



# APM System Monitoring



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# Chapter 1

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## Overview

### Topics:

- [APM System Monitoring](#)
- [Access the APM System Monitoring Page](#)

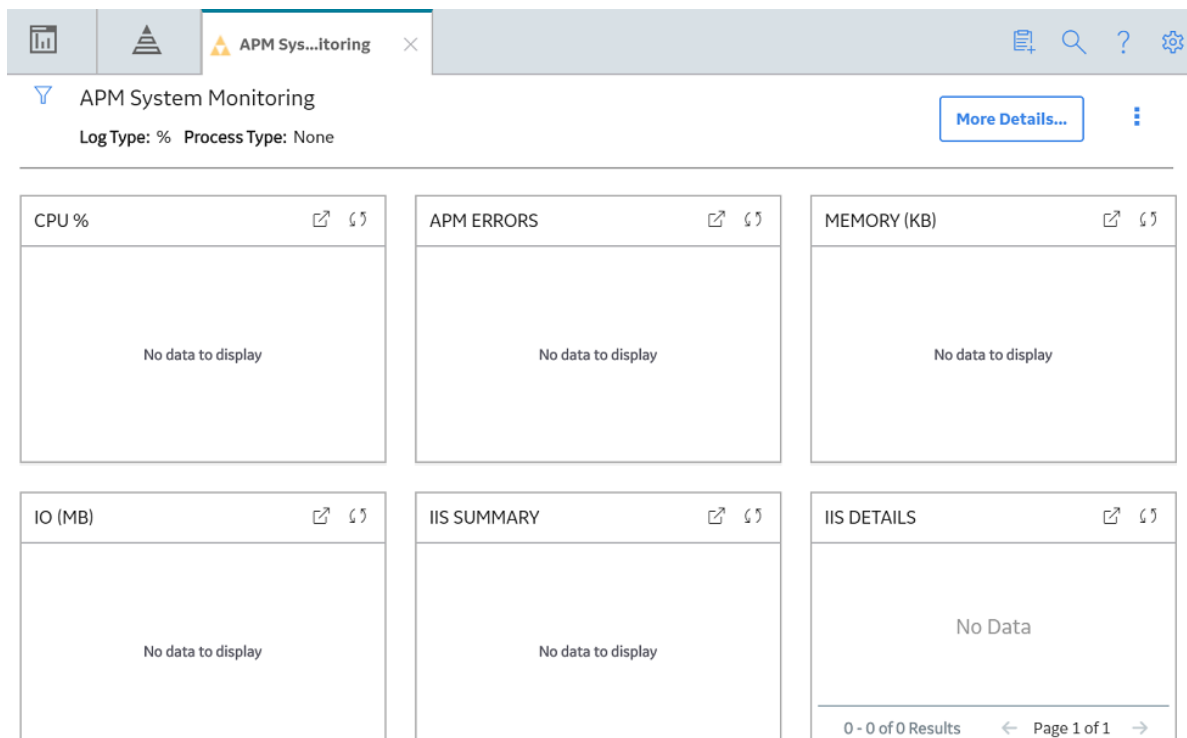
# APM System Monitoring

APM System Monitoring allows you to monitor processes and log information to better evaluate GE Digital APM system performance.

## Access the APM System Monitoring Page

### Procedure

In the module navigation menu, select **Admin > Operations Manager > APM System Monitoring**. The **APM System Monitoring** page appears.



The **APM System Monitoring** page displays the following sections:


- **APM Errors:** Displays the number of errors associated with GE Digital APM services and processes.
- **CPU%:** Displays a record of CPU use percentage. If two processors are being monitored, then the graph will display use percentage based on a 200 percent limit; if three are being monitored, the use percentage will be based on a 300 percent limit; and so on.
- **Memory (KB):** Displays a record of memory use percentage.
- **IO (MB):** Displays a record of input/output transfer, in megabytes.
- **IIS Summary:** Displays the total number of 500 Internal Server Errors and IIS resets.
- **IIS Details:** Displays details related to the 500 Internal Server Errors and IIS resets.
- **Log Details:** Displays details related to the errors associated with GE Digital APM services and processes.


### Note:

You can access additional APM System Monitoring information by selecting **More Details** on the upper-right corner of the **APM System Monitoring** page. If you do, a new page will appear, displaying the following sections:

- **Database Details:** Displays details related to the size of monitored databases.
- **Server Config:** Displays details related to the specifications of each monitored server.
- **Process Config:** Displays details related to the GE Digital APM services and processes.
- **Ports:** Displays details related to connected ports, including whether each is open or closed.

**Tip:**

In the upper-right corner of any section, you can select  to refresh the information displayed.

In the upper-right corner of any section, you can select  to view the information on a separate page. Refer to the Graphs and Queries documentation for information on using these interfaces.

# Chapter 2

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## Manage APM System Monitoring


### Topics:

- [Filter Information on the APM System Monitoring Page](#)
- [Transmit Logs or Data to GE Digital APM](#)



## Filter Information on the APM System Monitoring Page


### Procedure

1. [Access the APM System Monitoring Page](#) on page 2.
2. On the upper-left corner of the page, select . The **Enter Parameter Values** window appears.


### Enter Parameter Values

---


**Time**


**Server**

**Log Type**

**Process Type**


---

3. As needed, modify the values in the following boxes:
  - **Time:** Select the date whose information you want to be displayed.
  - **Server:** Select the server whose information you want to be displayed, or select **ALL** to display information for all monitored servers.
  - **Log Type:** Select the process whose logs you want to be displayed, or select **ALL** to display logs for all monitored processes.
  - **Process Type:** Select the process whose information you want to be displayed, or select **ALL** to display information for all monitored processes.
4. Select **Done**.

The information on the **APM System Monitoring** page is filtered based on the specified parameters.

