OMi Management Pack for Microsoft IIS

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Operations Manager i for Linux and Windows® operating systems

User Guide

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Chapter 1: OMi Management Pack for Microsoft IIS

The OMi Management Pack for Microsoft IIS (OMi MP for Microsoft IIS) works with Operations Manager i (OMi) and enables you to monitor the Microsoft Internet Information Services (Microsoft IIS).

The OMi MP for Microsoft IIS provides out-of-the-box Aspects for monitoring the availability and performance of services such as web services, websites, application pools, File Transfer Protocol (FTP), and Simple Mail Transfer Protocol (SMTP). OMi MP for Microsoft IIS also includes Health Indicators (HIs) and Event Type Indicators (ETIs) that report the status of health and events.

You can deploy the Aspects to monitor the Microsoft IIS for Windows servers in an enterprise environment.

Chapter 2: Getting Started

This section provides step-by-step information about deploying the components of OMi MP for Microsoft IIS for monitoring the web services, application pools, FTP, SMTP, and websites for availability and performance. It also provides information about accessing and viewing the Event, Health, and Performance perspectives.

Task 1: Adding Nodes to BSM or OMi Console

> **Note:** If the Microsoft IIS that you want to monitor is already being monitored by Smart Plug-in for Microsoft Internet Information Services (SPI for Microsoft Internet Information Services), then remove the SPI artifacts and datasources from the node hosting the Microsoft IIS before proceeding further.

Before you begin monitoring, follow these steps to add the nodes:

1. Open the Monitored Nodes manager from the Administration:

   On BSM 9.2x, click **Admin > Operations Management > Setup > Monitored Nodes**.

   On OMi 10.x, click **Administration > Setup and Maintenance > Monitored Nodes**.

2. In the Node Views pane, click **Predefined Node Filters > Monitored Nodes**. Then click  and click **Computer > Windows**. The Create New Monitored Nodes dialog box appears.
3. Specify the Primary DNS Name, Operating System, IP Address, Processor Architecture, and a description of the node and click **OK**.
4. Click **OK** in the Monitored Nodes dialog box.

The newly created node is saved as a Configuration Item (CI) instance in the Run-time Service Model (RTSM).

> **Note:** The node with Operations agent needs to be activated to OMi Server and certificate needs to be granted.

Task 2: Enabling the Enrichment Rule

To enable the Enrichment Rule, follow these steps:

1. Open the Enrichment Manager.

   On BSM 9.2x, click **Admin > RTSM Administration > Modeling > Enrichment manager**.

   On OMi 10.x, click **Administration > RTSM Administration > Modeling > Enrichment manager**.
2. In the Enrichment Rules pane, select **SoftwareElementDisplayLabelForNewHost** from the list. The Enrichment Rule Properties window appears.
3. Right-click and select **Properties**.
4. Click **Next**.
5. Select **Rule is Active**.
6. Click **Finish**.
7. Select the **SoftwareElementDisplayLabelForExisitingHost** rule and repeat steps 2 to 6.
8. Select the **SoftwareElementDisplayLabelPopular** rule and repeat steps 2 to 6.
9. In the Enrichment Rules pane, click  to save the changes.

Task 3: Deploying the IIS Web Server Discovery Aspect

The IIS Web Server Discovery Aspect enables you to discover Microsoft IIS instances in the environment. The IIS Web Server Discovery Aspect deployment discovers the Configuration Item (CIs) of the following CI types (CITs):

- IIS Web Server
- IIS FTP Server
- IIS SMTP Server
- IIS Web Site
- IIS Application Pool

To discover CIs on the added managed nodes, you can deploy the IIS Web Server Discovery Aspect. Follow these steps:

1. Open the Management Templates & Aspects pane:

   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

   On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.

2. In the Configuration Folders pane, click **Configuration Folders > Web Server Management > Microsoft IIS > Aspects**.
3. Perform one of the following methods to assign and deploy the Aspect. In the Management Templates & Aspects pane:
   - Select the **IIS Web Server Discovery** Aspect, and then click  .
   - Right-click the **IIS Web Server Discovery** Aspect, and then click **Assign and Deploy Item**.

     The Assign and Deploy Wizard appears.
4. In the **Configuration Item** tab, click the Windows Node CI to which you want to deploy the IIS Web Server Discovery Aspect.
5. Click **Next** in the **Required Parameters** tab.
6. To accept the CIs, on BSM 9.2x click **All Parameters** tab or on OMi 10.x click **Parameter Summary** tab.
7. To change the default values of the parameters, select the parameter and then click  . The Edit Parameter dialog box opens.
8. Click **Value**, specify the value, and then click **OK** and click **Next**.
9. *(Optional)*. In the **Configure Options** tab, if you do not want to enable the assignment immediately, clear the **Enable Assigned Objects** check box on BSM 9.2x or **Enable Assignment(s)** check box on OMi 10.x. You can then enable the assignment later using the Assignments & Tuning pane.

   > **Note:** In the **All Parameters** tab on BSM 9.2x or **Parameter Summary** tab on OMi 10.x, you can override the default values of any parameter. You can specify a value for each parameter at the Aspect level. By default, parameters defined as expert parameters are not displayed.
   >
   > To display expert parameters, click  **Show Expert Parameters**.

10. Click **Finish**.

Note: After the IIS Web Server Discovery Aspect is deployed, a message stating the `Assignment and deployment jobs created` appears. To check the status of the deployment job, go to the following location:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Deployment Jobs**.

On OMi 10.x, click **Administration > Monitoring > Deployment Jobs**.

Task 4: Verifying Discovery

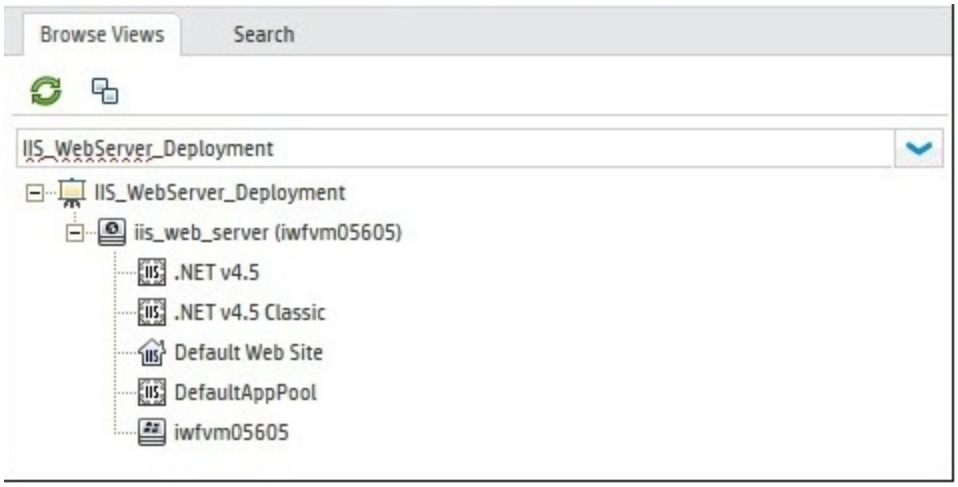
After you deploy the IIS Web Server Discovery Aspect, you can verify if the CIs are populated in the View Explorer.

1. Open the Event Perspective:

   On BSM 9.2x, click **Applications > Operations Manager > Event Perspective**.

   On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.

2. In the **Browse Views** tab, select the **IIS_WebServer_Deployment** View.



Task 5: Deploying the remaining Microsoft IIS Aspects

OMi MP for Microsoft IIS contains the following Microsoft IIS Aspects apart from the IIS Web Server Discovery Aspect:

- IIS Web Server Availability
- IIS Web Server Base
- IIS Web Server Error Logs
- IIS Web Server FTP Service Performance
- IIS Web Server Performance
- IIS Web Server SMTP Service Performance
- IIS Web Server WWW Service Performance
- IIS Web Server ASP Service Performance
- IIS Web Server ASP.NET Service Performance

To deploy the other IIS Aspects, follow these steps:

1. Open the Management Templates & Aspects pane:

   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

   On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folders pane, click **Configuration Folders > Web Server Management > Microsoft IIS > Aspects**.
3. In the Management Templates & Aspects pane, select an Aspect, and then click  .
   The Assign and Deploy Wizard appears.
4. In the **Configuration Item** tab, click the Windows Node CI to which you want to deploy the Aspect.
5. Click **Finish**.

