

Guide for System Center Management Pack for Microsoft Dynamics NAV 2015

Microsoft Corporation

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Contents

[Guide for System Center Management Pack for Microsoft Dynamics NAV 2015 6](#_Toc399234557)

[Introduction 6](#_Toc399234558)

[Guide History 6](#_Toc399234559)

[Supported Configurations 6](#_Toc399234560)

[Management Pack Scope 7](#_Toc399234561)

[Prerequisites 7](#_Toc399234562)

[Files in this Management Pack 7](#_Toc399234563)

[Importing the System Center Management Pack for Microsoft Dynamics NAV 2015 7](#_Toc399234564)

[Management Pack Purpose 8](#_Toc399234565)

[Monitoring Scenarios 8](#_Toc399234566)

[Discovering Microsoft Dynamics NAV Components 16](#_Toc399234567)

[How Health Rolls Up 18](#_Toc399234568)

[Understanding the Monitoring Operations 19](#_Toc399234569)

[Monitoring Microsoft Dynamics NAV Server Instances 19](#_Toc399234570)

[Monitoring Microsoft Dynamics NAV Server Instance Tenants 24](#_Toc399234571)

[Monitoring Microsoft Dynamics NAV Web Server Instances 30](#_Toc399234572)

[Configuring the Microsoft Dynamics NAV 2015 Management Pack for System Center 32](#_Toc399234573)

[Best Practices 33](#_Toc399234574)

[Security Configuration 33](#_Toc399234575)

[Links to Information About System Center 34](#_Toc399234576)

[System Center 2012 - Operations Manager 34](#_Toc399234577)

[Appendix: Monitoring Pack Contents 36](#_Toc399234578)

[Object Discoveries 36](#_Toc399234579)

[Monitor Overrides 47](#_Toc399234580)

# Guide for System Center Management Pack for Microsoft Dynamics NAV 2015

This guide describes the installation and features of the System Center Management Pack for Microsoft Dynamics NAV 2015. This guide was written based on version 1 of the System Center Management Pack for Microsoft Dynamics NAV 2015.

### Introduction

Microsoft System Center Operations Manager, which is a component of Microsoft System Center, enables you to monitor services and operations on multiple computers from a single console. The System Center Management Pack for Microsoft Dynamics NAV 2015 extends Operations Manager for monitoring computers that are running Microsoft Dynamics NAV 2015 components and services.

### Guide History

|  |  |
| --- | --- |
| Release Date | Changes |
| September 2015 | Original release of this guide |

### Supported Configurations

This monitoring pack requires System Center 2012 Operations Manager. A dedicated Operations Manager management group is not required.

The following table details the supported configurations for the Management Pack for Microsoft Dynamics NAV 2015.

|  |  |
| --- | --- |
| **Configuration** | **Support** |
| Microsoft Dynamics NAV 2015 | Yes |
| Clustered servers | Not supported |
| Agentless monitoring | Not supported |
| Virtual environment | Yes |

## Management Pack Scope

This monitoring pack supports monitoring the health of Microsoft Dynamics NAV 2015 installations, including the following components:

* Computers on which Microsoft Dynamics NAV Server is installed and Microsoft Dynamics NAV Server instances are installed.

This includes monitoring of Microsoft Dynamics NAV Server instances and mounted tenants.

* Computers on which Microsoft Dynamics NAV Web Server components are installed. These include the websites and web server instances for the Microsoft Dynamics NAV Web client.

### Prerequisites

This management pack is designed to discover and monitor the computers where Microsoft Dynamics NAV 2015 components are installed. To obtain proper monitoring information from Microsoft Dynamics NAV components, the computers must include Microsoft Dynamics NAV 2015.

### Files in this Management Pack

The System Center Management Pack for Microsoft Dynamics NAV 2015 includes the following files:

 MicrosoftDynamicsNAV2015MgtPackForSystemCenter2012.msi – contains Microsoft.Dynamics.Nav.2015.mp v. 8.0.0.0. This management pack supports Microsoft Dynamics NAV 2015 Servers and websites hosted by IIS 7 and IIS 8 that target System Center 2012 Operations Manager.

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### Importing the System Center Management Pack for Microsoft Dynamics NAV 2015

The following steps outline how to import the Management Pack for Microsoft Dynamics NAV 2015:

1. Download relevant .msi file from the [System Center Marketplace](http://go.microsoft.com/fwlink/?LinkId=220454) or [Microsoft Download Center](http://go.microsoft.com/fwlink/?LinkID=325260).
2. Run the .msi file and extract the files to a folder that you specify.
3. Import the Microsoft Dynamics NAV 2015.mp for the management pack in the System Center Operations Manager.

