



Meridium Enterprise APM System Requirements

V4.0.1.0



Meridium Enterprise APM System Requirements

V4.0.1.0

Copyright © Meridium, Inc. 2015

All rights reserved. Printed in the U.S.A.

This software/documentation contains proprietary information of Meridium, Inc.; it is provided under a license agreement containing restrictions on use and disclosure. All rights including reproduction by photographic or electronic process and translation into other languages of this material are fully reserved under copyright laws. Reproduction or use of this material in whole or in part in any manner without written permission from Meridium, Inc. is strictly prohibited.

Meridium is a registered trademark of Meridium, Inc.

All trade names referenced are the service mark, trademark or registered trademark of the respective manufacturer.

Table of Contents

⚠ Important: This document is utilizing a prototype PDF template. Links to external documents do not function correctly and should not be used. You will be prompted when you attempt to use a link to an external document. This template will continue to be updated.

Meridium Enterprise APM System Requirements	1
Copyright and Legal	2
Table of Contents	3
Basic Meridium Enterprise APM System Hardware and Software Requirements	5
Meridium Enterprise APM Client	6
Meridium Enterprise APM Server	9
Meridium Enterprise APM Database Server	12
Oracle Requirements	13
SQL Server Requirements	14
SQL Server Report Server	15
Meridium Enterprise APM Supported Software and Devices	17
Asset Criticality Analysis (ACA) System Requirements	21
Asset Health Manager (AHM) System Requirements	22
Asset Strategy Implementation (ASI) System Requirements	24
Asset Strategy Management (ASM) System Requirements	25
Calibration Management System Requirements	26
Failure Modes and Effects Analysis (FMEA) System Requirements	27
Family Policy System Requirements	28
Hazards Analysis System Requirements	29
Inspection Management System Requirements	30
Metrics and Scorecards System Requirements	31
Policy Designer System Requirements	33
Process Data Integration (PDI) System Requirements	35
Production Loss Analysis (PLA) System Requirements	39
Risk Based Inspection (RBI) System Requirements	40
Root Cause Analysis (RCA) System Requirements	41

Table of Contents

Rounds System Requirements	42
Reliability Analytics System Requirements	43
Reliability Centered Maintenance (RCM) System Requirements	44
Reports	45
Rules	46
SIS Management System Requirements	47
Thickness Monitoring (TM) System Requirements	48
Contact Meridium, Inc.	49

Basic Meridium Enterprise APM System Hardware and Software Requirements

The *basic Meridium Enterprise APM system* consists of machines and software that are required for any Meridium Enterprise APM implementation to function. Implementation of the basic Meridium Enterprise APM system gives you the foundation-level analysis tools within the Meridium Enterprise APM. This section of the documentation provides details on the hardware and software requirements for each machine within the basic system.

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

Meridium Enterprise APM Client

Hardware Requirements

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


Desktops and Laptops

Minimum requirements:

- Two Processor Cores, 2 GHz
- 4 GB RAM (8 GB RAM recommended)
- 8 GB of available hard drive space
- 13" screen
- 1024 X 768 screen resolution

Mobile Devices

Support for mobile devices is provided in two resolution view modes: full or limited. Full-resolution view mode supports access to the entire Meridium Enterprise APM system. Limited-resolution view mode supports limited access to overview pages and data collection.

 **Note:** Interaction with diagramming and design canvases is not available on touch-screen devices. If needed, use a mouse peripheral to utilize this functionality.

Minimum Requirements	Devices Tested
<p>Minimum requirements for full-resolution view mode:</p> <ul style="list-style-type: none"> • Two Processor Cores, 2 GHz • 2 GB RAM • 8 GB of available hard drive space • 7" screen • 1920 X 1200 screen resolution 	<p>Devices used in Meridium testing environment:</p> <ul style="list-style-type: none"> • Apple iPad 4th Generation • Apple iPad Air • Apple iPad Air 2 • Apple iPad Mini 2 • Apple iPad Mini 3 • Microsoft Surface Pro 3


Minimum Requirements	Devices Tested
<p>Minimum requirements for limited-resolution view mode:</p> <ul style="list-style-type: none"> • Two Processor Cores, 1 GHz • 1 GB RAM • 8 GB of available hard drive space • 4" screen • 1024 X 600 screen resolution 	<p>Devices used in Meridium testing environment:</p> <ul style="list-style-type: none"> • Samsung Galaxy Tab 4 (7") • Samsung Galaxy Tab 4 (10")

Software Requirements

The following software components are required on any machine or device that will access the Meridium Enterprise APM system.

One of the following browsers is required for desktops, laptops, and mobile devices:

- Chrome 43 and higher
- Internet Explorer 11
- Safari 8 (Mac only)

 **Note:** You can access Meridium Enterprise APM via the browser on a mobile device, but it is recommended that you install and use the Meridium Enterprise APM mobile application for an enhanced experience.