> **Note:** After the Aspect is deployed, a message stating the `Assignment and deployment jobs created` appears. To check the status of the deployment job, go to the following location:
> On BSM 9.2x, click **Admin > Operations Management > Monitoring > Deployment Jobs**.
>
> On OMi 10.x, click **Administration > Monitoring > Deployment Jobs**.

Topology Synchronization for Smart Plug-in for Internet Information Services

> **Note**: It is recommended to check the Topology Synchronization settings if a node or a CI is monitored by Operations Manager.

If you use Smart Plug-in for Internet Information Services with Operations Manager, perform the following steps to forward topology data from the OM server to the BSM or OMi Server. For more information about *Topology Synchronization*, see the *Operations Manager i Administration Guide*.

1. Open the Infrastructure Settings from the Administration:

   On BSM 9.2x, click **Admin > Platform > Setup and Maintenance > Infrastructure Settings**.

   On OMi 10.x, click **Administration > Setup and Maintenance > Infrastructure Settings**.
2. In the Infrastructure Settings pane, select **Applications > Operations Management**.
3. To verify if the topology synchronization package to be synced is added, click **Operations Management - HPOM Topology Synchronization Settings**.
4. If the topology synchronization package to be synced is not added, click  in **Packages for Topology Sync**.
5. In **Value**, add **HPOprlis** and click **Save**.

Monitoring Microsoft IIS Environment

After you deploy the Web Server IIS Discovery Aspect, you can view event related information from the following perspectives.

- Event Perspective
- Health Perspective

- Performance Perspective

Event Perspective

An Event Perspective provides complete information of events. In the Event Perspective, you can view the event information of Microsoft IIS CIs and Node CIs that are monitored by OMi MP for Microsoft IIS.

To view Event Perspective of the Microsoft IIS CIs, follow these steps:

1. Open the Event Perspective pane:

   On BSM 9.2x, click **Applications > Operations Management > Event Perspective**.

   On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.

   The View Explorer pane appears.

2. In the **Browse Views** tab, select **IIS_WebServer_Deployment** that contains the IIS Web Server CI. You can also use the **Search** tab to find a CI.
3. Click the CI for which you want to view the Event Perspective. The list of events for the selected CI appears in the Event Browser pane.
4. When you click on an event in the Event Browser, the Event Details pane opens where you can view the following details:
   - **General** - Displays the detailed information about the selected event such as Severity, Lifecycle State, Priority, Related CI, and so on.
   - **Additional Info** - Displays more detailed information about the attributes of the selected event.
   - **Source Info** - Displays an overview of the information available about the source of the selected event.
   - **Actions** - Displays the list of actions available for a selected event. There are two types of possible actions: User Action and Automatic Action.
   - **Annotations** - Displays a list of the annotations attached to the selected event.
   - **Custom Attributes** - Displays a list of the attributes that either an administrator or a responsible user manually configured and added to the selected event.
   - **Related Events** - Displays an overview of all the events that are related to the event selected in the Event Browser.
   - **History** - Displays the history of the selected event.
   - **Resolver Hints** - Displays the information used to identify the node and CI associated with an event.

- **Instructions** - Displays instruction information designed to help operators handle the associated event.
- **Forwarding** - Displays the transfer of ownership details if any, for the events.

Health Perspective

The Health Perspective provides a high-level view of the overall health information of the related CIs in the context of events. In the Health Perspective, you can view the health information of the CIs that are monitored by OMi MP for Microsoft IIS.

To view the Health Perspective of the CIs, follow these steps:

1. Open the Health Perspective pane:

   On BSM 9.2x, click **Applications > Operations Management > Health Perspective**.

   On OMi 10.x, click **Workspaces > Operations Console > Health Perspective**.

   The View Explorer pane appears.

2. In the **Browse Views** tab, select **IIS_WebServer_Deployment** that contains the IIS Web Server CI. You can also use the **Search** tab to find a Microsoft IIS CI.
3. Click the Microsoft IIS CI for which you want to view the Health Perspective. The list of events for the selected CI appears in the Event Browser pane.
   - Health Top View - Displays a topological view of the CIs that are affected by the selected event.
   - Health Indicators - Displays the Key Performance Indicators (KPIs) and HIs related to the CI that you select from the Health Top View pane.
   - Actions - Displays a list of available actions for a selected event.

Performance Perspective

The Performance Perspective enables you to draw graphs from existing graph templates. You can also plot customized graphs by selecting the required metrics for a selected CI.

To view the Performance Perspective of Microsoft IIS CIs using graphs, follow these steps:

1. Open the Performance Perspective pane:

   On BSM 9.2x, click **Applications > Operations Management > Health Perspective**.

   On OMi 10.x, click **Workspaces > Operations Console > Performance Perspective**.

   The View Explorer pane appears.

2. In the **Browse Views** tab, select **IIS_WebServer_Deployment** that contains the CIs. You can also use the **Search** tab to find CIs.
3. From the **Graphs** tab, click the graph you want to plot and then click  **Draw Graphs**. The selected graph is plotted on the right pane.

> **Note:** For more information about *Managing Events*, see the *Operations Manager i Concepts Guide*.

Chapter 3: Components

The OMi MP for Microsoft IIS includes the following components for monitoring Microsoft Internet Information Services in your environment:

- Microsoft IIS Aspects
- Policy Template Groups
- Parameters
- Configuration Items and Configuration Item Types
- Run-time Service Model (RTSM) Views
- Health Indicators (HIs) and Event Type Indicators (ETIs)
- Graph Templates
- Tools

Microsoft IIS Aspects

The OMi MP for Microsoft IIS Aspects monitor the system resources operating in a data center environment. The systems can be stand-alone or virtual. Each Aspect contains policy templates and instrumentation that monitor the health and performance of a system.

How to Access the Microsoft IIS Aspects

1. To access Microsoft IIS Aspects:

   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

   On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.
2. Click **Configuration Folders > Web Server Management > Microsoft IIS > Aspects**.

User Interface Reference

General	Provides an overview of the general attributes such as the Name, Description, Version, ID, Created By, Time Created, and Version ID of the Aspect.
CI Type	Refers to the type of CIs the Aspect can be assigned to. The Microsoft IIS Aspects contain IIS Web Server, Windows, and Computer CI types.
Instrumentation	Provides a single package which contains the binaries for discovery, collection, and data logging.
Aspects	Provides an overview of all the Aspects within the Microsoft IIS. The IIS Web Server Base Aspect is part of all the other Aspects.
Policy Templates	Provides an overview of all the policy templates within the Microsoft IIS.

Tasks

How to Deploy the Microsoft IIS Aspects

For more information on deploying Microsoft IIS Aspects, see Task 3: Deploying the IIS Web Server Discovery Aspect on BSM 9.2x or on OMi 10.x.

How to Create the Microsoft IIS Aspects

1. Open the Management Templates & Aspects pane:
   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

   On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.
2. Click **Configuration Folders > Web Server Management > Microsoft IIS > Aspects**.

3. In the Management Template & Aspects pane, click  , and then select **Create Aspect**. The Add New Aspect dialog box opens.
4. In the **General** tab, specify a **Name**, **ID**, **Version ID**, and **Description** for the Aspect. Click **Next**.
5. In the **CI Types** tab on BSM 9.2x or **CI Type** on OMi 10.x, select one or more CI Types (CITs) from the Available CI Types pane to associate with the Aspect and click  to add them to the Assigned CI Types pane, and then click **Next**.

   For more information on the different types of the discovered CITs, see Configuration Items and Configuration Item Types.

   > **Note:** You can use either the **CTRL** or **SHIFT** key to select multiple items.

