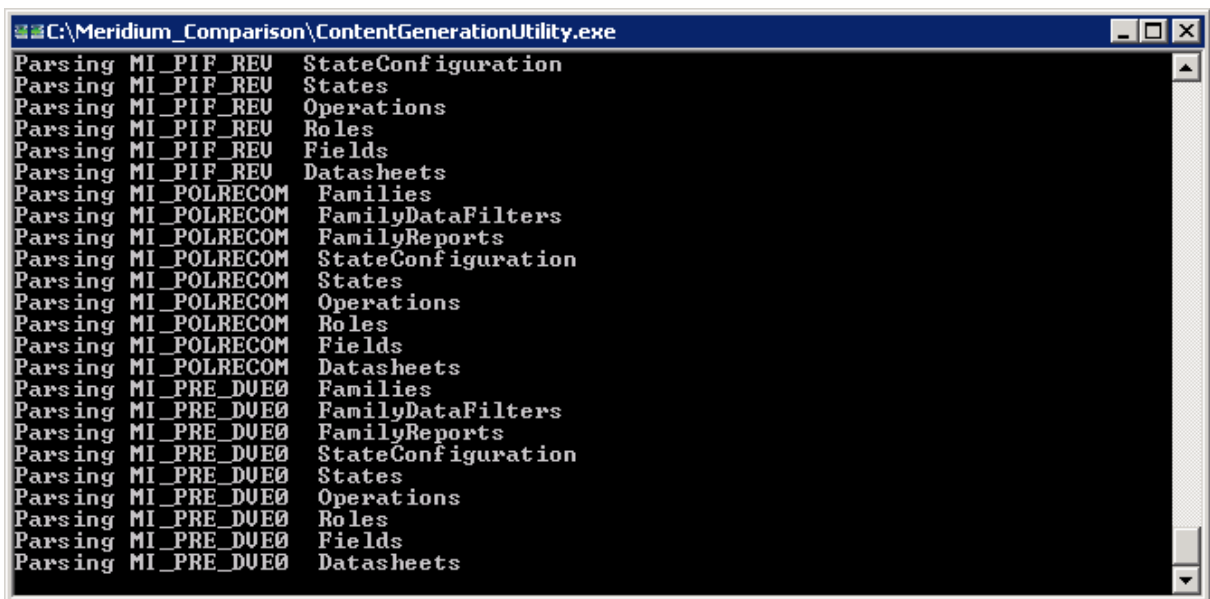
- **User:** The credentials of your Windows user.
- **Last Comparison Time:** The date and time on which the database comparison for this database was last run. If the comparison has never been run for this database, the current date and time is displayed.

8. Click the **Run Comparison** button.

A progress bar appears.



A command prompt window then appears, displaying the progress of the comparison process.



When the process is complete, the command prompt window closes automatically, and the [comparison details](#) appear in the **Upgrade Comparison** section of the **Comparison Details** screen of the Meridium APM Database Comparison Tool.

**Meridium APM Database Comparison Tool**

### Comparison Details

Summary Information

Comparison From: 3450000 to 3500000	User: MAYBERRY\aduncan	Last Comparison Time: 11/20/2012 11:54 PM	Run Comparison
			Save Results
			Export

2053 differences found.  
Upgrade Comparison

Item Name	Item Path	Type	Baseline Changes	Custom Changes
<a href="#">01Yakima</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">02All Customers</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">03Media Type (All Media)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">04Yearly Income (All Yearly Income)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">05Marital Status (All Marital Status)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">06City (CA)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">07Store Sqft</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2005 Customer View</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2005 Customer View Only</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 Highlight Table</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 Legend Displayed In as Meas</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 No Measure - Legend and Row</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 One Measure - On LegendCol</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">Action Test Case</a>	Public\Meridium\Modules\Metrics Man	Metrics View		

Back    Exit    Help

## Running the Comparison Against an Upgraded Database

---

These instructions assume that you want to compare the baseline database for the target version against your customized database for the target version (e.g., comparing the V3.5.0 baseline database against a V3.5.0 customized database). You can complete these instructions only if you previously ran the Meridium APM Database Comparison Tool [against the pre-upgraded database](#).

**IMPORTANT:** The comparison process can take *an hour or longer*, depending upon the size of the databases being compared, available memory, and other factors. After you start the process, you should *not* close the progress window unless you want to stop the comparison process. You can continue working in other windows while the process is running.

To run the comparison against an upgraded database:

1. [Access the Meridium APM Database Comparison Tool](#).

The **Meridium APM Database Comparison Tool** window appears, displaying the **Connection Information** screen. Except for the **Path to Database Upgrade Content** text box, all text boxes are read only and are populated with information about the database that you logged into when you accessed the Configuration Manager application.

The screenshot shows a window titled "Meridium APM Database Comparison Tool" with a sub-header "Connection Information". Inside the window, there is a section titled "Database Server Connection Information" which contains five text input fields: "Meridium Data Source", "Meridium User Name", "Meridium Password", "Source Version", and "Path to Database Upgrade content (.zip file)". The "Path to Database Upgrade content (.zip file)" field has a browse button (three dots) to its right. At the bottom of the window, there are four buttons: "Load Results", "Next", "Exit", and "Help".

2. In the **Path to Database Upgrade content** text box, if a path is provided, confirm that it is the correct path.

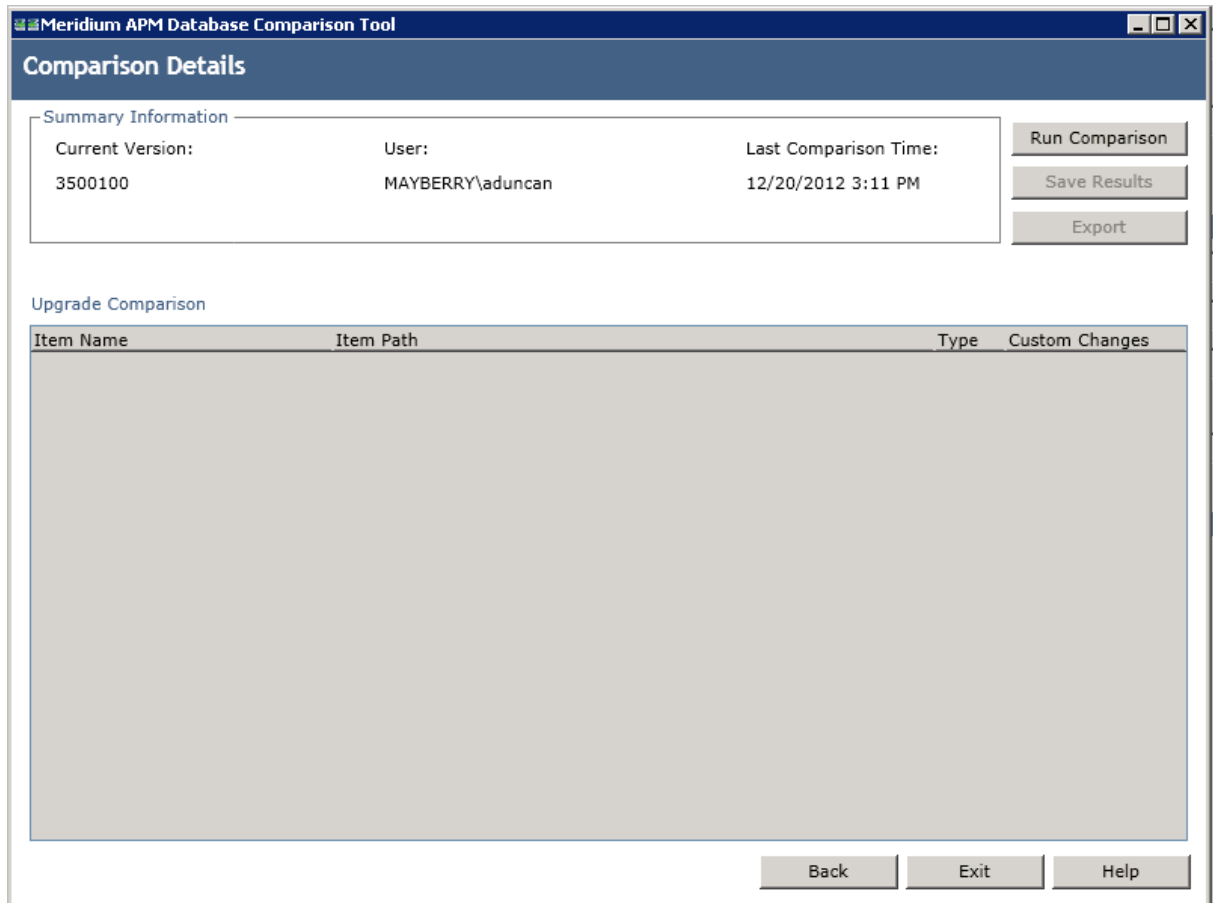
-or-

If a path is not provided, type the appropriate path.

The path identifies the location of the baseline database content file (e.g., mi\_db\_master\_3500000.zip) for the version to which you are upgrading. The default path is **C:\Meridium\DbUpg**, but this path could have been changed manually via the Meridium APM Server and Add-ons installer when the Meridium APM Application Server was installed or upgraded.

3. Click the **Next** button.

The **Comparison Details** screen appears.



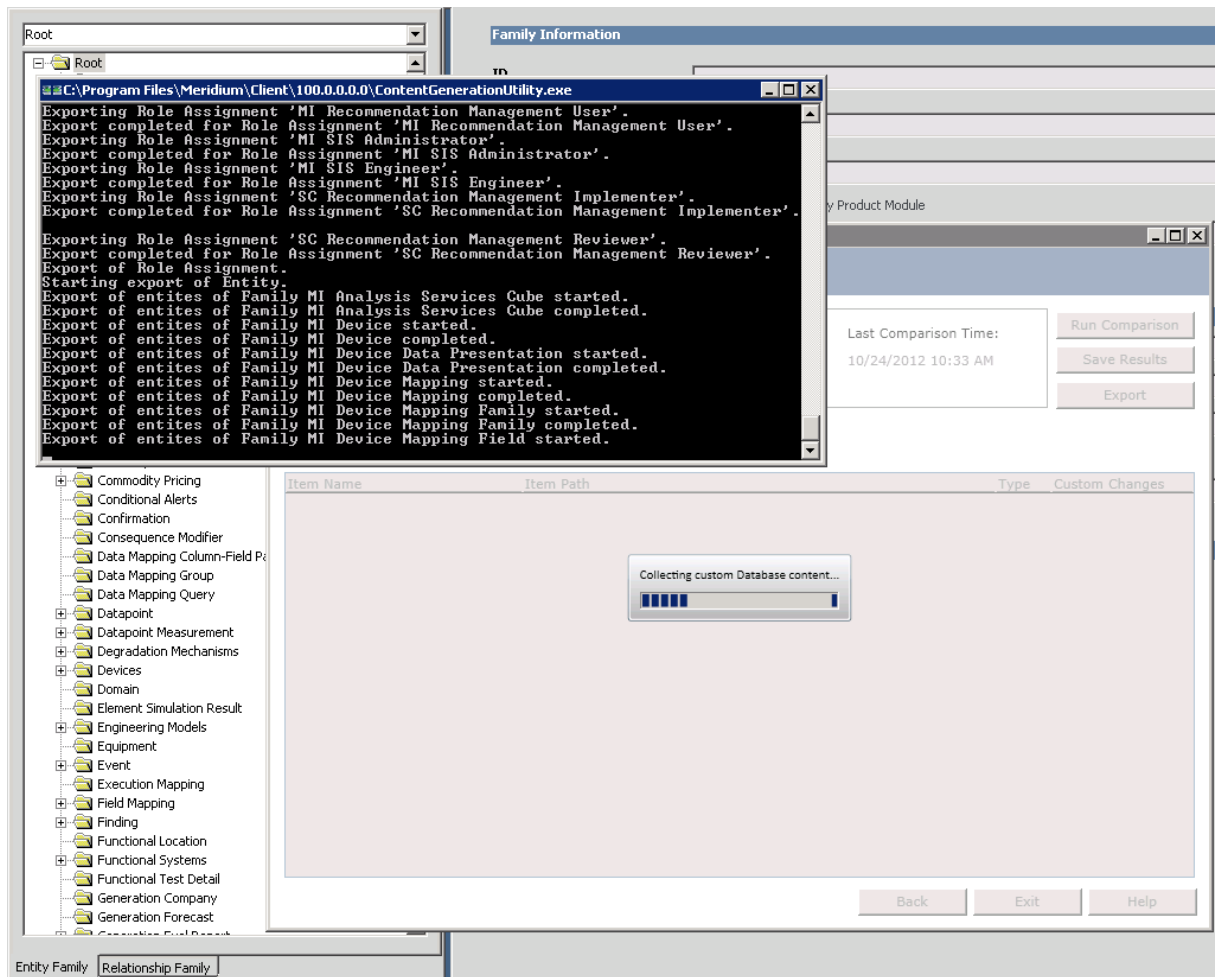
The following information appears in the **Summary Information** section:

- **Current Version:**The version of the database that you logged in to when you accessed the Configuration Manager.
- **User:** The credentials of your Windows user.
- **Last Comparison Time:** The date and time on which the database comparison for this database was last run. If the comparison has never been run for this database, the current date and time is displayed.

4. Click the **Run Comparison** button.

A command prompt window appears, displaying the progress of the comparison process. In addition, a message and progress bar appear, indicating that the system is collecting database content.

## Running the Comparison Against an Upgraded Database



When the process is complete, the command prompt window closes automatically, and the [comparison details](#) appear in the **Upgrade Comparison** section on the **Comparison Details** screen of the Meridium APM Database Comparison Tool.



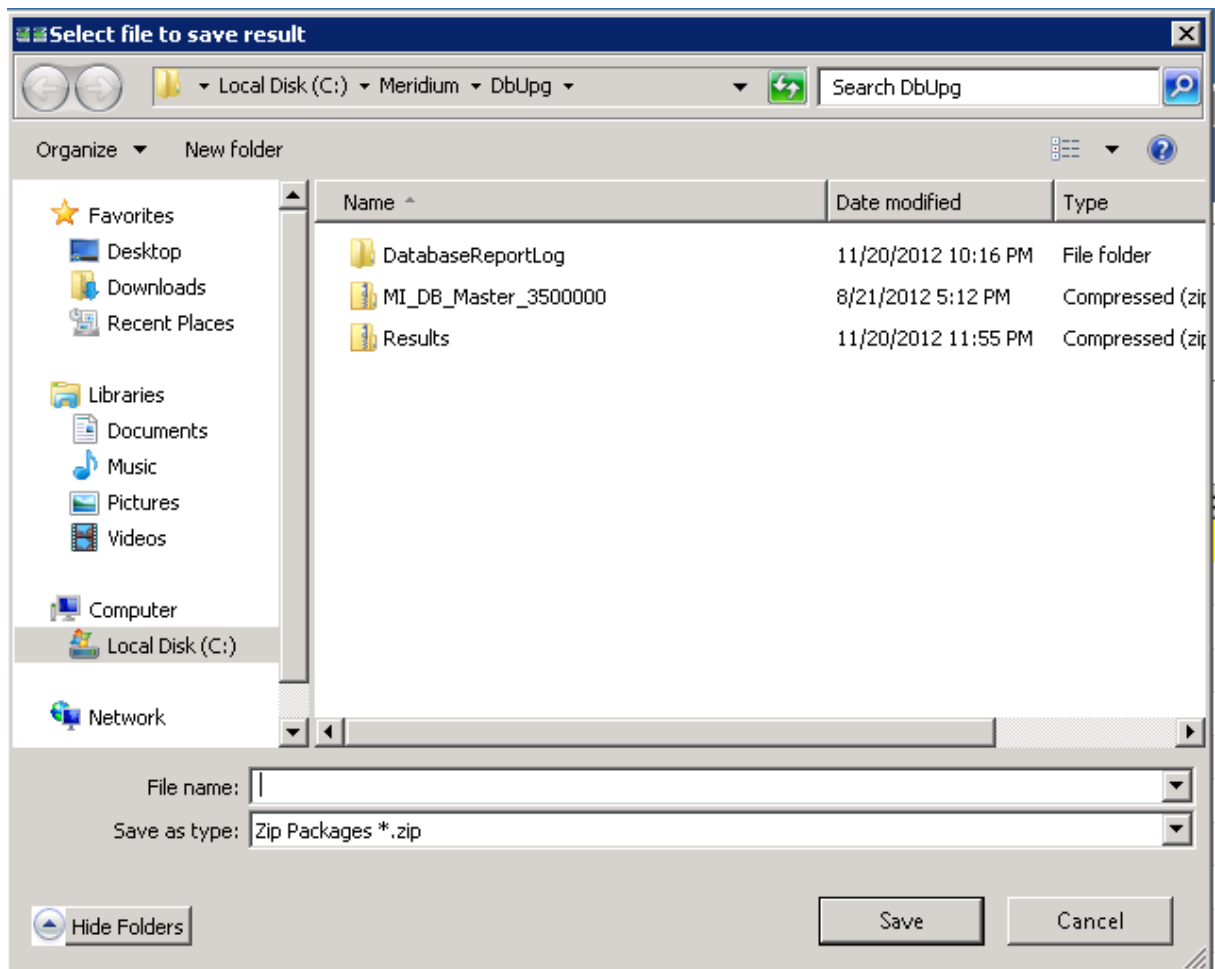
## Saving the Results to a .ZIP File

If you save comparison results to a .ZIP file using the following instructions, you can [reload those results at a later time](#). These instructions assume that you have already [launched the Meridium APM Database Comparison Tool manually](#) or [from the Configuration Manager](#).

To save comparison results to a .ZIP file:

1. On the **Comparison Details** screen, click the **Save Results** button.

The **Select file to save result** window appears. The folder path is set by default to *C:\Meridium\DbUpg*.



2. If you want to save the results to a location other than *C:\Meridium\DbUpg*, navigate to the location where you want to save the results.
3. In **File name** text box, type a name for the .ZIP file.
4. Click the **Save** button.

## Saving the Results to a .ZIP File

The results are saved to the .ZIP file with the specified name in the specified location.

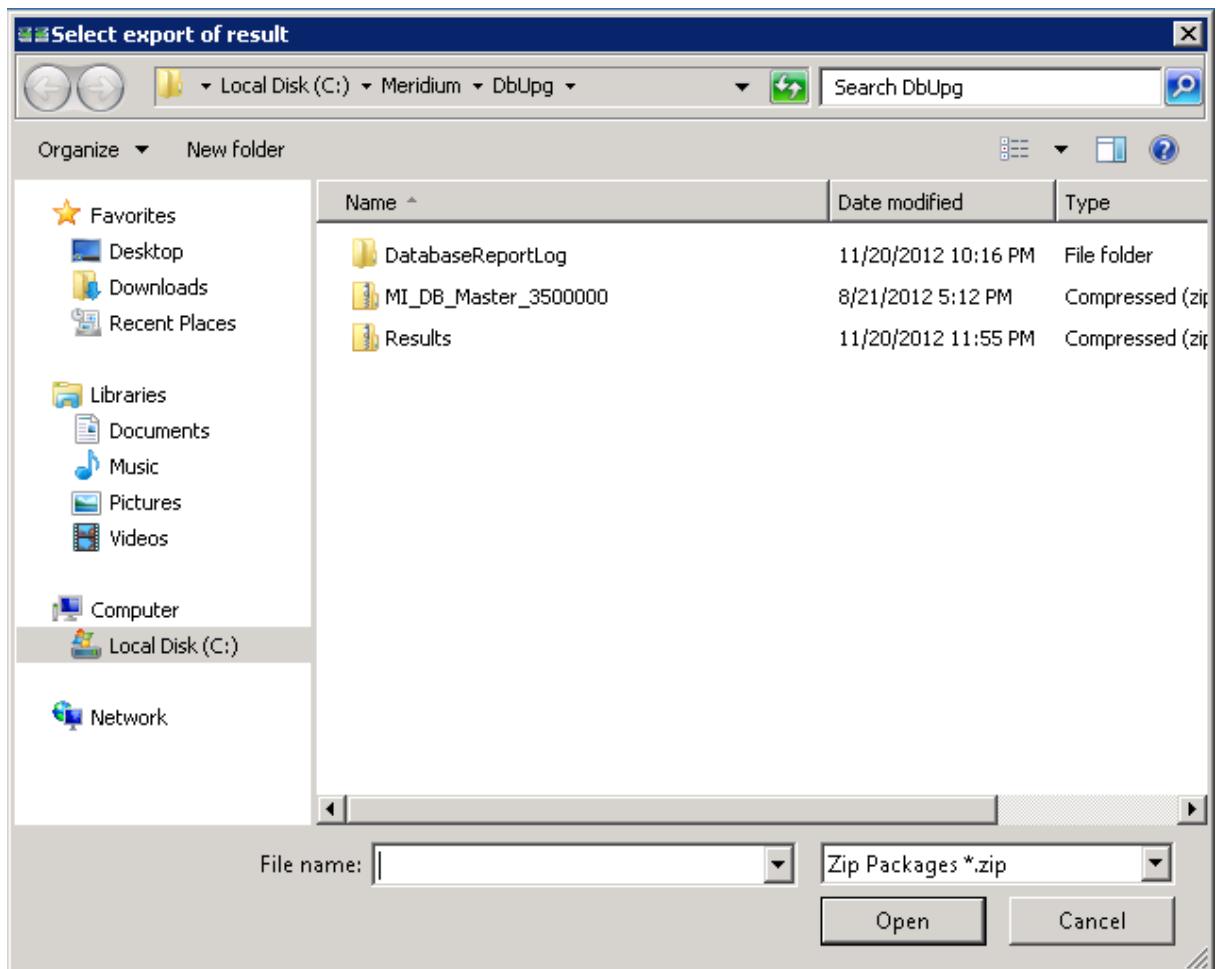
## Reloading Previous Comparison Results

If you have [saved previous comparison results to a .ZIP file](#), you can reload those results using the following instructions. These instructions assume that you have already [launched the Meridium APM Database Comparison Tool manually](#) or [from the Configuration Manager](#).

To reload previous comparison results:

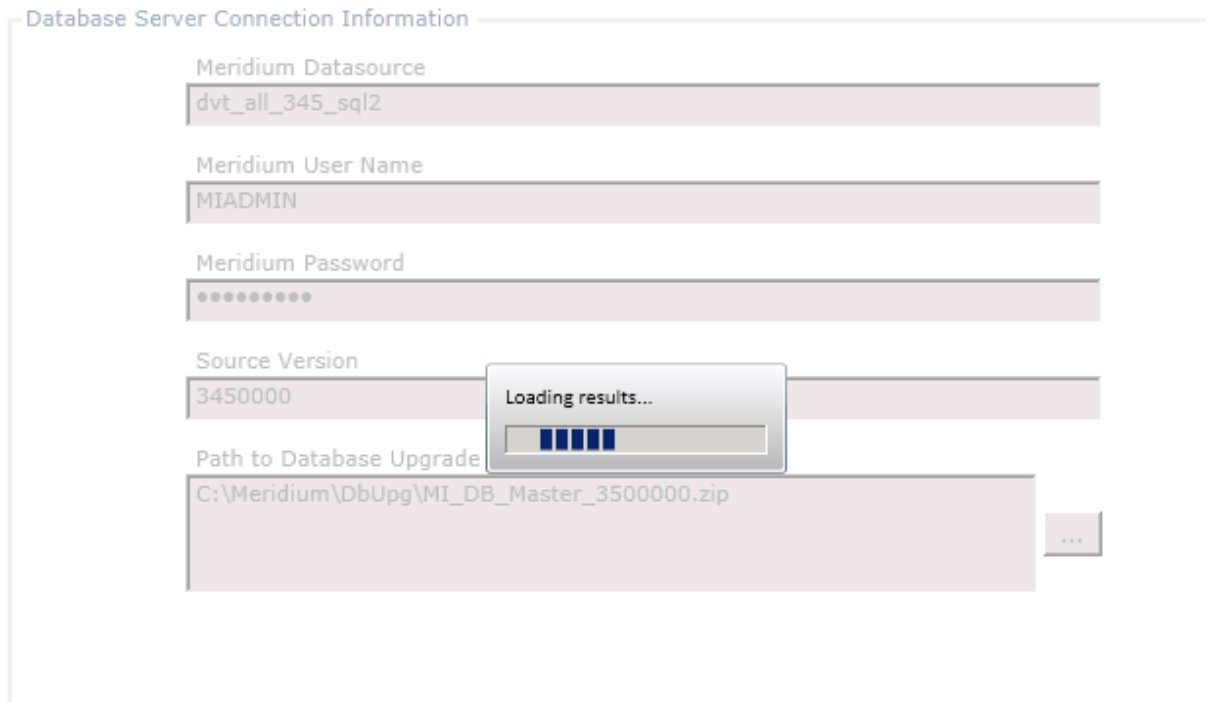
1. On the **Connection Information** screen, click the **Load Results** button.

The **Select export of result** window appears. The folder path is set by default to *C:\Meridium\DbUpg*.



2. If the results that you want to reload are stored in a location other than *C:\Meridium\DbUpg*, navigate to the location containing the exported results.
3. Select the .ZIP file containing the results that you want to reload, and click the **Open** button.

The **Loading results** message appears, displaying a progress bar indicating the progress of the loading process.



When the process is complete, the comparison results appear on the **Comparison Details** screen.

Reloading Previous Comparison Results

**Meridium APM Database Comparison Tool**

### Comparison Details

Summary Information

Comparison From: 3450000 to 3500000	User: MAYBERRY\aduncan	Last Comparison Time: 11/20/2012 11:54 PM	Run Comparison
			Save Results
			Export

2053 differences found.  
Upgrade Comparison

Item Name	Item Path	Type	Baseline Changes	Custom Changes
<a href="#">01Yakima</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">02All Customers</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">03Media Type (All Media)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">04Yearly Income (All Yearly Income)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">05Marital Status (All Marital Status)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">06City (CA)</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">07Store Sqft</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2005 Customer View</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2005 Customer View Only</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 Highlight Table</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 Legend Displayed In as Meas</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 No Measure - Legend and Row</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">2008 One Measure - On LegendCol</a>	Public\Meridium\Modules\Metrics Man	Metrics View		
<a href="#">Action Test Case</a>	Public\Meridium\Modules\Metrics Man	Metrics View		

Back    Exit    Help

## Aspects of the Comparison Results Grid

When you perform a database comparison, the results appear in a grid on the **Comparison Details** screen of the Meridium APM Database Comparison Tool.

The screenshot shows the 'Comparison Details' window of the Meridium APM Database Comparison Tool. It includes a 'Summary Information' section with fields for 'Comparison From' (3500000 to 3500100), 'User' (MAYBERRY\aduncan), and 'Last Comparison Time' (2/1/2013 10:13 AM). There are buttons for 'Run Comparison', 'Save Results', and 'Export'. Below this, it states '622 differences found. Upgrade Comparison'. The main part of the screen is a table with the following columns: 'Item Name', 'Item Path', 'Type', 'Baseline Changes', and 'Custom Changes'. The table lists various items like 'IntegrationInterfaces', 'MacroSamples', 'MaintenanceItem\_CNF', etc., with their respective paths and types. The 'Baseline Changes' column shows a solid black circle for each item, indicating a difference. The 'Custom Changes' column is empty. At the bottom of the window are 'Back', 'Exit', and 'Help' buttons.

Item Name	Item Path	Type	Baseline Changes	Custom Changes
<a href="#">IntegrationInterfaces</a>	Public\Rules Library\Meridium\SAPInterf	Rule Library	●	
<a href="#">MacroSamples</a>	Public\Rules Library\Meridium\Samples\	Rule Library	●	
<a href="#">MaintenanceItem_CNF</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">MaintenanceItem_EM</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">MaintenancePlan_EM</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">MaximoInterfaces</a>	Public\Rules Library\Meridium\CMMSInte	Rule Library	●	
<a href="#">MaximoWorkHistoryDetail</a>	Public\Rules Library\Meridium\CMMSInte	Rule Library	●	
<a href="#">MI_InspectionTasksUpdate</a>	Public\Rules Library\Meridium\Strategy I	Rule Library	●	
<a href="#">Notification_CNF</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">ObjectListItem_CNF</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">TaskList_CNF</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">TaskList_EM</a>	Public\Rules Library\Meridium\Asset Str	Rule Library	●	
<a href="#">MI Recommendation</a>	Public\Rules Library\Meridium\Root Entit	Rule Library	●	
<a href="#">MI Security User</a>	Public\Rules Library\Meridium\Root Entit	Rule Library	●	

The grid contains the name of each item that was identified as different during the comparison process. You can determine the general difference using the **Baseline Changes** and **Custom Changes** columns. You can click any hyperlink in the **Item Name** column to [display more detailed comparison results using WinMerge](#).

The comparison results grid contains the following columns:

- **Item Name:** The name of the item that was identified as different during the comparison process. You can determine the general difference using the **Baseline Changes** and **Custom Changes** columns. You can click any hyperlink in the **Item Name** column to display more detailed comparison results using WinMerge. The detailed comparison results are best understood through an [example](#).
- **Item Path:** If the item is a Catalog item, this column displays the Catalog folder path. If the item is *not* a Catalog item, this column repeats the item name.
- **Type:** The type of item that was identified as different during the comparison

process.

- **Baseline Changes/Custom Changes:** Contain black circles indicating that changes exist between the compared databases. In general, the **Baseline Changes** column contains a black circle if the baseline item has changed. Likewise, the **Custom Changes** column contains a black circle if you have made custom changes to the baseline item or the item does not exist in your pre-upgrade database.

The following table illustrates the possible combination of dots per item and explains how you can interpret those combinations.