Desktops and Laptops

One of the following operating systems is required for desktops and laptops:

- Apple OS X Yosemite
- Windows 7 (32-bit)
- Windows 7 (64-bit)
- Windows 8.1 (64-bit)

Mobile Devices

One of the following operating systems is required for mobile devices:

- Android Kitkat 4.4
- Android Lollipop 5.0

- Apple iOS 8
- Windows 8.1 (64-bit)

Meridium Enterprise APM Server

Hardware Requirements

The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the Meridium Enterprise APM Server. These requirements account for the Meridium APM software only. Additional hardware may be required on a Meridium Enterprise APM Server machine on which other components are installed. These minimum requirements may not be sufficient, depending upon how your system is configured and the anticipated user load the system must service.

- Four Processor Cores, 2+ GHz
- 16 GB RAM
- 100 GB of available hard drive space on, at a minimum, 7.2K RPM drives

A minimum of a 100BASE-TX switched network is required between the Meridium Enterprise APM Server and the Database Server.

 **Note:** For maximum system availability, we recommend deploying Meridium Enterprise APM servers in a clustered configuration to facilitate load balancing and failover in the event of a hardware problem. Meridium supports Microsoft Clustering Services and Network Load Balancing for clustered deployment configurations.

If you are using a virtual machine (VM) to host your Meridium Enterprise APM 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 and the anticipated user load. 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. Professional Services department](#).

Software Requirements

The following software components are required on any machine that will serve as the Meridium Enterprise APM Server. This table is intended to be used as a reference of the behavior of the Meridium Enterprise APM 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.

A Windows Server 2012 R2 (64-bit) operating system is required to properly run Meridium software, and must be installed on the machine that will serve as the Meridium Enterprise APM Server.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium Enterprise APM Server and Add-ons Installer
Microsoft SQL Server 2012 Management Objects	Microsoft	Yes	If this is not found, the installer will install it automatically.
ReportViewer2015	Microsoft	Yes	If this is not found, the installer will install it automatically.
IIS 8.5 -and- IIS 6.5 WMI Compatibility Roles	Microsoft	Yes	If this is not found, an error message will appear.
Microsoft ADOMD.Net	Microsoft	Yes, if Asset Care will be installed.	If this is not found, the installation will continue.
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.	

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium Enterprise APM Server and Add-ons Installer
Microsoft Access Database Engine (ACE) 2010	Meridium Enterprise APM distribution package	Yes	<p>The installer does not check for this component.</p> <p>Microsoft Database Access (ACE) is required on the Meridium Enterprise APM Server if you have translations stored in your database and want those translations to be exported during the database upgrade process.</p> <p>The Microsoft ACE software is stored in the following location in the Meridium Enterprise APM distribution package: \\General Release\Required 3rd Party Components\Microsoft ACE\12.0.</p> <p>To install this component, open the file AccessDatabaseEngine_x64.exe.</p>
WinMerge	Meridium Enterprise APM	Yes	This is installed automatically.
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.
Microsoft Visual C++ Redistributable Package (x86)	Meridium Enterprise APM	Yes	If this is not found, the installer will install it automatically.

Meridium Enterprise APM Database Server

Hardware Requirements

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

- Four Processor Cores, 2+ GHz
- 32 GB RAM
- 200 GB of available hard drive space on, at a minimum, 10K RPM drives

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 10* 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.
- A minimum of a 100BASE-TX switched network is required between the Meridium Enterprise APM Server and the Meridium Enterprise APM Database Server.

Software Requirements

Meridium Enterprise APM supports the use of an Oracle or SQL Server Database Server.

Oracle Requirements

Meridium Enterprise APM requires that you use Oracle Server 12.1 Enterprise Edition. The Meridium, Inc. testing environment uses Oracle Server 12.1.0.2.

SQL Server Requirements

Meridium Enterprise APM requires that you use SQL Server 2012 or SQL Server 2014. If you are using SQL Server 2012, it must be SP2 CU2 or above. The Meridium, Inc. testing environment uses SQL Server 2012 Standard Edition SP2 CU2 and SQL Server 2014 Standard Edition RTM.

SQL Server Report Server

Hardware Requirements

The following hardware requirements outline the *minimum* hardware required for any machine that will serve as the SQL Server Report Server. These requirements account for the Meridium Enterprise 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.

- Two Processor Cores, 2+ GHz
- 8 GB RAM
- 25 GB of available 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. Professional Services department](#).

Software Requirements

The following software components are required on any machine that will serve as the SQL Server Report Server.