For more information about how to import the management pack, see [How to Import a Management Pack (System Center 2012)](http://go.microsoft.com/fwlink/p/?LinkID=219431).

## Management Pack Purpose

With the System Center Management Pack for Microsoft Dynamics NAV 2015, operators can use the System Center Operation Console to monitor the Microsoft Dynamics NAV 2015 environments, including Microsoft Dynamics NAV Server instances and websites that are running Microsoft Dynamics NAV Web Server components. The management pack enables operators to troubleshoot errors and optimize the performance and reliability of the system.

This section includes the following:

 [Monitoring Scenarios](#z5a9ff008734b4183946f840ae0464ab0)

* [Discovering Microsoft Dynamics NAV Components](#_Discovering_Microsoft_Dynamics)

 [How Health Rolls Up](#zb8b3e32eb8154a8da8b18b606568e65d)

* [Understanding the Monitoring Operations](#_Understanding_the_Monitoring)

For more information about the discoveries, rules, monitors, views, and reports contained in this monitoring pack, see [Appendix: Monitoring Pack Contents](#zf475f3cc57b84a049d89cda7b1f37ba8).

### Monitoring Scenarios

The following table provides an overview of the key monitoring scenarios of the System Center Management Pack for Microsoft Dynamics NAV 2015.

|  |  |  |
| --- | --- | --- |
| Monitoring scenario | Description | Associated rules and monitors |
| Microsoft Dynamics NAV Server computer health | This scenario discovers and monitors the computers on which Microsoft Dynamics NAV 2015 Server is installed. In the Monitoring pane of the Operations Console, discovered computers are displayed in the Computer view under Microsoft Dynamics NAV 2015. Operators can see the state of the computer, computer properties, alerts, and events. | There are no associated rules or monitors directly associated with this scenario.Health is rolled up to the computer level from monitors on the Microsoft Dynamics NAV 2015 Server instances, including the Server Instance to SQL monitor, Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time monitor, and the Microsoft Dynamics NAV 2015 Server Instance Event monitor.Events come from the Windows Application event log of the computer on which Microsoft Dynamics NAV 2015 Server installed. |
| Microsoft Dynamics NAV Server Instance health | This scenario discovers and monitors Microsoft Dynamics NAV Server instances on computers where Microsoft Dynamics NAV Server is installed.In the Monitoring pane of the Operations Console, discovered server instances are displayed in the Server Instances view under Microsoft Dynamics NAV 2015. Operators can view the state of the instances, connection parameters, alerts, and events. Operators can also perform basic tasks such as starting and stopping a Microsoft Dynamics NAV Server instance. | Server Instance to SQL monitorMonitors the connection from the Microsoft Dynamics NAV Server instance to the SQL database.The monitor has the following states and alerts.* The state is Healthy when the connection is working,
* The state is Critical when the connection is lost. This condition generates an alert.

This condition can occur when the connection setup is incorrect, the SQL server service has stopped, or the network has failed.The monitor only reacts to errors that target the Microsoft Dynamics NAV Server instance. Errors that are related to a tenant are not monitored.The health from the server instance is rolled up to the computer on which the server instance is installed.Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time monitorMonitors the amount of time that it takes to complete a single write operation to the system table.The monitor uses the Microsoft Dynamics NAV\Heartbeat time (ms) performance counter. For evaluating health and generating alerts, the monitor includes a threshold comparison on the performance counter. The threshold comparison consists of two parameters: a parameter for the threshold value (the default is 100) and a parameter that specifies the number of samples (the default is 2) to compare with the threshold.The monitor has the following states and alerts.* The state is Healthy when the Microsoft Dynamics NAV\Heartbeat time (ms) performance counter for consecutive samples is below the threshold.
* The state is Critical when the Microsoft Dynamics NAV\Heartbeat time (ms) performance counter for the specified number of consecutive samples exceeds the threshold.

The health is rolled up to the computer on which the server instance is installed.Associated Rule:Microsoft Dynamics NAV\Heartbeat time (ms). This rule is alerting.Microsoft Dynamics NAV 2015 Server Instance Event monitorMonitors when the Microsoft Dynamics NAV Server instance records errors in the Application event log of the computer on which it runs. The monitor includes two parameters that configure an event rate limit, which is defined as the number of events (N) that can occur within a certain period of time (X). The default limit is 3 events within 300 seconds.The monitor has the following states and alerts.* The state is Healthy when the event rate is below the limit.
* The state is Warning when the event rate exceeds the limit, for example more than 3 events within 300 seconds. This condition generates an alert.