6. In the **Instrumentation** tab, click  **Add Instrumentation** to select the instrumentation category that has to added to an Aspect. For example: IIS_WebServer_Monitoring. Click **Next**.
7. In the **Aspects** tab, click  **Add Existing Aspect** to add Aspects as nested Aspects. The Add Existing Aspect dialog box opens and lists the Aspects. Select one or more Aspects by selecting either the **CTRL** or **SHIFT** key. Click **OK**. Click **Next**.
8. In the **Policy Templates** tab, click  **Add Policy Template** on BSM 9.2x and **Add Policy Templates From List** on OMi 10.x to select the policy templates that has to be added to an Aspect. The Add New Policy Template to Aspect dialog box opens and lists the policy templates. For example: MSIIS_IISAdmin, MSIIS_AppPools, MSIIS_WebService, and so on. Select one or more policy templates by selecting either the **CTRL** or **SHIFT** key. Click **OK**. Click **Next**.
9. If no suitable policy templates exist:
   a. Click  and then select **Add New Policy Template**. The Select New Policy Template dialog box opens.
   b. Select a policy template from the **Type** drop-down list. Click **OK**.
   c. In the Policy Related Information window, specify the **Name** and click **OK**. The policy template is added to the list of existing policy templates.
10. Click **Next**.
11. In the **Parameters** tab, you see a list of parameters from the Policy Templates that you assigned to a template.
    a. Click  **Edit**. The Edit Parameter dialog box opens.
    b. Modify the required details and click **OK**.

12. In the Add New Aspect window, click **Finish** to save the Aspect. The new Aspect appears in the Management Templates & Aspects pane.

The OMi MP for Microsoft IIS contains the following Aspects:

IIS Web Server Availability

Use this Aspect to monitor and collect the availability of IIS Web Service, FTP Service, SMTP Service, IIS Admin Service, Websites, and Application Pools.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ IISAdmin	IISADMIN_ Service_Availability	Indicates the availability of the IISADMIN service.	Measurement Threshold
IIS Web Server	MSIIS_ WebSites	WebSites_ Availability	Indicates the availability of the website service.	Measurement Threshold
IIS Web Server	MSIIS_ AppPools	ApplicationPools_ Availability	Indicates the availability of the Application Pool.	Measurement Threshold
IIS Web Server	MSIIS_ SMTPService	SMTPService_ Availability	Indicates the availability of the SMTP service.	Measurement Threshold
IIS Web Server	MSIIS_ WebService	WebService_ Availability	Indicates the availability of the web service.	Measurement Threshold
IIS Web Server	MSIIS_ Availability	NA	Runs the IIS MP availability collector or analyzer.	Scheduled Task
IIS Web Server	MSIIS_ FTPService	FTPService_ Availability	Indicates the availability of the FTP service.	Measurement Threshold

IIS Web Server Base

This is a base Aspect for monitoring Microsoft IIS. It contains the configuration and schedulers used for collecting metrics.

CI Type	Policy Template	Indicator	Description	Policy Type
Computer, IIS Web	MSIIS_VeryHigh	NA	Contains the schedule task policy of frequency *VeryHigh* for collecting	Scheduled Task

CI Type	Policy Template	Indicator	Description	Policy Type
Server			metrics for Microsoft IIS every 5 minutes.	
Computer, IIS Web Server	MSIIS_Low	NA	Contains the schedule task policy of frequency *Low* for collecting metrics for Microsoft IIS every 59 minutes.	Scheduled Task
Computer, IIS Web Server	MSIIS_ CollectionDefinition	NA	Maintains the metric definition for collecting IIS metrics.	ConfigFile
Computer, IIS Web Server	MSIIS_Medium	NA	Contains the schedule task policy of frequency *Medium* for collecting metrics for Microsoft IIS every 30 minutes.	Scheduled Task
Computer, IIS Web Server	MSIIS_High	NA	Contains the schedule task policy of frequency *High* for collecting metrics for Microsoft IIS every 15 minutes.	Scheduled Task

IIS Web Server Discovery

Use this Aspect to discover the various instances of IIS Web Server and the associated IIS Websites, IIS Application Pools, FTP and SMTP servers.

CI Type	Policy Template	Indicator	Description	Policy Type
Windows	MSIIS_ Discovery	NA	Discovers the various instances of IIS Web Server and the associated IIS Websites, IIS Application Pools, FTP and SMTP servers.	Service Auto-Discovery

IIS Web Server FTP Service Performance

Use this Aspect to monitor and collect the performance of the FTP service running on the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS FTP Server	MSIIS_ CurrAnonUsers	FTP_ Anonymous_	Indicates the current Anonymous users for FTP.	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
		Users		
IIS FTP Server	MSIIS_FTP_Conf	NA	Maintains a schedule of the IIS FTP counter's collection.	ConfigFile
IIS FTP Server	MSIIS_ CurrNonAnonUsers	FTP_ NonAnonymous_ Users	Indicates the current Non Anonymous users for FTP.	Measurement Threshold
IIS FTP Server	MSIIS_ FTPTotBytesPerSec	FTP_Traffic	Indicates the total bytes per second for FTP.	Measurement Threshold
IIS FTP Server	MSIIS_ CurrentConnections	FTP_ Connections	Indicates the current connections for FTP.	Measurement Threshold

IIS Web Server Performance

Use this Aspect to monitor and collect the performance of the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ InetInfoProcessorTime	InetInfo_ ProcessorTime	Indicates the percentage of the processor time counter of object process for the `Inetinfo` instance.	Measurement Threshold
IIS Web Server	MSIIS_Server_Conf	NA	Maintains the schedule of IIS web server counters' collection.	ConfigFile
IIS Web Server	MSIIS_ GlobalServices_Conf	NA	Maintains the schedule of the `IIS GlobalServices` counters' collection.	ConfigFile
IIS Web Server	MSIIS_FileCacheHits	File_Cache_ Hits_ Percentage	Indicates the percentage of File Cache hits for a web service.	Measurement Threshold
IIS Web Server	MSIIS_ BytesTransmitted	Bytes_ TransmitRate	Indicates the bytes transmitted per second of an object server.	Measurement Threshold
IIS Web Server	MSIIS_ InetInfoWorkingSet	InetInfo_ WorkingSet	Checks the `Inetinfo` working set.	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_TCPv6_Conf	NA	Maintains the schedule of `IIS TCPv6` counter's collection.	ConfigFile
IIS Web Server	MSIIS_ WebServiceCache_ Conf	NA	Maintains the schedule of `IIS WebServiceCache` counter's collection.	ConfigFile
IIS Web Server	MSIIS_TCPv4_Conf	NA	Maintains the schedule of the `IIS TCPv4` counter's collection.	ConfigFile
IIS Web Server	MSIIS_Process_Conf	NA	Maintains the schedule of `IIS process` counter's collection.	ConfigFile
IIS Web Server	MSIIS_RejectRate	HTTP_ Rejection_ Rate	Checks the rejection rate of the HTTP service.	Measurement Threshold
IIS Web Server	MSIIS_ CurrQueueSize	HTTP_Queue_ Size	Checks the current queue size of the HTTP service.	Measurement Threshold

IIS Web Server SMTP Service Performance

Use this Aspect to monitor and collect the performance of the SMTP service running on the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS SMTP Server	MSIIS_ MsgDeliveredPerSec	SMTP_ DeliveredMessagesRate	Indicates the messages delivered per second for SMTP.	Measurement Threshold
IIS SMTP Server	MSIIS_ MsgSentPerSec	SMTP_ DeliveredMessagesRate	Indicates the messages sent per second for SMTP.	Measurement Threshold
IIS SMTP Server	MSIIS_ MsgReceivedPerSec	SMTP_ ReceivedMessagesRate	Indicates the messages received per second for SMTP.	Measurement Threshold
IIS	MSIIS_SMTP_Conf	NA	Maintains the	ConfigFile

CI Type	Policy Template	Indicator	Description	Policy Type
SMTP Server			schedule of the `IIS SMTP` counter's collection.	
IIS SMTP Server	MSIIS_ CurrInBoundConn	SMTP_ InboundConnections	Indicates the current Inbound connections for SMTP.	Measurement Threshold
IIS SMTP Server	MSIIS_ CurrOutBoundConn	SMTP_ OutboundConnections	Indicates the current Outbound connections for SMTP.	Measurement Threshold