Software Name and Version	Where You Can Obtain It	Required?	Behavior of Meridium APM Server and Add-ons Installer
SQL Server Reporting Services 2012 -or- SQL Server Reporting Services 2014	Microsoft	Yes	If it is not found, the installer will close.

Meridium Enterprise APM Supported Software and Devices

The following tables describe the software and devices supported by Meridium Enterprise APM.

Supported Software

Meridium Enterprise APM Components	Supported 3rd Party Components	Notes	V4.0.0.0	V4.0.1.0
All Meridium Enterprise APM Components	.NET Framework 4.5		✓	✓
Meridium Enterprise APM Servers	Windows Server 2012 R2 (64-bit)		✓	✓
Meridium Enterprise APM Client Operating System	Android Kitkat 4.4		✓	✓
	Android Lollipop 5.0		✓	✓
	Apple iOS 7		✓	
	Apple iOS 8		✓	✓
	Apple OS X		✓	✓
	Windows 7 (32-bit and 64-bit)		✓	✓
	Windows 8.1 (64-bit)		✓	✓
Meridium Enterprise APM Client Web Browser	Chrome 43 and higher		✓	✓
	Internet Explorer 11		✓	✓
	Safari 8 (Mac only)		✓	✓

Meridium Enterprise APM Components	Supported 3rd Party Components	Notes	V4.0.0.0	V4.0.1.0
Meridium Enterprise APM Database	Oracle Server 12.1 Enterprise Edition	<p>Servers used in the Meridium, Inc. testing environment:</p> <ul style="list-style-type: none"> • Oracle Server 12.1.0.1 • Oracle Server 12.1.0.2 	✓	✓
	SQL Server 2012 (SP2 CU2 and higher)	The Meridium, Inc. testing environment uses SQL Server 2012 Standard Edition SP2 CU2.	✓	✓
	SQL Server 2014	The Meridium, Inc. testing environment uses SQL Server 2014 Standard Edition RTM.	✓	✓
Reports	SQL Server Reporting Services 2012		✓	✓
	SQL Server Reporting Services 2014		✓	✓
Metrics and Score-cards	Microsoft SQL Server Analysis Services 2012		✓	✓
	Microsoft SQL Server Analysis Services 2014		✓	✓

Meridium Enterprise APM Components	Supported 3rd Party Components	Notes	V4.0.0.0	V4.0.1.0
Process Data Integration	OSIsoft® PI Server version 3.4.390.16 with PI OPC DA/HDA Server version 1.2.7.0.		✓	✓
	Matrikon Simulation tool, which simulates the MatrikonOPC Historical Data Access Suite		✓	✓
	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 2.3.1.5322		✓	✓
	Honeywell Uniformance® Process History Database (PHD) Version 310.1.0.		✓	✓
Rounds (Mobile Device Operating System)	Any operating system that meets the Meridium Enterprise APM Client operating system requirements.		✓	✓
SAP Interfaces and ASI for SAP	SAP ECC 6.0 (Enhancement Packs [EhP] 1 through 7)		✓	✓

Supported Devices

Meridium Enterprise APM Components	Device	Notes	V4.0.0.0	V4.0.1.0
Thickness Monitoring*	GE DMS Go		✓	✓
	GE DMS Go+		✓	✓
	GE DMS2		✓	✓
	Olympus 37DL Plus Ultrasonic Thickness Gage		✓	✓
	Olympus 38DL Plus Ultrasonic Thickness Gage		✓	✓
Rounds	Any Android, iOS, or Windows tablet that meets the Meridium Enterprise APM Client operating system requirements listed in the Supported Software table.		✓	✓
	Barcode Functionality			
	Device cameras for Android and iOS tablet.		✓	✓

* Thickness Monitoring use the Devices Interface, which is a UI that is configured to support the transfer of data between Meridium Enterprise APM and devices that Meridium, Inc. supports.

Asset Criticality Analysis (ACA) System Requirements

License Requirements

The *Meridium APM Framework Tools* license is required to take advantage of ACA functionality.

In order to update your SAP system to reflect the criticality value that is determined in ACA, the licenses *SAP Interfaces - Foundation* and *SAP Interfaces - Criticality Assessment* are also required.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Asset Health Manager (AHM) System Requirements

License Requirements

The *Asset Health* license and the licenses for the modules that you want to use with AHM are required to take advantage of AHM functionality.

Additional Components Required

When you install the Meridium Enterprise APM Server, the Meridium Asset Health Indicator Service is installed automatically. In order for the Asset Health Indicator Service to function as described within this documentation, you must configure the Asset Health Indicator Service. After you do so, the Asset Health Indicator Service will allow the health indicator status values to be updated automatically.