The health is rolled up to the computer on which the server instance is installed.Associated Rule:Microsoft Dynamics NAV 2015 Server Instance Event Collection. This rule generates an alert.**Server** Running State monitorThis monitor is a basic service monitor that is part of the Windows Service Library.The monitor has the following states and alerts:* The state is Healthy when the Microsoft Dynamics NAV Server service is running.
* The state is Critical when the Microsoft Dynamics NAV Server service is stopped. This monitor generates an alert when a service instance that is set up to automatically start up is stopped.

The health is rolled up to the computer on which the server instance is installed.**Server** Instance Certificate Close to Expiration monitorThis monitor checks the expiration date of the security certificate that is used on the Microsoft Dynamics NAV Server instance and raises an event when the certificate is within 30 days of expiring. The event is subsequently raised one time each day until the certificate is replaced or renewed. When the certificate expires, users cannot access Microsoft Dynamics NAV.The monitor has the following states and alerts:* The state is Healthy when the certificate is not within 30 days of expiring.
* The state is Warning when the certificate is within 30 days of expiring. This condition generates an alert that indicates that the certificate must be renewed.

The health is rolled up to the computer on which the server instance is installed.**Server** Instance Certificate Has Expired monitorThis monitor checks the expiration date of the security certificate that is used on the Microsoft Dynamics NAV Server instance and raises an event when the certificate has met its expiration date. The event is subsequently raised one time each day until the certificate is replaced or renewed. When the certificate expires, users cannot access Microsoft Dynamics NAV.The monitor has the following states and alerts:* The state is Healthy when the certificate has not expired.
* The state is Critical when the certificate has expired. This condition generates an alert to indicate that the certificate must be renewed before users can access Microsoft Dynamics NAV again.

The health is rolled up to the computer on which the server instance is installed.Tenant Hosted By Server Instance Availability Rollup monitorThis monitor rolls up the availability health of all tenant that are mounted on a Microsoft Dynamics NAV Server instance. |
| Microsoft Dynamics NAV Server Instance Tenant health | This scenario discovers and monitors tenants that are mounted on Microsoft Dynamics NAV Server instances on computers where Microsoft Dynamics NAV Server is installed.In the Monitoring pane of the Operations Console, discovered tenants are displayed in the Tenant view under Microsoft Dynamics NAV 2015. Operators can view the state of the tenants, tenant properties, alerts, and events. | Tenant to SQL monitorMonitors the connection from the Microsoft Dynamics NAV Server instance to the tenant database.The monitor has the following states and alerts.* The state is Healthy when the connection is working,
* The state is Critical when the connection to the tenant database cannot be established or is no longer usable. This condition generates an alert.

This condition can occur when the connection setup is incorrect, the SQL server service has stopped, or the network has failed.The monitor only reacts to errors that target the tenants on Microsoft Dynamics NAV Server instances.The health from the tenant is rolled up to the Microsoft Dynamics NAV Server instance that on which the tenant is mounted.Microsoft Dynamics NAV 2015 Server Instance Tenant Event monitorMonitors when the tenant records errors in the Application event log of the computer on which it runs. The monitor includes two parameters that configure an event rate limit, which is defined as the number of events (N) that can occur within a certain period of time (X). The default limit is 3 events within 300 seconds.The monitor has the following states and alerts.* The state is Healthy when the event rate is below the limit.
* The state is Warning when the event rate exceeds the limit, for example more than 3 events within 300 seconds. This condition generates an alert.

The health is rolled up to the Microsoft Dynamics NAV Server instance on which the tenant is mounted.Associated rule:Microsoft Dynamics NAV 2015 Server Instance Tenant Event Collection. This rule generates an alert. |
| Monitor Microsoft Dynamics NAV Web Server computer health  | This scenario discovers and monitors computers on which Microsoft Dynamics NAV Web Server components are installed.In the Monitoring pane of the Operations Console, discovered computers are displayed in the Computers view under Microsoft Dynamics NAV 2015. Operators can see the state of the computer, computer properties, alerts, and events. | Microsoft Dynamics NAV 2015 Web Server Role Event monitorMonitors the events logs of computers on which Microsoft Dynamics NAV Web Server components are installed. The monitor collects all event entries that are generated by Microsoft Dynamics NAV Web Server components that have the level of warning or error level. The monitor includes two parameters that configure an event rate limit, which is defined as the number of events (N) that can occur within a certain period of time (X). The default limit is 3 events within 300 seconds.The monitor has the following states and alerts:* The state is Healthy when the event rate is below the limit.
* The state is Warning when the event rate exceeds the limit, for example more than 3 events within 300 seconds. This condition generates an alert.