## Transmit Logs or Data to GE Digital APM

### Procedure

1. [Access the APM System Monitoring Page](#) on page 2.
2. On the upper-right corner of the page, select  .  
A drop-down menu appears.
3. To transmit all of the log files collected by APM System Monitoring, select **Transmit Logs to Meridium**.

-or-

To transmit the data compiled by APM System Monitoring, select **Transmit Data to Meridium**.

The current logs files or the data that has changed since the last update are transmitted to GE Digital APM.

# Chapter 3

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## Performance Monitoring

### Topics:

- [Modify APM Performance Monitoring Settings](#)

# Modify APM Performance Monitoring Settings

The Performance Monitoring feature supports APM System Monitoring.

## Procedure

1. In the module navigation menu, select **Admin > Application Settings**.
2. Select **Performance Monitoring**.  
The **Performance Monitoring** page appears.

Performance Monitoring

Is APM Performance monitoring enabled for this application


True

Threshold at which a catalog query performance monitoring event is created

5

Threshold at which a workflow query performance monitoring event is created

5

3. In the **Is APM Performance monitoring enabled for this application** box, select **True** or **False**, depending on whether or not you want APM System Monitoring to be enabled.
4. In the **Threshold at which a catalog query performance monitoring event is created** and **Threshold at which a catalog query performance monitoring event is created** boxes, enter the values, in seconds, which represent the thresholds for event creation.
5. In the upper-right corner of the page, select .  
The settings are saved.

# Chapter 4

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## Deployment

### Topics:

- [Deploy APM System Monitoring for the First Time](#)
- [Upgrade or Update APM System Monitoring to V4.4.0.0.0](#)
- [Configure a Windows Service for MongoDB](#)
- [Install APM System Monitoring](#)
- [Configure APM System Monitoring](#)

## Deploy APM System Monitoring for the First Time

### About This Task

The following table outlines the steps that you must complete to deploy and configure this module for the first time. These instructions assume that you have completed the steps for deploying the basic system architecture.

These tasks may be completed by multiple people in your organization. GE Digital recommends, however, that the tasks be completed in the order in which they are listed.

| Step | Task  | Notes   |
|------|---|---|
| 1    | On the machine that will serve as the APM System Monitoring Server, download and install the latest version of MongoDB Community Edition. | This step is required. The latest version of MongoDB Community Edition, as well as instructions about how to install it, can be found on the official MongoDB, Inc. website.<br><br>Note that instructions for configuring a Windows Service for MongoDB Community Edition are provided in the next step. |
| 2    | <a href="#">Configure a Windows Service for MongoDB Community Edition.</a>  | This step is required.  |
| 3    | On the machine that will serve as the APM System Monitoring controller, <a href="#">install APM System Monitoring.</a>                    | This step is required.  |
| 4    | On each machine that will serve as an APM System Monitoring agent, <a href="#">install APM System Monitoring.</a>                         | This step is required.  |
| 5    | On the machine that will serve as the APM System Monitoring admin, <a href="#">install APM System Monitoring.</a>                         | This step is required.  |
| 6    | <a href="#">Complete additional configuration steps related to APM System Monitoring.</a>   | This step is required.  |
| 7    | As needed, <a href="#">modify APM System Monitoring settings via the Performance Monitoring feature.</a>                                  | This step is optional.  |

## Upgrade or Update APM System Monitoring to V4.4.0.0.0

### About This Task

The following tables outline the steps that you must complete to upgrade this module to V4.4.0.0.0. These instructions assume that you have completed the steps for upgrading the basic GE Digital APM system architecture.

These tasks may be completed by multiple people in your organization. We recommend, however, that the tasks be completed in the order in which they are listed.

### Procedure

- Upgrade from any version V4.3.0.0.0 through V4.3.1.0.4

This module will be updated to V4.4.0.0.0 automatically when you update the components in the basic GE Digital APM system architecture. No additional steps are required.

- Upgrade from any version V4.2.0.0 through V4.2.0.9.4

To upgrade APM System Monitoring, you should uninstall all of your existing APM System Monitoring components, and then follow the [first-time deployment workflow](#).

## Configure a Windows Service for MongoDB

### Before You Begin

- On the machine that will serve as the APM System Monitoring Server, download and install the latest version of MongoDB Community Edition.

### Procedure

1. On the machine on which you installed MongoDB Community Edition, select the Windows Start button, then navigate to and right-click **Command Prompt**, and then select **Run as administrator**. A command prompt window appears.
2. On the command prompt window, enter the following:
  - `mkdir c:\data\db`
  - `mkdir c:\data\log`

Two directories that will be used by APM System Monitoring are created.

3. Create a configuration (.cfg) file. The file must set `systemLog.path`. Include additional configuration options as needed. For example, to create a file at `C:\data\mongod.cfg` that specifies both `systemLog.path` and `storage.dbPath`, the file would contain the following text:

```
systemLog:
  destination: file
  path: c:\data\log\mongod.log
storage:
  dbPath: c:\data\db
```

**Note:** In the configuration file, each tab indentation seen in the preceding text should be replaced with two spaces.

4. On the command prompt window, enter the following:  
`"C:\Program Files\MongoDB\Server\3.2\bin\mongod.exe" --config "C:\data\mongod.cfg" --install`

**Note:** To use an alternate dbpath, specify the path in the configuration file (e.g., `C:\data\mongod.cfg`) or on the command line with the `--dbpath` option.

The MongoDB service is installed.

5. On the command prompt window, enter the following:

```
net start MongoDB
```

The MongoDB service is started, and the Windows service is configured.

### Next Steps

- Return to the [APM System Monitoring first-time deployment workflow](#).