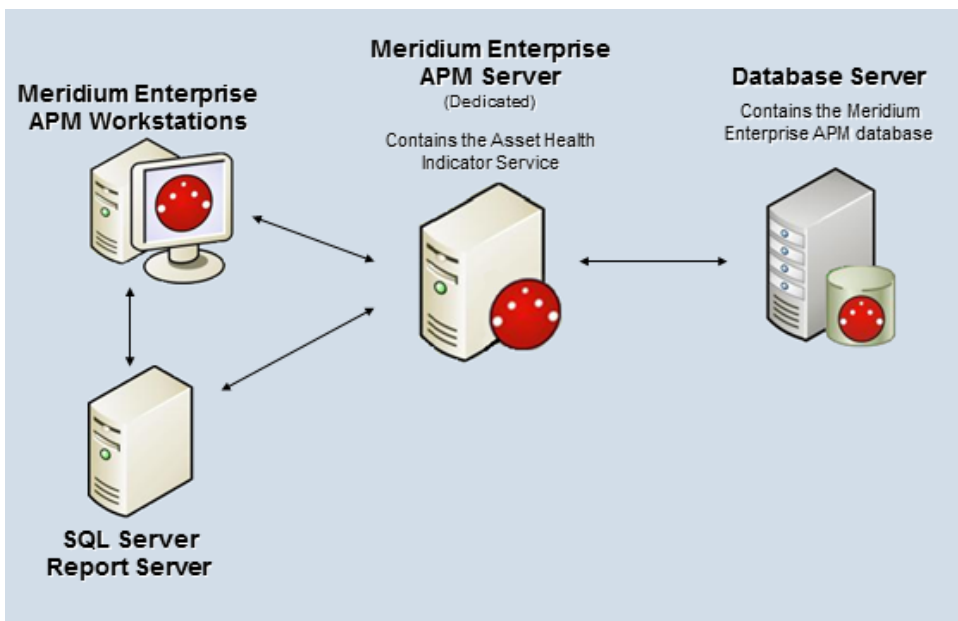
In addition, Asset Health Manager can be used to its complete potential only when it is integrated with one or more of the following modules:

- Rounds
- Asset Strategy Management
- Metrics and Scorecards
- Process Data Integration

Your system must also meet the system requirements for any of these additional modules that you plan to use with Asset Health Manager.

System Architecture

The following image shows the architecture components that are required to support this module.



Deploying Asset Health Manager

After you have installed and configured the basic Meridium Enterprise APM system architecture, you will need to perform some configuration steps specifically for Asset Health Manager.

If you want to use Asset Health Manager with [Process Data Integration](#) and [Policy Designer](#), you must also configure the services associated with these modules. For additional information on how services used by these three modules interact, select this link.

Asset Strategy Implementation (ASI) System Requirements

License Requirements

The following licenses are required to take full advantage of ASI functionality:

- *Asset Strategy Management*
- *SAP Content for ASI*

Additional Components Required

In addition to the basic Meridium APM system architecture, your system must also contain the following additional components:

- **The Asset Strategy Management (ASM) module.** ASI allows you to build Implementation Packages, which are containers of records that dictate the work that you want to perform and the Asset Strategies that contain the original work requests (Action Revision records). Asset Strategies are created in ASM.
- **An SAP System.** The connectivity to SAP is required only if you want to create items such as Maintenance Plans, Maintenance Items, and Task Lists from ASI. To take full advantage of the ASI module, we recommend that you integrate ASI with SAP.

Asset Strategy Management (ASM) System Requirements

License Requirements

A limited version of the ASM module is available with a Meridium license. To experience ASM with full functionality, an *Asset Strategy Management* license is required.

Additional Components Required

In addition to the basic Meridium APM system architecture, your system must also contain the following additional components if you wish to use Asset Strategy Implementation for packaging Actions from more than one strategy:

- **The Asset Strategy Implementation (ASI) module.** ASI allows you to build Implementation Packages, which are containers of records that dictate the work that you want to perform and the Asset Strategies that contain the original work requests.

Calibration Management System Requirements

License Requirements

The *Calibration* license is required to take advantage of Calibration Management.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Failure Modes and Effects Analysis (FMEA) System Requirements

License Requirements

The *RCM* license is required to take advantage of FMEA functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Family Policy System Requirements

License Requirements

The *Family Policy* license is required to take full advantage of Family Policy functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Hazards Analysis System Requirements

License Requirements

The *Hazards Analysis* license is required to take advantage of Hazards Analysis functionality.

In order to use the integration between Hazards Analysis and SIS Management, the *SIS Management* license is also required.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Inspection Management System Requirements

License Requirements

The *Inspection* license is required to take advantage of Inspection Management functionality.

Additional Components Required

For organizations with sites located in Brazil, Meridium Enterprise APM provides expanded inspection functionality to support the inspection requirements of NR-13. To take advantage of this functionality, the *NR13* license is required.