IIS Web Server WWW Service Performance

Use this Aspect to monitor and collect the performance of the WWW service running on the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ TotalBytesPerSec	Bytes_ Total/sec	Indicates the total number of bytes transferred per second from a web service.	Measurement Threshold
IIS Web Server	MSIIS_ GblFileCacheHits	File_Cache_ Hits_ Percentage	Checks the percentage of File Cache Hits of the object `Internet Information Services Global`.	Measurement Threshold
IIS Web Server	MSIIS_WebService_ Conf	NA	Maintains the schedule of the IIS web service counter's collection.	ConfigFile
IIS Web Server	MSIIS_ GetReqPerSec	Get_ Requests	Indicates the number of web service requests per second.	Measurement Threshold
IIS Web Server	MSIIS_CurrentConn	Current_ Connections	Indicates the number of active web service connections.	Measurement Threshold
IIS Web Server	MSIIS_ FilesPerSecond	File_ TransferRate	Indicates the total number of files transferred per second for a web service.	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ ConnAttemptsPerSec	Connections_ Attempts_ Rate	Checks the number of connection attempts per second.	Measurement Threshold
IIS Web Server	MSIIS_ CurrISAPIExtReq	ISAPI_ Extension_ Requests	Checks the current ISAPI extension requests.	Measurement Threshold

IIS Web Server ASP Service Performance

Use this Aspect to monitor and collect the performance of the ASP service running on the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ ASPReqQueued	Requests_ Performance	Checks the number of ASP requests waiting for service from the queue.	Measurement Threshold
IIS Web Server	MSIIS_ ASPNETReqRejected	.NET_Errors	Verifies whether the number of ASP.Net requests that are rejected are greater than the specified threshold.	Measurement Threshold
IIS Web Server	MSIIS_ ScriptCompileErr	ScriptCompiler_ Errors	Checks the errors of the script compiler.	Measurement Threshold
IIS Web Server	MSIIS_ ReqExecutionTime	ASPRequest_ ExecutionTime	Checks the execution time of the ASP requests.	Measurement Threshold
IIS Web Server	MSIIS_ASP_Conf	NA	Maintains a schedule of the IIS ASP counter's collection.	ConfigFile
IIS Web Server	MSIIS_ TotalReqFailed	ASP_Errors_ Rate	Checks the total number of failed ASP requests.	Measurement Threshold
IIS Web Server	MSIIS_ ASPErrorsPerSec	ASP_Errors	Verifies whether the number of ASP errors generated per second are greater than the specified threshold.	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ RequestsExecuting	ASP_Requests	Verifies whether the number of ASP requests that are being executed are greater than the specified threshold.	Measurement Threshold
IIS Web Server	MSIIS_ ASPReqWaitTime	NA	Checks the duration for which the most recent request was waiting in the queue.	Measurement Threshold
IIS Web Server	MSIIS_ RequestsPerSecond	Application_ Throughput	Verifies whether the number of ASP requests received per second are greater than the specified threshold.	Measurement Threshold
IIS Web Server	MSIIS_ ASPPreProcErrors	PreProcessor_ Errors	Verifies whether the number of preprocessor errors are greater than the specified threshold.	Measurement Threshold

IIS Web Server ASP.NET Service Performance

This Aspect monitors and collects the performance of the ASP.Net service running on the IIS Web Server.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ WorkerProcRunning	.NET_ WorkerProcesses	Checks the ASP.Net worker processes that are running.	Measurement Threshold
IIS Web Server	MSIIS_ASPNet_Conf	NA	Maintains the schedule of `IIS ASPNet` counter's collection.	ConfigFile
IIS Web Server	MSIIS_ ASPReqRejected	ASPRequests_ Rejected	Checks the ASP requests that are rejected.	Measurement Threshold
IIS Web Server	MSIIS_ ASPNETReqQueued	.NET_Requests_ InQueue	Checks the ASP.Net requests that are queued.	Measurement Threshold
IIS Web Server	MSIIS_ ApplicationRestarts	.NET_Errors	Checks the number of times the ASP.Net application has restarted.	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_ ASPNETReqWaitTime	.NET_Requests_ WaitTime	Checks the ASP.Net request's wait time.	Measurement Threshold
IIS Web Server	MSIIS_ ASPNETErrPerSec	.NET_ErrorRate	Checks the total number of ASP.Net application errors per second.	Measurement Threshold
IIS Web Server	MSIIS_ReqAppQueue	Requests_In_ AppQueue	Checks the requests in the application queue.	Measurement Threshold

IIS Web Server Error Logs

Use this Aspect to forward all application and system log entries with severity **Error** or **Warning** to the OMi Event browser.

CI Type	Policy Template	Indicator	Description	Policy Type
IIS Web Server	MSIIS_FwdAllSystemWarnError	NA	Forwards all system log entries with severity **Error** or **Warning**.	Windows Event Log
IIS Web Server	MSIIS_FwdAllApplicationWarnError	NA	Forwards all application log entries with severity **Error** or **Warning**.	Windows Event Log
IIS FTP Server	MSIIS_ FtpServerFwdAllSystemWarnError	NA	Forwards all FTPSVC system log entries with severity **Error** or **Warning**.	Windows Event Log
IIS SMTP Server	MSIIS_ SmtpServerFwdAllSystemWarnError	NA	Forwards all SMTPSVC system log entries with severity **Error** or **Warning**.	Windows Event Log

Policy Template Groups

The policy templates are grouped under the MP for Microsoft IIS Server policy group.

1. To access policy groups:

   On BSM 9.2x, click **Admin > Management Templates & Aspect > Monitoring > Policy template**.

   On OMi 10.x, click **Administration > Monitoring > Policy Templates**.

2. In the Policy Template Groups pane, click **Policy Management > Template Groups > MP for Microsoft IIS Server**.

The MP for Microsoft IIS Server policy group contains the following policy templates:

Policy Template Category	Policy Template
Measurement Threshold	MSIIS_WorkerProcRunning
	MSIIS_ASPReqRejected
	MSIIS_ASPNETReqQueued
	MSIIS_ApplicationRestarts
	MSIIS_ASPNETReqWaitTime
	MSIIS_ASPNETErrPerSec
	MSIIS_ReqAppQueue
	MSIIS_ASPReqQueued
	MSIIS_ASPNETReqRejected
Measurement Threshold	MSIIS_ScriptCompileErr
	MSIIS_ReqExecutionTime
	MSIIS_TotalReqFailed
	MSIIS_ASPErrorsPerSec
	MSIIS_RequestsExecuting
	MSIIS_ASPReqWaitTime
	MSIIS_RequestsPerSecond
	MSIIS_ASPPreProcErrors
	MSIIS_IISAdmin
	MSIIS_WebSites
	MSIIS_AppPools

Policy Template Category	Policy Template
Measurement Threshold	MSIIS_SMTPService
	MSIIS_WebService
	MSIIS_FTPService
	MSIIS_CurrAnonUsers
	MSIIS_CurrNonAnonUsers
	MSIIS_FTPTotBytesPerSec
	MSIIS_CurrentConnections
	MSIIS_CurrNonAnonUsers
	MSIIS_FTPTotBytesPerSec
	MSIIS_CurrentConnections
	MSIIS_InetInfoProcessorTime
	MSIIS_FileCacheHits
Measurement Threshold	MSIIS_BytesTransmitted
	MSIIS_InetInfoWorkingSet
	MSIIS_RejectRate
	MSIIS_CurrQueueSize
	MSIIS_MsgDeliveredPerSec
	MSIIS_MsgSentPerSec
	MSIIS_MsgReceivedPerSec
	MSIIS_CurrInBoundConn
	MSIIS_CurrOutBoundConn
	MSIIS_TotalBytesPerSec
	MSIIS_GblFileCacheHits

Policy Template Category	Policy Template
Measurement Threshold	MSIIS_GetReqPerSec
	MSIIS_CurrentConn
	MSIIS_FilesPerSecond
	MSIIS_ConnAttemptsPerSec
	MSIIS_CurrISAPIExtReq
Scheduled Task	MSIIS_Medium
	MSIIS_High
	MSIIS_VeryHigh
	MSIIS_Low
	MSIIS_Availability
Service Auto-Discovery	MSIIS_Discovery
Windows Event Log	MSIIS_FwdAllSystemWarnError
	MSIIS_FwdAllApplicationWarnError
	MSIIS_FtpServerFwdAllSystemWarnError
	MSIIS_SmtpServerFwdAllSystemWarnError
ConfigFile	MSIIS_ASPNet_Conf
	MSIIS_ASP_Conf
	MSIIS_CollectionDefinition
	MSIIS_FTP_Conf
	MSIIS_TCPv6_Conf
	MSIIS_WebServiceCache_Conf
	MSIIS_TCPv4_Conf
	MSIIS_Process_Conf
	MSIIS_Server_Conf
	MSIIS_GlobalServices_Conf
	MSIIS_SMTP_Conf
	MSIIS_WebService_Conf

Parameters

Parameters are variables that form an integral part of OMi MP for Microsoft IIS Aspects and Policy Templates. Each parameter corresponds to a variable. Parameters contain default values that are used for monitoring the different components of Microsoft IIS deployment. You can also modify the values of the variables to suit your monitoring requirements.