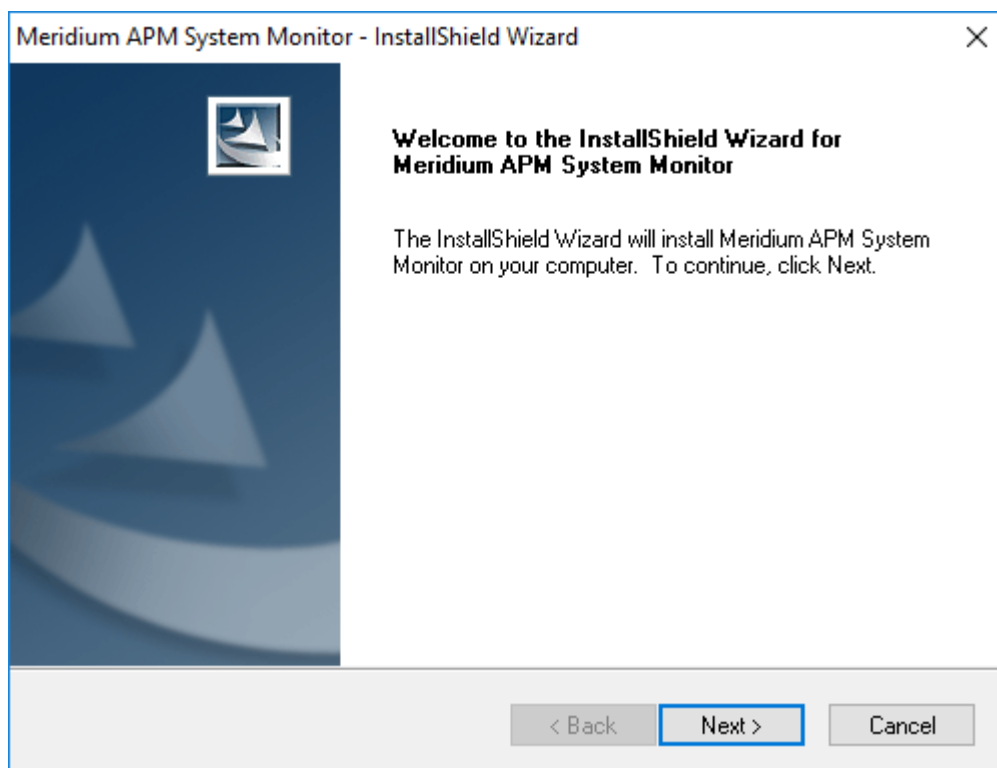
## Install APM System Monitoring

### Before You Begin

- Complete all previous steps in the [APM System Monitoring first-time deployment workflow](#).

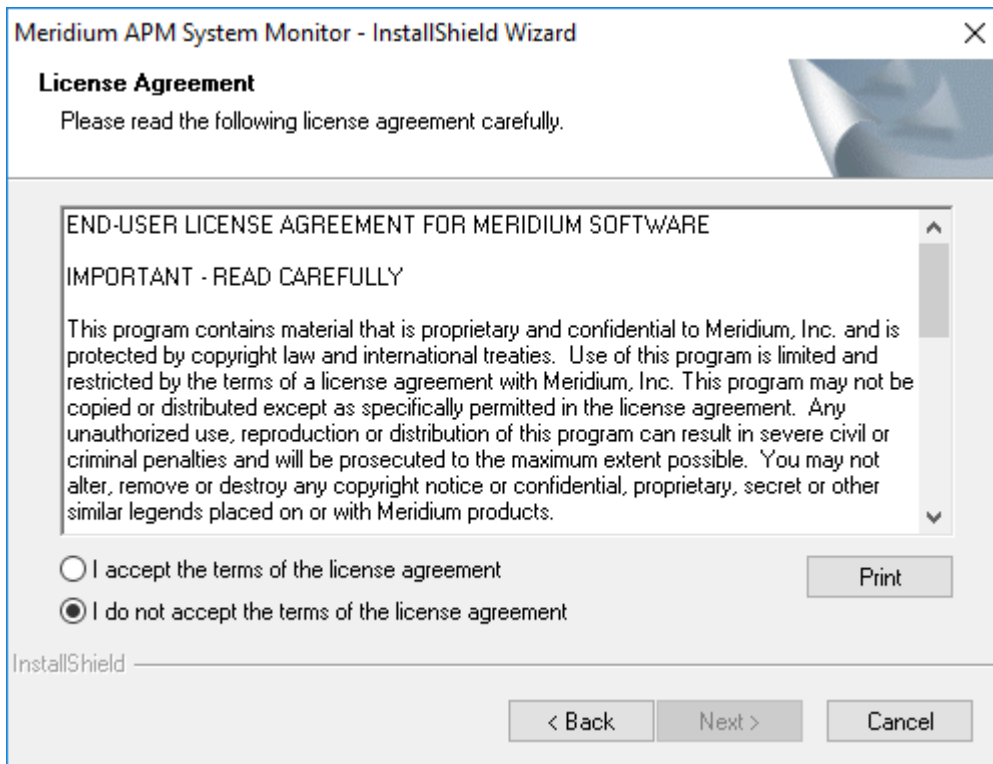
### Procedure

1. On the machine on which you want to install APM System Monitoring, access the GE Digital APM distribution package, and then navigate to the folder `Setup\APMSystemMonitor`.
2. Open the file `Setup.exe`.  
The Meridium APM System Monitor installer appears.