The associated rule is Microsoft Dynamics NAV 2015 Server Role Event Collection.  |
| Monitor Microsoft Dynamics NAV Web Server Instance health | This scenario discovers and monitors Microsoft Dynamics NAV Web Server instances on computers where Microsoft Dynamics NAV Server is installed.In the Monitoring pane of the Operations Console, discovered server instances are displayed in the Web Server Instances view under Microsoft Dynamics NAV 2015. Operators can view the state of the instances, connection parameters, alerts, and events. | Microsoft Dynamics NAV 2015 Web Server Instance Event monitorMonitors when the Microsoft Dynamics NAV Web Server instance records errors in the Application event log of the computer on which it runs. The monitor includes two parameters that configure an event rate limit, which is defined as the number of events (N) that can occur within a certain period of time (X). The default limit is 3 events within 300 seconds.The monitor has the following states and alerts.* The state is Healthy when the event rate is below the limit.
* The state is Warning when the event rate exceeds the limit, for example more than 3 events within 300 seconds. This condition generates an alert.

The health is not rolled up to the computer on which the web server instance is installed. |

### Discovering Microsoft Dynamics NAV Components

#### Discovered Objects

The System Center Management Pack for Microsoft Dynamics NAV 2015 includes several object discoveries that automatically discover the Microsoft Dynamics NAV components.

In the Operation Console, under Monitoring, discovered objects are displayed under **Microsoft Dynamics NAV 2015** in the **Computers**, **Server Instances**, or **Websites** view.

The following table describes the object discoveries that are used in the management pack.

|  |  |  |
| --- | --- | --- |
| Object that is discovered | Monitoring view | Object discovery |
| Computers on which Microsoft Dynamics NAV Server is installed | Computers | Microsoft Dynamics NAV 2015 Server Role DiscoveryMicrosoft Dynamics NAV 2015 Server Role Computer Group Discovery |
| Computers on which Microsoft Dynamics NAV Web Server components are installed | Computers | Microsoft Dynamics NAV 2015 Web Server Role DiscoveryMicrosoft Dynamics NAV 2015 Server Role Computer Group Discovery |
| Microsoft Dynamics NAV Server instances on computers where Microsoft Dynamics NAV Server is installed | Server Instances | Microsoft Dynamics NAV 2015 Server Instance Discovery |
| Tenants that are mounted on Microsoft Dynamics NAV Server instances | Tenants | Microsoft Dynamics NAV 2015 Server Instance Tenants Discovery |
| Microsoft Dynamics NAV Web Server instances on computers where Microsoft Dynamics NAV Web Server components are installed | Web Server Instances | Microsoft Dynamics NAV 2015 Web Server Instance Discovery |

For more information about the discoveries in this management pack, see [Appendix: Monitoring Pack Contents](#zf475f3cc57b84a049d89cda7b1f37ba8).

#### Object Discovery Intervals

The object discoveries are run when you import the management pack, and then they are run regularly according to the interval that is defined for each discovery. The default interval is set to 14,400 seconds (4 hours). Running the discoveries will update the views to objects that have been added or removed since the last run. You can override the default discovery interval to update the views more or less frequently.

For more information about how to override the discovery interval, see [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065) or [How to Monitor Using Overrides](http://go.microsoft.com/fwlink/?LinkID=117777).

### How Health Rolls Up

The following diagram shows how the health states of objects roll up in this monitoring pack.



**Note:** To view the health monitors for a computer or items, in the **Monitoring** view, right-click the object, choose **Open**, and then choose **Health Explorer**.

## Understanding the Monitoring Operations

### Monitoring Microsoft Dynamics NAV Server Instances

The System Center Management Pack for Microsoft Dynamics NAV 2015 provides the following discovery and monitoring functionality for Microsoft Dynamics NAV Server instances:

* Health
* Alerts
* Server instance properties
* Events
* Performance counters

You can also perform basic tasks on Microsoft Dynamics Server instances, such as checking dependent services and starting or stopping Microsoft Dynamics Server instances.