Baseline Changes	Custom Changes	Explanation	Example
•		<p>The baseline item has changed between the two versions.</p> <p>-and-</p> <p>The item in your pre-upgrade database is the same as the item in the baseline database.</p>	<p>You are upgrading from V3.4.5 to V3.5.0.</p> <p>In V3.5.0, the baseline family <i>Asset Strategy</i> was modified.</p> <p>You have not modified this family in your V3.4.5 database.</p>
	•	<p>The baseline item has <i>not</i> changed between the two versions.</p> <p>-and-</p> <p>There is difference between the baseline version of this item and the item in your pre-upgrade database.</p>	<p>You are upgrading from V3.4.5 to V3.5.0.</p> <p>The baseline query <i>Reading History</i> has <i>not</i> been modified between V3.4.5 and V3.5.0.</p> <p>You <i>have</i> modified this query in V3.4.5.</p>
•	•	<p>The baseline item has changed between the two versions or is new to the later version.</p> <p>-and-</p> <p>There is a difference between the baseline version of this item and the item in your pre-upgrade database, or this item does not exist in your pre-upgrade database.</p>	<p>You are upgrading from V3.4.5 to V3.5.0.</p> <p>In V3.5.0, the baseline query <i>Asset Query</i> was modified.</p> <p>You <i>have</i> modified this query in V3.4.5.</p>

Note that:

- The **Baseline Changes** column appears only if you [ran the comparison against a pre-upgraded database](#) (e.g., you are comparing a V3.4.5 database to the baseline V3.5.0 database).
- The **Custom Changes** column appears if you [ran the comparison against a pre-upgraded database](#) (e.g., you are comparing a V3.4.5 database to the baseline V3.5.0 database) *or* an [upgraded database](#) (e.g., you are comparing a customized V3.5.0 database to the baseline V3.5.0 database).

You can click any column header to sort the results by the values in that column. If the results are currently sorted in ascending, alphanumeric order, clicking the column header will resort the results in descending, alphanumeric order, and vice versa.

You can also filter the results by clicking the  button in any column header and then selecting the value by which you want to filter the results. For example, to see only queries in the results, you would click the  button in the **Type** column heading and select the **Query** check box, as shown in the following image.

The image shows a filter dialog box with three sections. The first section, 'Are in These', has a checked box next to 'Query' and unchecked boxes for 'Entity Family', 'Groups', 'Preferences', 'Relationship Family', 'Report', 'Rule Library', 'SystemCodes', and 'Users'. The second section, 'Not in These', has unchecked boxes for all the same categories. The third section, 'Text Searching', has a 'Search Type' dropdown menu set to 'Finals' and an empty 'Find' text box.

The result would then contain only queries, as shown in the following image.



## Aspects of the Comparison Results Grid

Item Name	Item Path	Type	Baseline Chan	Custom Chang
<a href="#">Alert Trend Alert Data</a>	Baseline\Meridium\Modules\AMS Asset Portal\Quer	Query	●	
<a href="#">Alert Trend Alert Data</a>	Public\Meridium\Modules\AMS Asset Portal\Quer	Query		●
<a href="#">Alert Trend Alert Data by Asset</a>	Baseline\Meridium\Modules\AMS Asset Portal\Quer	Query	●	
<a href="#">Alert Trend Alert Data by Asset</a>	Public\Meridium\Modules\AMS Asset Portal\Quer	Query		●
<a href="#">Alert Trend Data</a>	Baseline\Meridium\Modules\AMS Asset Portal\Quer	Query	●	
<a href="#">Alert Trend Data</a>	Public\Meridium\Modules\AMS Asset Portal\Quer	Query		●
<a href="#">Alert Trend Data by Asset</a>	Baseline\Meridium\Modules\AMS Asset Portal\Quer	Query	●	
<a href="#">Alert Trend Data by Asset</a>	Public\Meridium\Modules\AMS Asset Portal\Quer	Query		●
<a href="#">Alert Trend Data by Asset and Event Description</a>	Baseline\Meridium\Modules\AMS Asset Portal\Quer	Query	●	
<a href="#">Alert Trend Data by Asset and Event Description</a>	Public\Meridium\Modules\AMS Asset Portal\Quer	Query		●
<a href="#">All Inspection Records</a>	Baseline\Meridium\Modules\Inspection\Document	Query	●	

After you apply a filter, it will be displayed below the results, as outlined in red in the following image:

<a href="#">API RBI Analysis</a>	Public\Meridium\Modules\API RBI Connector\Quer	Query		
<a href="#">ASSET_GROUP_LOOKUP</a>	Public\Meridium\Modules\CMMS Integration Interf	Query		
<a href="#">ASSET_NUMBER_LOOKUP</a>	Public\Meridium\Modules\CMMS Integration Interf	Query		
<a href="#">Available Recommendations</a>	Public\Meridium\Modules\Recommendation Manag	Query		●
<a href="#">Equipment Taxonomy Query</a>	Baseline\Meridium\Modules\Core\Queries\Equipme	Query	●	

ItemType=Query

Back Exit Help

You can remove a filter by clicking the  button below the grid.

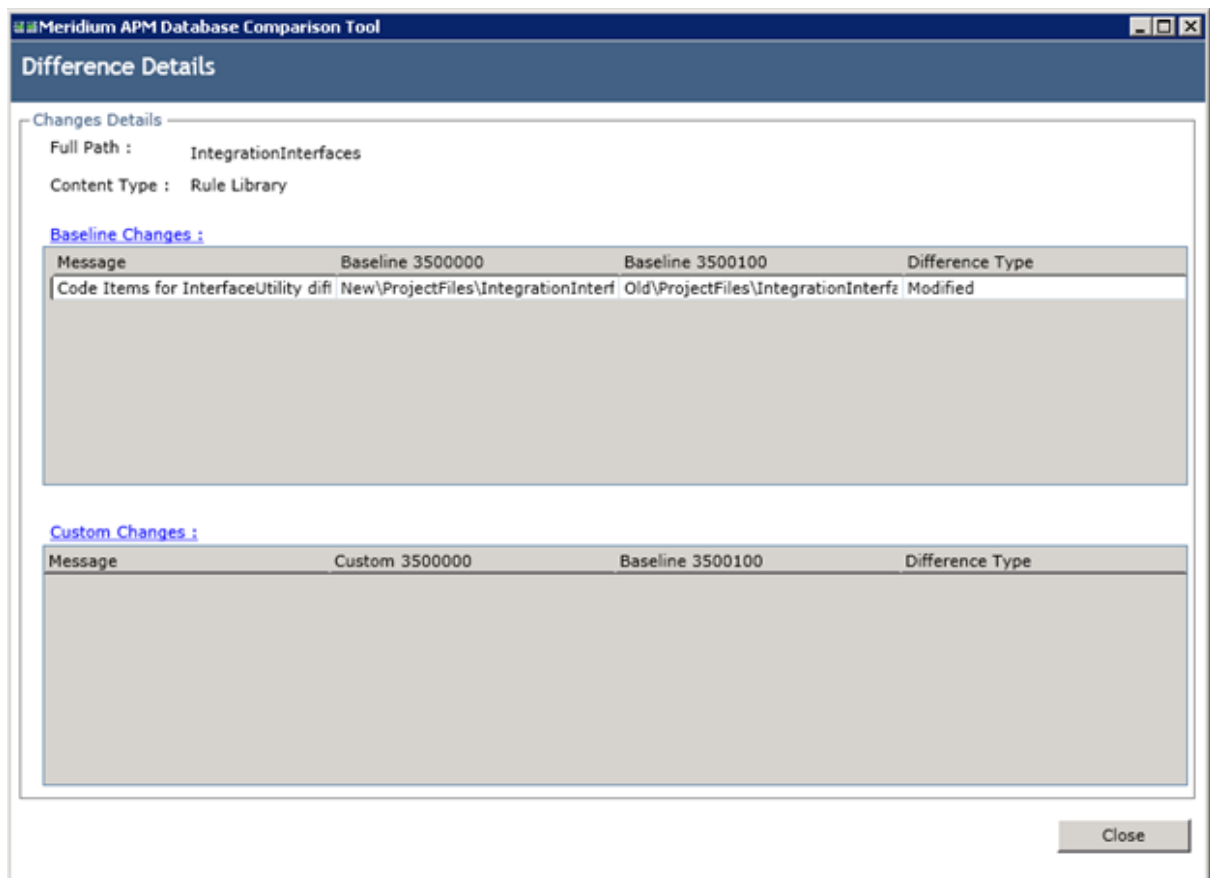
## Viewing Detailed Differences in WinMerge

From the [comparison results grid](#), for any item in the grid, you can access a detailed comparison of the differences between that item in your customized pre-upgraded database and the baseline database for the target version. The detailed differences will be displayed in WinMerge. Information on using WinMerge exceeds the scope of the Meridium APM documentation but can be found in the WinMerge Help system.

To view detailed differences for an item:

1. In the comparison results grid, click the hyperlinked item name for the item whose differences you want to view.

The **Difference Details** screen appears.



2. If differences are referenced in the top section, click the **Baseline Changes** link.

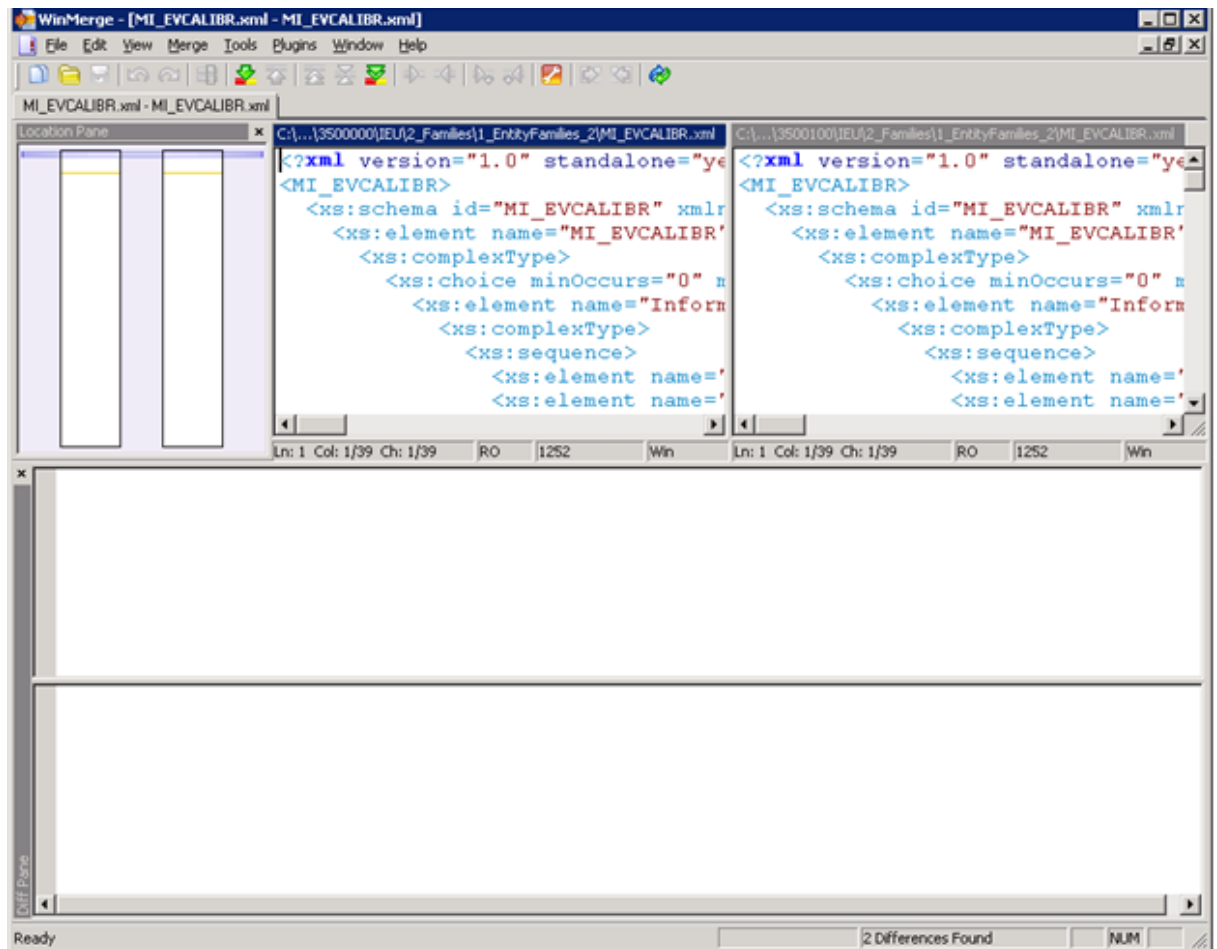
-or-

If differences are referenced in the bottom section, click the **Custom Changes** link.

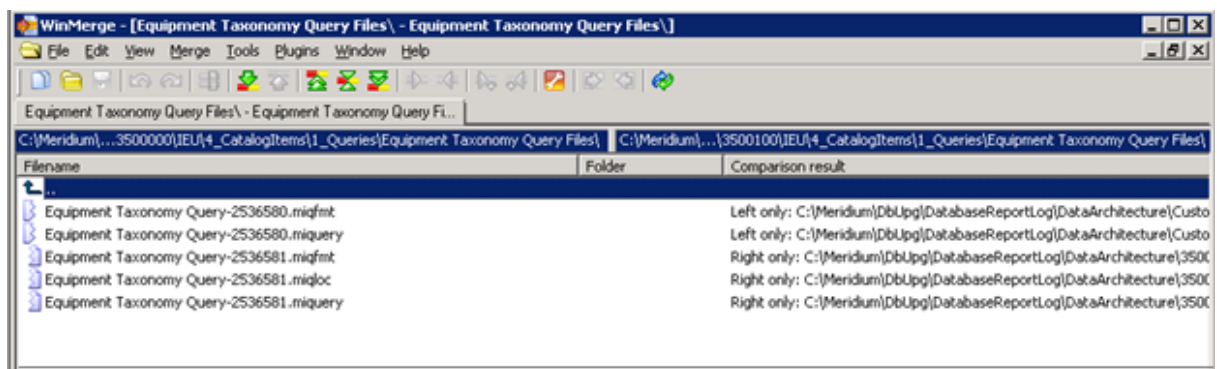
The following screens appear on separate tabs:

- On this screen, the XML code for the item exists in one file per version (e.g., an

entity family).

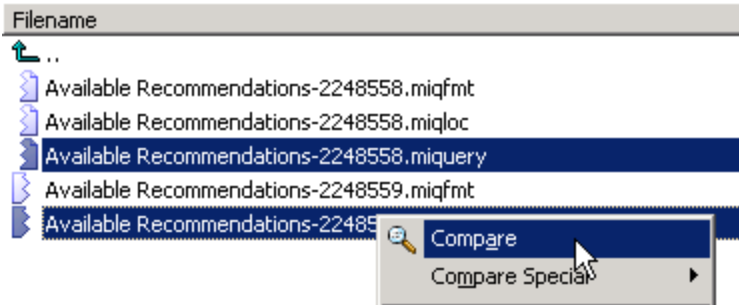


- On this screen, the item exists in multiple files per version (e.g., a query), which you can use to select the two specific files that you want to compare.

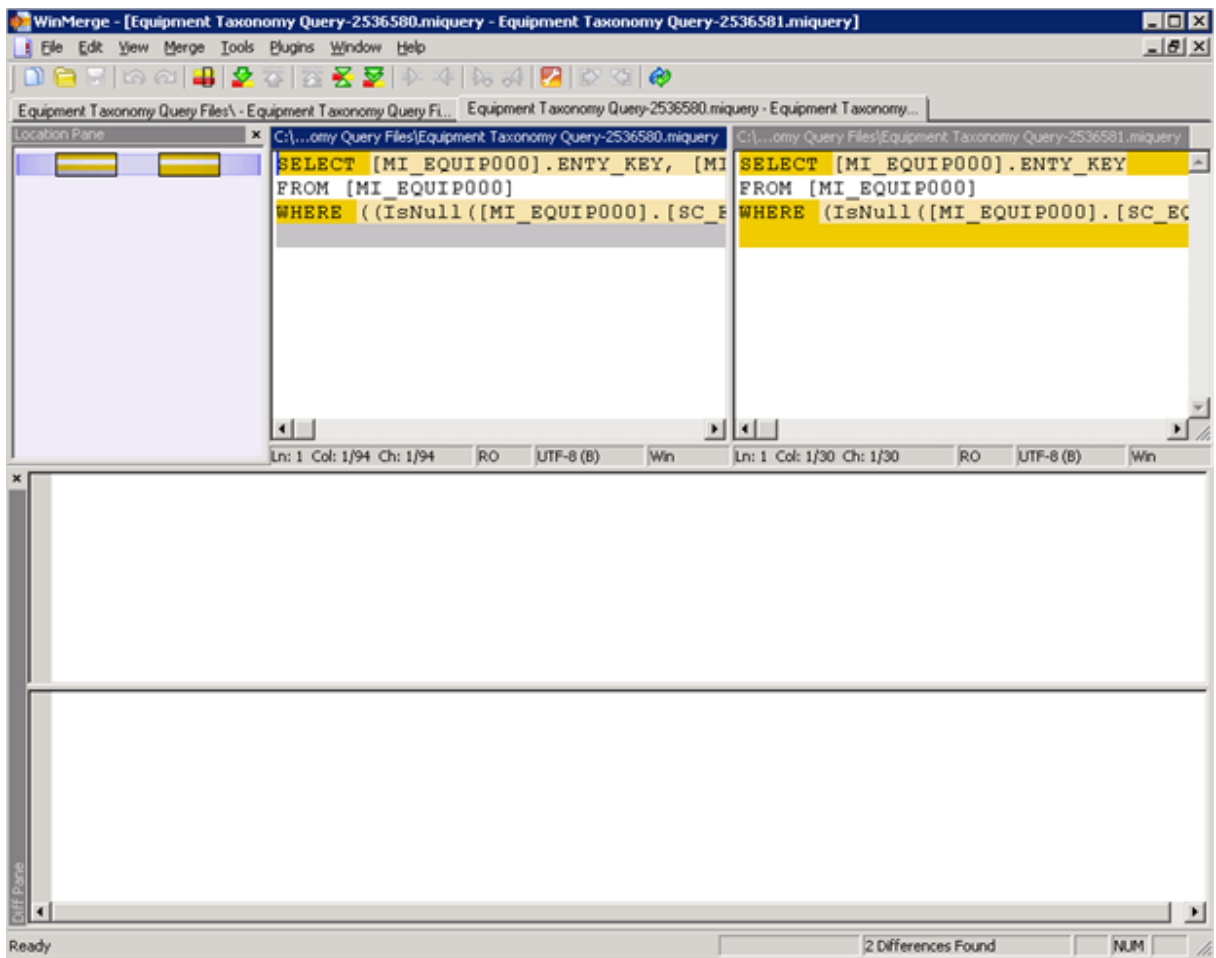


3. On the screen displaying the detailed differences, scroll through the differences using WinMerge tools.

4. On the screen allowing you to select the two specific files that you want to compare, select the two files, press the right mouse button, and click **Compare**.



WinMerge appears, displaying the results of the comparison.



## Example: You Have Modified a Baseline Query

---

The following example assumes that:

- You are upgrading from V3.5.0 to V3.5.0 SP1 LP.
- You have launched the Meridium APM Database Comparison Tool manually for the purposes of comparing your V3.5.0 database against the baseline V3.5.0 SP1 LP database.

Suppose that in your V3.5.0 database, you modified the baseline query *Available Recommendations*, which exists in the Catalog folder \\Public\Meridium\Modules\Recommendation Management\Queries.

The SQL code of *baseline* query looks like this:

```
SELECT MI_SM_STATES.SMST_CAPTION_TX "Current State", [MI Recommendation].[MI_REC_ID] "Recommendation ID", [MI Recommendation].[MI_REC_TYPE_CHR] "Recommendation Type", [MI Recommendation].[MI_REC_SHORT_DESCR_CHR] "Recommendation Headline", [MI Recommendation].[MI_REC_LONG_DESCR_TX] "Recommendation Description", [MI Recommendation].[MI_REC_ASSET_ID_CHR] "Asset ID", [MI Recommendation].[MI_REC_ANALY_ID_CHR] "Analysis ID", [MI Recommendation].ENTY_KEY "ENTY_KEY", [MI Recommendation].FMLY_KEY "FMLY_KEY"
FROM [MI Recommendation] JOIN MI_FMLY_SMSM_RELS ON [MI Recommendation].FMLY_KEY = MI_FMLY_SMSM_RELS.FMLY_KEY JOIN MI_SM_STATES ON MI_FMLY_SMSM_RELS.SMSM_KEY = MI_SM_STATES.SMSM_KEY AND [MI Recommendation].[MI_SM_STATE_ID_C] = MI_SM_STATES.SMST_ID
WHERE MI_FMLY_SMSM_RELS.FMSM_STAT_IND = 'A'
AND MI_SM_STATES.SMST_STAT_IND = 'A'
```

The SQL code of the *modified* query looks like this, where the customization is colored blue:

```
SELECT MI_SM_STATES.SMST_CAPTION_TX "Current State", [MI Recommendation].[MI_REC_ID] "Recommendation ID", [MI Recommendation].[MI_REC_TYPE_CHR] "Recommendation Type", [MI Recommendation].[MI_REC_SHORT_DESCR_CHR] "Recommendation Headline", [MI Recommendation].[MI_REC_LONG_DESCR_TX] "Recommendation Description", [MI Recommendation].[MI_REC_ASSET_ID_CHR] "Asset ID", [MI Recommendation].[MI_REC_ASSET_DESCR_C] "Asset Description", [MI Recommendation].[MI_REC_ANALY_ID_CHR] "Analysis ID", [MI Recommendation].ENTY_KEY "ENTY_KEY", [MI Recommendation].FMLY_KEY "FMLY_KEY"
FROM [MI Recommendation] JOIN MI_FMLY_SMSM_RELS ON [MI Recommendation].FMLY_KEY = MI_FMLY_SMSM_RELS.FMLY_KEY JOIN MI_SM_STATES ON (MI_FMLY_SMSM_RELS.SMSM_KEY = MI_SM_STATES.SMSM_KEY AND [MI Recommendation].[MI_SM_STATE_ID_C] = MI_SM_STATES.SMST_ID)
WHERE (MI_FMLY_SMSM_RELS.FMSM_STAT_IND = 'A' AND MI_SM_STATES.SMST_STAT_IND = 'A')
```

Example: You Have Modified a Baseline Query

The query design of the *customized* query includes the *Asset Description* field, which does *not* appear in the query design of the baseline query, shown in the following image.

Field	SMST_CAPTIO... ▼ ...	[Recommendation ID]	[Recommendation Ty...	[Recommendation He...	[Recommendation De...	[Asset ID]	[Asset Description]	[Analysis ID]
Alias	Current State	Recommendation ID	Recommendation Type	Recommendation He...	Recommendation De...	Asset ID	Asset Description	Analysis ID
Table	MI_SM_STATES	[Recommendation]	[Recommendation]	[Recommendation]	[Recommendation]	[Recommendation]	[Recommendation]	[Recommendation]
Sort								
Sort Index								
Include	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Display	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hyperlink		meridium://registryf...						
Criteria								
Or								

In this scenario, in the comparison results of the Meridium APM Database Comparison Tool, you would see a row for the Available Recommendations query:

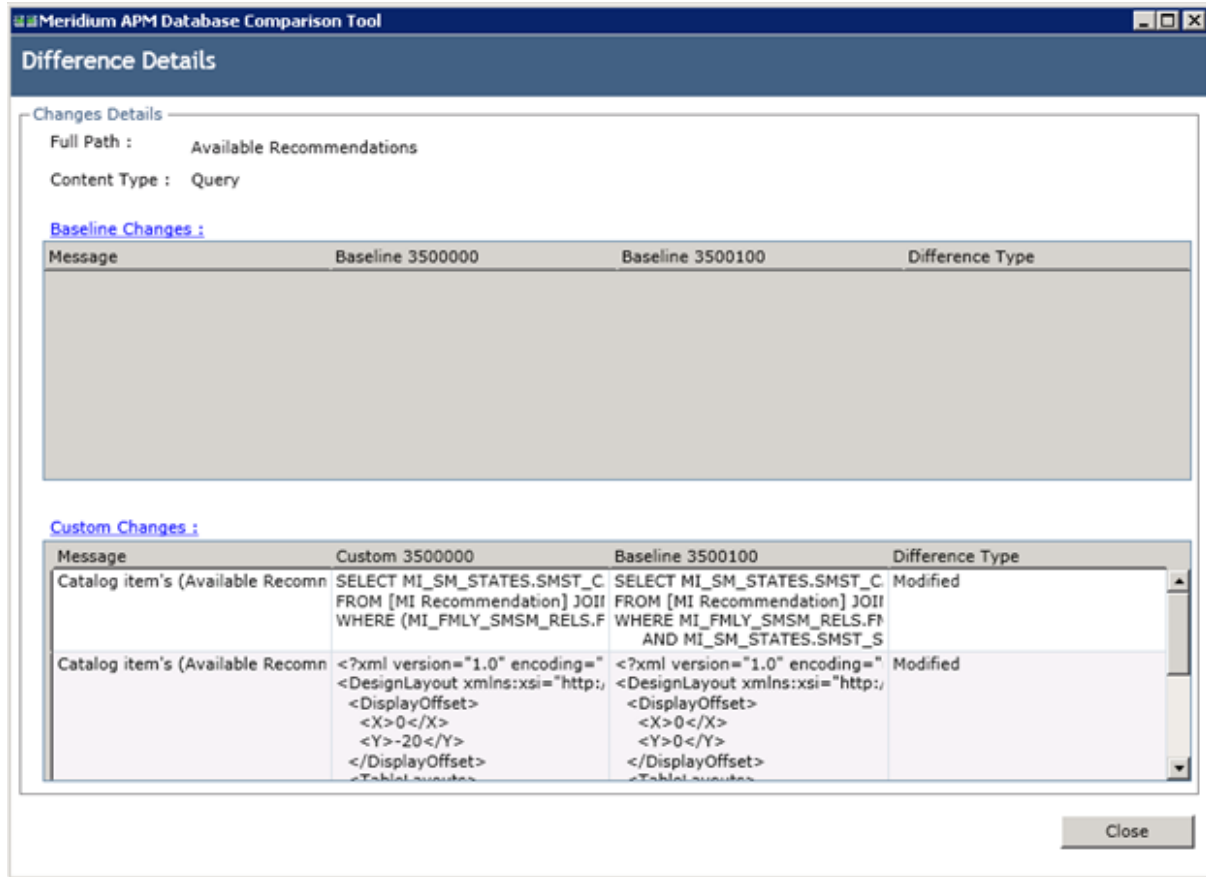
Item Name	Item Path	Type	Baseline Changes	Custom Changes
<a href="#">Available Recommendations</a>	Public\Meridium\Modules\Rec	Query		●

...where:

- The **Item Name** column contains the name of the query, *Available Recommendations*.
- The **Item Path** column contains the path to the Public Catalog item.
- The **Type** column contains the value *Query*.
- The **Baseline Changes** column is empty because the baseline query has *not* been modified between V3.5.0 and V3.5.0 SP1 LP.
- The **Custom Changes** column contains a black circle because you have modified the query such that it does not match the same query in the baseline V3.5.0 SP1 LP database.

If you were to click the hyperlinked item name, the following window would appear.

Example: You Have Modified a Baseline Query

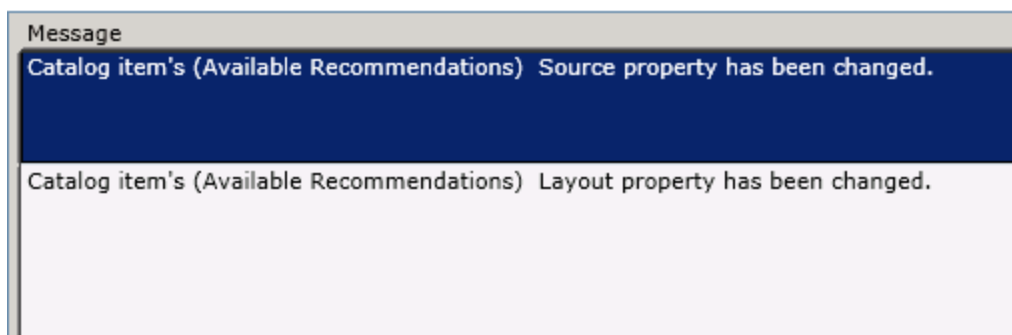


On this window, the **Baseline Changes** section is empty because the baseline query has not been modified (i.e., the **Baseline Changes** column on the previous screen was empty).

The **Custom Changes** section contains two rows:

- One row represents the change to the SQL code.
- One row represents the change to the query layout itself.

If you were to expand the **Message** column, you would see the following messages in each row:



Example: You Have Modified a Baseline Query

The first message, referencing the *source property*, identifies the change to the SQL code. Alternatively, the second message, referencing the *layout property*, identifies the changes to the query layout itself.

In the first row, the **Custom 3500000** column provides the SQL code of the customized V3.5.0 query, and the **Baseline3500100** column provides the SQL code of the baseline V3.5.0 SP1 LP query.

Custom 3500000	Baseline 3500100
SELECT MI_SM_STATES.SMST_CAPTION_TX "C FROM [MI Recommendation] JOIN MI_FMLY_SM WHERE (MI_FMLY_SMSM_RELS.FMSM_STAT_IN	SELECT MI_SM_STATES.SMST_C FROM [MI Recommendation] JOI WHERE MI_FMLY_SMSM_RELS.F AND MI_SM_STATES.SMST_S

Likewise, in the second row, the **Custom 3500000** column provides the XML syntax representing the query layout of the customized V3.5.0 query, and the **Baseline 3500100** column provides the XML syntax representing the query layout of the baseline V3.5.0 SP1 LP query.