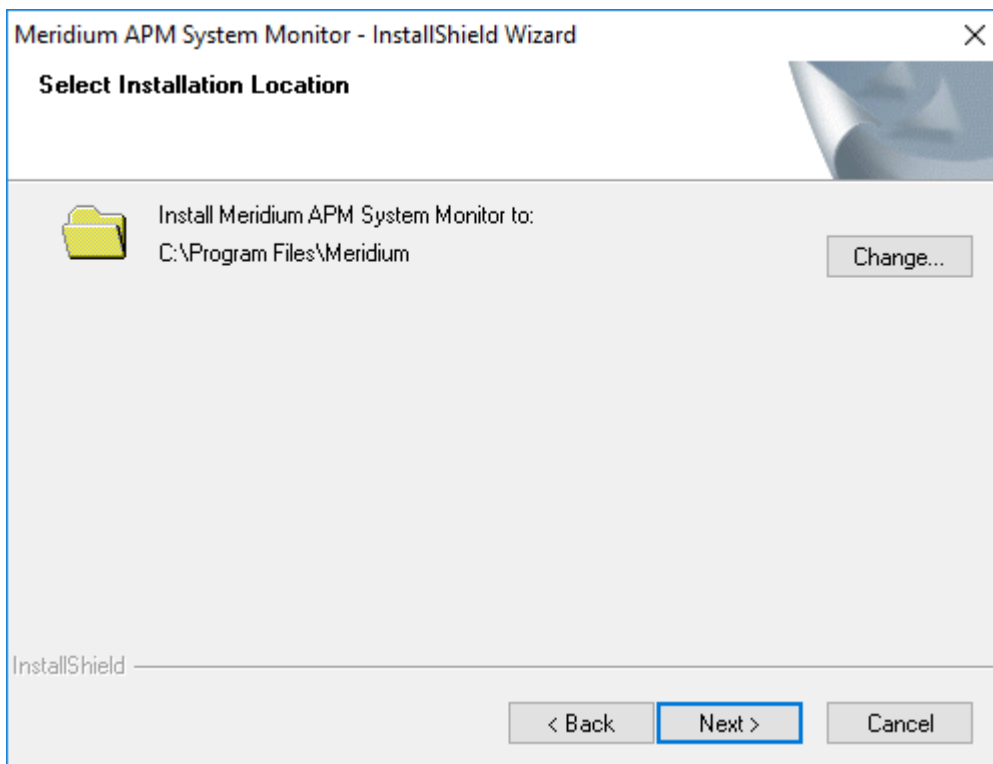


3. Select **Next**.  
The **License Agreement** screen appears.



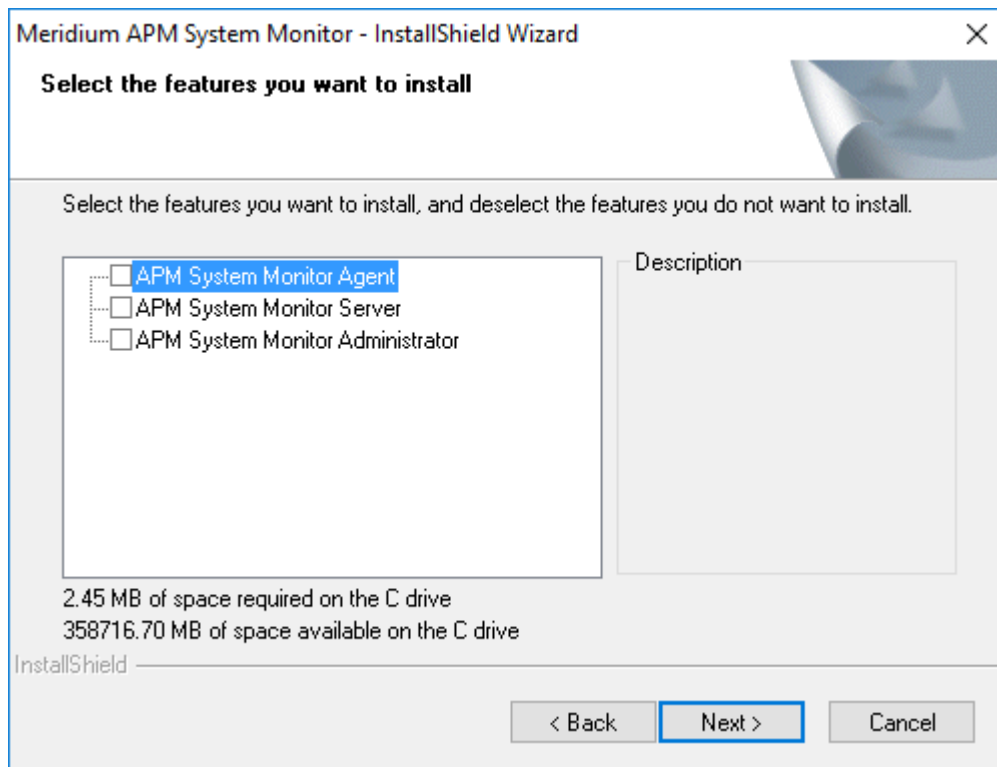


4. Read the License Agreement and, if you agree, select the **I accept the terms of the license agreement** check box. Then, select **Next**. The **Select Installation Location** screen appears.



5. Select **Next** to accept the default location.

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



6. If this is a machine that will serve as an APM System Monitoring agent, then select the **APM System Monitor Agent** check box.

**Note:** A single server machine could be the APM System Monitoring administrator, the APM System Monitoring controller, and an APM System Monitoring agent. Alternatively, you can distribute this deployment as needed. For a given server machine, select the check boxes for each APM System Monitoring feature that you want to deploy.