Types of Parameters

Parameters are grouped as follows:

- **Required** - These parameters contain the essential information required by the policy templates. For example, Threshold and Severity.
- **Expert** - These parameters are used by SMEs and Administrators. For example, Frequency of Low, High, and Very High are Expert parameters.

The OMi MP for Microsoft IIS includes the following parameters for monitoring Microsoft IIS in an environment:

Parameter	Description	Default Value
Frequency of High Scheduler	Frequency for the scheduler which is expected to run on short interval (in minutes). For example: 15 or 30 minutes.	15
Frequency of Low Scheduler	Frequency for the scheduler which is expected to run on long interval (in minutes). For example: 50 or 55 minutes.	59
Frequency of Medium Scheduler	Frequency for the scheduler which is expected to run on medium interval (in minutes). For example: 30 or 45 minutes.	30
Frequency of Very High Schedule	Frequency for the scheduler which is expected to run on very short interval (in minutes). For example: 3 or 5 minutes.	5

Tuning of Parameters

This section provides information about editing parameters for the Microsoft IIS Aspects that are deployed to CIs. To edit the parameters, follow these steps:

1. Open the Assignments & Tuning pane:

   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Assignments & Tuning**.

   On OMi 10.x, click **Administration > Monitoring > Assignments & Tuning**.

2. In the **Browse Views** tab, select the IIS_WebServer_Deployment view that contains the CI for which you want to tune the parameters. Alternatively, you can use the **Search** tab to find a CI.
3. In the list of CIs, click IIS Web Server. The Assignment Details pane lists the current parameter values.
4. You can change the default values of Parameters in the Assignment Details pane by following these steps:

   a. Click  . The Edit Parameter dialog box opens.

   b. Select the parameter you want to edit and click  . The Edit Parameter dialog box opens.

   c. Change the value and click **OK**.

   The new parameter values are deployed to the relevant CIs.

Configuration Items and Configuration Item Types

Configuration Items (CIs) are components that need to be managed to deliver an IT Service. CIs typically include IT Services, hardware, and software. Configuration Item Types (CITs) describes the type of a CI and its attributes. The OMi MP for Microsoft IIS uses the following CITs:

- IIS Web Server
- IIS FTP Server
- IIS SMTP Server
- IIS Web Site
- IIS Application Pool

Health Indicators (HIs) and Event Type Indicators (ETIs)

Health Indicators (HIs) analyze the events that occur in Microsoft IIS CIs and report the health of the Microsoft IIS CIs. Event Type Indicators (ETIs) are categorization of events based on the type of occurrence. ETIs helps to track the health of the related configuration item (CI).

How to Access Heath Indicators and Event Type Indicators

1. Access the indicators:

   On BSM 9.2x, click **Admin > Operations Management > Monitoring > Indicators**.

   On OMi 10.x, click **Administration > Service Health > CI Status Calculation > Health- and Event Type Indicators**.

2. In the CI Types pane, select **Configuration Item > Infrastructure Element > Running Software > WebServer**.

The OMi MP for Microsoft IIS includes the following Health Indicators to monitor the Microsoft IIS-related events in your environment:

CI Type	HI	Description	Value
IIS Web Server	WebService Availability	Indicates the availability of the web services.	Up, Down
IIS Web Site	WebSites Availability	Indicates the availability of the web sites.	Up, Down
IIS FTP Server	FTPService Availability	Indicates the status of the FTP services.	Up, Down
IIS SMTP Server	SMTPService Availability	Indicates the availability of the SMTP services.	Up, Down
IIS Web Server	IISADMIN Service Availability	Indicates the availability of the IISADMIN services.	Up, Down
IIS Application Pool	ApplicationPools Availability	Indicates the status of the application pools.	Up, Down

CI Type	HI	Description	Value
IIS FTP Server	FTP Traffic	Shows the rate at which data bytes are sent or received by the FTP service at the application layer.	Normal, High
IIS Web Server	.NET Errors	Indicates the .Net errors.	Normal, High
IIS Web Server	Application Throughput	Shows the number of requests that were executed per second.	Normal, High
IIS Web Server	ASP Errors	Indicates the ASP errors.	Normal, High
IIS Web Server	ASP Requests	Is the default for ASP requests such as Wait Time, Succeeded, Failed, and Disconnected.	Normal, High
IIS Web Server	File Cache Hits Rate	Indicates the ratio of file handle cache hits compared to total cache requests.	Normal, Low
IIS Web Server	Get Request Rate	Shows the rate at which HTTP requests using the GET method are made.	Normal, High
IIS Web Server	WebService Availability	Indicates the availability of web services.	Up, Down

Following are the Event Type Indicators to monitor the Microsoft IIS-related events in your environment:

CI Type	ETI	Description	Value
IIS Web Server	File_TransferRate	Indicates the total number of files transferred per second for a web service.	High, Moderate, or Normal
IIS SMTP Server	SMTP_InboundConnections	Indicates the current inbound connections on the SMTP server.	High, Moderate, or Normal
IIS SMTP Server	SMTP_ OutboundConnections	Indicates the current outbound connections for the SMTP server.	High, Moderate, or Normal
IIS SMTP Server	SMTP_ DeliveredMessagesRate	Indicates the number of messages delivered per second by the SMTP service.	High, Moderate, or Normal
IIS SMTP Server	SMTP_SentMessagesRate	Indicates the number of messages sent per second for	High, Moderate,

CI Type	ETI	Description	Value
		the SMTP service.	or Normal
IIS SMTP Server	SMTP_ ReceivedMessagesRate	Indicates the number of messages received per second by the SMTP service.	High, Moderate, or Normal
IIS Web Server	Bytes_TransmitRate	Indicates the counter bytes transmitted per second of the object server.	High, Moderate, Normal
IIS Web Server	InetInfo_ProcessorTime	Indicates the percentage of processor time for the `InetInfo` instance.	High, Moderate, or Normal
IIS Web Server	InetInfo_WorkingSet	Indicates the `Working Set` counter for the `Inetinfo` instance.	High, Moderate, or Normal
IIS Web Server	Recent_Request_ WaitTime_InQueue	Indicates the number of milliseconds the most recent request was waiting in the queue.	High, Moderate, or Normal
IIS Web Server	ScriptCompiler_Errors	Indicates the number of script compiler errors.	High, Moderate, or Normal
IIS Web Server	ASPRequests_Rejected	Indicates the number of ASP requests that are rejected.	High, Moderate, or Normal
IIS Web Server	PreProcessor_Errors	Indicates the number of preprocessor errors.	High, Moderate, or Normal
IIS Web Server	ASPRequest_ ExecutionTime	Indicates the execution time of ASP service requests on the managed nodes.	High, Moderate, or Normal
IIS Web Server	Script_Errors	Indicates the number of script errors	High, Moderate, or Normal
IIS Web Server	.NET ErrorRate	Indicates the total number of errors per second from the ASP.Net applications.	High, Moderate, or Normal
IIS Web Server	.NET_WorkerProcesses	Indicates the number of ASP.Net worker processes running on the managed nodes.	High, Moderate, or Normal