Custom 3500000	Baseline 3500100
<?xml version="1.0" encoding="utf-16"?> <DesignLayout xmlns:xsi="http://www.w3.org/ <DisplayOffset> <X>0</X> <Y>-20</Y> </DisplayOffset> <TableLayouts> <TableLayout> <SourceID>[Recommendation]</SourceID: <Bounds> <Location>	<?xml version="1.0" encoding="" <DesignLayout xmlns:xsi="http:// <DisplayOffset> <X>0</X> <Y>0</Y> </DisplayOffset> <TableLayouts> <TableLayout> <SourceID>[Recommendatic <Bounds> <Location>

You can expand either column to see the full text in that cell.

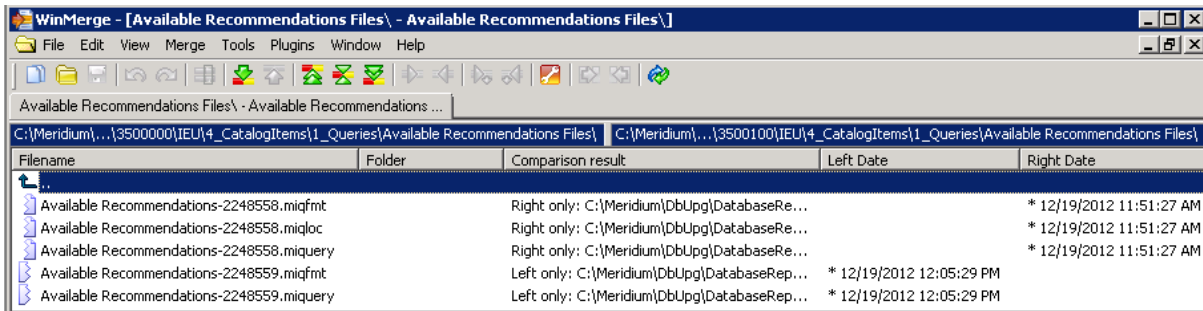
Finally, the **Difference Type** column contains the value *Modified* in each row, indicating that the SQL code and the XML syntax representing the query layout have been modified.

Difference Type
Modified
Modified

To see a more granular side-by-side comparison, you could click the **Custom Changes** link, which would display the following WinMerge window:



Example: You Have Modified a Baseline Query



Using WinMerge, you would need to select the specific files that you want to compare. The list displays *two* versions of the files with the following file extensions:

- **.miqfmt**: Stores data about the query layout.
- **.miquery**: Stores data about the query SQL code.

For each file with the same file extension, one of them represents the customized V3.5.0 query, and the other one represents the baseline V3.5.0 SP1 LP query.

For example, the following file represents the customized V3.5.0 query layout:

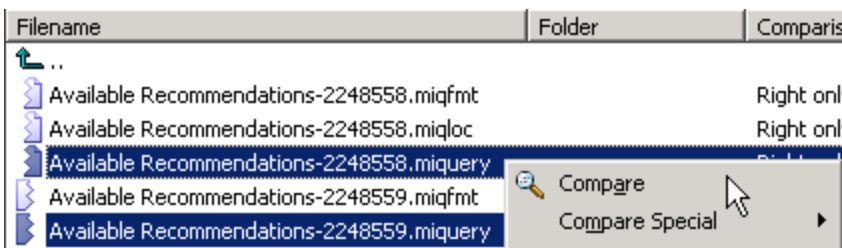
*Available Recommendations-2248558.miqfmt*

...and the following file represents the baseline V3.5.0 SP1 LP query layout:

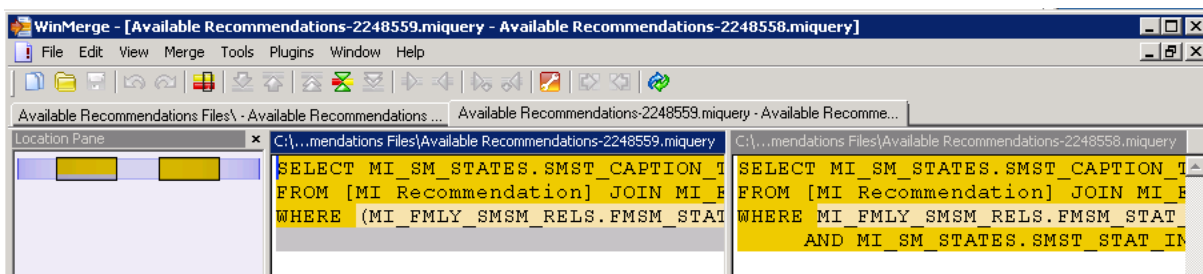
*Available Recommendations-2248559.miqfmt*

You can see that the V3.5.0 file has a lower number than the V3.5.0 SP1 LP file.

To see a side-by-side comparison of the differences between two files, you would need to select the two files with the same extension, press the right mouse button, and then select **Compare** from the shortcut menu.



The content of the two files would then be displayed side-by-side using WinMerge:



Example: You Have Modified a Baseline Query

At this point, you would need to compare the files line-by-line using WinMerge tools and features, which exceed the scope of the Meridium APM documentation.

## Exporting the Results to an Excel File

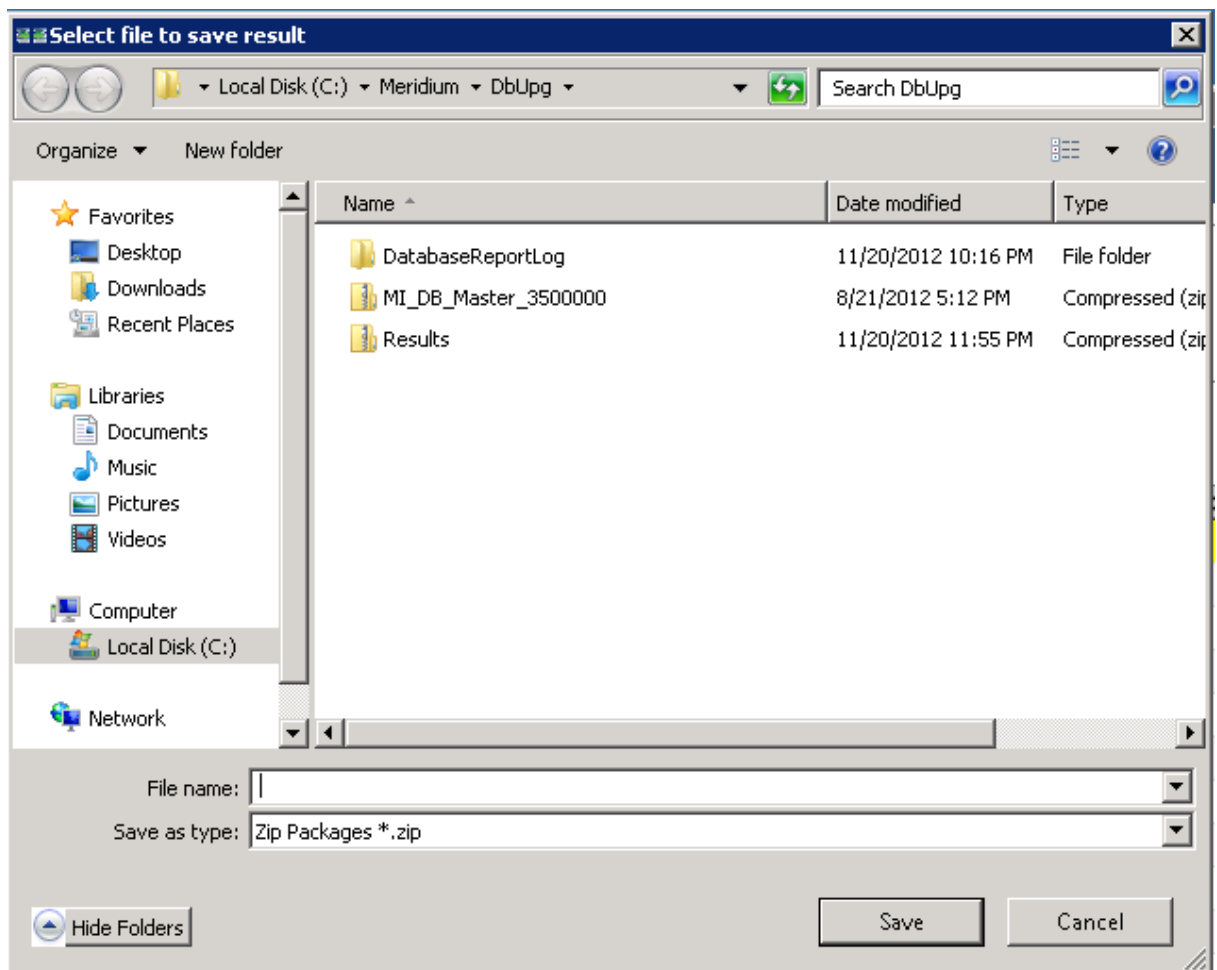
If you have run a database comparison and you want to make the result available to users who do not have access to the Meridium APM Application Server, you can save the results to a Microsoft Excel file. The Excel file will contain the data that appears in the grid on the **Comparison Details** screen of the Meridium APM Database Comparison Tool. It will not present a detailed side-by-side comparison.

These instructions assume that you have already [launched the Meridium APM Database Comparison Tool manually](#) or [from the Configuration Manager](#).

**To export comparison results to a Microsoft Excel file:**

1. On the **Comparison Details** screen, click the **Export Results** button.

The **Select file to save result** window appears. The folder path is set by default to *C:\Meridium\DbUpg*.



2. If you want to export the results to a location other than *C:/Meridium/DbUpg*, navigate to the location where you want to export the results.
3. In **File name** text box, type a name for the Excel file.
4. Click the **Save** button.

The results are saved to the Excel file with the specified name in the specified location, and a message appears, indicating that the file was saved successfully. The content of the Excel file will look something like this:

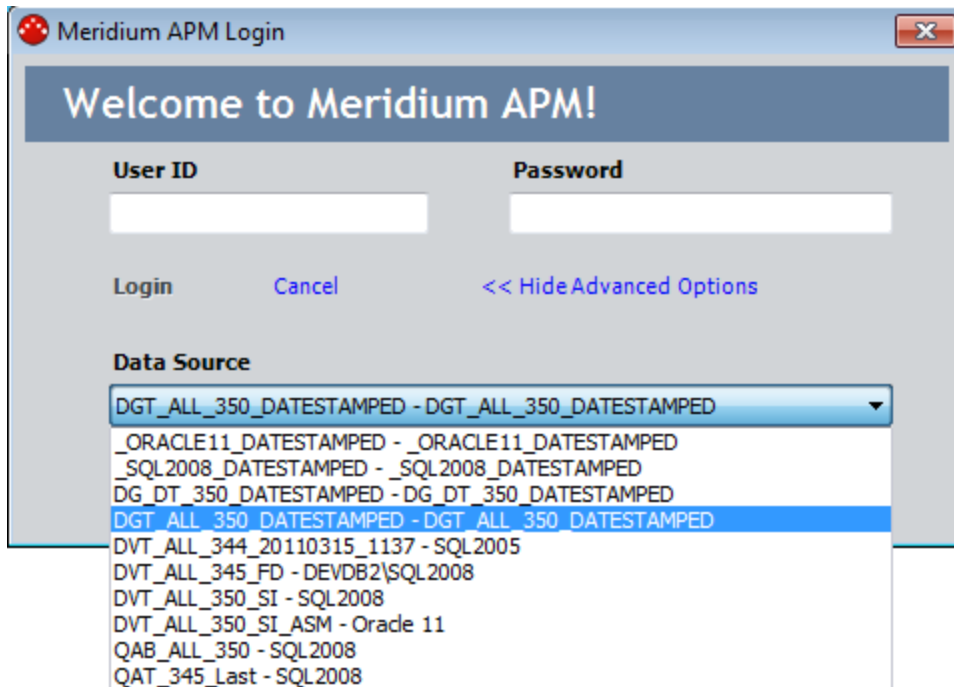
	A	B	C	D	E
1	ModifiedID	ItemPath	ItemType	HasBaselineChanges	HasCustomChanges
2	MaintenanceItem_CNF	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False
3	MaintenanceItem_EM	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False
4	MaintenancePlan_EM	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False
5	MI_InspectionTasksUpdate	Public\Rules Library\Meridium\Strategy Rules\MI_Insp Rule Library		True	False
6	Notification_CNF	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False
7	ObjectListItem_CNF	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False
8	TaskList_CNF	Public\Rules Library\Meridium\Asset Strategy Manager Rule Library		True	False

The file contains one worksheet, **ExportToExcel**, with the following columns of information:

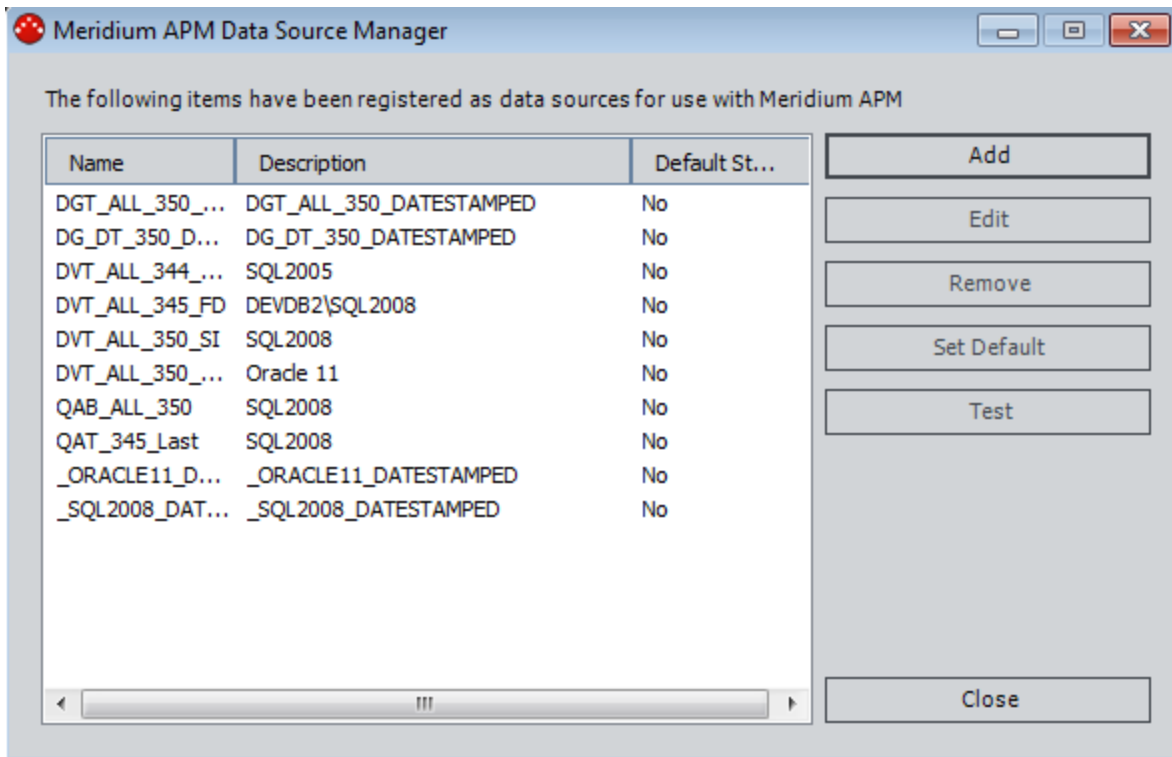
- **ModifiedID:** Displays the value that appeared in the **Item Name** column in the Meridium APM Database Comparison Tool.
- **ItemPath:** Displays the value that appeared in the **Item Path** column in the Meridium APM Database Comparison Tool.
- **ItemType:** Displays the value that appeared in the **Type** column in the Meridium APM Database Comparison Tool.
- **HasBaselineChanges:** Displays a value indicating whether or not a black circle appeared in the **Baseline Changes** column in the Meridium APM Database Comparison Tool. If no black circle appeared, the value is *False*. If a black circle appeared, the value is *True*.
- **HasCustomChanges:** Displays a value indicating whether or not a black circle appeared in the **Custom Changes** column in the Meridium APM Database Comparison Tool. If no black circle appeared, the value is *False*. If a black circle appeared, the value is *True*.

## About Specifying Data Sources

A *data source* stores the connection information for a Meridium APM database and allows access to that database. When you log in to a Meridium APM application, you will select the data source that corresponds to the Meridium APM database that you want to use.



Before you can begin using any Meridium APM application (Configuration Manager, URL Manager, Schedule Manager, or Meridium APM Framework) you must [add at least one data source for the applications to use](#). You can manage data sources via the Meridium APM Data Source Manager.



Data sources are associated with a specific Meridium APM Application Server to indicate which databases are accessible from that Application Server. Information about data sources is stored in the file MeridiumDatasources.config, which exists on the Meridium APM Application Server in the folder C:\ProgramData\Meridium. This file is created automatically when you install the Meridium APM Application Server. When it is first created, it will be empty. It will be updated automatically, however, as you add, modify, and delete data sources. Note that data source passwords are encrypted in the file.

**CEHint:** The folder C:\ProgramData is a hidden folder, so if you want to view the file, you will need to make sure that you are showing hidden folders.

## Adding Data Sources

The following instructions provide details on how to add a data source to the Meridium APM Data Source Manager. This will allow Meridium APM to connect to the database (SQL or Oracle). Before you can add a data source, the [Meridium APM database must already exist](#).

To add a Meridium APM data source to the Meridium APM Data Source Manager:

1. Access the Meridium APM Data Source Manager.
2. On the **Meridium APM Data Source Manager** window, click the **Add** button.

The **Add Data Source** dialog box appears.

**Add Data Source**

Please choose a database type and enter the related parameter values for this new data source. When finished, click Test.

**Database Type:** Oracle

**Database User Name:**

**Password:**

**Database Alias:**

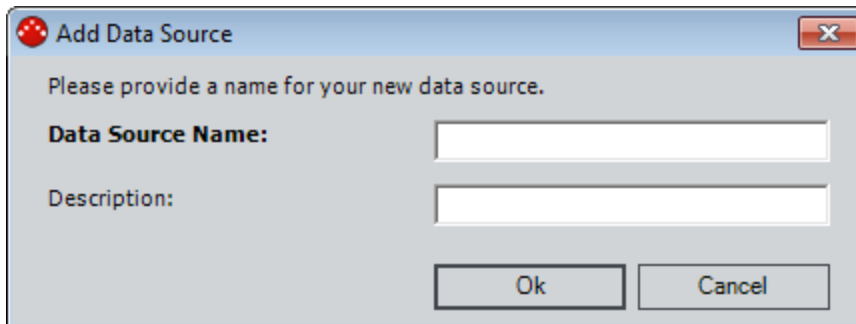
**Database Server:**

**Database Name:**

Execute scheduled items for this data source on this Application Server?

Save Test Cancel

3. Define the data source.
  - For an Oracle data source:
    - a. In the **Database Type** list, accept the default selection **Oracle**.
    - b. In the **Database User Name** text box, type the user name or schema name for the database that you are defining. This is required.
    - c. In the **Password** text box, type the password for the associated database user name. The password will appear as asterisks. The password is required and cannot exceed 15 characters in length.
    - d. In the **Database Alias** text box, type the database alias.
  - For a SQL Server data source:
    - a. In the **Database Type** list, select **SQL Server**.
4. If you want [scheduled items in this database to be executed from the specified Application Server](#), select the **Execute scheduled items for this data source on this Application Server?** check box. Note that this user must be the owner of the specified database. This is required.
5. Click the **Test** button to [test the connection information](#).
6. Click the **Save** button.
  - c. In the **Password** text box, type the password for the associated database user name. The password will appear as asterisks. The password is required.
  - d. In the **Database Server** text box, type the name of the Database Server. The data source information is saved, and the **Add Data Source** dialog box appears. In the **Database Name** text box, type the name of the database.



7. In the **Data Source Name** text box, type a name for the data source. This is required and must be unique for the Application Server. In addition it cannot contain spaces or special characters. When you save the data source, the Meridium APM system will check for unsupported characters in the data source name. If unsupported characters are found in the name, you will need to correct the name before you can save the data source.
8. In the **Description** text box, type a description of the data source. This is optional.

**Note:** Together, the name and description make up the information that will appear to users to identify the data source throughout the Meridium APM applications.

9. Click **OK**.



The data source is saved and added to the list of data sources. Depending upon your selection of the **Enable scheduled items for this data source on this Application Server** check box, a message may appear, [describing the effect of your selection](#).

## Testing a Data Source Connection

---

### To test a data source connection:

1. Access the Meridium APM Data Source Manager.
2. On the **Meridium APM Data Source Manager** window, in the list of data sources, select the data source that you want to test.
3. Click the **Test** button.

If the data source successfully connects with the specified database, a message will appear, indicating that the connection information is valid. If the data source fails to connect with the database, a message will appear, indicating that the connection information is invalid. You will need to correct the connection information before you can successfully connect to the specified database.

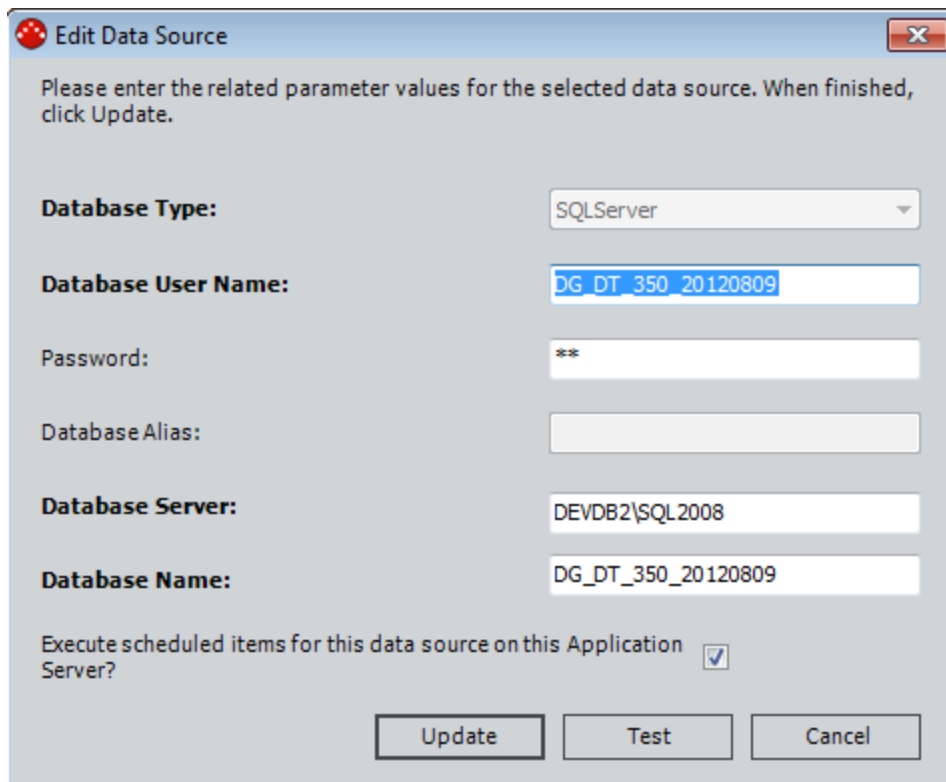
## Modifying a Data Source

---

To modify an existing data source:

1. Access the Meridium APM Data Source Manager.
2. On the **Meridium APM Data Source Manager** window, in the list of data sources, select the data source that you want to modify.
3. Click the **Edit** button.

The **Edit Data Source** dialog box appears.



**Edit Data Source**

Please enter the related parameter values for the selected data source. When finished, click Update.

**Database Type:** SQLServer

**Database User Name:** DG\_DT\_350\_20120809

**Password:** \*\*

**Database Alias:**

**Database Server:** DEVDB2\SQL2008

**Database Name:** DG\_DT\_350\_20120809

Execute scheduled items for this data source on this Application Server?

Update Test Cancel

4. Modify the information.
5. Click the **Test** button to [test the data source connection](#).
6. Click the **Update** button.

Your changes are saved.

## About Enabling Scheduled Item Execution

---

Scheduled items are stored within the Meridium APM database and are executed by the Meridium APM Scheduling Service, which is installed on the Meridium APM Application Server. Your Meridium APM implementation will include multiple Meridium APM Application Server machines (dedicated and supporting) that connect to the *same* Meridium APM database. Each of these Meridium APM Application Server instances will also contain an instance of the Meridium APM Scheduling Service, which is installed automatically with the Meridium APM Application Server software.

You will need to dedicate ONE Meridium APM Application Server for executing scheduled items in the database. If multiple Application Servers were to execute scheduled items in the same database, the scheduled items would be executed multiple times, resulting in duplicate operations (e.g., duplicate later email messages).

To ensure that scheduled items will be executed only once, you will need to enable scheduled item execution for each data source on ONE Meridium APM Application Server. You can do so by selecting the **Execute scheduled items for this data source on this Application Server** check box, which appears on the [Add Data source](#) and [Edit Data Source](#) dialog boxes in the Meridium APM Data Source Manager.

When you define this setting for each data source, you should keep in mind the following considerations:

- When you access the [Edit Data Source dialog box](#), the **Execute scheduled items for this data source on this Application Server** check box will be selected or cleared, as appropriate *for the current Application Server*. For example, if scheduled items are enabled for Data Source X on Application Server A, when you access the **Edit Data Source** dialog box for Data Source X on Application Server A, the check box will be selected. If you access the **Edit Data Source** dialog box for Data Source X on Application Server B, the check box will be *cleared*. There is no indication on Application Server B that scheduled item execution is enabled on Application Server A, until you attempt to change the setting from Application Server B.
- You are not required to select this check box for any data source. In general, however, you will *want* to designate an Application Server for executing scheduled items in each data source; otherwise, scheduled items in that data source will never be executed. Therefore, if you create a data source and do not select the **Execute scheduled items for this data source on this Application Server** check box and no other Application Server is configured to execute scheduled items in that database, a message will appear, warning you of this condition. The same message will appear if you *clear* this check box for a data source where it was previously selected.
- Because you can designate *only* one Application Server for executing scheduled items, if one Application Server has already been designated for this purpose and you *select* the **Execute scheduled items for this data source on this Application Server** check box for the *same* data source on *different* Application Server, a warning message will appear, indicating that enabling scheduled item execution on the current Application Server will disable execution on the other Application Server. You will have the option to accept or cancel the change.

## Specifying a Data Source as the Default

---

Using the Data Source Manger, you can designate a certain data source as the *default* data source. The default data source will be selected by default on the Meridium APM Login dialog box the *first time* a user launches a Meridium APM application. If, however, a user logs in to a different data source, the next time that they try to log in to a Meridium APM application, the data source the data source that they last logged into will be selected by default. Note that changing the default data source via the Meridium APM Data Source Manager will not change the default data source for any user who has already logged in to a Meridium APM application.

After you specify a data source as the default, the only way to reverse that action is to choose a different data source as the default or to delete the current default data source.

### To specify a data source as the default:

1. Access the Meridium APM Data Source Manager.
2. On the **Meridium APM Data Source Manager** window, select the data source that you want to use as the default.
3. Click the **Set Default** button.

The selected data source will appear in bold, and the label **Yes** will appear in the **Default Status** column. All other data sources will display **No** in their respective **Default Status** columns.

## Removing Data Sources

---

When you remove a data source, you are deleting the entry for that data source from the MeridiumDatasources.config file on the Application Server machine. Removing a data source from the Data Source Manager does not delete the associated database.

### To remove a data source:

1. Access the Meridium APM Data Source Manager.
2. On the **Meridium APM Data Source Manager** window, select the data source that you want to remove.
3. Click the **Delete** button.

A confirmation message appears, asking if you really want to delete the data source.

4. Click the **Yes** button.

The data source is removed from the list in the Data Source Manager and will no longer be available on that Application Server.

## About the Meridium APM System Administration Tool Documentation

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The documentation in this section of the Help provides the following information about the Meridium APM System Administration tool:


- [Accessing the Meridium APM System Administration tool.](#)
- [Using the Meridium APM System Administration tool.](#)
- A [directory of configuration files](#), which you can use to access details on modifying individual configuration files. Those details are provided in the documentation for the corresponding module or feature that the configuration file supports.