#### Viewing and Configuring Microsoft Dynamics NAV Server Instances Health and Alerts

The following table describes the health states of Microsoft Dynamics NAV Server instances.

|  |  |
| --- | --- |
| State | Cause |
| Healthy | The Microsoft Dynamics NAV Server instance is operating properly. |
| Warning | The Microsoft NAV Server instance has generated multiple errors. The event rate exceeds the limit that is defined for the monitor. The default rate is 3 events within 300 seconds. This condition generates an alert. For information, see [Configuring health states and alerts](#_Configuring_health_states). |
| Critical | * The connection to the SQL Server that hosts the Microsoft Dynamics NAV Database has failed. This condition generates an alert.
* The Microsoft Dynamics NAV\Heartbeat time (ms) performance counter for the specified number of consecutive samples exceeds the threshold. This condition generates an alert.
* The Server Instance has stopped. This condition generates an alert.

For information, see [Configuring health states and alerts](#_Configuring_health_states). |

To view Microsoft Dynamics NAV Server Instance health

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.

The Server Instances pane displays all of the discovered Microsoft Dynamics NAV Server instances

1. To view the health model for a server instance, choose the server instance, and then in the **Task** pane, choose **Health Explorer**.

To view alerts

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.
2. Choose the server instance, and then in the **Task** pane, choose **Alert View.**

Configuring health states and alerts

The Microsoft Dynamics NAV 2015 monitors for Microsoft Dynamics NAV Server instances have several parameters that you can configure to define the conditions that change health state and trigger alerts.

* For more information about the configurable parameters, see the [Monitor Overrides](#_Monitor_Overrides).
* For more information about how to change the parameters, see [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065) or [How to Monitor Using Overrides](http://go.microsoft.com/fwlink/?LinkID=117777).

#### Viewing Server Instance Properties

You can view the configuration parameters for the Microsoft NAV Server instance, such as server name, authentication type, enabled web services, and more.

To view properties

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.
2. Right-click the server instance, choose **Properties**.

For more information about the available properties, see [Configuring Microsoft Dynamics NAV Server](http://go.microsoft.com/fwlink/?LinkID=273711).

#### Viewing Performance Counters

The System Center Management Pack for Microsoft Dynamics NAV 2015 collects performance data on the Microsoft Dynamics NAV Server instances. The performance counters include counters that are specific to Microsoft Dynamics NAV 2015, plus a subset of counters that are available for monitoring Windows services.

The following table lists the performance counters that are monitored for processes of Microsoft Dynamics NAV Server instances.