Metrics and Scorecards System Requirements


License Requirements

The *Metrics Manager* license is required for Metrics and Scorecards module.

Additional Components Required

In addition to the basic Meridium Enterprise APM system architecture, your system must also contain a SQL Server Analysis Services Server machine that will host the Microsoft SQL Server Analysis Services software. The following versions of SQL Server Analysis Services are supported in this version of Meridium Enterprise APM:

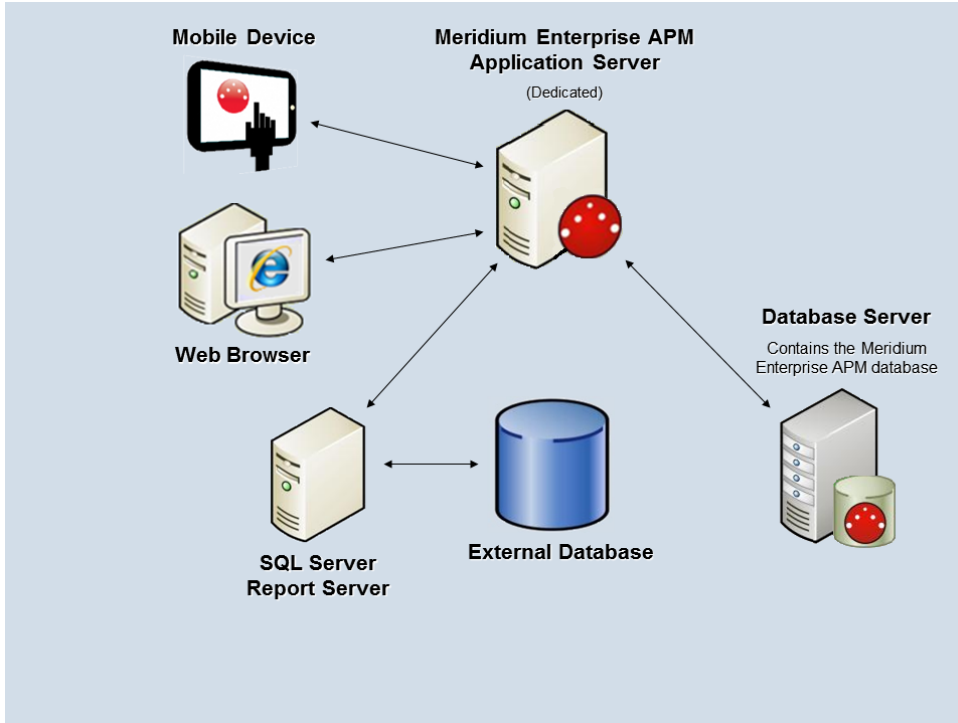
- Microsoft SQL Server Analysis Services 2012
- Microsoft SQL Server Analysis Services 2014

 **Note:** The Meridium Enterprise APM testing environment uses SQL Server Analysis Services 2012 and SQL Server Analysis Services 2014.

Microsoft SQL Server Analysis Services provides the ability to analyze large amounts of data quickly and easily. Analysis Services provides a means for accessing warehouses of data by letting you create dimensional cubes from information in the database and dimension tables. Numeric measures can be summed into pre-aggregated values while cubes are being created. Cubes can contain data that is summarized, copied, or read directly from the data warehouse. Cubes, dimensions, and partitions can be processed (i.e., updated) to incorporate new or changed data from the data warehouse. Time, location, equipment type, or sizes are common dimensions against which measures are calculated and displayed in Meridium Enterprise APM. Note that the data warehouse can be created as a separate database, combining information from Meridium Enterprise APM and other data sources. On the other hand, dimensional cubes can be created by accessing the Meridium Enterprise APM database directly.

Together, Microsoft SQL Server Analysis Services and the Metrics and Scorecards module functionality provide Meridium Enterprise APM users with the ability to analyze data in the Meridium Enterprise APM database using the features of Analysis Services through the Meridium Enterprise APM interface. To use the Metrics and Scorecards functionality, you must incorporate SQL Server Analysis Services into your Meridium Enterprise APM system.

If you choose to implement the Metrics and Scorecards module within your system, we recommend using a configuration in which the Analysis Server exists on a machine that is separate from the Meridium Enterprise APM Application Server. This deployment scenario most accurately reflects the Meridium Enterprise APM testing environment. The following illustration shows how the SQL Server Analysis Services Server connects to the basic Meridium Enterprise APM System architecture.



Note: While this image depicts only a single, dedicated Meridium Enterprise APM Application Server, your implementation may contain one or more of these machines. The purpose of this image is to depict the interaction of the SQL Server Analysis Server with the basic Meridium Enterprise APM components not to provide details on the basic components themselves. While your Meridium Enterprise APM system may contain multiple dedicated Application Servers, it will contain only a single SQL Server Analysis Server that *all* of those Application Servers will access.