## Accessing the Meridium APM System Administration Tool

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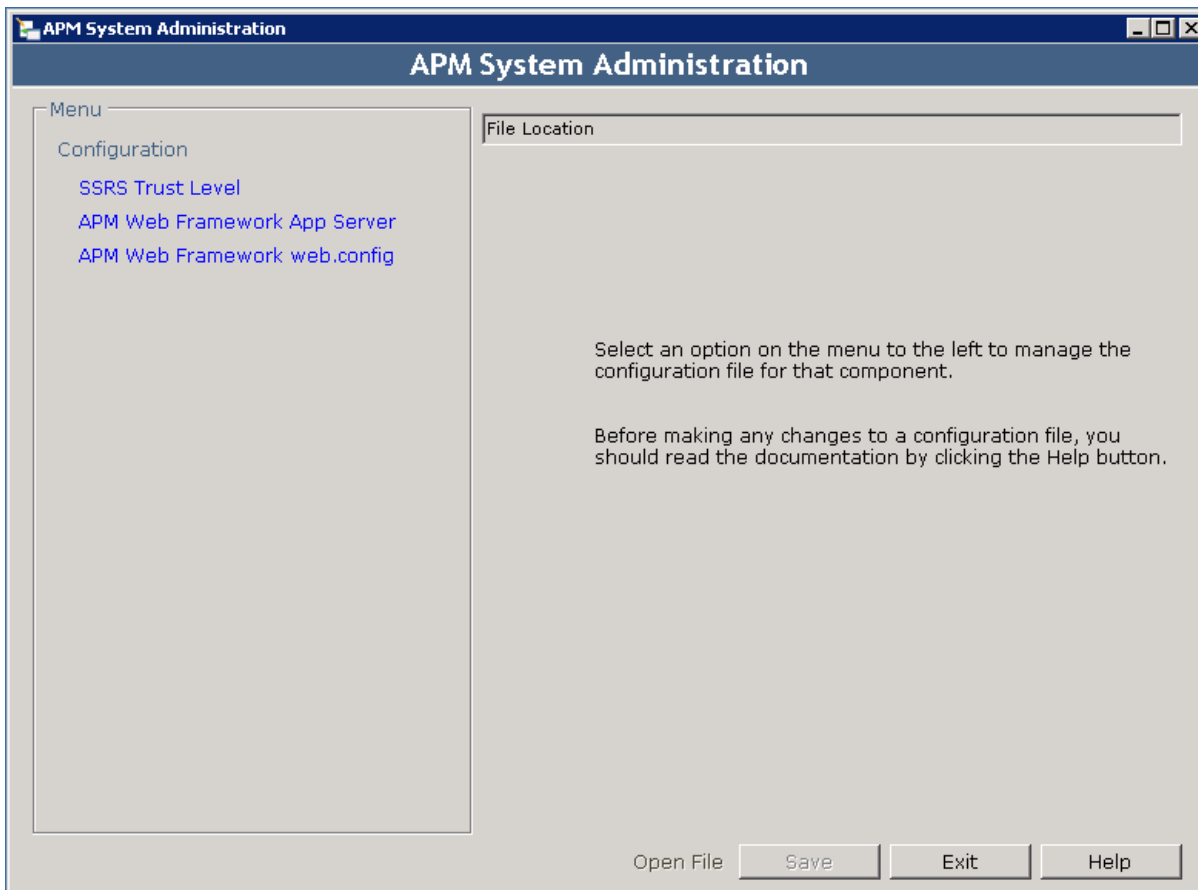
The Meridium APM System Administration tool is installed by the Meridium APM Application Server and Add-ons installer when you install any Meridium APM Application Server or add-on component. You can [use the Meridium APM System Administration tool to modify settings in configuration files that support Meridium APM components](#).

You can access the Meridium APM System Administration tool in the following ways:

- *Automatically from the Meridium APM Application Server and Add-ons installer.* On the last screen of the installer, a check box appears that lets you specify whether or not you want to launch the Meridium APM System Administration tool when the installer closes. If you set the option to *Yes*, when the installer closes, the APM System Administration tool will open automatically.
- *Manually* by clicking the icon on the Start menu on a machine where the Meridium APM Application Server or add-ons component is installed. 

The following image shows an example of what the APM System Administration tool looks like when you access it. Keep in mind that the items on the **Configuration** menu will vary depending upon the components that are installed on the machine where you access the tool.





# Getting Started: Meridium APM System Administration Tool

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## What is the System Administration tool?

The APM System Administration tool is an interface that lets you configure settings that exist in configuration files that are used by Meridium APM components. [Click here to view and collapse an overview of the APM System Administration tool interface.](#)

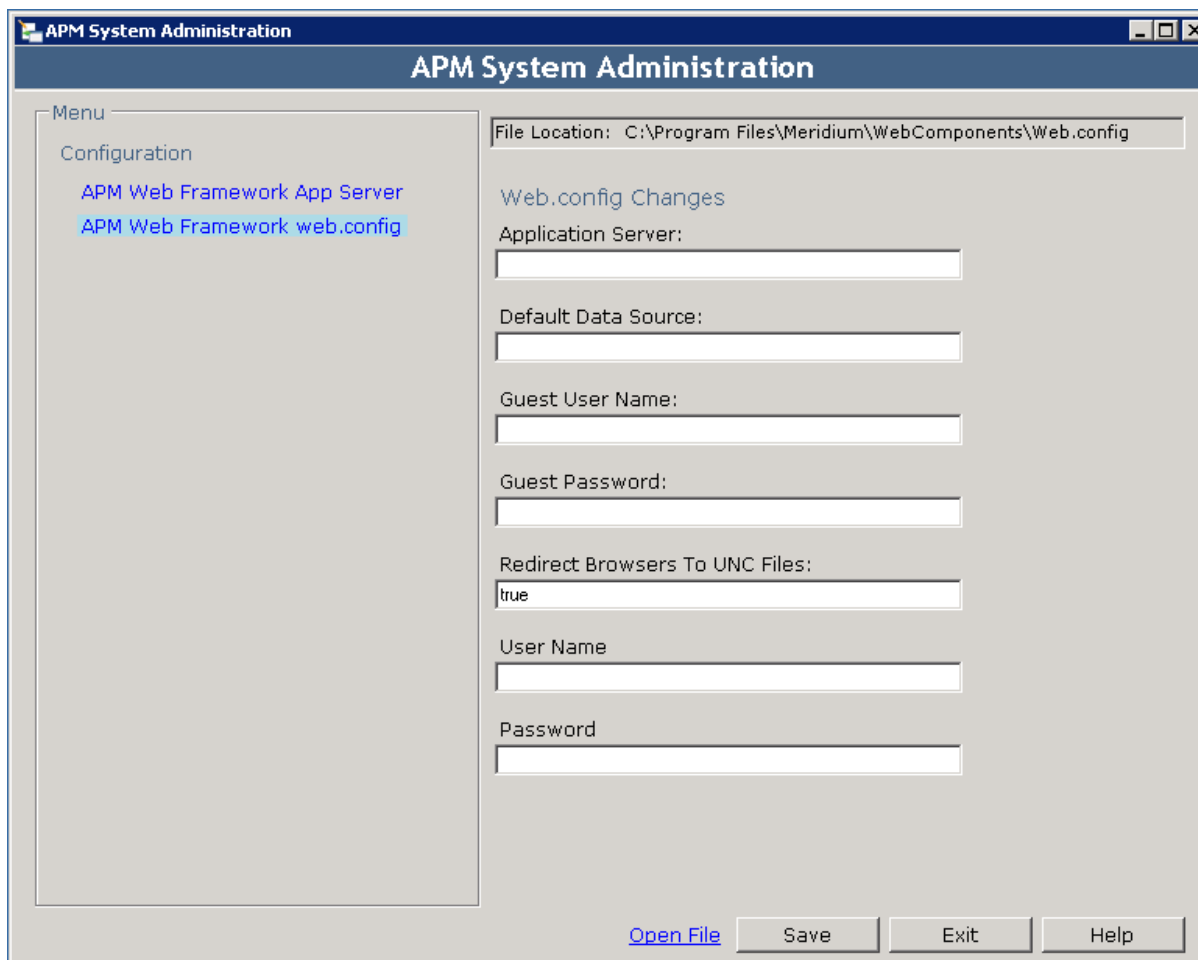
The APM System Administration tool consists of the **APM System Administration** window, which contains the following sections:

- **Configuration:** A menu that contains only the configuration items that exist for the components that are currently installed on the machine on which you are currently working. When you select a configuration item in this menu, the contents of the configuration file appear in the workspace to the right.
- **Workspace:** Displays settings that are available in the file that is selected in the **Configuration** menu. The settings that are displayed for each file is not a comprehensive view of the file. Instead, only the settings that require modifications or entries are displayed from that file. Above the file settings, the file path to the underlying configuration file is displayed. This provides the location and the name of the file.

Below the file settings, the following options appear:

- **Open File:** Opens the underlying configuration file in the appropriate application (e.g., Notepad).
- **Save:** Saves your changes to the underlying configuration file.
- **Exit:** Closes the **APM System Administration** window. If you click this button and you have unsaved changes, a message will appear, asking if you want to save those changes.
- **Help:** Displays the Meridium APM Help system and automatically selects the *Getting Started* topic for the APM System Administration tool.

The following image shows an example of what the Meridium APM System Administration tool looks like. Keep in mind that the links on the **Configuration** menu will vary depending upon the components that are installed on the machine [where you access the tool](#).



## How do I get started?

In the following table, click the configuration item whose corresponding settings you want to modify. Doing so will display the help topic that provides details on working with that file. **You should read the help before modifying the contents of any configuration file.**

The following table lists and describes the configuration items that you can modify using the APM System Administration tool.

**Note:** This tool does not provide an interface for *every* configuration file that exists for Meridium APM components. Therefore, this directory is not a comprehensive list of all the configuration files that you will need to modify in your system. If a configuration file requires modification but an interface for that file is not provided in the APM System Administration tool, the documentation on modifying that file can be found in the documentation for installing, upgrading, and configuring the module or feature that file supports.

Configuration Item Name	Module or Feature it Supports
Sync Services Database	Operator Rounds
Meridium Sync Config	Operator Rounds
APM Web Framework web.config	Meridium APM Web Framework
PDI Service	Process Data Integration

## About License Activation

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License activation determines which modules and products will be available in your Meridium APM system. Except for some Meridium APM Framework Tools and Features, ALL modules require license activation (i.e., they cannot be used until the associated license has been activated). License activation also controls the availability of the Meridium APM Web Framework application, which requires a license in order to be used.

Within individual modules, availability of the following items is controlled by license activation:

- Entity and relationship families.
- Rules Library projects.
- URLs.
- Options on the **Go To** menu in the Meridium APM Framework application.

Other types of content, such as Catalog items, may be available even if the license for the associated module has not been activated. This content will not be functional, however, because it relies upon specific families that must be activated before the associated content can be used.

To activate Meridium APM licenses, you must supply a license file that will be provided to you by Meridium, Inc. with your Meridium APM software distribution. In this documentation, we provide [instructions for activating licenses](#). This documentation assumes that you have already obtained your license file, which is required to complete the activation process. For a list of the modules/features and their corresponding license file, [click here](#).

Note that each license file:

- **Has a customer-specific PIN associated with it.** When you activate licenses, you must supply the PIN that is associated with the selected license file. If the PIN that you specify does not match the PIN in the file, an error message will be displayed, and the licenses will not be activated. The appropriate PIN should have been provided to you when you received the license file.
- **Is valid only for a certain length of time.** You will want to make sure to activate modules within a timely manner *before* your license file expires. If you attempt to [activate licenses](#) using an expired file, an error message will be displayed, indicating that the file has expired, and the activation will not occur.
- **Is version-specific.** If you attempt to activate licenses using a file whose version information differs from the version of the product in which you are performing the activation, an error message will be displayed, and the activation will not occur.

**Note:** Under any of the error conditions described in the preceding list, any modules or products that were active *before* you attempted to load the license file will continue

to be active after the error message is displayed. In other words, these errors will not affect your current activation state. They will simply prevent you from making changes to that state.

For production versions of Meridium APM, after you have activated your licenses, you should be able to continue using the associated modules and products until you upgrade to a new version of Meridium APM. After you upgrade, the licenses will no longer be valid. Any modules that were previously available will no longer be accessible from the **Go To** menu in the Meridium APM Framework application. You will need to obtain a new license file in order to reactivate the licenses on the new version.

If you have been provided with temporary licenses for demo or trial purposes, your licenses will expire after a certain period of time, as determined by your trial agreement. After the licenses have expired, you will no longer be able to log in to the Meridium APM Framework, Meridium APM URL Manager, or Meridium APM Schedule Manager applications. You will, however, be able to log in to the Configuration Manager application so that you can load a new license file.

**Note:** For most modules, license activation results in the content for that module being available immediately. For the SAP Interfaces product, however, the changes will not be immediate; it may take up to one hour for the module and its content to be available. If you want to apply the changes immediately, you can restart IIS on the Meridium APM Application Server.

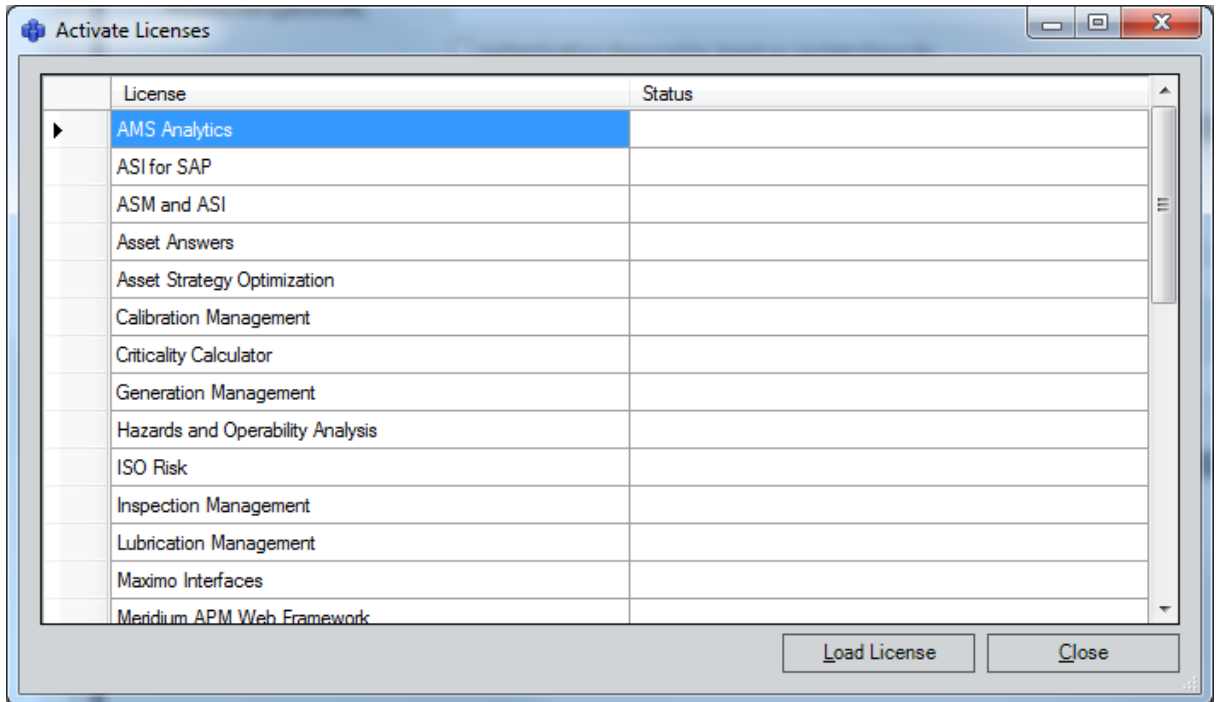
# Activating Licenses

Before you can complete these steps, you must have a license file and a customer PIN. The file must be stored in a location that is accessible from the Meridium APM Configuration Manager application.

To activate licenses in Meridium APM:

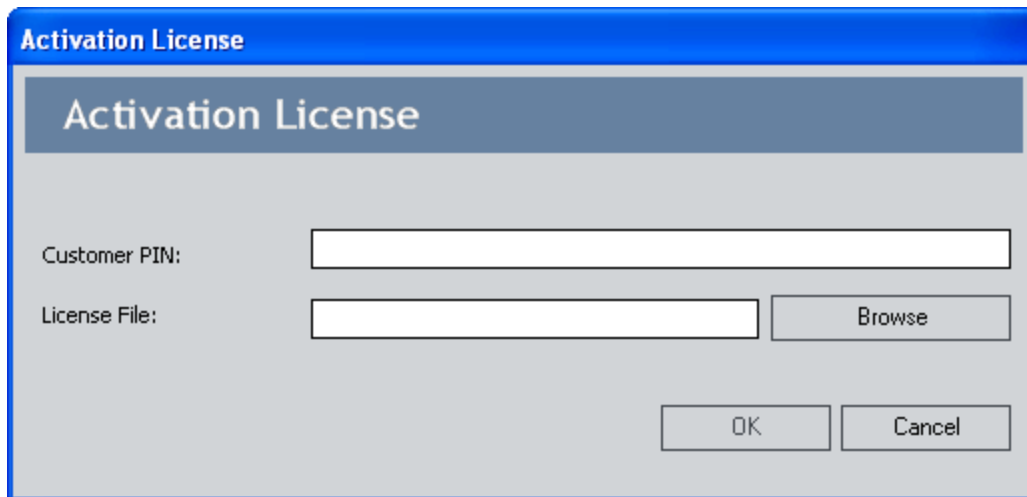
1. In the Configuration Manager, on the main menu, click **Tools**, point to **Global Preferences**, and then click **Activate Licenses**.

The **Activate Licenses** dialog box appears.



2. Click the **Load License** button.

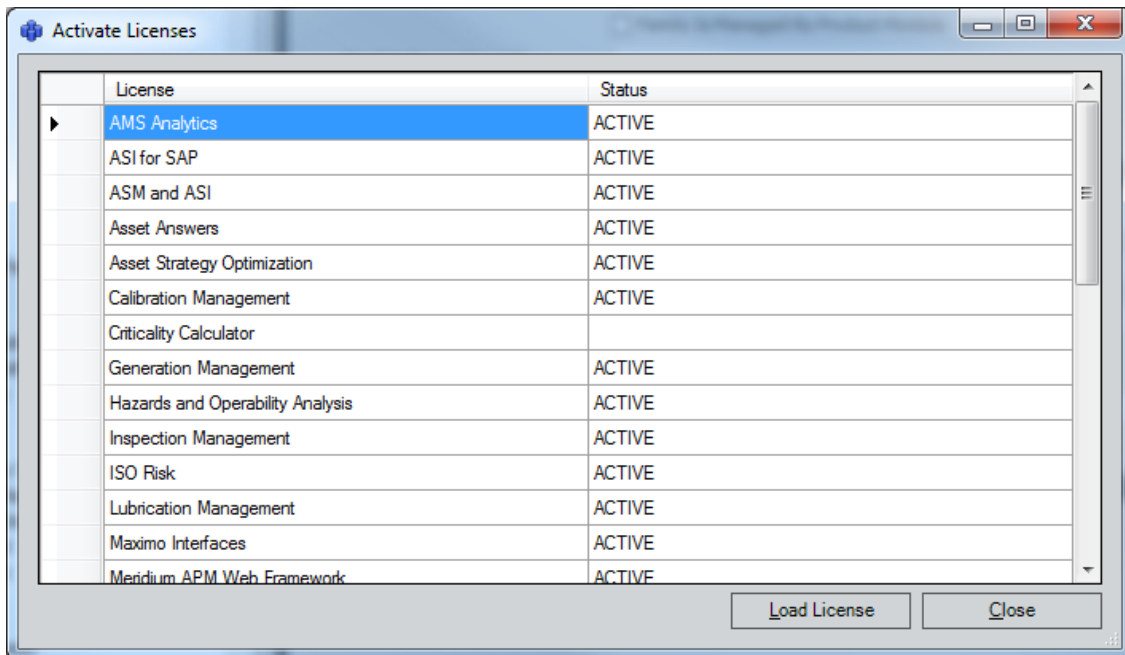
The **Activation License** dialog box appears.



3. In the **Customer PIN** text box, type the PIN associated with the license file that you want to load.
4. To the right of the **License File** text box, click the **Browse** button.  
The **Open** dialog box appears.
5. Navigate to the folder containing the license file that you want to load, select it, and click the **Open** button.  
The **Open** dialog box closes, and the path and file name of the file that you selected are displayed in the **License** text box.
6. Click **OK**.

The Meridium APM system validates the license file and PIN that you entered. If the file and PIN are determined to be valid, the **Activation License** dialog box closes, revealing the **Activate Licenses** dialog box.





For each module that has been successfully activated, the **Status** cell is populated with the text *ACTIVE*.

**Note:** If the license file or PIN are invalid, an error message will be displayed after step 6. The text of the error message will explain the problem that was encountered.

7. After you have reviewed the list to verify that the desired modules and products have been successfully activated, click the **Close** button.

The **Entity Family** and **Relationship Family** tabs are refreshed to display the families associated with that module.

8. At this point, you should compile the database.

## Activating Licensed Modules and Products

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Licenses can then be activated via the Meridium APM Configuration Manager application. To activate your licenses, you will need to supply a license file and PIN that should have been provided with your Meridium APM distribution.

**Note:** Each license file has an expiration date. If you do not activate your licenses before the expiration date in the file, the file will expire, and you will no longer be able to use it.

Consider the following installation and upgrade guidelines related to license activation:

- The version in the license file must match the version of the Meridium APM product. Therefore, licenses should be activated *after* you have installed or upgrade to the version on which you want to activate licenses.
- Because licenses are activated via the Configuration Manager application, before you can activate licensed modules and products, you must install the Configuration Manager application.
- For modules that have module-specific installation steps, you must activate license for that module *before* you perform the associated installation steps.
- Licenses must be activated each time you upgrade to a *new* version of Meridium APM (i.e., a version where one value in the three-digit version number changes). If you activate licenses in one version of Meridium APM and then upgrade to a later version, you will need to re-activate your licenses after the upgrade.

**Note:** Licenses do not require reactivation when you apply a hot fix or service pack to an existing version.

- If you license a new module or product for your *current* version of Meridium APM, you will be provided with an updated license file that you will need to apply to your system. New modules should be activated before you perform any installation steps associated with that module.
- You can [view the current status](#) (active or inactive) via the Meridium APM Configuration Manager and Meridium APM Framework applications.

For production versions of Meridium APM, after you have activated your licenses, you should be able to continue using the associated modules and products until you upgrade to a new version of Meridium APM, in which case you must obtain a new license file and reactivate the licenses. After you upgrade, the licenses will no longer be valid. Any modules that were previously available will no longer be accessible from the **Go To** menu in the Meridium APM Framework application. You will need to obtain a new license file in order to reactivate the licenses on the new version.

If you have been provided with temporary licenses for demo or trial purposes, your licenses will expire after a certain period of time, as determined by your trial agreement. After the licenses have expired, you will no longer be able to log in to the Meridium APM Framework, Meridium APM URL Manager, or Meridium APM Schedule Manager

applications. You will, however, be able to log in to the Configuration Manager application so that you can load a new license file.

## Overview of the Import/Export Metadata Tool

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The Import/Export Metadata tool lets you:

- Export metadata from a Meridium APM data source to a Microsoft Excel or XML file.
- and-
- Import into a Meridium APM data source Meridium APM metadata that is stored in a Microsoft Excel or XML file.

When exporting metadata, you can select all items, some of the items, or, in most cases, items that have been modified during a specified period of time. When importing metadata, you can select all or some of the items in the specified spreadsheet.

The Import/Export Metadata tool has many applications but can be especially useful for manipulating large amounts of metadata. It can also be useful if you need to make changes to metadata in multiple Meridium APM data sources. The Import/Export Metadata Tool allows you to export the metadata from one data source, make the necessary changes, and then import the modified metadata into one or more other data sources.

**Note:** Importing and exporting metadata between multiple data sources must be done in multiple Configuration Manager sessions. For example, you would log in to one data source, export the metadata, log out of the Configuration Manager, then log in to a different data source, and import the metadata.

Export files can also be useful for providing a "snapshot" of the metadata in your database. For example, to see all the privileges that are configured for a particular Security User or Security Group, you could simply export their privileges. To see a full list of all the fields defined for multiple families, you could simply export those families and fields.

**Note:** In most cases, throughout the Meridium APM documentation, we do not provide lists of families, fields, System Codes, and other information that can be obtained easily by exporting the associated metadata. Keep in mind that you can do an export anytime you need to see a snapshot of the metadata in your database.

## Data Types Available for Import and Export

Using the Import/Export Metadata tool in the Configuration Manager, you can import and export metadata for the data types listed in the following table.

Data Type	Notes
Families, Filters, and Fields	<ul style="list-style-type: none"> <li>This data type includes all the family and field metadata for the selected families and any data filters, family reports, and state configurations that exist for those families.</li> <li>The Meridium APM system requires the caption defined for each family and field to be unique. When you import families and fields, if the Meridium APM system determines that a family or field caption is a duplicate of an existing caption, an underscore will be appended to the end of the caption, and a warning will be written to the import log.</li> <li>When you import families and fields, the physical storage for those families and fields will be created automatically.</li> <li>When you try to import a file containing multiple families with State Configurations, a warning message appears, indicating that the file cannot be imported. You can successfully import a State Configuration only when the import file contains only <i>one</i> family.</li> <li>If you export a family whose State Configuration includes a state to which a State Configuration Role is assigned, this assignment will be available in the <i>Roles</i> section of the export file.</li> </ul>
Datasheets	<ul style="list-style-type: none"> <li>When you import a datasheet that already exists in the target data source, the existing datasheet will always be automatically <i>overwritten</i> by the new one.</li> <li><a href="#">Action indicators</a> are not included in the export file for datasheets.</li> <li>If you are exporting a custom-layout datasheet, make sure that you also export the associated system preference.</li> </ul>
Family Rule Projects	None
Rules Library Projects	None
Relationship Definitions	None
Units of Measure and Conversions	None

Data Type	Notes
Unit of Measure Conversion Sets	None
Security Groups and Privileges	<ul style="list-style-type: none"> <li>• Security Groups are exported in alphabetical order. No consideration is given to the hierarchy of the Security Groups during the export. If you import Security Groups from a file that was created by an export, the hierarchy of the imported groups will not match the hierarchy that existed in the original data source.</li> <li>• When you export <i>changed</i> Security Groups and Privileges, groups will be exported only if their group properties or family privileges have been modified. Groups will not be exported if only their membership has changed (i.e., users added or removed).</li> </ul>
Users, Privileges, and Assignments	<ul style="list-style-type: none"> <li>• Exporting Security Users using the <b>All</b> option can take a considerable amount of time.</li> <li>• If you import a Security User with a user ID that is already assigned to a Security User that exists in the system, the Meridium APM system will overwrite the information associated with the existing user with the information stored in the import file, including any user information, group assignments, and family privileges associated with that Security User.</li> <li>• When you export <i>Users, Privileges and Assignments</i> using the <b>Changed</b> option, users will be exported only if their Security User Information has been modified or if their family privileges have been changed at either the user or group level. Security Users will not be exported if only their group membership has changed.</li> </ul>
Strategies, Rules, and Schedules	<p>The Import/Export Metadata tool is not aware of embedded references, such as sub-strategies, existing notifications, or queries that are used by strategy rules. For example, if a strategy rule references another strategy, the referenced strategy will not get exported when you perform an export of the root strategy. The same is true for any queries or datasets that are used as inputs for the strategies and any existing notifications that are used as outputs of the strategy.</p> <p>When importing and exporting strategies, <i>you must select manually</i> to import or export all supporting objects, queries, datasets, notifications, sub-strategies, and any third party components.</p>
System Preferences	<p>When you export a custom-layout datasheet, you must also export the associated system preference, whose preference ID appears in the format <b>[Family ID]-[DatasheetID]</b>, where <b>[Family ID]</b> is the ID of the family for which the custom-layout datasheet is defined and <b>[DatasheetID]</b> is the ID of the custom-layout datasheet.</p>

Data Type	Notes
Metric Views	The Import/Export Metadata tool will allow you to import Metric Views regardless of whether or not the associated Cubes exist. To avoid encountering problems when working with imported Metric Views, you should create all the necessary Cubes before importing the associated Metric Views.
System Code Tables	None
System Codes and References	To import System Codes, the System Code Table to which they belong <i>must</i> exist in the target data source. If the System Code Table does not exist, the associated System Codes will not be imported, and an error message will be written to the import log.
Folders	<ul style="list-style-type: none"> <li>Exporting folders exports only the folder structure, not the folder content.</li> <li>When you import or export a folder, any folder-level permissions that are assigned to that folder will also be imported or exported along with the folder.</li> <li>While main-level personal, public, and baseline folders can be exported, only subfolders within these folders can be imported back into Meridium APM.</li> </ul>
Queries	When you export a query, any saved grid layouts will be exported along with it.
Datasets	None
Graphs	None
Reports	<ul style="list-style-type: none"> <li>When you export a report that contains a subreport, the subreport is not exported automatically. You must export the main report and all of its subreports manually.</li> <li>When you import a report, the Meridium APM system will attempt to publish the report to the SQL Server Report Server. If the report cannot be published to the SQL Server Report Server, the report will still be imported into the Meridium APM database and placed in the appropriate Catalog folder.</li> </ul>
Searches	None
Configured Explorers	None

Data Type	Notes
Associated Pages	<ul style="list-style-type: none"> <li>• All Associated Pages will be exported <i>exactly</i> as they are defined. If the URL parameters contain values that are specific to the source schema (e.g., entity or family keys), the links may not work properly if they are then imported into a different target schema that does not contain those values.</li> <li>• Newly imported Associated Pages cannot be exported in the same session in which the import was done. Before exporting newly imported Associated Pages, you should close and then reopen the Configuration Manager application.</li> <li>• If you attempt to import Associated Pages from a spreadsheet where a row for a subfamily occurs before the family row, the Associated Pages will not be imported successfully. The log, however, will indicate that the import was successful. When you import Associated Pages, be sure that the family exists before the subfamily within the import file.</li> </ul>
<a href="#">Records and Links</a>	<ul style="list-style-type: none"> <li>• Before you can import records and links into families that have just been imported, you must first flush the cache.</li> <li>• Importing a KPI fails to set the proper data definitions for the KPI if the KPI gets its data from a cube.</li> <li>• When you <i>import</i> records and links from an XML file, you can choose to import <i>all</i> the records and links in the file or only some of them. If you choose to import only some of the records, depending upon the version from which the records and links were exported, the Meridium APM system may require you to import <i>all</i> the records and links from the file instead.</li> </ul>
State Configuration Roles	Exporting State Configuration Roles will create a <i>Role Definitions</i> section in the export file.
Dashboards	When you export or import a dashboard, you cannot also automatically export or import the underlying queries that have been used to configure dashboard sections. We recommend that whenever you export or import a dashboard that you also export or import the associated queries. If you import a dashboard into a database where the associated queries do not exist, error messages will be displayed when Security Users attempt to use the dashboard.