|  |  |  |
| --- | --- | --- |
| Performance counter | Description | Management pack |
| # Active sessions | Number of active sessions on the Microsoft Dynamics NAV Server instance. An active session is a connection to the Microsoft Dynamics NAV Server instance from a Microsoft Dynamics NAV client, such as the Microsoft Dynamics NAV Windows client or Microsoft Dynamics NAV Web client, NAS, or Web services. | Microsoft Dynamics NAV 2015 |
| # Calculated fields cache total requests | Count of the total number of requests to the calculated field’s cache. The calculated field’s cache contains the results of [CALCFIELDS Function (Record)](http://msdn.microsoft.com/en-us/library/dd338975%28v%3Dnav.71%29.aspx) calls. | Microsoft Dynamics NAV 2015 |
| # Command cache total requests | Count of the total number of requests to the command cache. The command cache contains the results of all SQL commands. | Microsoft Dynamics NAV 2015 |
| # Mounted tenants | Number of tenants that are mounted on the Microsoft Dynamics NAV Server instance. | Microsoft Dynamics NAV 2015 |
| # Open connections | Count of the current number of open connections from the Microsoft Dynamics NAV Server instance to Microsoft Dynamics NAV databases on SQL Servers. | Microsoft Dynamics NAV 2015 |
| # Preferred connection total requests | Count of the total number of requests to the preferred connection cache. The preferred connection cache contains requests from the SQL connection pool that was last used by a Microsoft Dynamics NAV user. | Microsoft Dynamics NAV 2015 |
| # Primary key cache total requests | Count of the total number of requests to the primary key cache. The primary key cache contains the results of requests to get a record by using its primary key. | Microsoft Dynamics NAV 2015 |
| # Result set cache total requests | Count of the total number of requests to the result set cache. The result set cache contains result sets that are returned from SQL Server. | Microsoft Dynamics NAV 2015 |
| # Rows in all temporary tables | Count of number of rows in all temporary tables. | Microsoft Dynamics NAV 2015 |
| % Calculated fields cache hit rate | Percentage of hits in the calculated fields cache, compared to the total requests to the calculated fields cache. | Microsoft Dynamics NAV 2015 |
| % Command cache hit rate | Percentage of hits in the command cache, compared to the total requests to the command cache. | Microsoft Dynamics NAV 2015 |
| % Preferred connection cache hit rate | Percentage of hits in the preferred connection cache, compared to the total number of requests. | Microsoft Dynamics NAV 2015 |
| % Primary key cache hit rate | Percentage of hits in the primary key cache, compared to the total requests to the primary key cache. | Microsoft Dynamics NAV 2015 |
| % Query repositioning rate | Percentage of queries that are re-executed when fetching the query result. | Microsoft Dynamics NAV 2015 |
| % Result set cache hit rate | Percentage of hits in the result set cache, compared to the total requests to the result set cache. | Microsoft Dynamics NAV 2015 |
| Average server operation time (ms) | Average duration of server operations in milliseconds. | Microsoft Dynamics NAV 2015 |
| Heartbeat time (ms) | Collects the time that it takes to complete a single write operation to a system table. Every 30 seconds, the Microsoft Dynamics NAV Server instance writes a record to indicate that the instance is active. | Microsoft Dynamics NAV 2015 |
| Server operations/sec | Number of operations that have started on the Microsoft Dynamics NAV Server per second. An operation is a call to the Microsoft Dynamics NAV Server instance from a Microsoft Dynamics NAV client to run Microsoft Dynamics NAV objects. JJ672857.note(en-us,NAV.71).gif**Note:** OData and SOAP requests are not included. | Microsoft Dynamics NAV 2015 |
| Handle Count | Number of handles in the monitored service. | Windows Service Library |
| Collect Process\Private Bytes | Collects memory usage for the Windows service.  | Windows Service Library  |
| Collect Process\% Processor Time | Collects processor utilization for the Windows service.  | Windows Service Library |
| Thread Count | Collects the number of threads in the monitored service. | Windows Service Library |
| Working Set | Working set of the monitored service.  | Windows Service Library |
| Collect Event Log Events | Collects service control events about the monitored service. | Windows Service Library |

To view performance counters

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.
2. In the **Task** pane, choose **Performance View.**

#### Viewing Events

The events that are monitored for the Microsoft Dynamics NAV Server instance are collected from the Windows Application event log of the computer that hosts the Microsoft Dynamics NAV Server instance. The monitor extracts only log events entries that are related to the Microsoft Dynamics NAV Server instance which have a level of warning or error.

To view events

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.
2. In the **Task** pane, choose **Event View.**

#### Performing Tasks on Microsoft Dynamics NAV Server Instances

The management pack enables you to perform tasks on Microsoft Dynamics NAV Server instances from the Operations Console without having to work on the computer that is running the Microsoft Dynamics NAV Server instances.

To access tasks

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Server Instances**.
2. In the **Task** pane, under **Microsoft Dynamics Server Instances Tasks**, choose one of the following tasks.

|  |  |
| --- | --- |
| Task | Description |
| Check Dependent NT Services | Checks the state of services that the Microsoft Dynamics NAV Server instance depends on. |
| Start NT Service | Starts the Microsoft Dynamics NAV Server instance.  |
| Stop NT Service | Stops the Microsoft Dynamics NAV Server instance. The health changes to Critical. |

### Monitoring Microsoft Dynamics NAV Server Instance Tenants

Microsoft Dynamics NAV 2015 can be deployed in a multitenant architecture that consists of a single application database and one or more business data databases for storing company-specific data, which are referred to as *tenants*. Tenants are mounted on Microsoft Dynamics NAV Server instances, where a single server instance can have one or more tenants. For more information about multitenancy in Microsoft Dynamics NAV 2015, see [Multitenant Deployment Architecture](http://go.microsoft.com/fwlink/?LinkID=325353).

The System Center Management Pack for Microsoft Dynamics NAV 2015 provides discovery and monitoring functionality for tenants that are mounted on Microsoft Dynamics NAV Server instances. The monitoring includes the following functionality:

* Health
* Alerts
* Tenant properties
* Events

#### Microsoft Dynamics NAV Server Instance Tenants Health and Alerts

The following table describes the health states of Microsoft Dynamics NAV Server instance tenants.

|  |  |
| --- | --- |
| State | Cause |
| Healthy | The Microsoft Dynamics NAV Server instance tenant is operating properly. |
| Warning | The Microsoft NAV Server instance tenant has generated multiple errors. The event rate exceeds the limit that is defined for the monitor. The default rate is 3 events within 300 seconds. This condition generates an alert.For more information, see [Configuring health states and alerts](#_Configuring_health_states). |

##### To view Microsoft Dynamics NAV Server Instance Tenant health

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Tenants**.