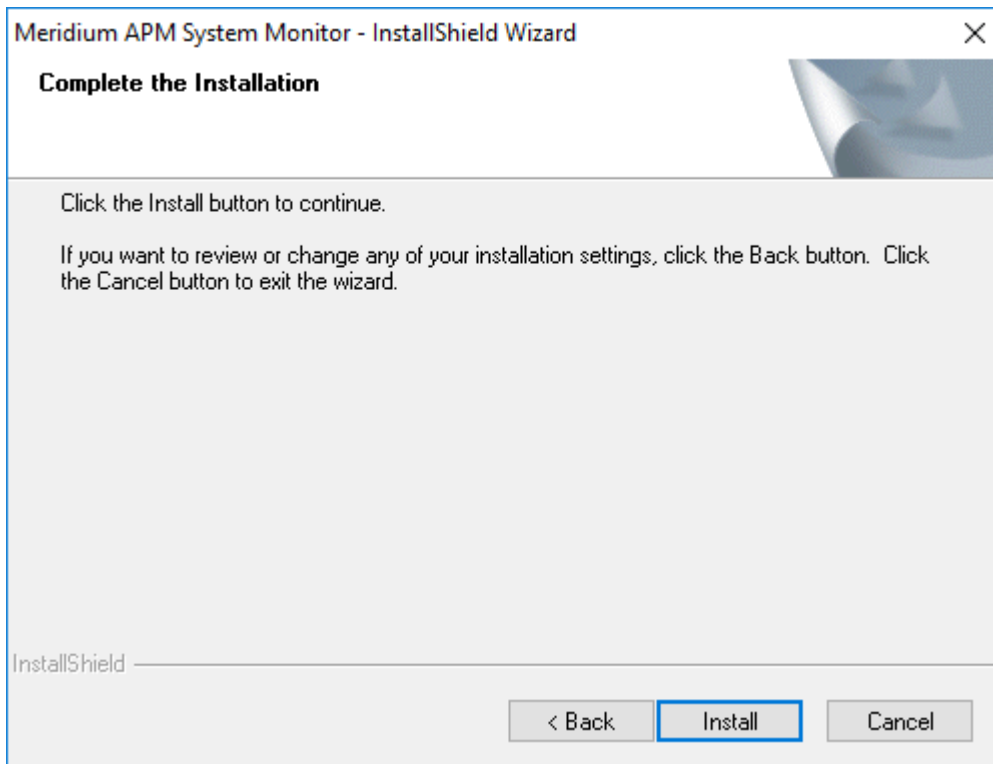
7. If this is the machine that will serve as the APM System Monitoring administrator, then select the **APM System Monitor Administrator** check box.

**Note:** Only one machine will serve as the APM System Monitoring administrator.

8. If this is the machine that will serve as the APM System Monitoring controller, then select the **APM System Monitor Server** check box.

**Note:** Only one machine will serve as the APM System Monitoring controller.

9. Select **Next**.  
The **Complete the Installation** screen appears.



10. Select **Install**.

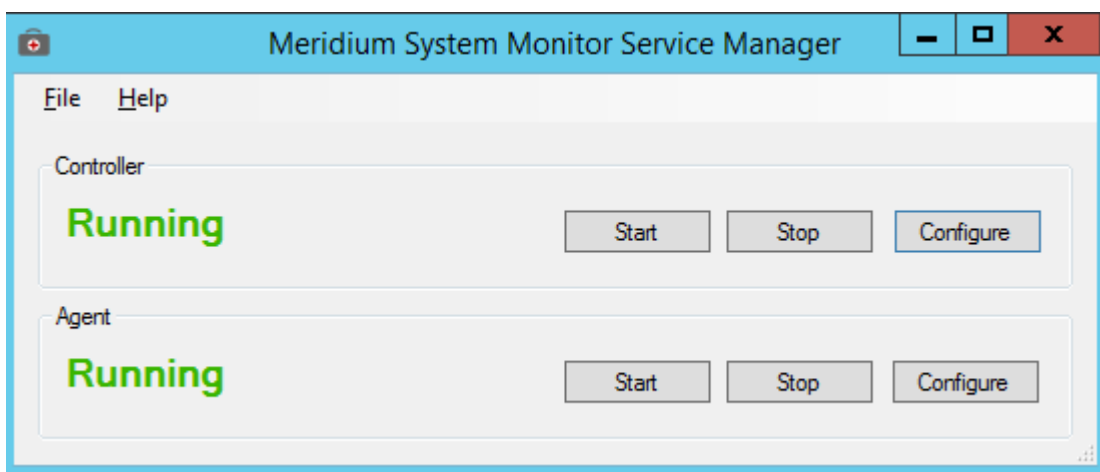
The **Setup Status** screen appears, displaying a progress bar. When the installation is complete, the **Installation is Complete** screen appears.

11. Select **Finish**.

The Meridium APM System Monitor installer closes.

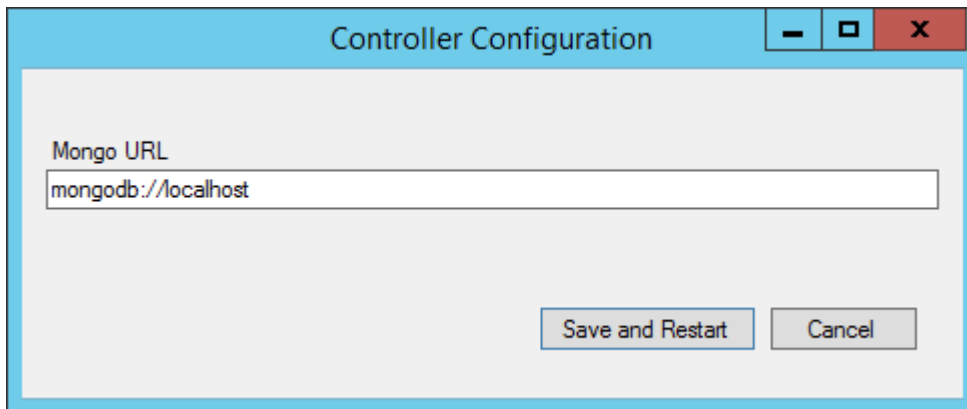
12. If the machine will serve as the APM System Monitoring controller or an APM System Monitoring agent, navigate to `C:\Program Files\Meridium\APMSystemMonitor`, and then open the file `Meridium.System.Monitor.ServiceManager.exe`. If the machine will serve only as the APM System Monitoring administrator, skip this step and proceed directly to step 18.

The **Meridium APM System Monitor Service Manager** window appears.