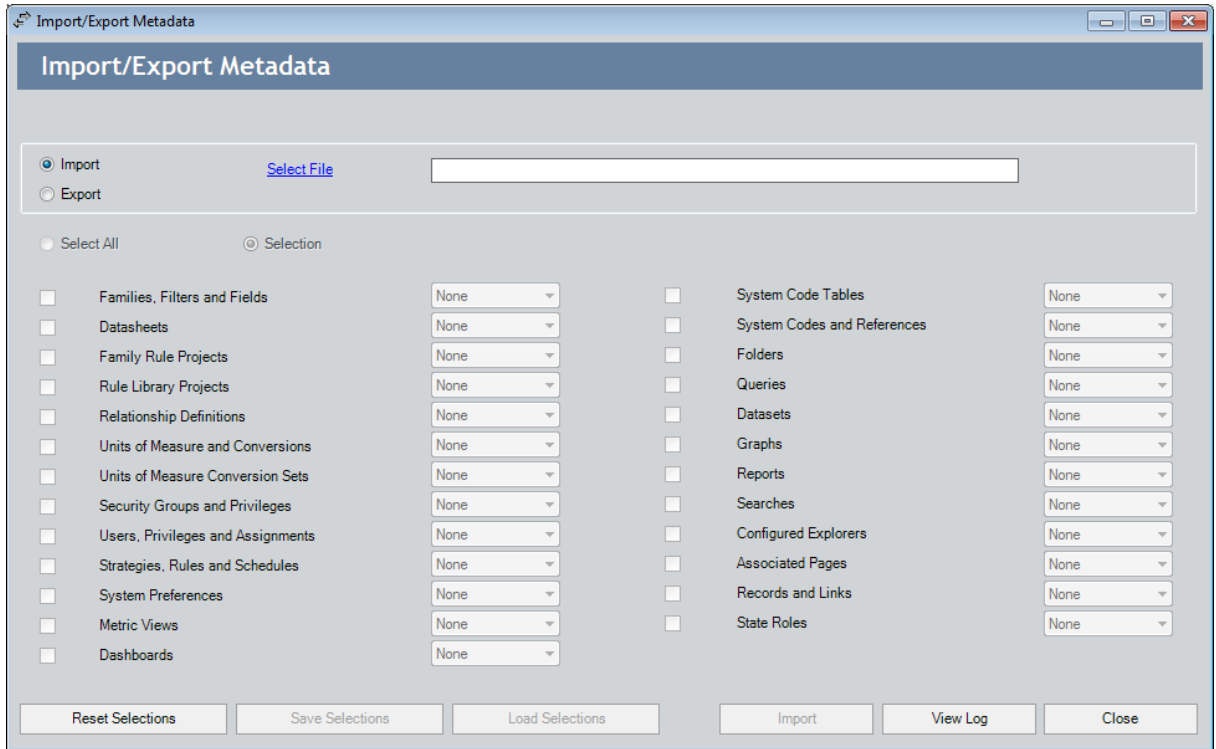


# Accessing the Import/Export Metadata Tool

To access the Import/Export Metadata tool:

- In the Configuration Manager, on the main menu, click **Tools**, and then click **Import/Export Meridium APM Metadata**.

The **Import/Export Metadata** window appears.



# Aspects of the Import/Export Metadata Window

The [Import/Export Metadata window](#) is divided into three main, unlabeled areas.

## Area one

...displays options that let you choose whether you want to [import](#) or [export](#) metadata and select a file. Throughout the documentation we refer to this section as the *file selection area*. The following image shows what the file selection area looks like on the **Import/Export Metadata** window.

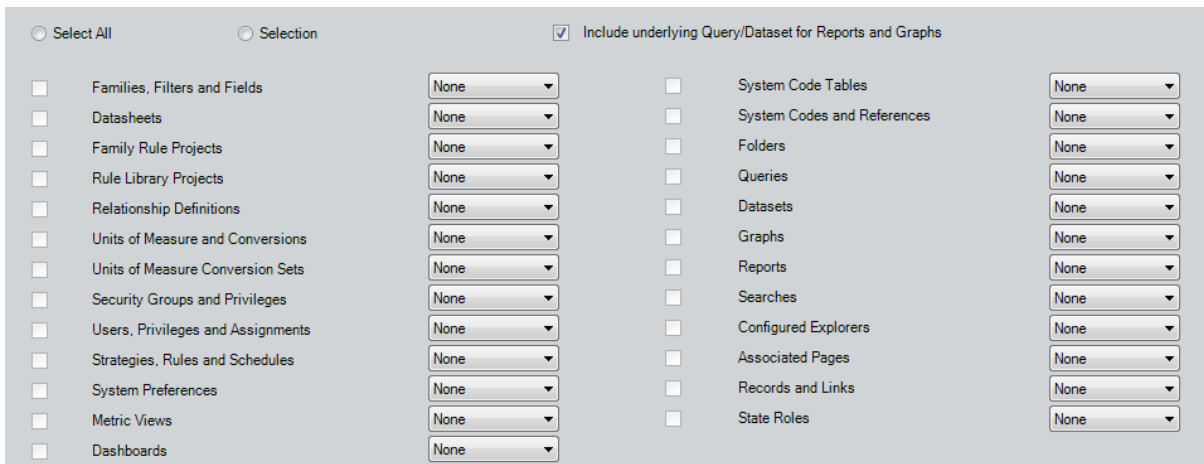


The other areas on the **Import/Export Metadata** window are disabled until you complete the following steps within the file selection area:

1. Select either the **Import** or **Export** option. The **Import** option is selected by default.
2. Specify the file to which you want to export metadata or the file containing the metadata that you want to import, respectively.

## Area two

...contains fields that let you choose [what you want to import or export](#). Throughout this documentation, we refer to this area as the *metadata selection area*. The following image shows what the metadata selection area looks like on the **Import/Export Metadata** window.



For each data type that is supported by the Import/Export Metadata Tool, the metadata selection area contains a check box and a drop-down list. The check is always read-only. Your selection in the list determines whether or not the check box is selected. When you choose at least some items of a given type to [import](#) or [export](#), the check box becomes

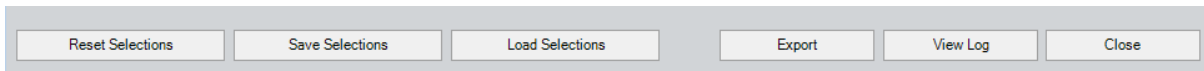
selected automatically. You can clear the check box by selecting the **None** option for a given data type.

The following list contains an explanation of the options that appear above the metadata type options in the metadata selection area:

- **Select All:** When you select this option, the Meridium APM system selects the **All** option for all the metadata types automatically.
- **Selection:** This option is selected automatically after you select at least one metadata type to import or export.
- **Include underlying Query/Dataset for Reports and Graphs:** Indicates whether or not you also want to export the underlying queries or datasets when you export reports or graphs. This check box appears only if the **Export** option is selected in the first area on the **Import/Export Metadata** window, and it is selected automatically. You can clear this check box to indicate that you do *not* want to export the underlying queries or datasets when you export reports or graphs.

## Area three

...appears at the bottom of the window and contains buttons that let you perform actions based on your selections in areas two and one. Throughout the documentation, we refer to this area as the *options area*. The following image shows what the options area looks like on the **Import/Export Metadata** window.



**Note:** The preceding image shows the **Export** button. If you select the **Import** option in area one, however, the **Export** button in area three will be replaced by the **Import** button.

The following list contains an explanation of each button that appears in the options area:

- **Reset Selections:** [Clears any metadata selections](#) that are currently specified in the metadata selection area. This button is always enabled.
- **Save Selections:** Displays the **Save As** window, where you can specify a file and location to which you want to save your metadata import or export selections. You can use this file to load these selections again, so that you do not have to manually select your settings the next time you want to perform the same operation.
- **Load Selections:** Displays the **Open** window, from which you can select a file to which you saved previous selections, and then load those selections on the **Import/Export Metadata** window automatically.
- **Export:** Exports the selected metadata from the Meridium APM database to the file specified in the file selection area. This button appears only if the **Export** option is selected in the first area.
- **Import:** Imports into the Meridium APM database the contents of the file specified

in the file selection area. This button appears only if the **Import** option is selected in the file selection area.

- **View Log:** Displays the **Import/Export Results Log** dialog box, which contains the [log for the Import/Export Metadata tool](#). This button is always enabled.
- **Close:** Closes the **Import/Export Metadata** window. This button is always enabled.

## Exporting Metadata

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Exporting metadata is a process where information is extracted from the current Meridium APM data source and saved to an XML or Microsoft Excel file. Exporting metadata does not change the database in any way. It simply provides you with a snapshot of the selected metadata as it exists at the time of the export.

**To export data from the Meridium APM database to a Microsoft Excel or XML file:**

1. In the Configuration Manager, on the [Import/Export Metadata window](#), click the **Export** option at the top of the window.
2. Click the **Select File** link.  
The **Save As** dialog box appears.
3. Navigate to the folder where you want to save the export file.
4. In the **File name** text box, type a name for the file.

**Note:** The file name must be unique within the selected folder. If you specify a file name that already exists, you will not be given the option to overwrite it. Instead, you will be instructed to choose a unique file name.

5. In the **Save as type** list, choose the type of file you want to create. You can select:
  - **Microsoft Excel (\*.xls)**
  - **Microsoft Excel 5.0 (\*.xls)**
  - **XML (\*.xml)**
6. Click the **Save** button.  
The **Save As** dialog box closes, and the path and file name that you specified appear on the **Import/Export Metadata** window in the text box to the right of the **Select File** link.
7. Choose what you want to export.
  - If you want to export all the metadata in the database, click the **Select All** option.  
-or-
  - If you want to export only some information in the database, click the **Selection** option, and then [make the desired selections](#).  
-or-
  - If you want to load selections that you saved from a previous export, click the **Load Selections** button, and [load the desired selections](#).

**Note:** The more metadata you select to export in a single operation, the longer the export will take. We recommend that you not use the **Select All** option, particularly if your database is large and contains a lot of data. If you need to export your entire database, you should perform multiple exports, [selecting a portion of the metadata](#) each time.

8. If you chose to export reports or graphs and you want to export the underlying queries and datasets, select the **Include underlying Query/Dataset for Reports and Graphs** check box.
9. If you want to [save your selections](#), click the **Save Selections** button, and complete the steps necessary to save your selections.
10. Click the **Export** button.

A dialog box appears, indicating the status of the export.

When you begin the export, your pointer will become an hourglass icon to indicate that the system is working. As long as the hourglass appears, the export is processing. The export may take a while, particularly if you are exporting a large amount of metadata. In addition, some items, such as System Preferences and System Codes and References can take longer to export than others. You will know that the export is complete when the hourglass disappears, the blue status indicator reaches the end of the status bar, and the **Close** button becomes enabled.

When the export is complete, a dialog box appears, asking if you want to save a log of the export results to an external file.

11. If you do not want to save the log, click the **Close** button.

-or-

If you want to save the log, click the **Save Log** button. The remaining instructions assume that you have clicked the **Save Log** button.

The **Save As** dialog box appears.

12. Navigate to the location where you want to save the file, type a name for the file, and click the **Save** button.

The file is saved.

At this point, the export file that you specified has been created in the location that you selected. The **Import/Export Metadata** window remains open so that you can:

- [View a log of the export](#) by clicking the **View Log** button. This will show the successful and unsuccessful results of the export.
- Perform an [import](#) or perform another export.

## About Importing Metadata

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Meridium APM metadata can be imported into any Meridium APM data source, either the one from which it was exported or a different one.

- If you import the metadata into a data source where that *same* metadata already exists, the [action indicators in the import](#) file will tell the Meridium APM system what to do with the metadata.
- If you import metadata into a data source in which that metadata does not already exist, you will need to consider any dependencies for the metadata you are importing. For example, you cannot import permissions for a Security User until that Security User exists in the target database. If you attempt to import metadata without the necessary prerequisites, the import operation will fail and error messages will be written to the import log to explain the reason for the failure.

## Performing the Import Procedure

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To import metadata into a Meridium APM data source:

1. In the Configuration Manager, on the [Import/Export Metadata window](#), in the file selection area, click the **Import** option.

2. Click the **Select File** link.

The **Open** dialog box appears.

3. Navigate to the folder that contains the **.XLS** or **.XML** file from which you want to import data and select the file.

**Note:** When you export Meridium APM metadata, the Meridium APM system may create files in addition to the main metadata file and store them in a separate subfolder. When you import the metadata back into Meridium APM, these files must be available. Make sure that the subfolder created by the export and its contents are in the same folder as the file you select for the import.

4. Click the **Open** button.

The **Open** dialog box closes, and the path and file name that you selected appear on the **Import/Export Metadata** window in the text box to the right of the **Select File** link. Additionally, all of the metadata drop-down lists become enabled.

5. In the list to the right of the metadata type that you want to import, select the option that corresponds to what you want to import:
  - If you want to import all the metadata in the file, select the **Select All** option.
  - If you want to import only some of the metadata in the file, select the **Selection** option, and then [make the desired selections](#)

**CEHint:** If you want to load selections that you saved from a previous import, click the **Load Selections** button in the options area, and [load the desired selections](#). In addition, if you want to [save your selections](#), click the **Save Selections** button in the options area, and complete the steps necessary to save your selections.

6. Click the **Import** button to import the selected data.

A dialog box appears to indicate the status of the import. When the import process is complete, a dialog box appears, asking if you want to save a log of the import results to an external file.

7. If you do not want to save the log, click the **Close** button.

-or-

If you want to save the log, click the **Save Log** button. The remaining instructions assume that you have clicked the **Save Log** button.



The **Save As** dialog box appears.

8. Navigate to the location where you want to save the file, type a name for the file, and click the **Save** button.

The file is saved.

At this point, the import is complete, and all the information that you selected from the source file now exists in the Meridium APM database. The **Import/Export Metadata** window remains open so that you can:

- [View a log of the import](#) by clicking the **View Log** button.
- Perform another import or do an [export](#).

**Note:** If you import metadata from an .XLS file and then try to open the spreadsheet in Microsoft Excel after the import is complete, an error may be displayed and the spreadsheet may not open. If this occurs, simply close the Configuration Manager application and check to make sure that the Excel.exe process is no longer running. You should then be able to open the file in Microsoft Excel.

## Making Selections for an Export

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When you export Meridium APM metadata, you can choose which items of each supported [data type](#) to export. You can choose any combination of any data types you wish. Keep in mind, however, that the more data you choose to export in a single operation, the longer the export will take. Large exports can take a considerable amount of time.

Note also that if you are exporting data to a Microsoft Excel file, there is a limit to the number of rows allowed by Microsoft Excel. If your export will result in more than about 67,000 rows of data, you should perform more than one export operation and use your export selections to export the data in parts.

For each data type, you can select one of the following options from the associated list box:

- **None:** Specifies that none of the information in the category will be exported. This is the default selection for each data type. If you do not want to export any items of a given data type, simply accept the default selection, **None**.
- **All:** Specifies that all the items of that data type will be exported. For example, if you choose **All** for **Families, Filters, and Fields**, ALL families, filters, associated reports, and fields in the database will be exported.
- **Some:** Lets you specify that only *some* of the items of a given data type exported. When you select this option, a selection dialog box appears, where you can [choose which specific items](#) to import or export. An alternate selection tool appears when you choose to export some [Records and Links](#).
- **Changed:** Specifies that items that have been modified within a certain date range will be exported. When you select this option, the **Select the Date Range** dialog box appears, where you can [select a date range](#) for the export. Note that:
  - Exporting Changed Security Users or Groups does not export the users or groups whose *privileges* have been changed. The **Changed** option selects only the users and groups that were added new or whose properties (e.g., description or caption) have been modified. Similarly, if the group assignments of Security Users have changed, they are not exported when the **Changed** option is selected. The same is true for all categories where multiple objects are available.
  - When you choose to export datasheets that have been modified, the Meridium APM system will export only the datasheets in which the data-sheet ID, Default Caption, Description, Default designation, or Custom Form setting has changed within the selected period of time. The Import/Export Metadata tool does not recognize changes to the sections within datasheets (e.g., adding fields, deleting fields, reorganizing fields, adding sections, deleting sections, or modifying captions). (cqWT00026274)

## Making Selections for an Import

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When you import Meridium APM metadata from a file, you can choose which items of each supported [data type](#) within the file to import. You can choose to import all or only some of the data in the file, and you can choose any combination of any data types you wish. For each data type, you can select one of the following options from the associated list box:

- **None:** Specifies that none of the metadata of that type will be imported. This is the default selection for each item.
- **All:** Specifies that all the metadata in the file for that data type will be imported. For example, if you select All in the **Families, Filters, and Fields** list, ALL families, filters, and fields in the file will be imported.
- **Some:** Specifies that only some of the metadata in the file for a given data type will be imported. When you select this option, a selection dialog box appears, where you can choose exactly what to import.

**Note:** When you choose to import a report or graph, you will also need to select the associated query or dataset. It will not be selected automatically.

## Selecting Changed Items

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When you export Meridium APM metadata, you can choose to export items that were modified within a specified date range. This option is available for the following data types:

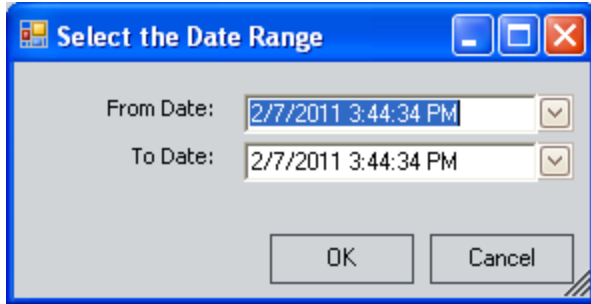
- Families, Filters, and Fields
- Datasheets
- Family Rule Projects
- Rule Library Projects
- Relationship Definitions
- Security Groups and Privileges
- Users, Privileges, and Assignments
- Strategies, Rules, and Schedules
- System Preferences
- Metric Views
- System Code Tables
- System Codes and References
- Folders
- Queries
- Datasets
- Graphs
- Reports
- Searches
- Configured explorers
- Dashboards

The following instructions provide an example of how to export changed Families, Filters, and Fields. You can use these instructions to export metadata for any data type where the **Changed** option is available.

### To select changed Families, Filters, and Fields to export:

1. In the Configuration Manager, on the [Import/Export Metadata window](#), in the list to the right of the **Families, Filters, and Fields** data type, select **Changed**.

The **Select the Date Range** dialog box appears.



2. In the **From Date** text box, modify the default date and time (the current date and time) to specify the start date and time of the desired period.
3. In the **To Date** text box, modify the default date and time (the current date and time) to specify the end date and time of the desired period.
4. Click **OK**.

The date and time range is saved and will be applied when you perform the export.

## Selecting Some Items to Import or Export

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When you export Meridium APM metadata, you can choose to export all the metadata of a given data type or only some of that metadata. Similarly, when you import Meridium APM metadata, you can choose to import all the metadata in the file that is associated with a given data type or only *some* of that data. In either case, you can choose exactly what to export or import using the fields in the selection area of the **Import/Export Metadata** window.

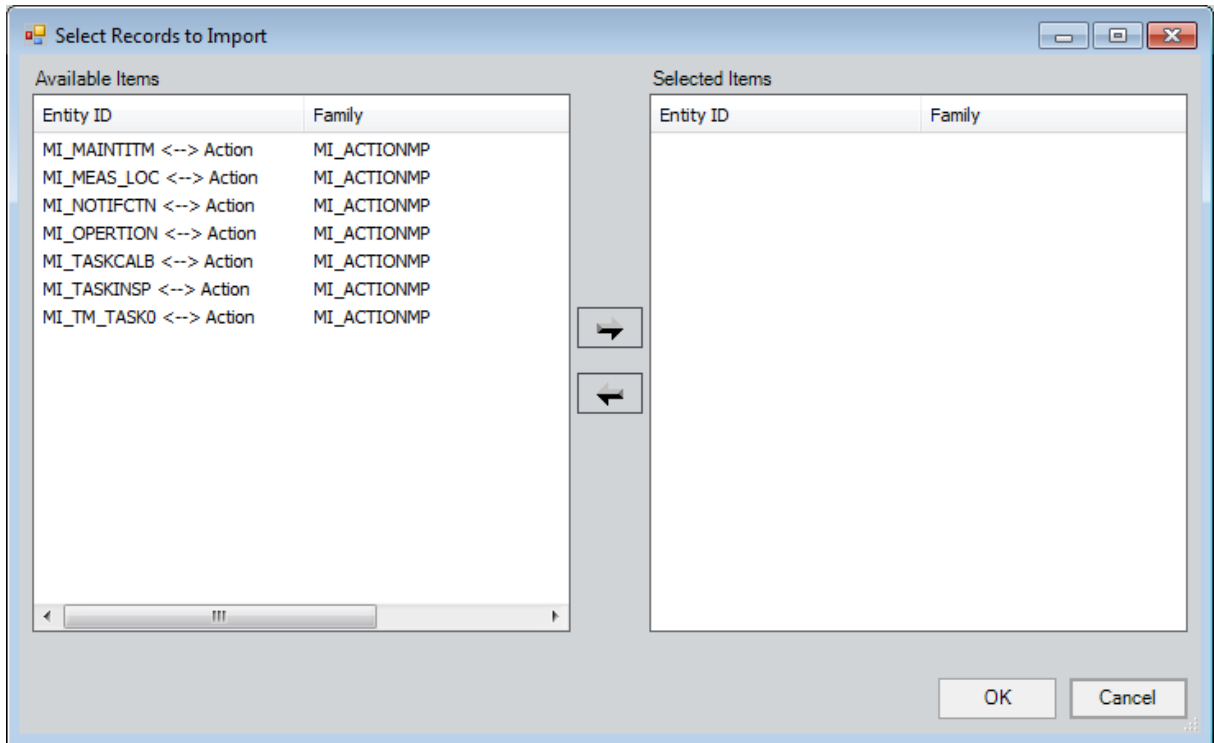
The following instructions provide an example for importing or exporting only some of the items associated with a given data type using exporting Families, Filters, and Fields. You can use these instructions to make selections for any data type except for importing or [exporting Records and Links](#), which requires you to follow different procedures.

### To select Some items to import or export:


1. Access the [Import/Export Metadata window](#).
2. Select either the **Import** or **Export** option, depending upon the operation that you want to perform, and then specify the corresponding file (via the **Select File** link).  
The path to the specified file appears in the text box to the right of the **Select File** link.
3. In the metadata selection area, on the menu to the right of the metadata type that you want to import or export, select **Some**.

The **Select <Data Type> to <Import/Export>** window appears, where **<Data Type>** is the metadata type that you selected, and **<Import/Export>** is either *Import* or *Export*, depending upon which operation you are performing. For example, the following image shows what this window looks like when you select to import some records and links.

## Selecting Some Items to Import or Export

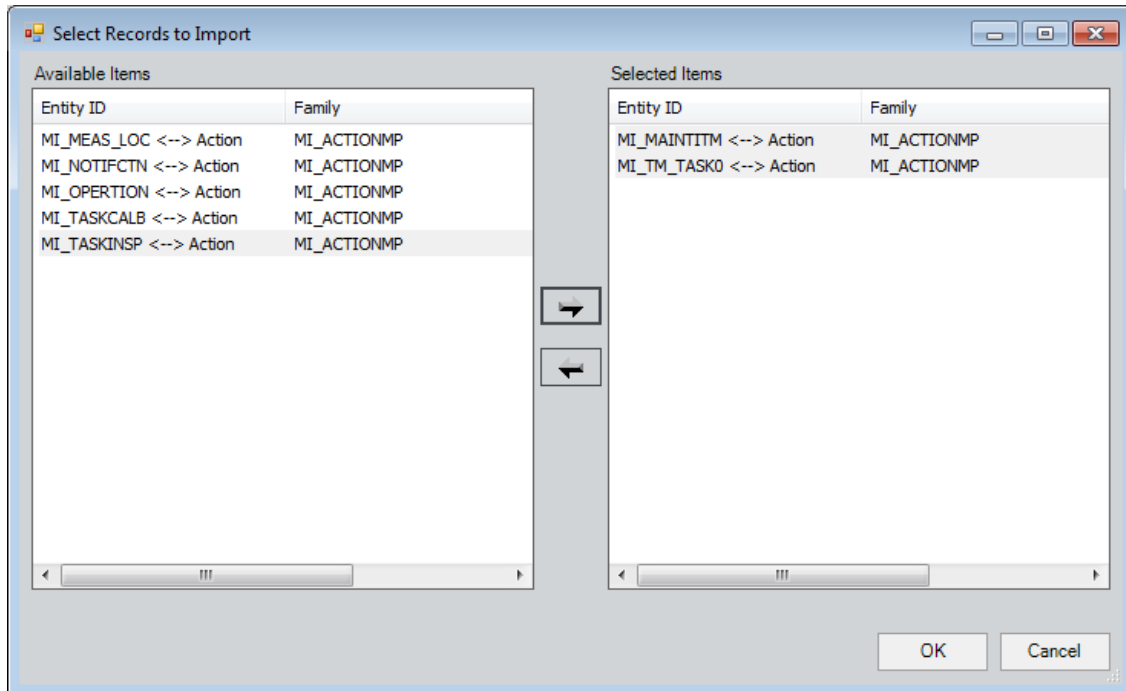



The **Available Items** list on the left displays a list of all the items for a given data type that are available for selection. In this example, the list displays all the records *in the current data source*. When you perform an import, the list contains all the items associated with the selected data type *in the specified file*. If there are *no* items of a given data type in the current data source (for an export) or in the file (for an import), the list on the left will be empty. The specific content of the list should be self-explanatory based on the data type and whether you are performing an import or an export.

4. In the list on the left, for each item that you want to select, highlight the row containing that item, and then click the  button.

The selected items appear in the list on the right.

## Selecting Some Items to Import or Export



**Note:** If you need to remove selections from the list on the right, highlight the row(s), and click the  button.

5. After the **Selected Items** list contains all the items that you want to import or export, click **OK**.  
The selection dialog box closes, and your selections are saved.
6. Click the **Import** or **Export** button, according to the operation that you want to perform.  
The specified content is processed accordingly.



## Exporting Records and Links

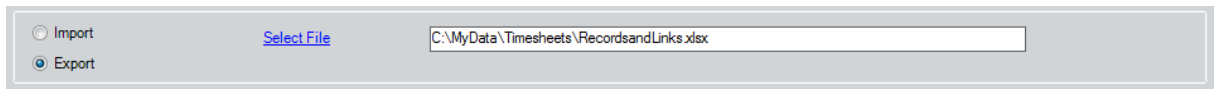
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When you export records, only existing links to successor records are also exported with the records. If a relationship family includes fields, any links between records that use that relationship family will not be exported. When the records and links are exported, one file will be created for each family for which you exported records.

### To export Records and Links:

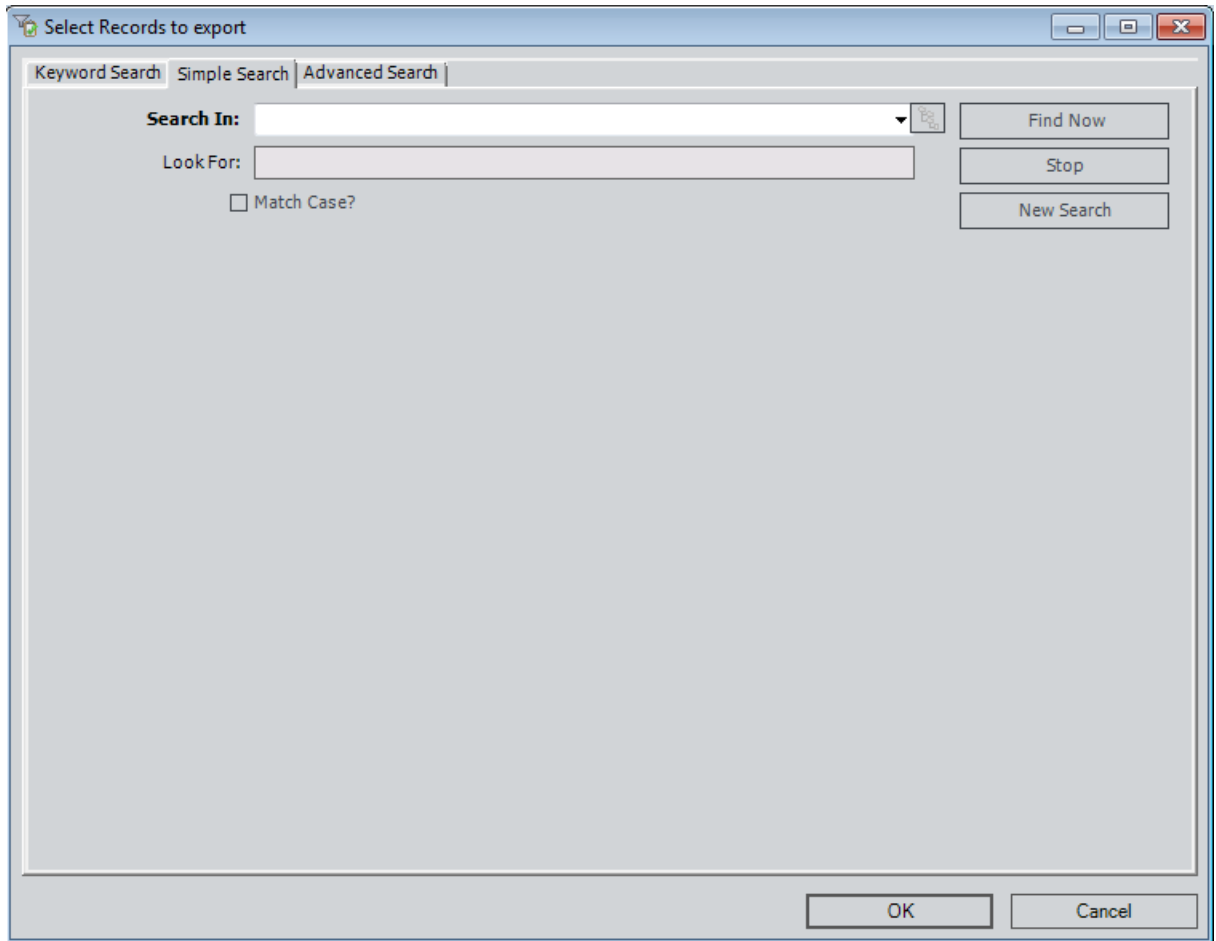
1. [Access the Import/Export Metadata window.](#)
2. Select the **Export** option, and specify the file to which you want to export the records and links (via the **Select File** link).