The Tenants pane displays all of the discovered tenants that are mounted on Microsoft Dynamics Server instances.

**Note:** Even if the Microsoft Dynamics NAV Server instance is not configured for multitenancy, a single tenant exists on the server instance that connects to the Microsoft Dynamics NAV database.

1. To view the health model for a tenant, choose the tenant, and then in the **Task** pane, choose **Health Explorer**.

##### To view alerts

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Tenants**.
2. Choose the tenant, and then in the **Task** pane, choose **Alert View.**

##### Configuring health states and alerts

The monitor for Microsoft Dynamics NAV Server instance tenants has several parameters that you can configure to define the conditions that change health state and trigger alerts.

* For more information about the configurable parameters, see the [Monitor Overrides](#_Monitor_Overrides).
* For more information about how to change the parameters, see [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065) or [How to Monitor Using Overrides](http://go.microsoft.com/fwlink/?LinkID=117777).

#### Viewing Tenant Properties

You can view the configuration parameters for the tenants that are mounted to Microsoft Dynamics NAV Server instances, such as tenant ID, the name of server instance that the tenant is mounted to, and Microsoft Dynamics NAV that the tenant connects to.

##### To view properties

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Tenants**.
2. Right-click the tenant, and then choose **Properties**.

The following table describes the properties.

|  |  |
| --- | --- |
| Property | Description |
| Display name | The name of the tenant. |
| Path | The path to the tenant object on the computer running Microsoft Dynamics NAV Server. |
| Object Display Name | The name of the tenant object. |
| Tenant ID | The ID of the tenant that is mounted on the server instance. The ID is used by clients to connect to the tenant. |
| Server Instance Name | The name of the Microsoft Dynamics NAV server instance on which the tenant is mounted. |
| Database Server | The name of the database server that hosts the tenant's business data database. |
| Database Name | The name of the business data database that the tenant uses. |
| Alternate Tenant IDs | The alternate IDs of the tenant. This can be a host name or a SharePoint Host URL. |
| Allow Application Database Writes | Indicates whether the tenant can write to the application database. |
| NAS Services Enables | Indicates whether NAV Application Server services are enabled for the tenant. |
| Default Company | The default company that is used by the tenant for clients, SOAP and OData web services, and NAS Services. |
| Default Time Zone | The default time zone in which Web Service, OData and NAS calls are run. Supported values are "UTC", "Server Time Zone", or the ID of a Windows time zone. |
| Tenant State | Indicates the state of the tenant that is mounted on the server instance or it failed to mount on server. The following states are available:

| **State** | **Description** |
| --- | --- |
| Mounted | Indicates that the tenant database is mounted on the Microsoft Dynamics NAV Server instance but is not yet operational. This can occur when Microsoft Dynamics NAV Server is started or when the Mount-NavTenant cmdlet is run from the Microsoft Dynamics NAV 2015 Administration Shell. You should consider the Mounted state as an intermediate state that only exists right after mount operation is executed. The purpose of this state is to indicate that the Microsoft Dynamics NAV Server knows about this database but has not yet brought the database into an operational state, which includes verifying whether table schemas are synchronized. |
| Operational | Indicates that the database is fully operational and the table schemas are up to date. This is the normal operating state of a database. |
| OperationalWithSyncPending | Indicates that the tenant database is operational but schema synchronization is pending on one or more tables. If a table that is pending schema synchronization is accessed by Microsoft Dynamics NAV Server (for example, when user tries to access the table from the Microsoft Dynamics NAV Windows client) an error will be displayed. The error informs the user that the metadata for the table has not been synchronized. |
| OperationalWithSyncInProgress | Indicates that table schemas in database are currently being synchronized.Users can continue to work with the application from the Microsoft Dynamics NAV clients. However, if they try to access a table whose schema has not been synchronized, an error will occur. While the synchronization process is running on a Microsoft Dynamics NAV Server instance, the following restrictions apply: * Other Microsoft Dynamics NAV Server instances will not be able to start the synchronization process on the same database.
* If a user changes a table definition in the development environment, he will not be able to save the changes until the synchronization process is finished.
 |
| OperationalWithSyncFailure | Indicates that the database is operational but the last attempt to synchronize the table schemas failed. If Microsoft Dynamics NAV Server tries to access a table that has not been synchronized, an error occurs. For example, this can occur when destructive changes have been made to a table and there is no upgrade codeunit available to handle the changes.  |

 |
| Detailed State | Provides a detailed information about the tenant state, such as errors that occurred.  |

For more information about table synchronization and tenant states, see [Synchronizing Table Schemas](http://go.microsoft.com/fwlink/?LinkID=512505).