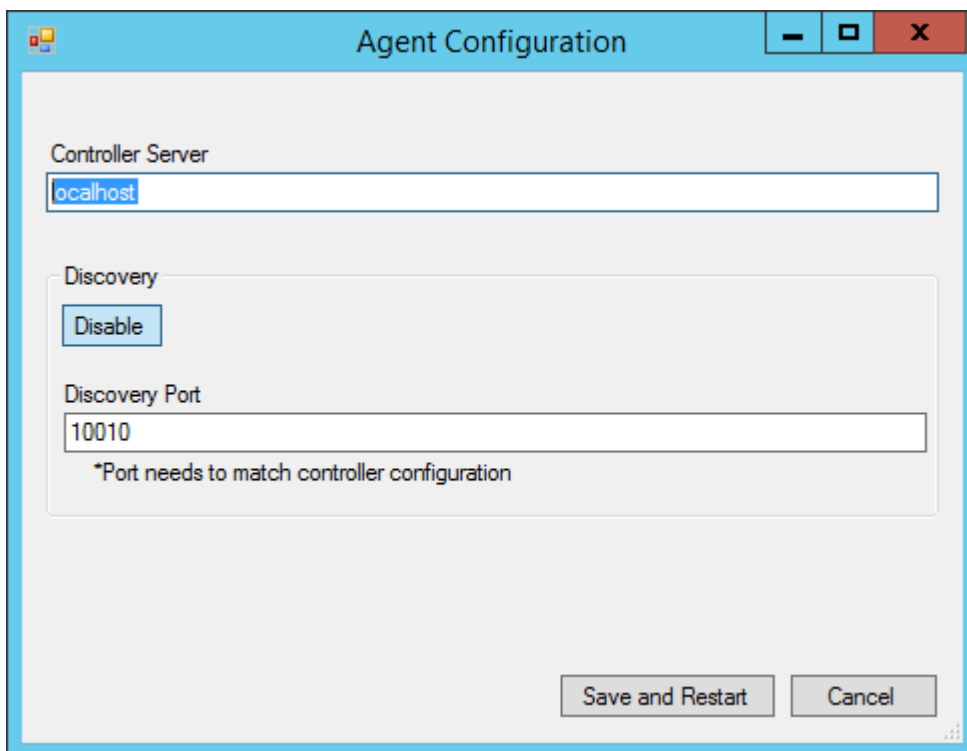


13. If the machine will serve as the APM System Monitoring controller, then, in the **Controller** section, select **Configure**. Otherwise, skip this step.

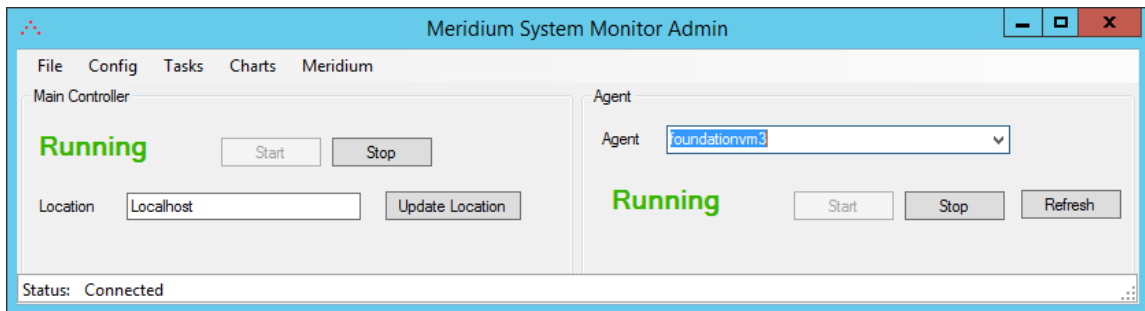
The **Controller Configuration** window appears.



14. In the **Mongo URL** box, enter the URL for the MongoDB database, and then select **Save and Restart**. The machine is configured as the APM System Monitoring controller.
15. If the machine will serve as an APM System Monitoring agent, then, in the **Agent** section, select **Configure**. Otherwise, skip this step. The **Agent Configuration** window appears.