The path to the selected file appears in the text box to the right of the **Select File** link.



3. In the metadata selection area, in the list to the right of the **Records and Links** option, select the **Some** option.

The **Select Records to export** window appears and displays the Search Tool.



4. Perform a search for the records that you want to export.

**Note:** All the records returned by your search will be exported by default. You can limit which records will be exported by using the Advanced Search and specifying criteria that return a smaller, more specific set of search results. If you are trying to export more than 1,000 records (i.e., the default number of records returned), you should change the page size to include the additional records in the export operation.

5. Click **OK**.

The **Select Records to export** window closes, and your selections are saved.

6. Click the **Export** button.

The specified records are exported. At this point, you can [view the export log](#) and [view the export spreadsheet](#) (if you exported to a Microsoft Excel file).

## Saving Your Import or Export Selections

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When you perform an [import](#) or an [export](#), you can save your selections so that they can later be [loaded](#) and reused.

To save your import or export selections for reuse:

1. In the Configuration Manager, after making selections for an [import](#) or an [export](#), at the bottom of the **Import/Export Metadata** window, click the **Save Selections** button.

The **Save As** dialog box appears.

2. Navigate to the folder where you want to save the selections file.
3. In the **File name** text box, type a name for the file that you want to create. The only available file type is XML.
4. Click the **Save** button.

An XML file containing the import or export selections is created and saved to the specified location.

## Loading Saved Import or Export Selections

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If you have [saved import or export selections](#) from a previous import or export, you can load those saved selections and use them to perform a new import or export.

To load saved selections for performing an import or export:

1. In the Configuration Manager, on the [Import/Export Metadata window](#), after choosing the desired [Import option](#) or [Export option](#) and specifying the import or export file, click the Load Selections button.

The **Open** dialog box appears.

2. Navigate to the file containing the selections that were saved from a previous import or export.
3. Select the file, and click the **Open** button.

The selections are loaded from the file, and the selections area of the **Import/Export Metadata** window is populated accordingly.

## About the Excel File

When you export Meridium APM metadata, you have the option of exporting it to a Microsoft Excel or XML file. When you choose to export data to a Microsoft Excel file, the Meridium APM system creates a Microsoft® Excel spreadsheet file (.XLS) containing the [metadata that you chose to export](#).

**Note:** Microsoft Excel does not need to be installed on the workstation where the export is performed. Microsoft Excel is needed, however, if you want to modify the file in any way.

The specific content of the spreadsheet will depend upon what you chose to export. Every spreadsheet will contain an **Information** worksheet, which contains general information about the export operation, including:

- **MERIDIUM\_VERSION:** The Meridium APM version used to perform the export.
- **EXPORT\_CREATION\_DATE:** The date and time that the export operation was performed.
- **USER\_ID:** The user ID of the user who performed the export.
- **USER\_NAME:** The name of the user who performed the export.
- **MERIDIUM\_DATASOURCE:** The name of the Meridium APM data source on which the export was performed.

In addition to the **Information** worksheet, one or more worksheets will appear for every data type that you chose to export. For example, the following figure shows a spreadsheet created from the export of **Datasheets** and **Queries**.

	A	B	C	D	E	F	G	H	I
1	DATASHE	DATASHE	DATASHE	DATASHE	DATASHE	DATASHE	DATASHE	DATASHE	DATASHE
2	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_ID	Asset Ider	1	Value(s)<*
3	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_D	Asset Ider	1	Value(s)<*
4	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_T	Asset Ider	1	Value(s)<*
5	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_M	Asset Ider	1	Value(s)<*
6	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_I	Asset Ider	1	Value(s)<*
7	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_C	Asset Ider	1	Value(s)<*
8	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_S	Asset Ider	1	Value(s)<*
9	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_M	Asset Ider	1	Value(s)<*
10	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_S	Asset Ider	1	Value(s)<*
11	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_S	Asset Ider	1	Value(s)<*
12	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_S	Asset Ider	1	Value(s)<*
13	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_A	Asset Ider	1	Value(s)<*
14	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_D	Asset Ider	1	Value(s)<*
15	Actuator	Actuator	Actuator<*	DEFAULT	True	ASSET_S	Asset Ider	1	Value(s)<*
16	Actuator	Actuator	Actuator<*	DEFAULT	True	AISCACT_	Asset Ider	1	Value(s)<*
17	Actuator	Actuator	Actuator<*	DEFAULT	True	AISCACT_	Asset Ider	1	Value(s)<*

**Note:** Some data type selections will result in the creation of more than one worksheet. For example, when you export **Families, Filters, and Fields**, four worksheets will be created: **Families, FamilyDataFilters, FamilyReports, and Fields**.

The content of each tab will be specific to that data type. Each column in the spreadsheet will contain a header with a name that indicates what type of data the column contains. The column header names should be self-explanatory for each data type, provided that you are familiar with that data type.

## About the XML File

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As an alternative to exporting metadata to a Microsoft Excel file, you can export it to an XML file. The XML file format is provided because it offers more flexibility with respect to data manipulation. The Microsoft Excel format provides a more user-friendly facility for viewing and modifying metadata. Depending upon what you need to do with the export file, XML may be the preferred option.

The XML file contains the same [information that is included in the Microsoft Excel file](#) but in a different format. Instead of being formatted into columns and rows, the metadata is formatted with XML tags. To interpret the file, you must be familiar with XML. As with the Microsoft Excel format, to interpret the XML export file, you will need to be familiar with the data type that was exported. Additionally, being familiar with the Microsoft Excel file for a particular data type should help you interpret the XML file for the same data type.

If you are familiar with exported Microsoft Excel files and you have a basic understanding of XML, you should be able to interpret the exported XML file.

## About Action Indicators

Depending upon which type of data you export, the export file may contain one or more action indicators. In a Microsoft Excel file, the action indicators appear in the **ACTION\_INDICATORS** column. In an XML file, action indicators appear within the **<ACTION\_INDICATORS>** tag.

Action indicators tell the Meridium APM system what action to take when metadata is *imported*. When you export metadata, any item that requires an action indicator for an import will be assigned a default value. The value will be used only when the metadata is imported back into Meridium APM. If you want to change the default action, you can modify the value in the export file before importing the data into Meridium APM.

If the ACTION\_INDICATOR tag or column contains only one [value](#), that value applies to the entire item. If the ACTION\_INDICATOR contains more than one value, then each value corresponds to each property (column or tag) associated with that item. For example, the following figure shows a portion of an export spreadsheet created from exporting datasets.

	A	B	C	D	E	F
1	DATASET_ID	DATASET_DE	DATASET_CATAL	DATASET	DATASET_FILE_NM	ACTION_INDICATORS
2	REG Help Dataset	This is an autor	Personal\Datasets	autouser	REG Help Dataset-27547	IU IU IU IU IU
3	REG GRPH AND RPT	This is an autor	Personal\Datasets	autouser	REG GRPH AND RPT CF	IU IU IU IU IU
4	RM General Reliability Dataset		Personal\Datasets	autouser	RM General Reliability De	IU IU IU IU IU
5	autoDataset	This is an autor	Personal\Datasets	autouser	autoDataset-2812204.mid	IU IU IU IU IU
6	QA DATASET BAR DELIMITER		Public\Meridium\Modules\Rel		QA DATASET BAR DELI	IU IU IU IU IU
7	QA CU_1 Query		Public\Meridium\Modules\Rel		QA CU_1 Query-9000000	IU IU IU IU IU
8	QA TXT Query		Public\Meridium\Modules\Rel		QA TXT Query-90000000	IU IU IU IU IU
9	QA DATASET BAR DELIMITER2		Public\Meridium\Modules\Rel		QA DATASET BAR DELI	IU IU IU IU IU
10	QA DATASET BAR DELIMITER4		Public\Meridium\Modules\Rel		QA DATASET BAR DELI	IU IU IU IU IU
11	QA DATASET BAR DELIMITER3		Public\Meridium\Modules\Rel		QA DATASET BAR DELI	IU IU IU IU IU
12	QA DATASET BAR DELIMITER5		Public\Meridium\Modules\Rel		QA DATASET BAR DELI	IU IU IU IU IU
13	Test		Public\Meridium\Modules\Rel		Test-900000000077.mids	IU IU IU IU IU
14	QA RCM-CU-BL-01		Public\Meridium\Modules\Rel		QA RCM-CU-BL-01-90000	IU IU IU IU IU
15	Test_Bar		Public\Meridium\Modules\Rel		Test_Bar-900000000085.i	IU IU IU IU IU
16	Test12		Public\Meridium\Modules\Rel		Test12-900000000089.mii	IU IU IU IU IU
17	New Query		Public\Meridium\Modules\Rel		New Query-90000000029	IU IU IU IU IU

The **ACTION\_INDICATORS** column contains five values. The first value specifies the action to take on the property in the first column. The second value specifies the action to take on the property in the second column, and so on. Similarly, in the XML file, the **<ACTION\_INDICATORS>** tag would also contain five values, each of which would correspond to a specific item property.



## Possible Values for Action Indicators

---

The value of an action indicator tells the Meridium APM system what to do with a given item or item property when metadata is *imported* into Meridium APM. The values of the action indicators are specific to the data type. The following lists contain the valid values for action indicators and descriptions of how the values are interpreted during an import.

### Values used by most data types:

- **IU** (Insert or Update): Insert the item if does not exist or update it if it does already exist.
- **IO** (Insert Only): Insert the item if it does not exist. If the item already exists, do not update it.
- **UO** (Update Only): Update the item if it already exists. If the item does not exist, do not insert it.

### Values used for rule projects and code items:

- **MERGE**: Merge the item with the existing project.

**Note:** MERGE is a valid action for rule projects only. It is not valid for code items.

- **IGNORE**: Ignore the project when doing an import. In other words, make NO change to the data source.
- **INSERTONLY**: Insert the item if it does not exist. If the item already exists, do not update it.
- **DELETE**: Delete any existing item.
- **REPLACE**: Replace any existing item with the incoming item.

**Note:** Exported family rule projects contain the **RULE\_PROJ\_GENERATE\_CODE** column, the value of which determines whether the rule code is generated automatically when you [import](#) the project into Meridium APM. By default, this column is set to **False** for exported family rule projects. You can set the column to **True** if you want the rule code to be generated automatically during the import process. Note that this column in the Microsoft Excel spreadsheet must be formatted as Text and is case sensitive (i.e., **False** or **True**, not **FALSE** or **TRUE**). Note, however, that by regenerating the code, you will overwrite any existing code for the family. Regenerating rules for system (MI) families could change rule code and impact the functionality of the application. We strongly recommend that you not regenerate rules for these families.

## About the Files Folder

When you export Meridium APM metadata, the Meridium APM system creates two items:

- The export file (either a Microsoft Excel or XML file).
- A subfolder for storing files associated with the export.

The subfolder is named **[File Name] Files**, where **[File Name]** is the name that you specify for the export file. For example, if you name the export file **Dataset Export**, the subfolder will be called **Dataset Export Files**.

This folder is created for every export but will not always contain files. Files are saved to this folder only when they are needed to support the export. Support files will be exported along with the selected metadata for the following data types:

- Family Rule Projects
- Rule Library Projects
- Strategies, Rules, and Schedules
- System Preferences
- Metric Views
- Queries
- Datasets
- Graphs
- Reports
- Searches
- Configured explorers

The specific content of the subfolder will depend upon what is exported. Whenever a file is exported to support the export of metadata, the file name will appear in the export file as a property for that item. For example, in the following figure, the highlighted cell shows the name of the file that was saved to the Files folder to support the export of the dataset in that row.

	A	B	C	D	E	F	G
1	DATASET	DATASET	DATASET	DATASET	DATASET_FILE_NM	ACTION_INDICATORS	
2	REG Help	This is an	Personal\autouser		REG Help Dataset-2754771.midset	IU IU IU IU IU	
3	REG GRP	This is an	Personal\autouser		REG GRPH AND RPT CRUD Dataset Source-2754930.i	IU IU IU IU IU	
4	RM General Reliabili		Personal\autouser		RM General Reliability Dataset-2785654.midset	IU IU IU IU IU	
5	autoDatas	This is an	Personal\autouser		autoDataset-2812204.midset	IU IU IU IU IU	
6	QA DATASET BAR		Public\Meridium\Mod		QA DATASET BAR DELIMITER-900000000069.midset	IU IU IU IU IU	
7	QA CU_1 Query		Public\Meridium\Mod		QA CU_1 Query-900000000065.midset	IU IU IU IU IU	
8	QA TXT Query		Public\Meridium\Mod		QA TXT Query-900000000068.midset	IU IU IU IU IU	
9	QA DATASET BAR		Public\Meridium\Mod		QA DATASET BAR DELIMITER2-900000000072.midse	IU IU IU IU IU	

Whenever a file is exported along with the selected metadata, you should not modify the file, delete the file, or edit the file name that appears in the export file. When you import metadata using an XML or Microsoft Excel file that references support files,

those files will need to be available for the import. The Meridium APM system will expect the referenced files to be in the **[File Name] Files** folder in the same folder as the file you are importing, where **[File Name]** is the name of the XML or Microsoft Excel file. Moving the files to a different location or renaming the folder will cause the import to fail or to produce unexpected results.

## Resetting Selections on the Import/Export Metadata Window

---

The following instructions explain how to reset your selections on the **Import/Export Metadata** window. You can use these instructions in either of the following scenarios:

- **Scenario A:** You have just performed an import or export operation, the **Import/Export Metadata** window is still open, and you want to perform another import or export. You want to reset your selections without changing them all manually or closing the **Import/Export Metadata** window and reopening it.
- **Scenario B:** You have started making selections for an import or export operation, but you have changed your mind and want to start over with the default settings.

**To reset all the selections on the Import/Export Metadata window:**

- In the Configuration Manager, on the **Import/Export Metadata** window, click the **Reset Selections** button.

The values in the selections area are reset to their default state. Note that the **Reset Selections** button resets *only* the settings in the data type selection area. It does not reset your Import/Export selection or clear the path and file name of the import/export file if you have already specified one.

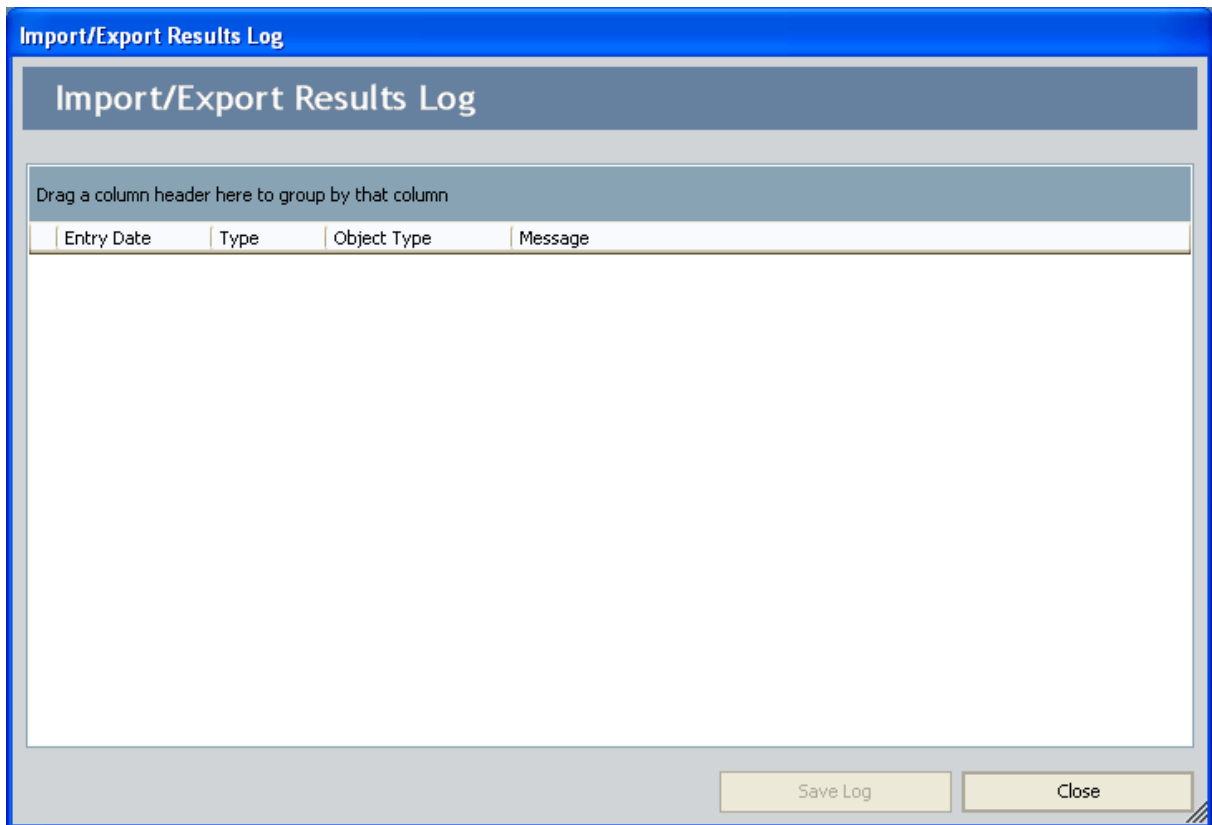
## Viewing the Import/Export Log

After you perform an import or an export, you can view the log to see details about the items that were imported or exported.

To view the log:

- In the Configuration Manager, after performing an import or an export, on the **Import/Export Metadata** window, click the **View Log** hyperlink.

The **Import/Export Results Log** dialog box appears, displaying a list of imported and exported files, grouped by **Entry Date**, **Type**, **Object Type**, and **Message**.



On the **Import/Export Results Log** dialog box, you can perform the following tasks:

- Double-click the row in the list to view details about the entry, including Entry Date, Type, Object Type, and Message.
- Sort the log by clicking any column heading and choosing the desired sort value.
- Group the entries by any column by dragging the column heading to the portion of the screen that reads **Drag a column header here to group by that column**.
- Save the log to a file by clicking the **Save Log** button. Note that unless you save the log to a file, it is preserved for a given import or export only as long as the **Import/Export Metadata** window remains open or until you perform another import or export.

## Meridium APM Supported Software and Devices

The following tables describe the software and devices supported by Meridium APM.

### Supported Software

Meridium APM Components	Supported 3rd Party Components	Notes	V3.6.1.0.0
<b>All Meridium APM Components</b>	.NET Framework 3.5 SP1	None	✓
	.NET Framework 4.0	None	✓
	.NET Framework 4.5	None	✓
<b>Meridium APM Servers</b> (Application Server, Web Framework Server, Web Server, Sync Server)	Windows Server 2008 R2 (64-bit)	None	✓
	Windows Server 2012 (64-bit)	None	✓
	Windows Server 2012 R2 (64-bit)	None	✓
<b>Meridium APM Framework</b>	Windows XP (32-bit)	None	✓
	Windows 7 (64-bit or 32-bit)	None	✓
	Windows 8.1 (64-bit)	None	✓
	Windows 10 (64-bit)	None	✓
<b>Meridium APM Web Framework</b>	Internet Explorer 8 & 9	None	✓
	Internet Explorer 10	None	✓
	Internet Explorer 11	None	✓

Meridium APM Components	Supported 3rd Party Components	Notes	V3.6.1.0.0
<b>Meridium APM Database</b>	Oracle 11g Database Server	None	✓
	Oracle 12c Database Server (12.1.0.1)	None	✓
	Oracle 12c Database Server (12.1.0.2)	None	✓
	SQL Server 2008 R2 Database Server	None	✓
	SQL Server 2012 Database Server	None	✓
<b>Reports</b>	SQL Server 2008 R2 Reporting Services	None	✓
	SQL Server 2012 Reporting Services	None	✓
<b>Oracle Data Access Components (ODAC)</b>	ODP.Net 12.1.0.1 (32-bit) & 11.2.0.3 (64-bit)	None	✓
	ORAMTS12.1.0.1 (64-bit only)	None	✓
<b>Metrics and Scorecards</b>	SQL Server 2008 R2 Analysis Services	None	✓
	SQL Server 2012 Analysis Services	None	✓

Meridium APM Components	Supported 3rd Party Components	Notes	V3.6.1.0.0
<b>Process Data Integration</b>	OSIsoft® PI Server version 3.4.375.80 with PI OPC DA/HDA Server version 1.2.6.0	None	✓
	OSIsoft® PI Server version 3.4.390.16 with PI OPC DA/HDA Server version 1.2.7.0	None	✓
	Matrikon Simulation tool (MatrikonOPC Simulation Server 1.5.0.0)	None	✓
	IP21 (Aspen ONE V8.0) Version 12.0.0.20	A direct connection to IP21 provides access to DA values only.	✓
	IP21 (Aspen ONE V8.0) Version 12.0.0.20 with MatrikonOPC IP21 Server Version 2.2.1.3763	None	✓
<b>Integration Management</b>	Informatica PowerCenter 9.0.1	None	✓
<b>Operator Rounds (device system prerequisites)</b>	Windows Mobile 2003, 5.0, 6.0, and 6.5	None	✓
	Windows Embedded Handheld 6.5	None	✓
	.NET Compact Framework 3.5	None	✓
	Microsoft SQL CE 3.5 SP1	None	✓
	Microsoft Sync Services for ADO.NET 1.0 SP1	None	✓



Meridium APM Components	Supported 3rd Party Components	Notes	V3.6.1.0.0
<b>mobileAPM</b>	Android 4.1 and higher	None	✓
	iOS 9	None	✓
	iOS 10	None	✓
	Windows 8.1	None	✓
<b>SAP Interfaces and ASI for SAP</b>	SAP ECC 6.0 EhP 1 through EhP 7	None	✓
	SAP Web Application Server 7.0 (ABAP + Java) with PI 7.0	Applies to SAP Interfaces only, not ASI for SAP.	✓
	SAP Web Application Server 7.3 (ABAP + Java) with PI 7.3	Applies to SAP Interfaces only, not ASI for SAP.	✓
<b>Oracle EBS eAM Integration</b>	Oracle EBS eAM 12.1.1 or 12.1.2	None	✓
<b>Maximo Application Server</b>	7.1 or 7.5	None	✓
<b>AMS Analytics</b>	AMS Machinery Health Manager 5.30, 5.5	None	✓
	AMS Intelligent Device Manager 10.0,10.5, 11.5	None	✓

## Supported Devices

Meridium APM Work Process	Device	Notes	V3.6.1.0.0
<b>Thickness Monitoring*</b>	GE DMS2	None	✓
	GE DMS Go	None	✓
	GE DMS Go+	None	✓
	Olympus 37DL PLUS Ultrasonic Thickness Gage	None	✓
	Olympus 38 DL PLUS Ultrasonic Thickness Gage	None	✓
<b>Calibration Management*</b>	Beamex MC5 Documenting Process Calibrator	None	✓
	Fluke 74x Documenting Process Calibrator	None	✓
	Fluke 75x Documenting Process Calibrator	None	✓
	Meriam MFT4010 Documenting Process Calibrator	None	✓

Meridium APM Work Process	Device	Notes	V3.6.1.0.0
Operator Rounds	Any Windows Mobile device that meets the Operator Rounds device system prerequisites listed in the <i>Supported Software</i> table.	None	✓
	<b>Barcode Add-on</b>		
	Intermec and Motorola scanners	Devices used in Meridium testing environment: <ul style="list-style-type: none"> <li>• Intermec CN70 device***</li> <li>• Motorola MC9500-k series device***</li> <li>• Motorola/ Psion Omnii XT15 with 1 D barcode reader***</li> </ul>	✓
	<b>RFID Add-on</b>		
Intermec 70 series scanners with the Intermec IP30 Handheld RFID reader	Device used in Meridium testing environment:  Intermec CN70 device with an Intermec IP30 Handheld RFID reader***	✓	

Meridium APM Work Process	Device	Notes	V3.6.1.0.0
	eCom/ Intermec i.roc Ci70-Ex Handheld Device with LF or HF RFID reader	Device used in Meridium testing environment:  i.roc Ci70-Ex device with eCom LF RFID reader (TLB30) & with HF RFID reader (UNI13)***	✓

Meridium APM Work Process	Device	Notes	V3.6.1.0.0
mobileAPM	Apple iOS	Devices used in Meridium testing environment: ** <ul style="list-style-type: none"> <li>• Apple iPhone 5***</li> <li>• Apple iPad Mini***</li> <li>• Apple iPad 2***</li> </ul>	✓
	Google Android	Devices used in Meridium testing environment: ** <ul style="list-style-type: none"> <li>• Google Nexus 4***</li> <li>• Google Nexus 7***</li> <li>• Google Nexus 10***</li> </ul>	✓
	Getac Z-710EX Tablet	(HF RFID is the only supported optional feature for this device.)  Device used in Meridium testing environment:  Getac Z-710EX Tablet running Android 4.1.1***	✓

Meridium APM Work Process	Device	Notes	V3.6.1.0.0
	Panasonic ToughPad FZ-M1 (Windows 8.1)	(Barcode scanning and UHF RFID are supported optional features on theN/A  FZ-M1 model only.)  Device used in Meridium testing environment:  Panasonic ToughPad FZ-M1CENKABM - Windows 8.1	✓
	Microsoft Surface Pro 3 (Windows 8.1)	Device used in Meridium testing environment:  Microsoft Surface Pro 3 - Windows 8.1	✓
	TSL Model 1153 RFID reader	None	✓
	Socket Mobile 8Ci Bluetooth Cordless Hand Scanner (Model CX2881-1476)	None	✓

\* Thickness Monitoring and Calibration Management use the Devices Interface, which is a UI that is configured to support the transfer of data between Meridium APM and devices that Meridium, Inc. supports.

\*\*For the tested devices, the built-in cameras may not support barcode reading. More details about camera requirements or compatible add-on devices will be provided when they are available.

\*\*\*Maintenance and patch releases may not be retested on all devices unless the changes are specific to the device.

## About Configuration Files and Server Upgrades

In addition to product code, the Meridium APM system uses settings in the configuration files stored in the folder <root drive>\Program Files\Meridium and its subfolders to function properly. Meridium, Inc. may make changes to these files for a given release to support product changes. Because your system must contain the most current settings to function properly, the updated baseline configuration files will always be provided when you upgrade a Meridium APM Server machine. In some cases, the Meridium APM documentation may instruct you to modify settings in a baseline configuration file so that the system will function properly. This means that, after you upgrade, you will need to reconcile the differences between the baseline configuration files provided when you upgrade and your customized pre-upgrade configuration files.

During the upgrade process, the extension **.merbak** will be appended to the file name of *either* the new baseline configuration files or your customized pre-upgrade files. *Which* of these files has this extension depends on whether you are applying a maintenance release or if you are upgrading across main versions.

### Applying an Update Release


When you apply an update release of the same main version to a given Meridium APM Server (i.e., apply V3.6.0.x.x to V3.6.0.x.x), your customized pre-upgrade configuration files will be unchanged. During the update process, the Meridium APM Server and Add-ons installer adds all new baseline configuration files with the extension **.merbak** appended to file name. The pre-update configuration file and the updated baseline configuration file are stored within the same original folder.

For example, assume the configuration file **Web.config** exists in the folder **C:\Program Files\Meridium\Application Server** and contains custom configuration settings. If you update the Meridium APM Application, the **\Application Server** folder would contain the files shown in the following image.

 Web.config	5/14/2013 3:29 AM
 Web.config.merbak	11/7/2014 8:44 PM

...where **Web.config** contains your custom settings and **Web.config.merbak** is the new baseline configuration file.

The Meridium APM system will use only the settings stored in files with the **.config** file extension. Therefore, if Meridium, Inc. has made changes to baseline files (i.e., the files with the **.config.merbak** extension) between your current version and the release that you are applying, you must reconcile the differences in these files. To do so, you would open both files and apply the settings in the **.config.merbak** file to the **.config** file.

 **Hint:** You can use WinMerge, which is installed automatically on the Meridium APM Application Server, to facilitate this process.

### Upgrading Across Main Versions

When you upgrade a given Meridium APM Server from a main version to another main version (i.e., from V3.5.1.x.x or earlier to V3.6.0.x.x), before deploying the updated baseline configuration files, the Meridium APM Server and Add-ons installer automatically creates a backup of your pre-upgrade configuration files with the extension **.merbak** appended to file name. The pre-upgrade configuration file and the updated baseline configuration file are stored within the same original folder.

For example, assume the configuration file **Web.config** exists in the folder **C:\Program Files\Meridium\Application Server** and contains custom configuration settings. If you upgrade the Meridium APM Application, the **\Application Server** folder would contain the files shown in the following image.

 Web.config	5/14/2014 3:29 AM
 Web.config.merbak	8/15/2013 8:44 PM

...where **Web.config.merbak** contains your custom settings and **Web.config** is the new baseline configuration file.

The Meridium APM system will use only the settings stored in files with the **.config** file extension. Therefore, if files with the **.config.merbak** extension contain custom settings, you must reconcile the differences in these files. To do so, you would open both files and apply the settings in the **.config.merbak** file to the **.config** file.

**CEHint:** You can use WinMerge, which is installed automatically on the Meridium APM Application Server, to facilitate this process.