CI Type	ETI	Description	Value
IIS Web Server	.NET_Requests_WaitTime	Indicates the wait time of an ASP.Net request on the managed nodes.	High, Moderate, or Normal
IIS Web Server	.NET_Requests_InQueue	Indicates the number of ASP.Net requests queued on the managed nodes.	High, Moderate, or Normal
IIS Web Server	.NET_Requests_Rejected	Indicates the number of ASP.Net requests rejected on the managed nodes.	High, Moderate, or Normal
IIS Web Server	ISAPI_Extension_Requests	Indicates the current ISAPI extension requests.	High, Moderate, or Normal
IIS Web Server	ISAPI_Extension_ RequestsRate	Indicates the number of ISAPI extension requests per second.	High, Moderate, or Normal
IIS Web Server	.NET_ErrorRate	Indicates the total number of errors received from the ASP.Net applications per second.	High, Moderate, or Normal
IIS Web Server	Connection_Attempts_Rate	Indicates the number of connection attempts per second.	High, Moderate, or Normal
IIS Web Server	HTTP_Queue_Size	Indicates the current queue size of a HTTP service.	High, Moderate, or Normal
IIS Web Server	Requests_In_AppQueue	Indicates the number of requests in the application queue.	High, Moderate, or Normal
IIS Web Server	HTTP_Rejection_Rate	Indicates the HTTP Service rejection rate.	High, Moderate, or Normal
IIS Web Server	InetInfo_Handle_Count	Indicates the handle count of the `Inetinfo` process.	High, Moderate, or Normal
IIS Web Server	Anonymous Users	Shows the current or maximum number of users who established concurrent anonymous connections using	Normal, High

CI Type	ETI	Description	Value
		the Web service (counted since service startup).	
IIS Web Server	NonAnonymous Users	Shows the current or maximum number of users who established concurrent non-anonymous connections using the Web service (counted since service startup).	Normal, High
IIS Web Server	ASP Errors Rate	Indicates the number of errors per second.	Normal, High
IIS Web Server	ASPRequest ExecutionTime	Indicates the execution time of ASP service requests on the managed nodes.	High, Moderate, or Normal
IIS Web Server	ASPRequests Rejected	Indicates the number of ASP requests that are rejected.	High, Moderate, or Normal
IIS Web Server	Bytes TransmitRate	Indicates the counter bytes transmitted per second of the object server.	High, Moderate, or Normal
IIS Web Server	Connections Attempts Rate	Indicates the number of connection attempts per second.	High, Moderate, or Normal
IIS Web Server	Current Connections	Shows the current number of connections established with the web service.	Normal, High
IIS Web Server	Metadata Cache	Indicates the Metadata cache.	Normal, Low, High
IIS Web Server	Preprocessor Errors	Indicates the number of Preprocessor errors.	High, Moderate, or Normal
IIS Web Server	Requests In AppQueue	Indicates the number of requests in the application queue.	High, Moderate, or Normal

Run-time Service Model (RTSM) Views

A View helps you visualize the context of an event. A typical View shows a subset of CIs and their relationships with other neighboring CIs. Using Views, you can visualize the topology of an OMi MP for Microsoft IIS environment. In addition, Views can be used to do the following:

- Manage the Event Perspective of Microsoft IIS CIs
- Manage the Health Perspective of Microsoft IIS CIs
- Assigning and Tuning the Aspects and Policy Templates

How to Access the RTSM Views

1. Open the RTSM Views pane:

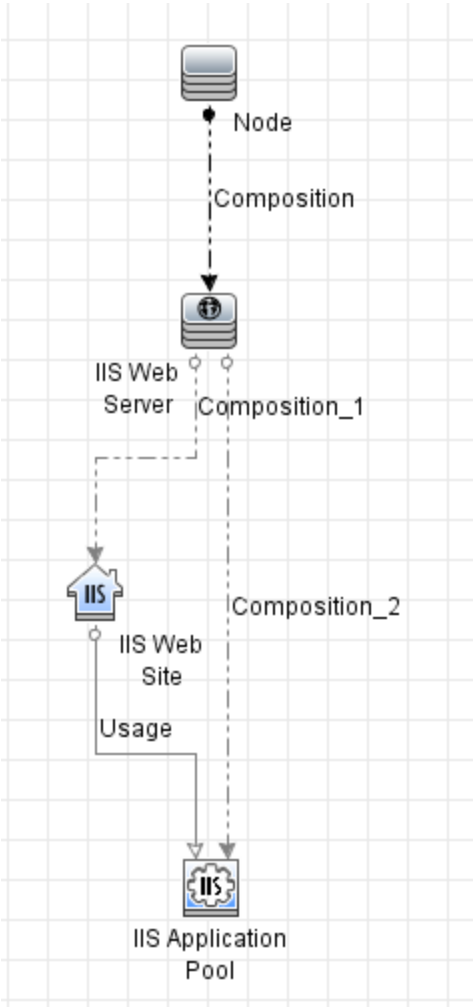
   On BSM 9.2x, click **Admin > RTSM Administration > Modeling > Modeling Studio > Resources**.

   On OMi 10.x, click **Administration > RTSM Administration > Modeling > Modeling Studio > Resources**.

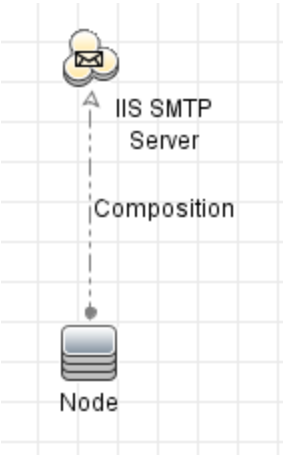
2. Select **Views** from the **Resource Type** drop down list.
3. Select **Operations Management > IIS** from the list.

The RTSM package in the Microsoft IIS Content Pack contains the following views:

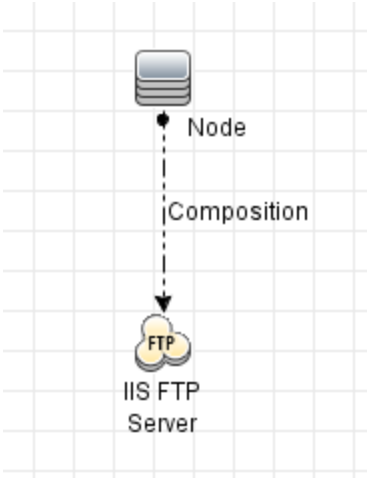
- **IIS_WebServer_Deployment** - This view displays various components such as the IIS Application Pool, IIS Web Site, IIS Web Server, and Node CI types in a pictorial view.



- **IIS_Smtp_Deployment** - This view displays various components such as the IIS SMTP Server and Node CI Types in a pictorial view.



- **IIS_Ftp_Deployment** - This view displays various components such as the IIS FTP Server and Node CI Types in a pictorial view.



Graph Templates

Graphs provide a pictorial representation of metrics. The OMi MP for Microsoft IIS contains a set of graph templates mapped to the Computer CI type.

How to Access Microsoft IIS Graph Templates

1. Open the Graph Mapping pane:

   On BSM 9.2x, click **Admin > Operations Management > Operations Console > Performance Graph Mappings**.

   On OMi 10.x, click **Administration > Operations Console > Performance Graph Mappings**.

2. Click **Configuration Item > Infrastructure Element > RunningSoftware > WebServer > IIS Web Server**.

The following table lists the graph templates present in the Microsoft IIS graph family:

CI Type: IIS Web Server			
Graph Name	**Description**	**Metric Name**	**Table in Data Store**
ASP Failed	Shows the failed, rejected or	ASP_REQ_	ASP

CI Type: IIS Web Server			
Requests, ASP Rejected Requests Vs ASP Queued Requests	queued requests.	QUEUED ASP_REQ_ REJECTED TOTAL_REQ_ FAILED	
ASP Request Per Second Vs ASP Requests in Execution	Shows the ASP requests that are sent per second compared to the requests that are to be executed.	REQUESTS_ EXECUTING REQUESTS_ PERSECOND	ASP
ASP Requests Wait Time	Shows the wait time for the ASP requests.	ASP_REQ_ WAIT_TIME	ASP
ASP.NET Rejected Requests Vs ASP.NET Queued Requests	Shows the rejected ASP.NET requests compared to the queued ASP.NET requests.	ASPNET_ REQ_ QUEUED ASPNET_ REQ_ REJECTED	ASP.NET
Percentage of File Cache Hits	Shows the percentage of file cache hits for the `Internet Information Service Global` object.	GBL_FILE_ CACHE_HITS	GLOBAL SERVICES
TCPv4 Failed Connections Vs TCPv4 Active Connections	Shows the number of failed connections compared to the number of active connections related to TCPv4.	TCPV4_ CONN_ ACTIVE, TCPV4_ CONN_ FAILURES	TCPV4
TCPv6 Failed Connections Vs TCPv6 Active Connections	Shows the number of failed connections compared to the number of active connections related to TCPv6.	TCPV6_ CONN_ ACTIVE, TCPV6_ CONN_ FAILURES	TCPV6
Total Files Cached Vs File Cache Hits	Shows the number of files cached compared to the number of cache hits.	FILE_ CACHE_ HITS, TOTAL_ FILES_ CACHED	WEBSERVICECACH
Connections Vs	Shows the number of current	CURRENT_	WEBSERVICE

CI Type: IIS Web Server			
Requests	connections compared to the number of requests per second for a web service.	CONN, GET_ REQ_ PERSEC	
Current ISAPI Extension Requests Vs ISAPI Extension Request Per Second	Shows the number of current extension requests compared to the number of extension requests per second for ISAPI.	CURR_ISAPI_ EXT_REQ, ISAPI_EXT_ REQ_ PERSEC	WEBSERVICE

How to View Graphs

Performance Perspective enables you to populate graphs from existing graph templates. You can also plot customized graphs by selecting the required metrics for a selected CI.