Policy Designer System Requirements

License Requirements

The *Policy Designer* license is required to take full advantage of Policy Designer functionality.

Note: This license is not required for *baseline policies* to operate. However, if you want to modify a baseline policy, the *Policy Designer* license is required.

Additional Components Required

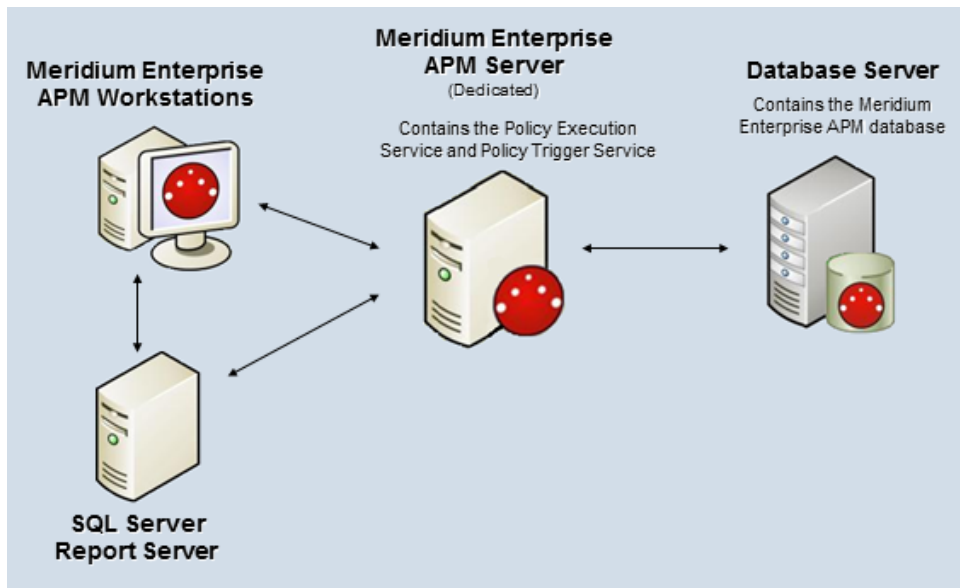
When you install the Meridium Enterprise APM Server, the Meridium Policy Execution Service and Policy Trigger Service are installed automatically. In order to execute policies, you must configure these services on the appropriate machines.

Note: Depending on the number of policies that you need to manage in your system, you may have multiple Meridium Enterprise APM Servers to process policy executions. In this case, you can configure your Meridium Enterprise APM System Architecture according to your company's preference for server load-balancing.

Your system must also meet the system requirements for any additional modules that you plan to use with Policy Designer.

System Architecture

The following image shows the basic system architecture for deploying Policy Designer with one Meridium Enterprise APM Server that processes policy executions.



Deploying Policy Designer

Policy Designer System Requirements

After you have installed and configured the basic Meridium Enterprise APM system architecture, you will need to perform some configuration steps specifically for Policy Designer.

If you want to use Policy Designer with [Process Data Integration](#) and [Asset Health Manager](#), you must also configure the services associated with these modules. For additional information on how services used by these three modules interact, select this link.

Process Data Integration (PDI) System Requirements


License Requirements

The *OPC Interfaces* license is required to take advantage of Process Data Integration functionality.

Additional Components Required

In addition to the basic Meridium Enterprise APM system architecture, your system must also contain the following additional components:

- **Meridium APM Process Data Integration Server:** A machine on which the Meridium APM Process Data Integration Service is installed. The Meridium APM Process Data Integration Server must contain Microsoft Message Queuing (MSMQ).

 **Note:** While MSMQ is not a prerequisite to installing the Meridium APM Process Data Integration Service, it must exist on the machine before users begin using the Process Data Integration feature.

If you are using a virtual machine (VM) to host your Meridium APM Process Data Integration 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, [contact Meridium, Inc.](#)

- **OPC Server:** A machine on which the OPC-compliant server software is installed. The software requirements of this server are determined by the third-party distributor of the software.

To reduce your number of configuration tasks, (i.e., to avoid configuring a COM or DCOM connection), we recommend that this be the *same* machine as the Meridium APM Process Data Integration Server, (i.e., the machine on which the Meridium APM Process Data Integration Service is installed). If, however, your company restricts the installation of additional applications on the OPC Server, the Meridium APM Process Data Integration Server may be a separate machine from the OPC Server. Note that if you choose this deployment method:

- The OPC Server must be accessible from your Meridium APM Process Data Integration server.