When features require you to specify settings in a configuration file, the corresponding module upgrade workflows will instruct you to reapply these settings.

After you have applied your configuration settings to the baseline file or if a given pre-upgrade configuration file does not contain any custom changes that you need to apply to the baseline configuration file, you can delete the pre-upgrade configuration file. The pre-upgrade configuration files will not be deleted by the Meridium APM Server and Add-ons installer.



## How Do Application Updates Work?

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The APM Framework applications use a configuration file when they are launched, *MeridiumStart.config*, which contains the tag **AppFolderName**, where the number representing the Meridium APM version is specified. For example, for V3.4.5, the AppFolderName tags would look like this:

```
<AppFolderName>3.4.5.701.0</AppFolderName>
```

Likewise, the Application Server and Add-ons software using a configuration file, *UpdateVersion.xml*, which contains the **AvailableVersion** tag, where the number representing the Meridium APM version is specified. For example, for V3.5.0, the AvailableVersion tags would look like this:

```
<AvailableVersion>100.0.0.0</AvailableVersion>
```

When you launch an APM Framework application on the APM Framework machine, the system compares the AppFolderName value in the MeridiumStart.config file with the AvailableVersion value in the UpdateVersion.xml file on the Application Server. If these values are different (as in the preceding example), the application update process will run. After the application update is complete, the value within the AppFolderName tags in the MeridiumStart.config file on the APM Framework machine will match the value within the AvailableVersion tags in the UpdateVersion.xml file on the Application Server (e.g., <AppFolderName>3.5.0.160.0</AppFolderName>).

When you upgrade to V3.5.0 or later, the MeridiumStart.config file will be updated with the tag **VersionIndicator**. This tag also exists in the UpdateVersion.xml file on the Application Server. At any point, if the value within the VersionIndicator tags in the MeridiumStart.config file is different from the value within the VersionIndicator tags in the UpdateVersion.xml file, an application update will occur.

**Note:** By default, automatic application updates are disabled for the APM Framework applications that are installed with the Meridium APM Application Server software on the Application Server machine.

## About Uninstalling and Repairing Meridium APM Installations

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If you want to uninstall or repair Meridium APM components, you can do so using the methods outlined in this section of the documentation. You can use the hyperlinked options to access instructions for performing the corresponding task.

### On the Application Server machine

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- [Completely uninstall all Meridium APM components on the Application Server machine.](#)
- [Uninstall specific features on a machine using the Meridium APM Application Server and Add-ons installer.](#)
- [Repair the Application Server and Add-ons installation.](#)

If you are upgrading to the latest version of Meridium APM, you do not need to manually uninstall the previous version before you install the new version.

### On the Meridium APM Framework machine

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- [Completely uninstall the Meridium APM applications on the APM Framework machine.](#)
- [Uninstall specific Meridium APM applications on the APM Framework machine.](#)
- [Repair a Meridium APM Framework installation.](#)

If you upgrading to the latest version of Meridium APM, you do not need to manually uninstall the previous version before you install the new version.

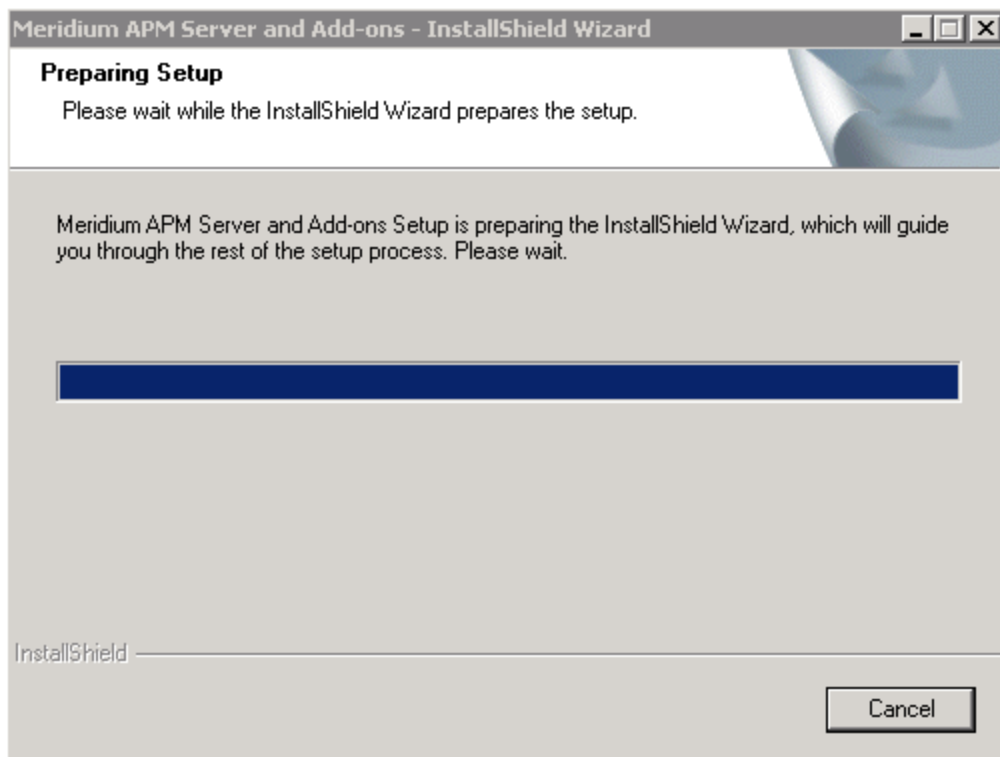
## Uninstalling All Meridium APM Components on an Application Server Machine

If a machine will no longer serve as the Meridium APM Application Server machine, you can uninstall *all* the Meridium APM components using the Meridium APM Application Server and Add-ons installer. The following instructions provide details on doing so.

To uninstall all Meridium APM components on an Application Server machine:

1. On the APM Framework machine from which you want to uninstall all Meridium APM applications, access the Programs and Features window from the Control Panel, select the **Meridium APM Server and Add-ons** item in the grid, and click the **Uninstall** button.

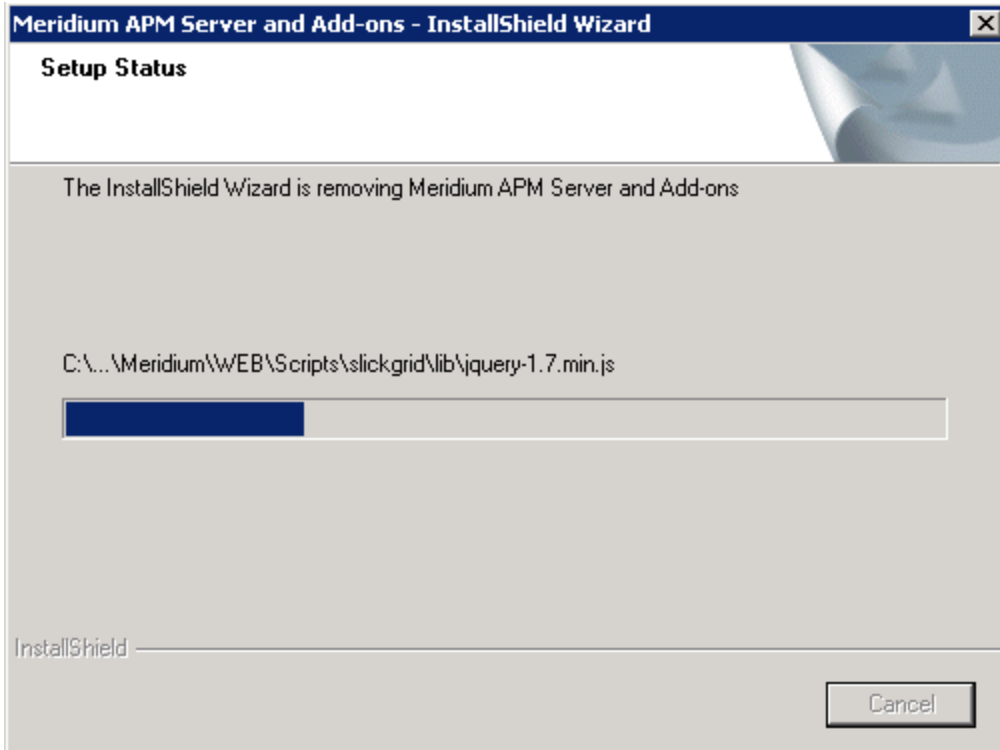
The Meridium APM Server and Add-ons installer appears, displaying the **Preparing Setup** screen.



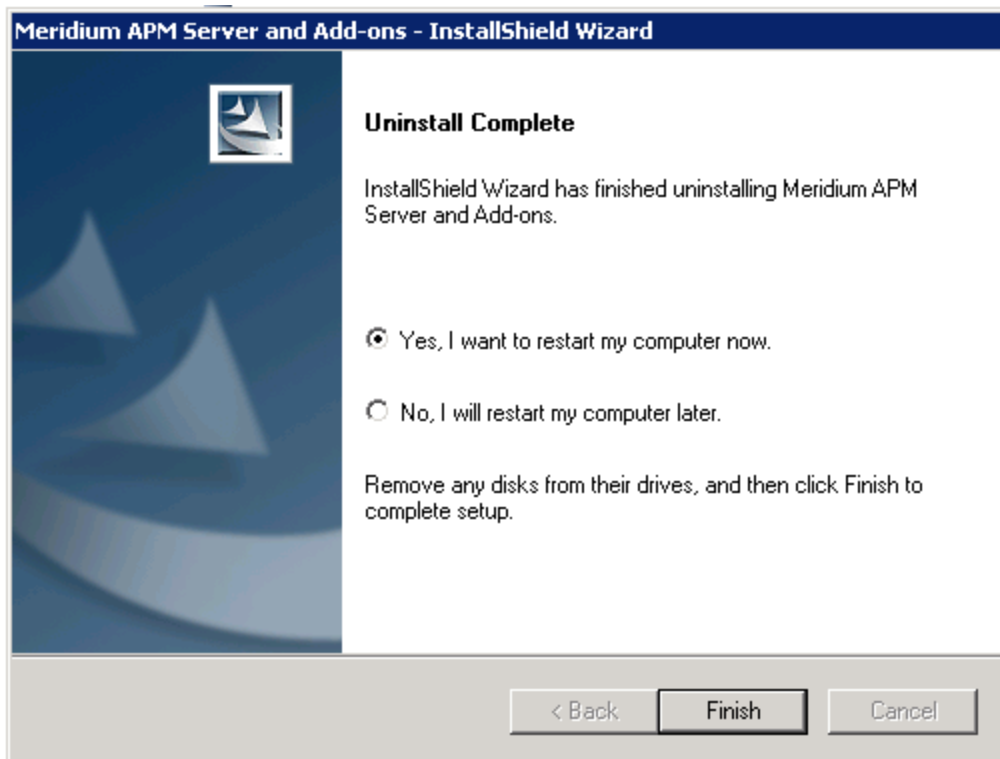
After the progress bar reaches the end, a message appears, asking if you want to complete removing the applications.

2. Click the **Yes** button.

The **Setup Status** screen appears, displaying a progress bar that indicates the status of the uninstall process.



After the progress bar reaches the end, the **Uninstall Complete** screen appears, indicating that the Meridium Server and Add-ons software has been removed and asking if you want to restart your computer now or later.



3. If you want your computer to restart automatically when the installer closes, accept the default selection, **Yes, I want to restart my computer now**, and move on to the next step.

*-or-*

If you want to restart your computer manually at a later time, select the **No, I will restart my computer later** option.

4. Click the **Finish** button.

The Meridium APM Framework and Add-ons installer closes. Additionally, if you selected the **Yes, I want to restart my computer now** option, your machine is restarted automatically.

## Uninstalling Specific Components Using the Application Server and Add-Ons Installer

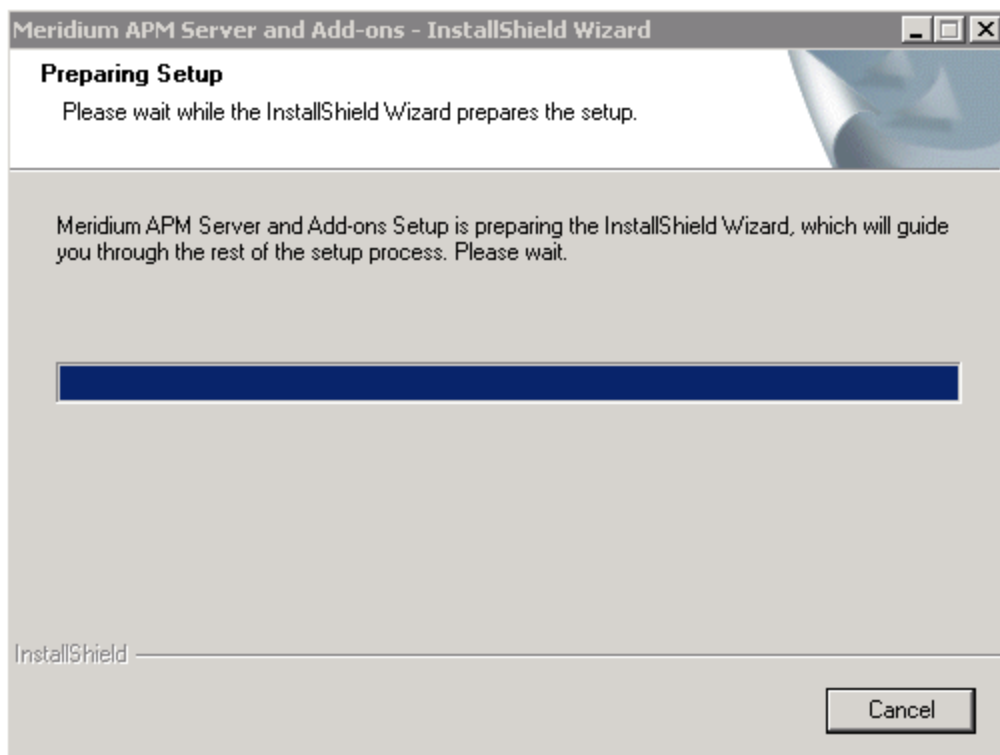
If you want to uninstall a particular component from the Meridium APM Application Server machine, you can run the installer in *modify mode*, which will allow you to make changes to the current installation on that machine. For example, if you installed a component on the Application Server and later you decide that you want that component to reside on a separate machine, you can uninstall that component.

The following instructions provide details on running the Meridium APM Application Server and Add-Ons installer in modify mode on the APM Application Server machine.

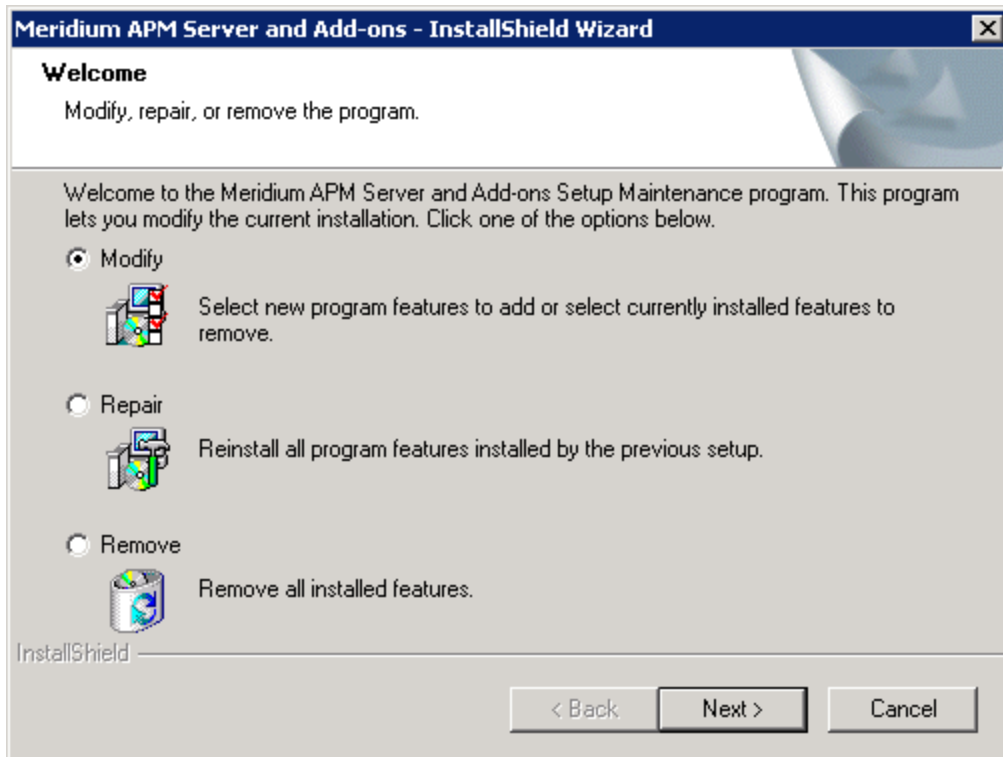
**To uninstall specific components using the Application Server and Add-Ons installer:**

1. On the Application Server machine where you want to uninstall components through the modify mode of the installer, access the Programs and Features window from the Control Panel.
2. In the grid, select the **Meridium APM Server and Add-on** item, and then click the **Change** button.

The **Meridium APM Server and Add-ons** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



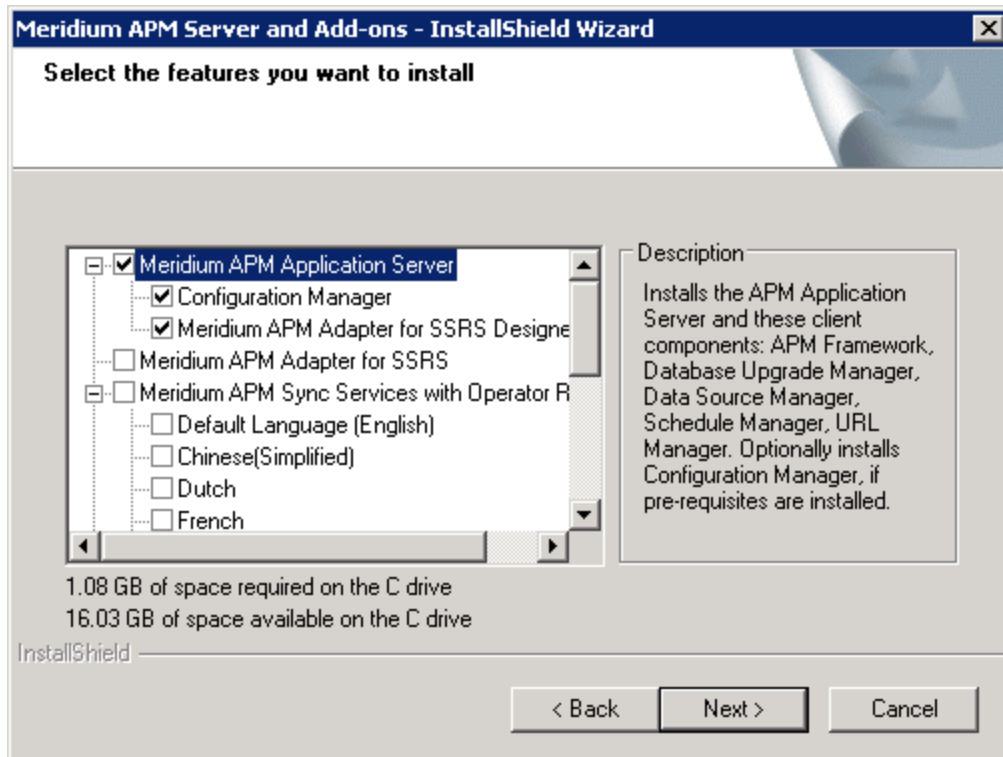
After the progress bar reaches the end, the **Welcome** screen appears.



The **Welcome** screen contains the following options:

- **Modify:** Runs the installer in modify mode, which allows you to install additional components on the machine or uninstall specific components. This option is selected by default. These instructions assume that you want to run the installer in modify mode.
  - **Repair:** Runs the installer in repair mode, which allows you to update the components that are installed on the machine.
  - **Remove:** Uninstalls *all* the Meridium APM components that are installed on the machine.
2. Accept the default selection, **Modify**, and click the **Next** button.

The **Select the features you want to install** screen appears, and the Meridium APM Application Server node is highlighted automatically in the tree.



The components that are currently installed on the machine are selected in the tree. If you want to *install* one or more additional components, you can select the additional check box. These instructions, however, assume that you want *uninstall* components.

3. *Clear* the check box that corresponds to the component(s) that you want to *uninstall*.
4. Click the **Next** button.

A message appears, indicating that the installer is checking your machine for the required prerequisites for the features that are currently selected in the tree.

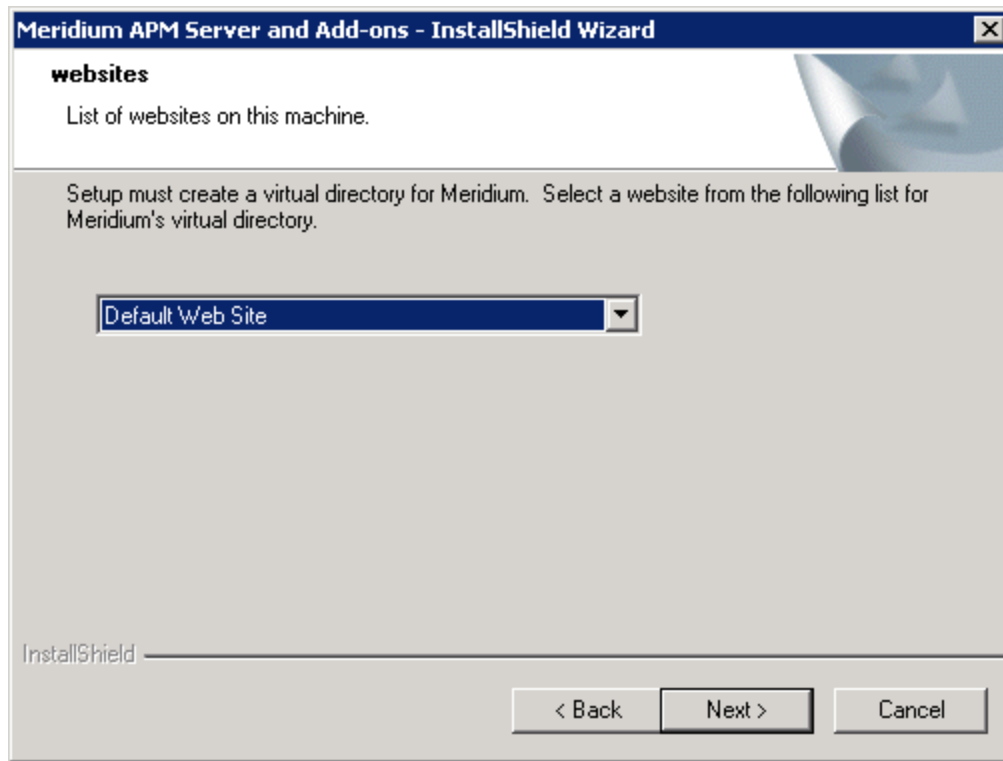
- If one or more prerequisites are missing on the machine, the **Meridium Installer** screen will appear and display a message that indicates which prerequisites still need to be installed on the machine before you can install the feature that is dependent on that prerequisite. This message also indicates what you can do to continue.

If you see this screen, you should read the message in detail, and either click the **Back** button to clear the selection whose prerequisites are missing, and then continue through the installation without installing that component, or close the installer, install the missing prerequisite, and then run the installer again later.

- If all the prerequisites for the selected components are installed on the machine, or you have selected components that do not require any prerequisites, the



**websites** screen appears.



The **websites** screen lets you specify where the installer will create a virtual directory for Meridium APM. This website is configured in the IIS Manager on the APM Application Server machine. The websites list contains all the websites that are configured on the APM Application Server machine. The default website is *Default Web Site*. Throughout this documentation, we assume that you have chosen to install Meridium APM under the *Default Web Site*.

5. In the list of websites, select the website where you want the installer to create a virtual directory.
6. Click the **Next** button.

The **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons uninstallation process. After the progress bar reaches the end, the **Uninstall Complete** screen appears.



This screen contains a message, indicating that the uninstall has finished successfully. You can also select to restart your computer automatically after the installer closes or to restart your computer manually at a later time. By default, the **Yes, I want to restart my computer now** option is selected by default.

7. If you want the computer to be restarted as soon as you click the **Finish** button, accept the default selection and move on to the next step.

*-or-*

If you do not want the computer to be restarted at this time, select the **No, I will restart my computer later** option.

8. Click the **Finish** button.

The **Meridium APM Server and Add-ons** installer closes. Additionally, if the **Yes, I want to restart my computer now** option was selected, the computer is restarted automatically.

## Repairing Application Server Software and Add-on Component Installations

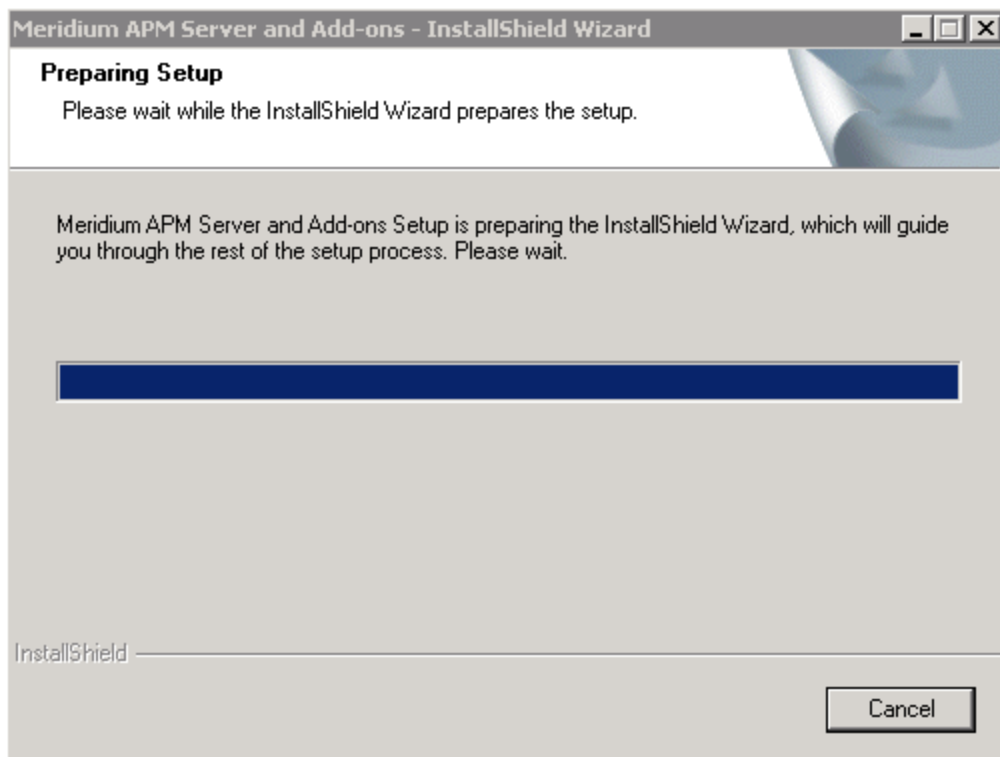
After you have installed the Application Server and Add-Ons software on the Application Server, if your installation is somehow corrupted (e.g., files are deleted by mistake), you can run the Meridium APM Application Server and Add-ons installer in *repair mode* to repair the installation (e.g., reinstall the missing files).

The following instructions provide details on running the Meridium APM Application Server and Add-ons installer in repair mode on the Application Server.

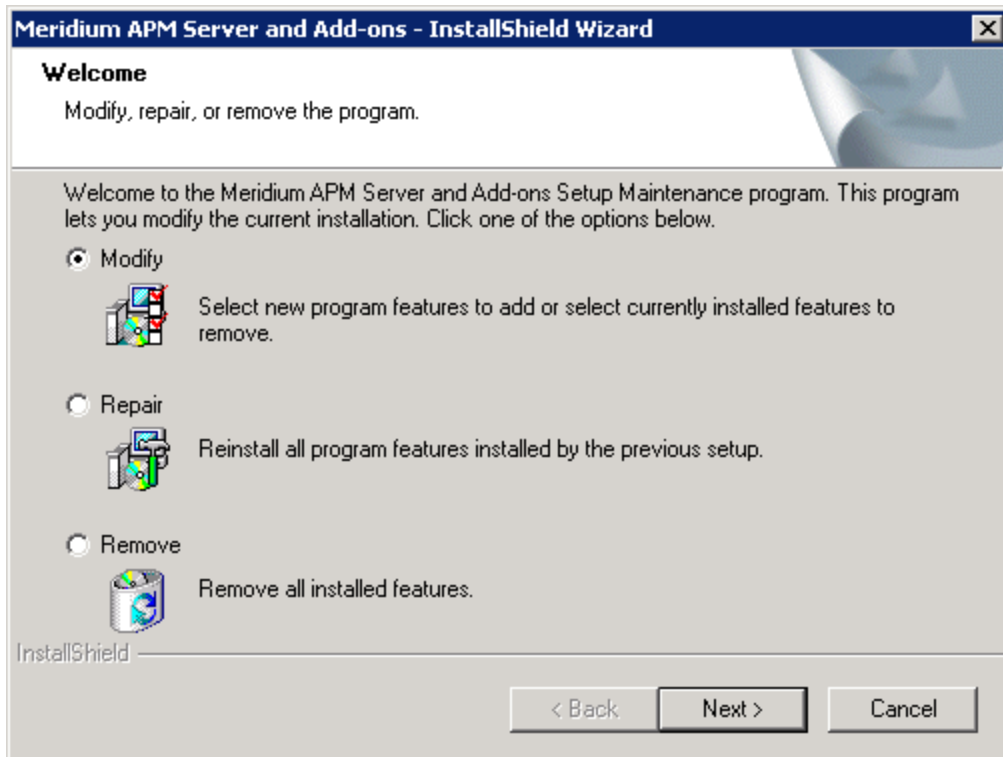
### To repair an Application Server and Add-ons installation on the Application Server:

1. On the Application Server machine where you want to repair the installation through the repair mode of the installer, access the Programs and Features window from the Control Panel.
2. In the grid, select the **Meridium APM Server and Add-on** item, and then click the **Change** button.