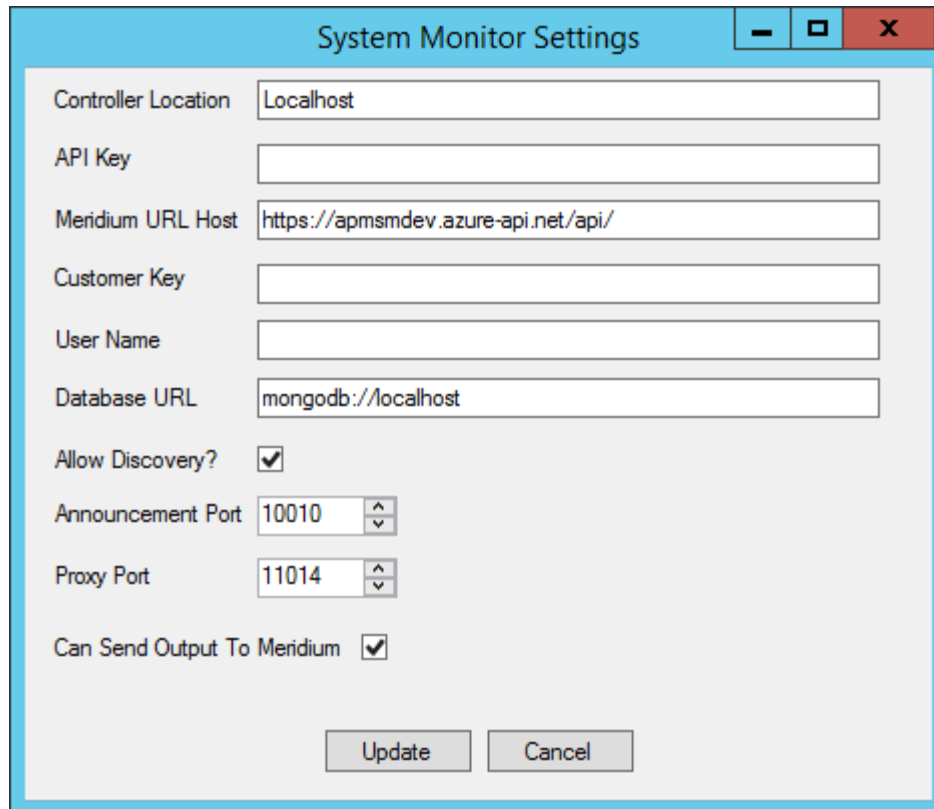


16. Ensure that the values in the **Controller Server** and **Discovery Port** boxes match the values specified for the APM System Monitoring controller, and then select **Save and Restart**. The machine is configured as an APM System Monitoring agent.
17. Close the **Meridium APM System Monitor Service Manager** window. APM System Monitoring is installed on the machine.
18. If the machine will serve as the APM System Monitoring administrator, navigate to C:\Program Files\Meridium\APMSystemMonitor\Admin, and then open the file Meridium.SystemMonitor.Admin.exe. Otherwise, skip the remaining steps and return to the [first-time deployment workflow](#). The **Meridium System Monitor Admin** window appears.



19. Perform the following steps in the **Meridium System Monitor Admin** window:

- a) In the **Location** box, enter the location of the APM System Monitor controller, and then select **Update Location**.  
The connection status displayed in the lower-left corner of the window changes to Connected.
- b) Select **Config**, and then select **Settings**.  
The **System Monitor Settings** window appears.



- c) In the **Controller Location** box, enter the location of the APM System Monitor controller.
- d) Enter values in the **API Key**, **Customer Key**, and **User Name** boxes. You should have received these values from GE Global Support.
- e) If you did not install MongoDB in the default location, modify the value in the **Database URL** box as needed.
- f) If you want to disallow discovery, clear the **Allow Discovery** check box.  
**Note:** Disallowing discovery is not recommended, but may be necessary, depending on your firewall settings. A firewall may prevent automatic discovery by APM System Monitoring.
- g) If needed, modify the values in the **Announcement Port** and **Proxy Port** boxes.

- h) Select **Update**.  
The **System Monitor Settings** window closes.
- i) On the **Meridium System Monitor Admin** window, select **Config**, and then select **General**.  
The **General Config** window appears.

- j) In the **Log Level To Store** and **Log Level to Output** sections, select the check box for each log level that you want to monitor.  
**Tip:** GE Digital recommends that you select only the **Error** check boxes. If additional check boxes are selected, the log files produced may be very large.
- k) In the **Days In Storage** box, select the number of days logs should be stored in the system before deletion.
- l) In the **Days In Outputs** box, select the number of days worth of information that should be used to populate GE Digital APM dashboards.
- m) Enter values in the **Email Server**, **From Address**, and **To** boxes, and then select **Update**.  
**Tip:** If you want to configure emails to be sent to multiple recipients, you can enter a list of comma separated values in the **To** box.  
The **General Config** window closes.
- n) On the **Meridium System Monitor Admin** window, select **Config**, and then select **Agents**.  
The **Agents** window appears.

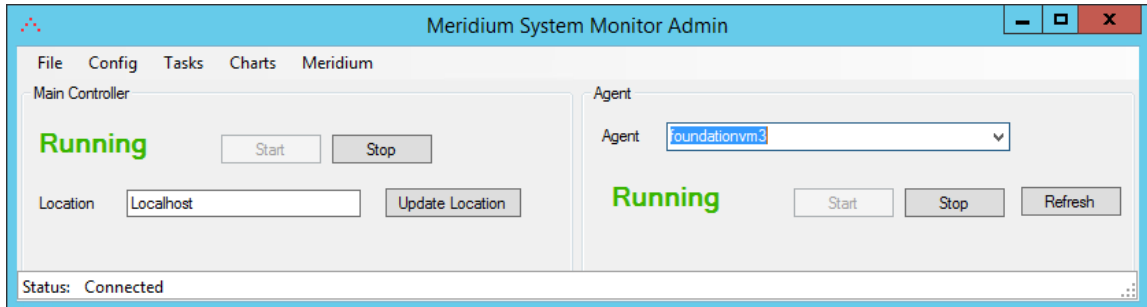
### Next Steps

- Return to the APM System Monitoring [first-time deployment](#) or [upgrade](#) workflow.