- The Meridium APM Process Data Integration Server must connect to the OPC Server using a COM or DCOM connection. Meridium does not provide documentation or support for configuring this connection.

⚠ IMPORTANT: The OPC Server must pass time data to the Meridium Process Data Integration Service using the UTC time zone in order for the PDI functionality to work as designed.

- **Process Historian:** A machine that contains the process historian software. The software requirements of this machine are determined by the third-party distributor of the software.

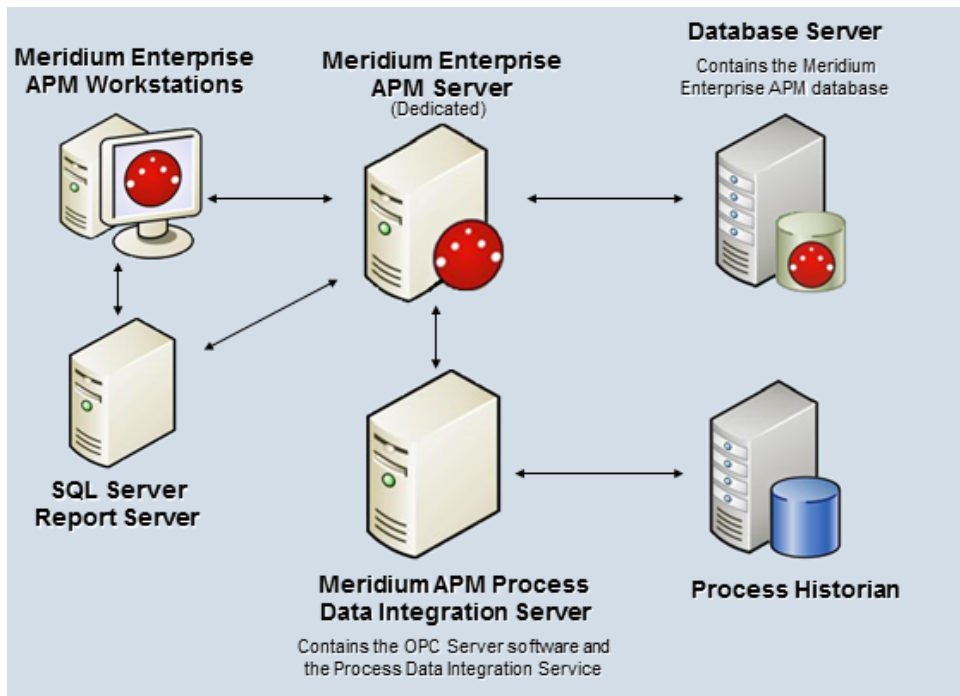
Only the following OPC Servers and process historians are supported for the PDI feature. Other OPC Servers and process historians have not been tested and connections to them are not supported by Meridium, Inc.:

- OSIsoft® PI Server version 3.4.390.16 with PI OPC DA/HDA Server version 1.2.7.0.
- Matrikon Simulation tool, which simulates the MatrikonOPC Historical Data Access Suite.
- IP21 (Aspen ONE V8.0) Version 12.0.0.20.
- IP21 (Aspen ONE V8.0) Version 12.0.0.20 with MatrikonOPC IP21 Server Version 2.3.1.5322.
- Honeywell Uniformance® Process History Database (PHD) Version 310.1.0.

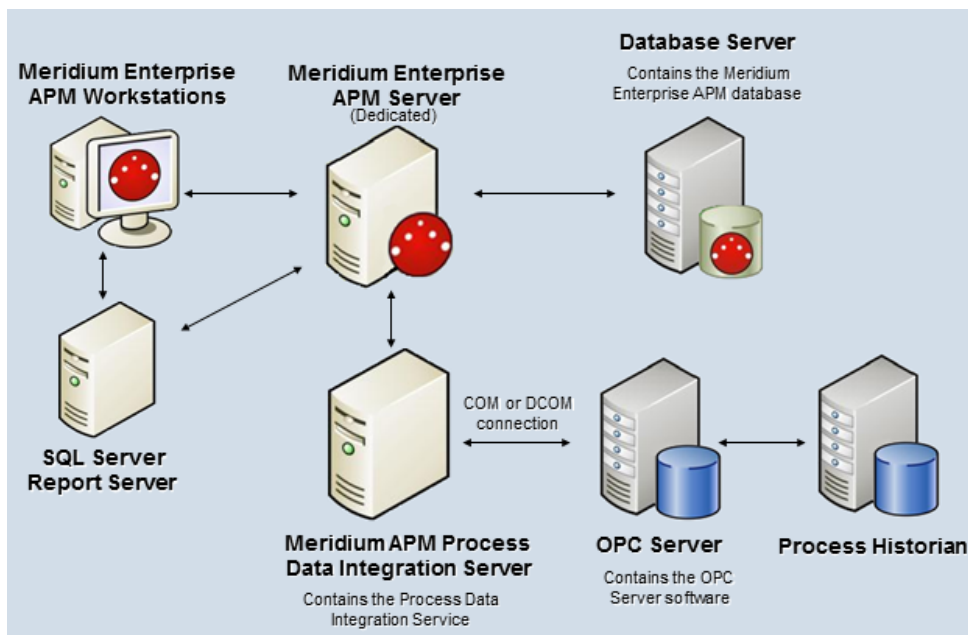
📄 Note: Tag browsing must be enabled on the machine on which the Honeywell Uniformance® Process History Database (PHD) OPC Server software is installed. To enable tag browsing, change the BrowseMode registry setting to *1*, and then restart the machine. For more information, refer to the Honeywell Uniformance® PHD OPC Server User Guide.