The Meridium APM Server and Add-ons installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



After the progress bar reaches the end, the **Welcome** screen appears.



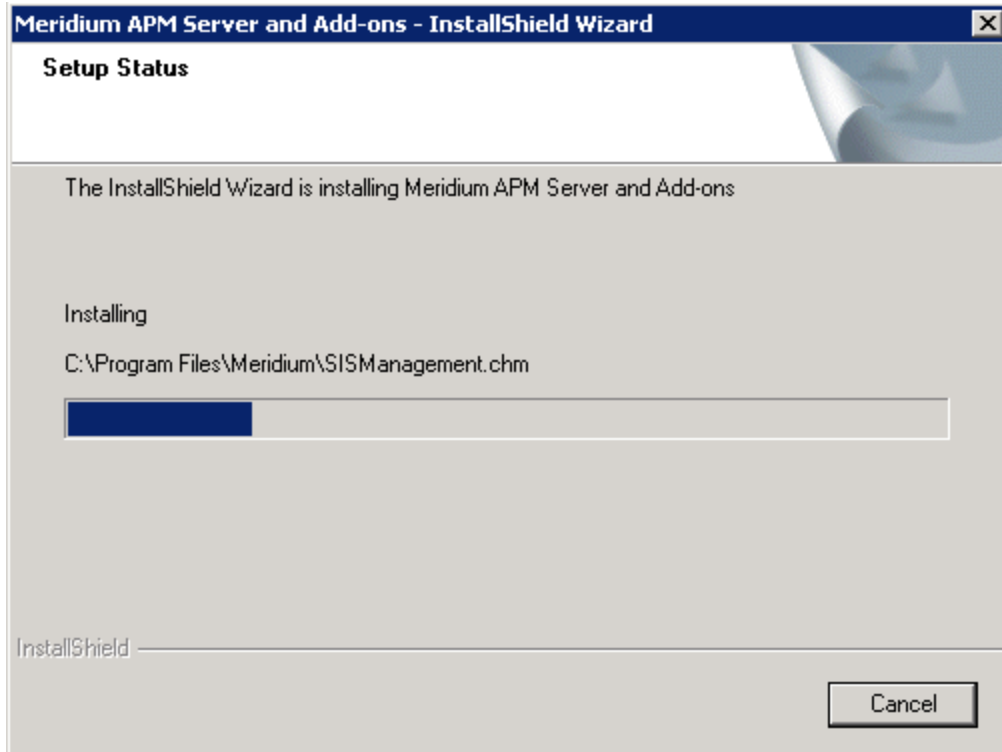
The **Welcome** screen contains the following options:

- **Modify:** Runs the installer in modify mode, which allows you to install additional components on the machine or uninstall specific components. This option is selected by default.
  - **Repair:** Runs the installer in repair mode, which allows you to update the components that are installed on the machine. These instructions assume that you want to run the installer in repair mode.
  - **Remove:** Uninstalls *all* the Meridium APM components that are installed on the machine.
3. Select the **Repair** option, and then click the **Next** button.

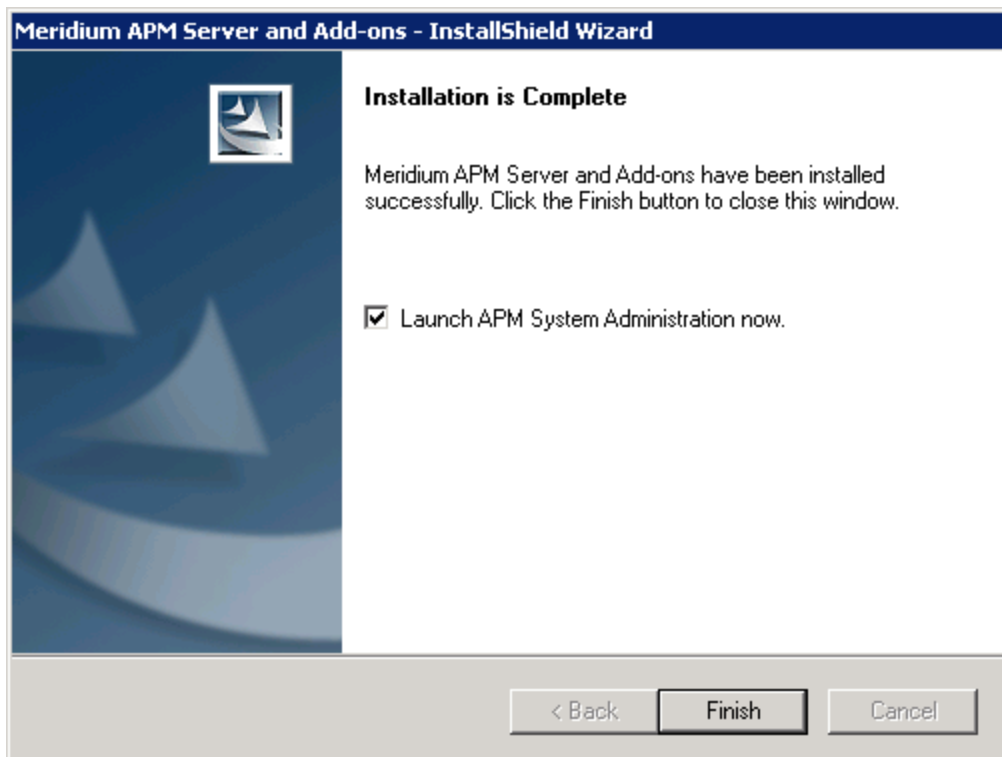
A message appears, asking if you want to upgrade your server. This means that the current installation that is installed on the machine will be reinstalled.

4. Click the **Yes** button.

The **Setup Status** screen appears, which displays a progress bar that shows the progress of the Meridium APM Server and Add-ons installation process.



After the progress bar reaches the end, a message appears, indicating that your server is being configured. After your server is configured, the **Installation is Complete** screen appears.



This screen contains a message, indicating that Meridium APM Server and Add-ons has been installed successfully. You can also select to optionally launch the APM System Administration tool when the installer window closes. By default, this option is set to *Yes*.

5. If you want the APM System Administration tool to be launched as soon as you click the **Finish** button, accept the default selection and move on to the next step.

*-or-*

If you do not want the APM System Administration tool to be launched at this time, clear the **Launch APM System Administration now** check box.

6. Click the **Finish** button.

## Uninstalling All the Meridium APM Applications on a Framework Machine

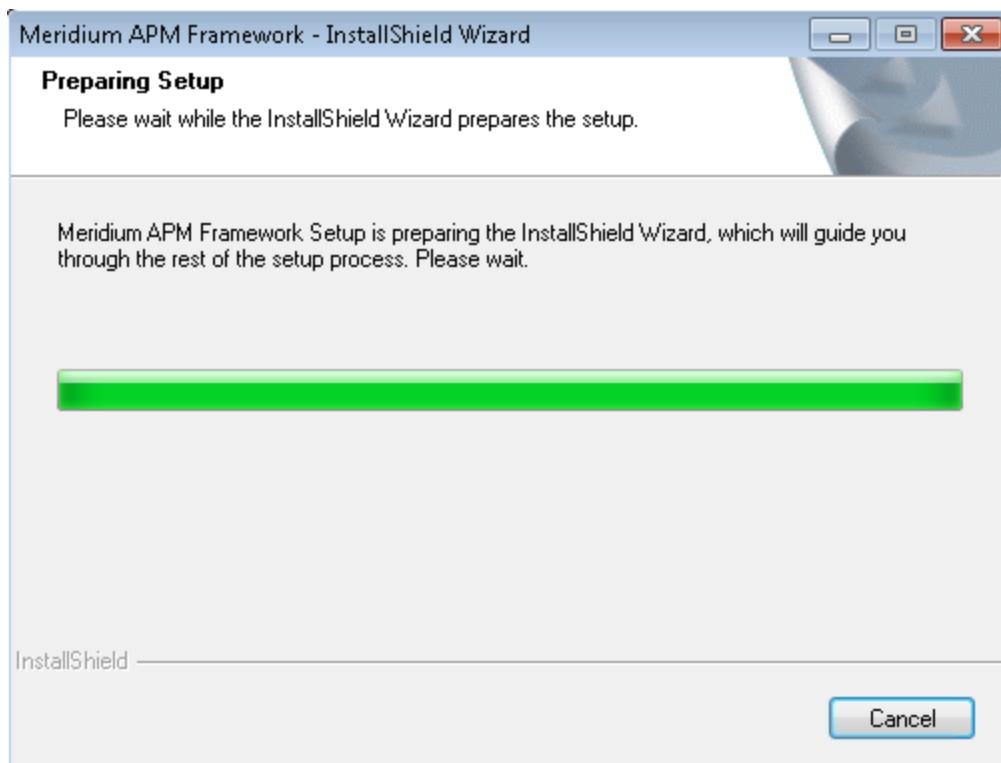
If a computer that has access to the Meridium APM Framework or administrative applications should no longer have such access, you can remove from that machine all the Meridium APM applications that are installed on it.

The following instructions provide details on removing *all* the Meridium APM applications that are installed on a Meridium APM Framework machine.

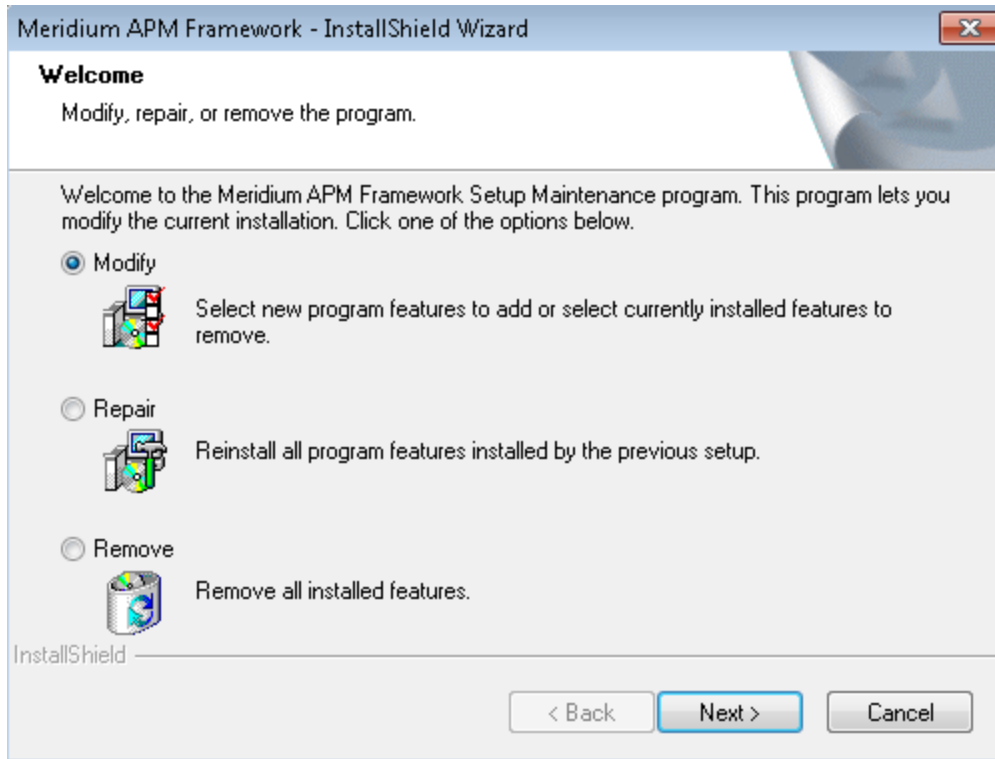
### To remove all the Meridium APM applications from a Framework machine:

1. On the APM Framework machine from which you want to uninstall all Meridium APM applications, access the Programs and Features window from the Control Panel.
2. In the grid, select the **Meridium APM Framework** item, and click the **Change** button.

The **Meridium APM Framework** installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



After the progress bar reaches the end, the **Welcome** screen appears.



The **Welcome** screen contains the following options:

- **Modify:** Runs the installer in modify mode, which allows you to install additional components on the machine or uninstall specific components. This option is selected by default. These instructions assume that you want to run the installer in modify mode.
- **Repair:** Runs the installer in repair mode, which allows you to update the components that are installed on the machine.
- **Remove:** Uninstalls *all* the Meridium APM components that are installed on the machine.

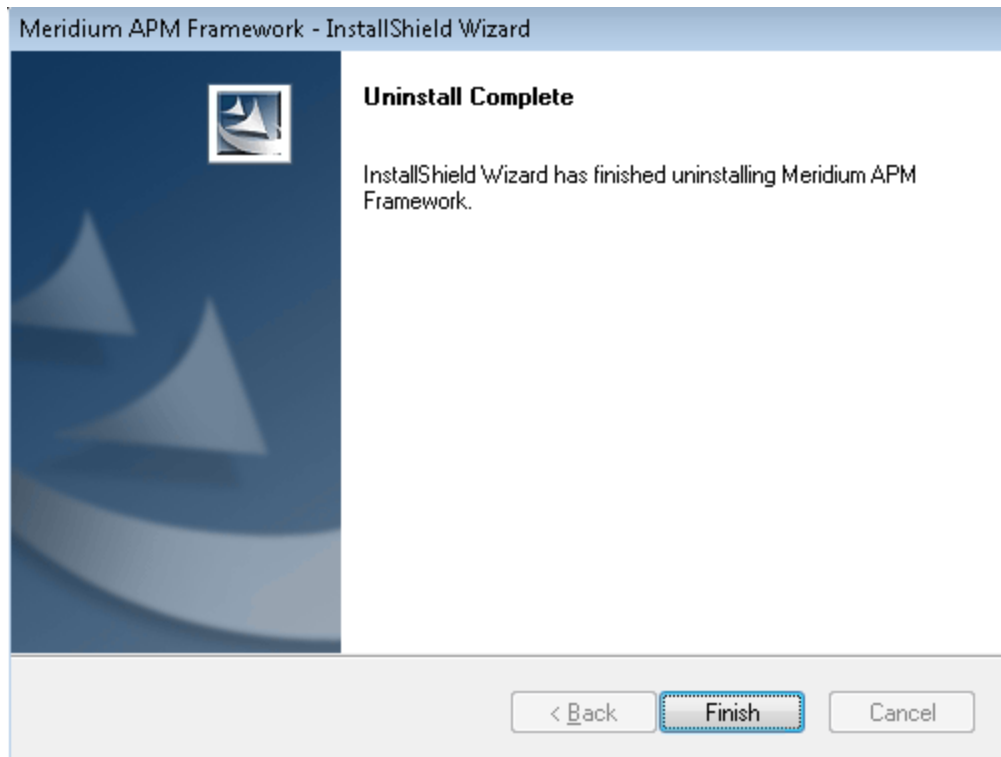
3. Select the **Remove** option, and click the **Next** button.

A message appears, asking if you want to completely remove the applications.

4. Click the **Yes** button.

The **Setup Status** screen appears, displaying a progress bar. After the progress bar reaches the end, the **Uninstall Complete** screen appears.





5. Click the **Finish** button.

The Meridium APM Framework installer closes. In addition, if shortcuts had been installed on the desktop, they are no longer displayed.

## Uninstalling Specific Applications Using the Meridium APM Framework Installer

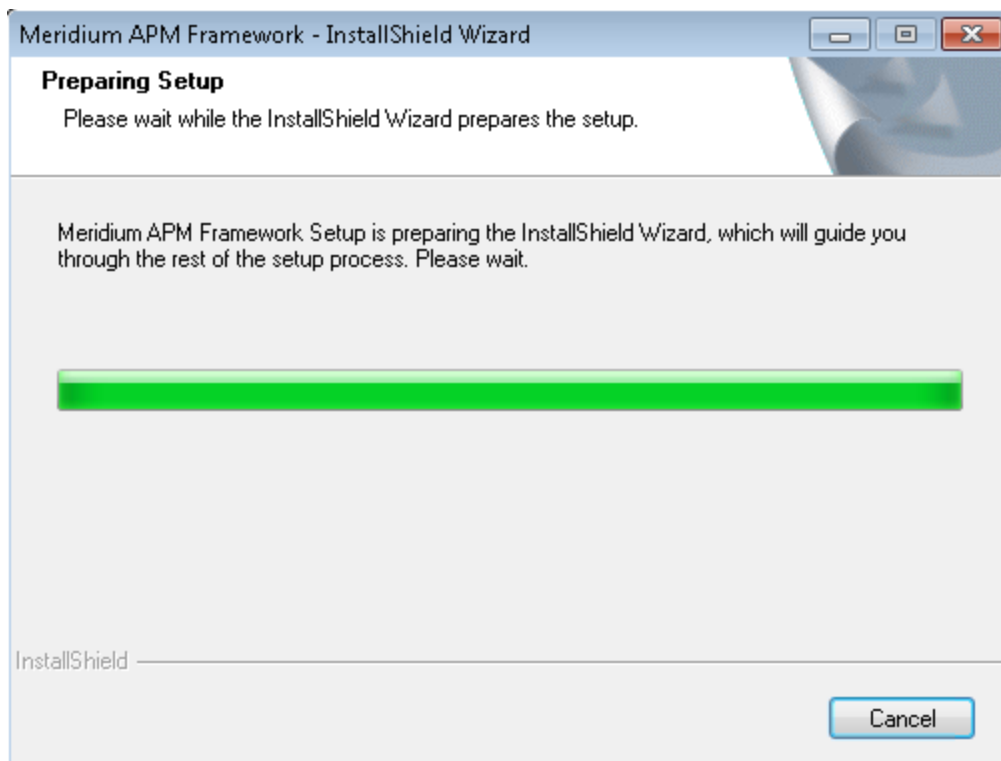
If you have installed an application on an APM Framework machine by mistake or you no longer want an APM Framework machine to have access to a particular application, you can uninstall only that application using *modify mode* of the Meridium APM Framework installer.

The following instructions provide details on uninstalling specific applications from an APM Framework machine.

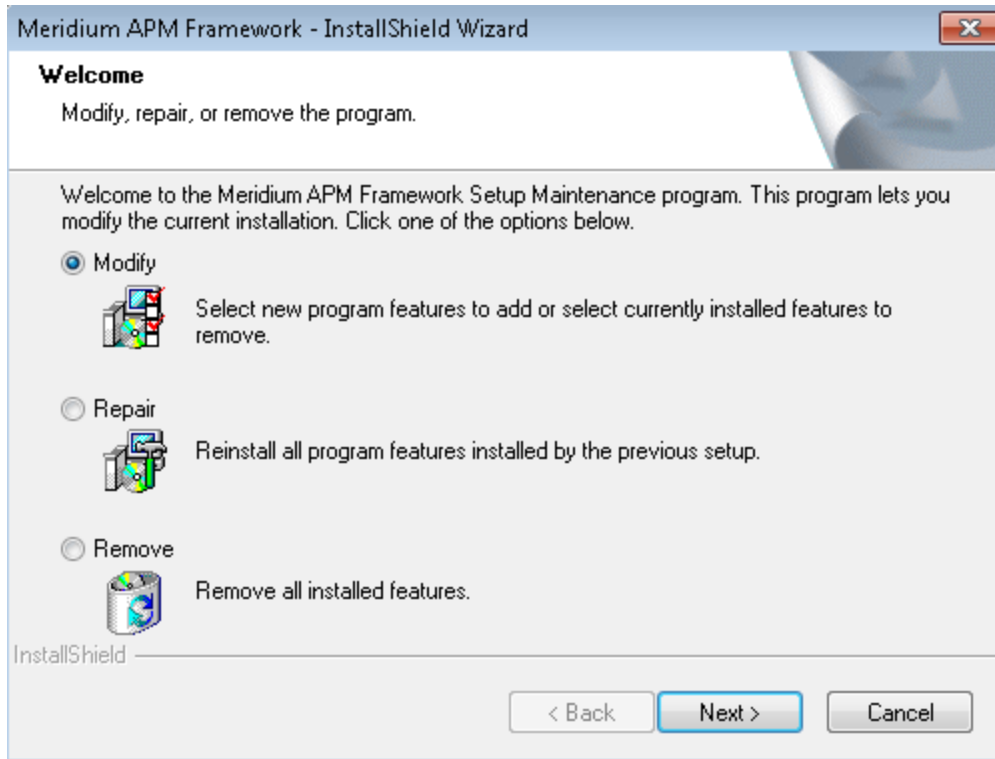
### To uninstall specific applications using the Meridium APM Framework installer:

1. On the APM Framework machine where you want to uninstall an application using the modify mode of the Meridium APM Framework installer, access the Programs and Features window from the Control Panel.
2. In the grid, select the **Meridium APM Framework** item, and then click the **Change** button.

The Meridium APM Framework installer appears, displaying the **Preparing Setup** screen, which contains a progress bar.



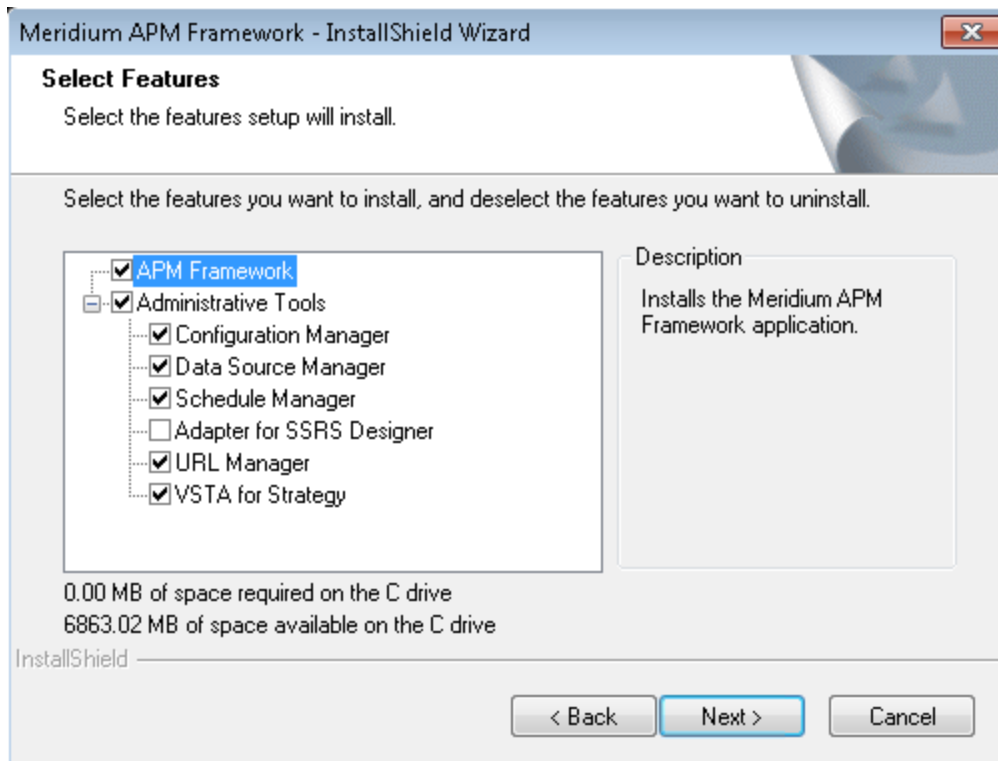
After the progress bar reaches the end, the **Welcome** screen appears.



The Welcome screen contains the following options:

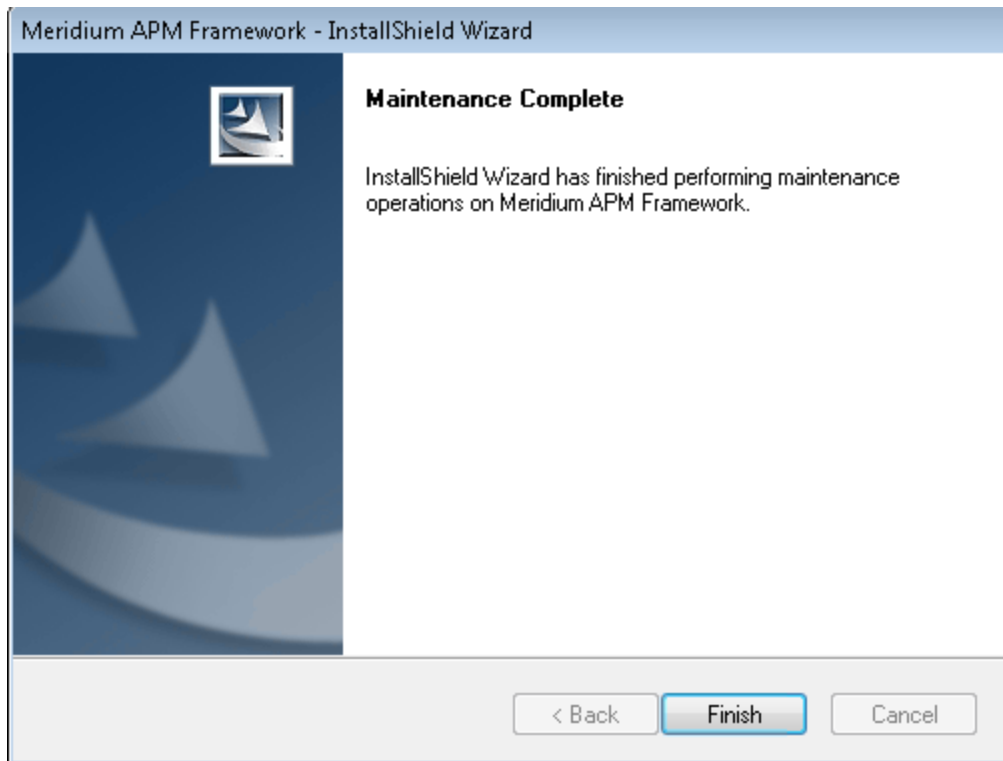
- **Modify:** Runs the installer in modify mode, which allows you to install additional components on the machine or uninstall specific components. This option is selected by default. These instructions assume that you want to run the installer in modify mode.
  - **Repair:** Runs the installer in repair mode, which allows you to update the components that are installed on the machine.
  - **Remove:** Uninstalls *all* the Meridium APM components that are installed on the machine.
3. Accept the default option, **Modify**, and click the **Next** button.

The **Select Features** screen appears, and all the applications that are currently installed are selected by default.



4. *Clear* the check box to the left of the application(s) that you want to uninstall.
5. Click the **Next** button.

The **Setup Status** screen appears, displaying a progress bar that shows the progress of the uninstallation process. After the progress bar reaches the end, the **Maintenance Complete** screen appears.



6. Click the **Finish** button.

The Meridium APM Framework installer closes. Additionally, if shortcuts were created for the applications that you removed, the icons are no longer displayed.

## Meridium APM Licenses

The following table lists the licenses that can be activated via the Configuration Manager and the modules/features that are activated with each license.

This license:	...Activates this module/feature:
AMS Analytics	AMS Analytics
ASI for SAP	Additional Asset Strategy Implementation features
ASM and ASI	Asset Strategy Management (ASM) -and- Asset Strategy Implementation (ASI)
Asset Answers	Asset Answers integration
Asset Strategy Optimization	Asset Strategy Optimization (ASO)
Calibration Management	Calibration Management
Criticality Calculator	Criticality Calculator
Generation Management	Generation Management
Hazards and Operability Analysis	Hazards Analysis
Inspection Management	Inspection Management
ISO Risk	Custom
Lubrication Management	Lubrication Management
Maximo Interfaces	Maximo Interfaces
Meridium APM Framework Tools	All of the following modules/features: <ul style="list-style-type: none"> <li>• Asset Criticality Analysis (ACA)</li> <li>• Asset Health Manager (AHM)</li> <li>• Core Analysis</li> <li>• Process Data Integration (PDI)</li> <li>• Recommendation Management</li> <li>• Risk Assessment</li> </ul>
Meridium APM Web Framework	Meridium APM Web Framework
Metrics and Scorecards	Metrics and Scorecards

This license:	...Activates this module/feature:
<b>NR13</b>	NR13
<b>OPC Interfaces</b>	Additional Process Data Integration features
<b>Operator Rounds</b>	Operator Rounds
<b>Oracle EBS eAM Interfaces</b>	Oracle EBS eAM Interfaces
<b>OSI PI Interfaces</b>	Additional Process Data Integration features
<b>Policy Manager</b>	Policy Manager
<b>Production Loss Accounting</b>	Production Loss Accounting (PLA)
<b>RBI 581</b>	RBI 581 functionality for Risk Based Inspection (RBI)
<b>RCM and FMEA</b>	Reliability Centered Maintenance (RCM) -and- Failure Modes and Effects Analysis (FMEA)
<b>Reliability Analytics</b>	Reliability Analytics
<b>Risk Based Inspection</b>	Risk Based Inspection (RBI)
<b>Root Cause Analysis</b>	Root Cause Analysis (RCA)
<b>SAP Interfaces - Criticality Assessment</b>	The ACA feature that updates criticality indicator values in SAP
<b>SAP Interfaces - Foundation</b>	SAP Interfaces
<b>SAP Interfaces - Process Integration</b>	Additional SAP Interfaces features
<b>SAP Interfaces - Technical Characteristics</b>	Additional SAP Interfaces features
<b>SAP Interfaces - Work Management</b>	Additional SAP Interfaces features
<b>SIS Management</b>	SIS Management
<b>Thickness Monitoring</b>	Thickness Monitoring