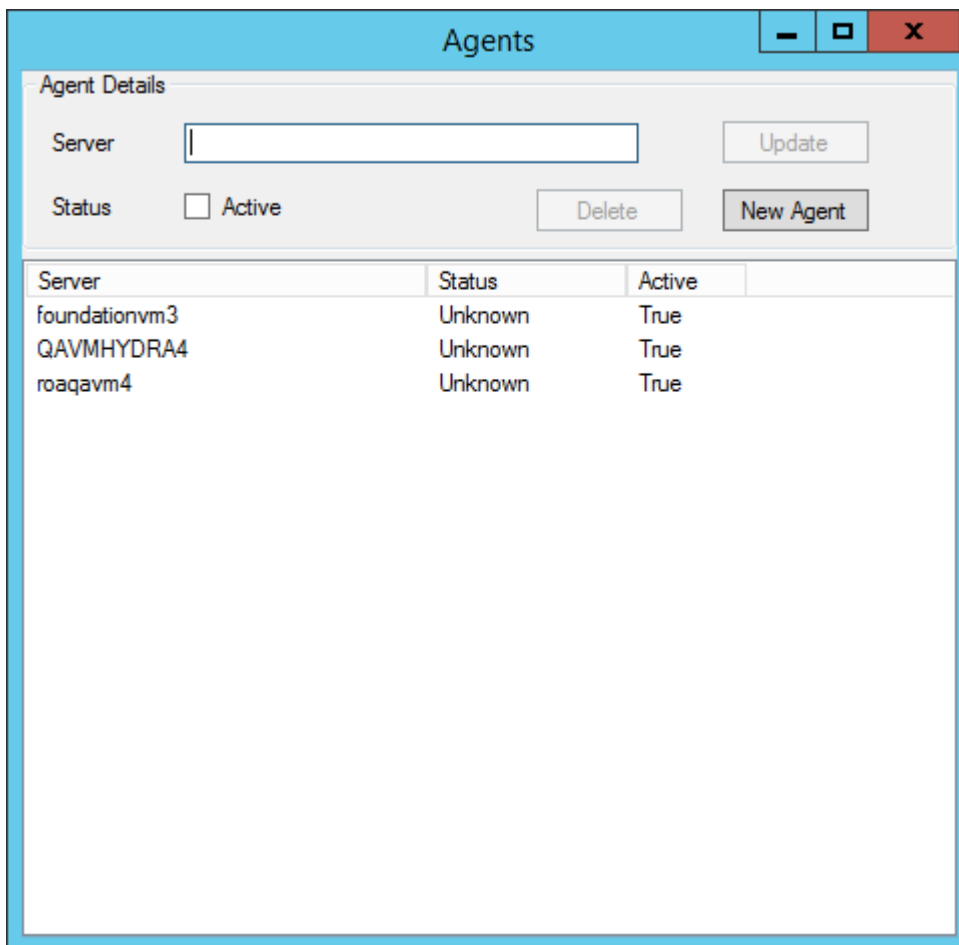
# Configure APM System Monitoring

## Procedure

1. On the machine serving as the APM System Monitoring administrator, navigate to `C:\Program Files\Meridium\APMSystemMonitor\Admin`, and then open the file `Meridium.SystemMonitor.Admin.exe`.  
The **Meridium System Monitor Admin** window appears.



2. On the **Meridium System Monitor Admin** window, select **Config**, and then select **Agents**.  
The **Agents** window appears.



- As needed, modify the configuration of the agents, and then close the **Agents** window.  
**Note:** If you have allowed discovery (i.e., the **Allow Discovery?** check box on the **System Monitor Settings** window is selected), the **Delete** and **New Agent** buttons on the **Agents** window are disabled.
- On the **Meridium System Monitor Admin** window, select **Config**, and then select **Alerts**. The **Alerts** window appears.

The screenshot shows the 'Alerts' configuration window. The 'Alert Details' section includes the following fields:

- Name: IIS Reset Alert
- Alert Type: IISReset
- Process Type: None
- Event Type: None
- Status:  Active
- Threshold: 1
- Minutes Above: 1

Buttons for 'New', 'Update', and 'Delete' are visible on the right side of the form.

| Name            | Type     | Process | Event | Active | Threshold | Minutes... |
|-----------------|----------|---------|-------|--------|-----------|------------|
| IIS Reset Alert | IISReset | None    | None  | True   | 1         | 1          |

- As needed, modify the configuration of the alerts, and then close the **Alerts** window.
- On the **Meridium System Monitor Admin** window, select **Config**, and then select **APM**. The **Configure APM Output** window appears.



The image shows a 'Configure APM Output' dialog box with the following fields and controls:

- Allow APM Output:** An unchecked checkbox.
- Database Type:** A dropdown menu currently set to 'Oracle'.
- Database Name:** An empty text input field.
- SQL Instance:** An empty text input field.
- User ID:** An empty text input field.
- Password:** An empty text input field.
- Ora Port:** A spin box with the value '0' and up/down arrow buttons.
- Ora Host:** An empty text input field.
- Ora Service:** An empty text input field.
- Buttons:** 'Update' and 'Cancel' buttons at the bottom.

7. If you want to access APM System Monitoring information within GE Digital APM, enter values in the available fields, and then close the window.

**Note:** If you do not configure the settings on this window, you can still access APM System Monitoring information via the **Charts** menu on the **Meridium System Monitor Admin** window. If you configure these settings, you will also be able to access APM System Monitoring information via the **APM System Monitoring** page in GE Digital APM.

8. To create a new task, on the **Meridium System Monitor Admin** window, select **Tasks**, and then select the type of task that you want to create or modify. The **Tasks** window appears, displaying the information related to the selected task. The following image displays an example of the window for tasks of the type ServerCpuUsage.

**Alert Details**

Task Type: ServerCpuUsage  Active New

Day of Week: Wednesday Update

Start Time (UTC): 4:00:00 AM Delete

End Time (UTC): 3:59:59 AM

Frequency (Seconds): 30

Event Type: None

Process Type: None

Database Type: Oracle

Database Name:

Connection String:  ...

**Ports**

0 Update

Delete

New

Drag a column header here to group by that column

|   | Task Type     | Process Type | Start Time | End Time | Freq | Day Of Week | Is Active                           | Event Type |
|---|---------------|--------------|------------|----------|------|-------------|-------------------------------------|------------|
|   |               |              |            |          |      |             | <input type="checkbox"/>            |            |
| ▶ | ServerCpuU... | None         | 4:00 AM    | 3:59 AM  | 30   | Wednesday   | <input checked="" type="checkbox"/> | None       |
| ⊕ | ServerCpuU... | None         | 4:00 AM    | 3:59 AM  | 30   | Friday      | <input checked="" type="checkbox"/> | None       |

- As needed, create new tasks and modify existing tasks, and then close the **Tasks** window. The configuration of APM System Monitoring has been updated.

### Next Steps

- Return to the APM System Monitoring [first-time deployment](#) or [upgrade](#) workflow.

# Chapter 5

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## Reference

### Topics:

- [General Reference](#)

# General Reference

## APM System Monitoring

### License Requirements

This feature is available with the core GE Digital APM application; no specific license is required.

### Additional Components Required

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

- The latest version of MongoDB Community Edition. The latest version of MongoDB Community Edition, as well as instructions about how to install it, can be found on the official MongoDB, Inc. website.

### Deploying APM System Monitoring

After you have installed and configured the basic GE Digital APM system architecture, you will need to perform some configuration steps specifically for APM System Monitoring.

### Supported Features in APM Now

All standard GE Digital APM product features for this module are available in the APM Now environment.