System Architecture

The following image shows how these machines should be incorporated into the basic Meridium Enterprise APM system architecture if you implement the standard configuration where the OPC Server software and the Meridium APM Process Data Integration Service are installed on the same machine.



The following image shows the alternate configuration of these machines when the OPC Server software is installed on a *separate* machine from the Meridium APM Process Data Integration Service.



Deploying Process Data Integration

After you have installed and configured the basic Meridium Enterprise APM system architecture, you will need to perform some configuration steps specifically for Process Data Integration.

Process Data Integration (PDI) System Requirements

If you want to use Process Data Integration with [Asset Health Manager](#) and [Policy Designer](#), you must also configure the services associated with these modules. For additional information on how services used by these three modules interact, select this link.

Production Loss Analysis (PLA) System Requirements

License Requirements

The *Production Loss Accounting* license is required to take advantage of PLA functionality.

Additional Components Required

If you want to:

- Access and create a Root Cause Analysis (RCA) from PLA, you will need to make sure that the [license for Root Cause Analysis](#) is *active*.
- Access and create a Production Analysis from PLA, you will need to make sure that the [license for Reliability Analytics](#) is *active*.

Risk Based Inspection (RBI) System Requirements

License Requirements

The *Risk Based Inspection* license is required to take advantage of RBI functionality.

Additional Components Required

If you want to take advantage of the expanded RBI functionality for pipelines, the *Pipeline Management* license is required.

Root Cause Analysis (RCA) System Requirements

License Requirements

The *PROACT* license is required to take advantage of RCA functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Rounds System Requirements

System Requirements

The *Operator Rounds* license is required to take advantage of the Rounds functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Reliability Analytics System Requirements

License Requirements

The *Reliability Manager* license is required to take advantage of Reliability Analytics functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Reliability Centered Maintenance (RCM) System Requirements

License Requirements

The *RCM* license is required to take advantage of RCM functionality.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Reports

License Requirements

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Additional Components Required

- Microsoft Visual Studio 2012 or 2013 Professional must be installed on all the workstations, that need to work with Reports in the Meridium Enterprise APM system.
- Microsoft SQL Server Data Tools - Business Intelligence for Visual Studio 2013.
- Meridium SSRS Data Processing Extension plugin for Visual Studio from the Admin Installer.

Rules

License Requirements

A Developers License is required in order to use Rules Editor.

Additional Components Required

- Microsoft Visual Studio 2012 or 2013 Professional must be installed on all the workstations, that need to work with Meridium rules in the Meridium Enterprise APM system.
- MSXML must also be installed on all the workstations.
- Meridium APM Rules Editor Extension plugin for Visual Studio from the Admin Installer.

SIS Management System Requirements

License Requirements

The *SIS Management* license is required to take advantage of SIS Management functionality.

In order to use the integration between SIS Management and Hazards Analysis, the *Hazards Analysis* license is also required.

Additional Components Required

Only the basic Meridium Enterprise APM system architecture is required for this feature to work correctly. No additional components are required.

Thickness Monitoring (TM) System Requirements

License Requirements

The *Thickness Monitoring* license is required to take advantage of TM functionality.

Files That Support Devices in Thickness Monitoring

In addition to Thickness Monitoring, if you will devices to collect data that you will transfer to Meridium Enterprise APM, the machine that will connect to these devices must have the Meridium Device Service installed. The following devices are supported:

- GE DMS Go
- GE DMS Go+
- GE DMS2
- Olympus 37DL Plus Ultrasonic Thickness Gage
- Olympus 38DL Plus Ultrasonic Thickness Gage

These devices may required additional drivers provided by the manufacturer.

Contact Meridium, Inc.

[Meridium, Inc. Offices and Regional Contacts](#)

For mailing addresses, phone, fax, and contact form: <https://www.meridium.com/about/locations>

[Global Support Services](#)

For technical product support: <https://www.meridium.com/support>