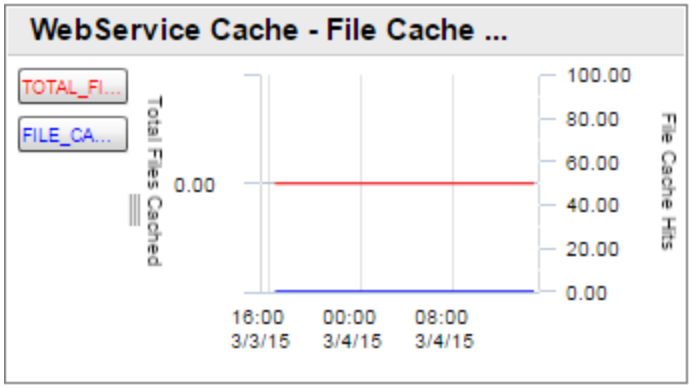
To view the Performance Perspective of Microsoft IIS CIs using graphs, follow these steps:

1. Open the Graph Mapping pane:

   On BSM 9.2x, click **Admin > Applications > Operations Management > Performance Perspective**.

   On OMi 10.x, click **Administration > Workspaces > Operations Console > Performance Perspective**.

2. In the View Explorer pane, click the **Browse Views** tab. For example, select **IIS Web Server** deployment. The performance pane appears, which lists the default graphs available for the Microsoft IIS deployment.



3. If you want to create a different graph other than the available out-of-the-box reports, click the

graph you want to plot from the **Graphs** tab, and then click **Draw Graphs**. The selected graph is plotted on the right pane.

> **Note:** For more information about *Managing Events*, see the *Operations Manager i Concepts Guide*.

Tools

The OMi MP for Microsoft IIS is packaged with tools which enable administering and troubleshooting the Microsoft IIS CIs. Tools enable operators to perform actions in the context of an event from the Event Browser. Several scripts can be run on a host through an agent deployed through the Operation Manager (OM).

How to Access Tools

1. Open the Tools pane:
   On BSM 9.2x click, **Admin > Operation Management > Operations Console > Tools**.

   On OMi 10.x click, **Administration > Operations Console > Tools**.
2. In the CI Types pane, click **InfrastructureElement > RunningSoftware > WebServer> IIS Web Server**.

Launching Tools

As an administrator, you want to configure and manage tools. Do the following to deploy tools:

1. Open the Tools pane:

   On BSM 9.2x, click **Applications > Operations Management > Browse Views**.

   On OMi 10.x, click **Workspaces > Operations Console > Event Perspective > Browse Views**.
2. Select a View. A list of CIs are shown under the view you select.
3. Select a CI and right-click. Select **Launch Tool**.
4. Click **Next**. You can preview the execution of the tool.

5. Click **Run Tool**.

   The tool runs in the background and displays the result in the **Execution Result** tab.

The OMi MP for Microsoft IIS contains the following tools:

CI Type	Tool Name	Description
IIS Web Server	Start FTPSVC Service	Starts the FTPSVC service on the IIS Web Server
IIS Web Server	Start IISADMIN Service	Starts the IISADMIN service on the IIS Web Server
IIS Web Server	Start SMTPSVC Service	Starts the SMTPSVC service on the IIS Web Server
IIS Web Server	Start W3SVC Service	Starts the W3SVC service on the IIS Web Server
IIS Web Server	Stop FTPSVC Service	Stops the FTPSVC service on the IIS Web Server
IIS Web Server	Stop IISADMIN Service	Stops the IISADMIN service on the IIS Web Server
IIS Web Server	Stop SMTPSVC Service	Stops the SMTPSVC service on the IIS Web Server
IIS Web Server	Stop W3SVC Service	Stops the W3SVC service on the IIS Web Server

Chapter 4: Troubleshooting

The following section provides information about troubleshooting scenarios. Some of the troubleshooting procedures must be run on the managed node.

Microsoft IIS CIs on a node do not appear on OMi console

Problem: Microsoft IIS Web Server CIs are not appearing on the OMi console.

Solution: To verify the discovery, follow these steps:

1. Check if the **IIS Web Server Discovery** Aspect is deployed on the managed node. If the Aspect is not deployed, then deploy the Aspect on the node.
2. If the Aspect is already deployed and if there are no errors, follow these steps:
   a. Delete all the files under the folder `%ovdatadir%/tmp/agtrep` except the `agtrep` folder.
   b. On the command prompt, run the `ovagtrep -clearall` command.
   c. Re-deploy the **IIS Web Server Discovery** Aspect.

Datasources are not created

Problem: The IIS Datasources are not created.

Solution: To check for the datasources, ensure the following are met:

1. Ensure the IIS Web Server Discovery Aspect is deployed on the node.
2. Ensure the log file entry is created in `%ovdatadir%/conf/dsi2ddf/ddflbd` folder on the node.
3. Execute the `IIS_CreateDataSource.bat` command manually on the node.

   The datasources would be created on the node.

Not Receiving Events

Problem: Events are not received for the Microsoft IIS Aspect.

Solution: Check the deployment of Aspects on all nodes. To check the deployment, follow these steps:

1. Identify the Microsoft IIS Server Template for which alerts are not being generated.
2. Run the `ovpolicy -list -all` command at the command prompt. Check if the template is present in the output.
3. If the policy template is not deployed, re-deploy the Aspect.
4. Enable the trace by running the command `MsTraceUtil.exe -s MSIIS -l 4 [Enable Trace]` on the node. Check the log files created in the folder *%ovdatadir%\bin\MSIIS\log* for further details.
5. Disable tracing post analysis by running the command `MsTraceUtil.exe -s MSIIS -l 0 [Disable Trace].`

Data Logging Policies Not Logging Data

Problem: Data is not getting logged for Microsoft IIS classes.

Solution: To identify the root cause, perform the following steps:

1. Identify the Class or Table for which data is not getting logged. To identify the associated Aspect and Policy Template for the Class or Table, see the *Appendix: Metrics and Datasources* section.

   As an example, let us consider that data is not getting logged for the class FTP service. Based on the section *Appendix: Metrics and Datasources*, we can identify the corresponding Aspect and Policy Template Name as:

   Aspect: IIS Web Server FTP Service Performance

   Policy Template Name: MSIIS_FTP_Conf
2. Check if this Aspect is assigned to the node. If not, assign the Aspect to the managed node. This will schedule the data collection. If the Aspect was already assigned, then continue with the next steps.

3. On the managed node from the command prompt, run the command `ovpolicy -list -poltype configfile`. Check if the output has the policy template `MSIIS_FTP_Conf`. If not re-deploy the IIS Web Server FTP Service Performance Aspect. If the policy template is already deployed, then continue with the next steps.
4. Ensure the IIS Web Server Discovery Aspect is deployed. If the Aspect was already deployed, then continue with the following steps:
   a. Enable the trace by running the command `MsTraceUtil.exe –s MSIIS –l 4 [Enable Trace]`.
   b. Navigate to **Admin > Operations Management > Monitoring > Management Template & Aspects**.
   c. Select the IIS Web Server FTP Service Performance Aspect.
   d. Select the policy template MSIIS_FTP_Conf from the list of policies grouped in the IIS Web Server FTP Service Performance Aspect. This is a ConfigFile policy template.
   e. Open the policy to identify the collections it will schedule. In this case there is one collection with the following details:

      Collection name = MSIIS_FTP_Collection

      Collection ID = MSIIS_C10008

      Collection role = MSIIS
   f. Log on to the managed node.

      On the managed node, from the command prompt, run the following command:

      ```
      %OvDataDir%\bin\instrumentation\MPMSCollectionManager.exe -s MSIIS -c C10008 -o p
      ```
   g. Check the trace file *MSIIS_C10008_COLL_Trace.log* in the directory *%ovdatadir%\bin\MSIIS\log* for further details.
   h. Disable tracing post analysis by running the `MsTraceUtil.exe –s MSIIS –l 0 [Disable Trace]`.

Multiple Labels for a Host CI

Problem: There are multiple node CIs, one with a short name and one with a Fully Qualified Domain Name (FQDN).

Solution: Check if the FQDN is not specified for a node. If the FQDN is not specified, do the following steps:

1. Specify the FQDN on the node before activating the node to the OMi Server.
2. Specify the FQDN name under Monitored nodes while adding nodes.
3. Deploy the Discovery policy.

Appendix A: Metrics and Datasources

Data stores define the way in which you can store metric data.

The OMi MP for Microsoft IIS creates the following data tables for Microsoft IIS metrics in the data store on the node to facilitate the data-collection procedure:

> **Note:** The data logging metrics are not associated with any Policy Templates.

Table in Data Store	Aspect Name	Policy Template / Collection Name	Metrics	Data Type
IISMP_ASP	IIS Web Server ASP Service Performance		INSTANCE_ NAME	TEXT
		MSIIS_ RequestsPerSecond	REQUESTS_ PERSECOND	UINT64
		MSIIS_ RequestsExecuting	REQUESTS_ EXECUTING	UINT64
		MSIIS_ ASPReqWaitTime	ASP_REQ_ WAIT_TIME	UINT64
		MSIIS_ ScriptCompileErr	SCRIPT_ COMPILE_ERR	UINT64
		MSIIS_ ASPReqRejected	ASP_REQ_ REJECTED	UINT64
		MSIIS_TotalReqFailed	TOTAL_REQ_ FAILED	UINT64
		MSIIS_ ASPPreProcErrors	ASP_ PREPROC_ ERRORS	UINT64
		MSIIS_ ASPReqQueued	ASP_REQ_ QUEUED	UINT64
		MSIIS_ ReqExecutionTime	REQ_ EXECUTION_ TIME	UINT64
		MSIIS_ ASPErrorsPerSec	ERRORS_ PERSECOND	UINT64

Table in Data Store	Aspect Name	Policy Template / Collection Name	Metrics	Data Type
		MSIIS_ WorkerProcRunning	WORKER_ PROC_ RUNNING	UINT64
IISMP_ASPNET	IIS Web Server ASP.NET Service Performance		INSTANCE_ NAME	TEXT
		MSIIS_ ASPNETReqWaitTime	ASPNET_REQ_ WAIT_TIME	UINT64
		MSIIS_ ASPNETReqQueued	ASPNET_REQ_ QUEUED	UINT64
		MSIIS_ ASPReqRejected	ASPNET_REQ_ REJECTED	UINT64
		MSIIS_ ApplicationRestarts	APPLICATION_ RESTARTS	UINT64
IISMP_FTP	IIS Web Server FTP Service Performance	MSIIS_CurrAnonUsers	CURR_ANON_ USERS	UINT64
		MSIIS_ CurrNonAnonUsers	CURR_ NONANON_ USERS	UINT64
		MSIIS_ CurrentConnections	CURRENT_ CONNECTIONS	UINT64
		MSIIS_ FTPTotBytesPerSec	TOTAL_BYTES_ PERSEC	UINT64
IISMP_SMTP	IIS Web Server SMTP Service Performance	MSIIS_ CurrInBoundConn	CURR_ INBOUND_ CONN	UINT64
		MSIIS_ CurrOutBoundConn	CURR_ OUTBOUND_ CONN	UINT64
		MSIIS_ MsgSentPerSec	MSG_SENT_ PERSEC	UINT64
		MSIIS_ MsgDeliveredPerSec	MSG_ DELIVERED_ PERSEC	UINT64

Table in Data Store	Aspect Name	Policy Template / Collection Name	Metrics	Data Type
		MSIIS_ MsgReceivedPerSec	MSG_ RECEIVED_ PERSEC	UINT64
IISMP_WEBSERVICE	IIS Web Server WWW Service Performance	MSIIS_CurrentConn	INSTANCE_ NAME	TEXT
			CURRENT_ CONN	UINT64
		MSIIS_GetReqPerSec	GET_REQ_ PERSEC	UINT64
		MSIIS_ FilesPerSecond	FILES_ PERSECOND	UINT64
		MSIIS_ TotalBytesPerSec	TOTAL_BYTES_ PERSEC	UINT64
		MSIIS_ GblFileCacheHits	FILE_CACHE_ HITS	UINT64
		MSIIS_ ConnAttemptsPerSec	CONN_ ATTEMPTS_ PERSEC	UINT64
		MSIIS_ CurrISAPIExtReq	CURR_ISAPI_ EXT_REQ	UINT64
		MSIIS_ ISAPIExtReqPerSec	ISAPI_EXT_ REQ_PERSEC	UINT64
IISMP_ WEBSERVICECACHE	IIS Web Server Performance	MSIIS_FileCacheHits	INSTANCE_ NAME	TEXT
			FILE_CACHE_ HITS	UINT64
			TOTAL_FILES_ CACHED	UINT64
			CURR_FILE_ CACHE_MEM	UINT64
IISMP_SERVER	IIS Web Server Performance	MSIIS_ BytesTransmitted	INSTANCE_ NAME	TEXT
			BYTES_ TRANSMITTED	UINT64

Table in Data Store	Aspect Name	Policy Template / Collection Name	Metrics	Data Type
			ERRORS_ SYSTEM	UINT64
			LOGON_TOTAL	UINT64
			SERVER_ SESSIONS	UINT64
IISMP_ GLOBALSERVICES	IIS Web Server Performance	MSIIS_ GblFileCacheHits	INSTANCE_ NAME	TEXT
			GBL_FILE_ CACHE_HITS	UINT64
			FILES_ CACHED	UINT64
			AYNC_REQS_ REJECTED	UINT64
IISMP_ASPNETAPP	IIS Web Server ASP Service Performance	MSIIS_ ASPNETErrPerSec	INSTANCE_ NAME	TEXT
			ASPNET_ERR_ PERSEC	UINT64
		MSIIS_ReqAppQueue	REQ_APP_ QUEUE	UINT64
IISMP_HTTPSERVICE	IIS Web Server Performance	MSIIS_CurrQueueSize	INSTANCE_ NAME	TEXT
			CURR_ QUEUE_SIZE	UINT64
		MSIIS_RejectRate	REJECT_RATE	UINT64
IISMP_AVAILABILITY	IIS Web Server Availability		AVAIL_ METRIC_ID	UINT64
			AVAIL_ INSTANCE_ NAME	TEXT
			GGE R64 AVAIL_VALUE	UINT64
IISMP_PROCESS	IIS Web Server Performance		INSTANCE_ NAME	TEXT

Table in Data Store	Aspect Name	Policy Template / Collection Name	Metrics	Data Type
			PROCESSOR_ TIME	UINT64
		MSIIS_ InetInfoWorkingSet	WORKING_SET	UINT64
			ELAPSED_ TIME	UINT64
		MSIIS_ InetInfoHandleCount	HANDLE_ COUNT	UINT64
IISMP_TCPV4	IIS Web Server Performance	MSIIS_ TCPV4ConnFailures	TCPV4_CONN_ FAILURES	UINT64
		MSIIS_ TCPV4ConnActive	TCPV4_CONN_ ACTIVE	UINT64
			INSTANCE_ NAME	TEXT
IISMP_TCPV6	IIS Web Server Performance	MSIIS_ TCPV6ConnFailures	TCPV6_CONN_ FAILURES	UINT64
		MSIIS_ TCPV6ConnActive	TCPV6_CONN_ ACTIVE	UINT64
			INSTANCE_ NAME	TEXT

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