### Monitoring Microsoft Dynamics NAV Web Server Instances

A Microsoft Dynamics NAV website can include one or more web server instances for the Microsoft Dynamics NAV Web client. The System Center Management Pack for Microsoft Dynamics NAV 2015 provides discovery and monitoring functionality for Microsoft Dynamics NAV Web Server instances for Microsoft Dynamics NAV Web client installations. The monitoring includes the following functionality:

* Health
* Alerts
* Web server instance properties
* Events

**Note:** Monitoring Microsoft Dynamics NAV Web Server Instances is only available with computers on which Microsoft Dynamics NAV 2015 is installed.

#### Microsoft Dynamics NAV Web Server Instance Health and Alerts

The following table describes the health states of Microsoft Dynamics NAV Web Server instances.

|  |  |
| --- | --- |
| State | Cause |
| Healthy | The Microsoft Dynamics NAV Server instance is operating properly. |
| Warning | The Microsoft NAV Web Server instance has generated multiple errors. The event rate exceeds the limit that is defined for the monitor. The default rate is 3 events within 300 seconds. This condition generates an alert.For more information, see [Configuring health states and alerts](#_Configuring_health_states).Note: This information is collected on the Web Server Role level, not the website level. |

##### To view Microsoft Dynamics NAV Web Server Instance health

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Web Server Instances**.

The Web Server Instance pane displays all of the discovered web server instances on which Microsoft Dynamics NAV Web Server components are installed.

1. To view the health model for a web server instance, choose the instance, and then in the **Task** pane, choose **Health Explorer**.

##### To view alerts

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Web Server Instances**.
2. Choose the web server instance, and then in the **Task** pane, choose **Alert View.**

##### Configuring health states and alerts

The monitors for Microsoft Dynamics NAV Web Server instance have several parameters that you can configure to define the conditions that change health state and trigger alerts.

* For more information about the configurable parameters, see the [Monitor Overrides](#_Monitor_Overrides).
* For more information about how to change the parameters, see [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065) or [How to Monitor Using Overrides](http://go.microsoft.com/fwlink/?LinkID=117777).

#### Viewing Web Server Instance Properties

You can view the configuration parameters for the web server instances on which Microsoft Dynamics NAV Web Server components are installed, such as server name, URL, authentication type, and more.

##### To view properties

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Web Server Instances**.
2. Right-click the web server instance, and then choose **Properties**.

For information about the available properties, see [Configuring Microsoft Dynamics NAV Web Client by Modifying the Web.Config File](http://go.microsoft.com/fwlink/?LinkID=274967).

#### Viewing Events

The events that are monitored for the Microsoft Dynamics NAV Web Server instances are collected from the Windows Application event log of the computer that hosts the web applications on which Microsoft Dynamics NAV Web Server components are installed. The monitor extracts only log events entries that are related to the Microsoft Dynamics NAV Web Server components which have a level of warning or error.

##### To view events

1. In the **Monitoring** pane, choose **Microsoft Dynamics NAV 2015**, and then choose **Web Server Instances**.
2. In the **Task** pane, choose **Event View.**

## Configuring the Microsoft Dynamics NAV 2015 Management Pack for System Center

This section provides guidance on configuring and tuning the monitoring pack.

 [Best Practice: Create a Management Pack for Customizations](#_Create_a_Management)

* [Best Practice: Setting the Discovery Interval](#_Setting_the_Discovery)

 [Security Configuration](#z3)

### Best Practices

#### Create a Management Pack for Customizations

By default, Operations Manager saves all customizations such as overrides to the Default Management Pack. As a best practice, you should create a separate management pack for each sealed management pack that you want to customize.

When you create a management pack for the purpose of storing customized settings for a sealed management pack, it is helpful to base the name of the new management pack on the name of the management pack that it is customizing, such as “Microsoft Dynamics NAV 2015 Customizations”.

Creating a new management pack for storing customizations of each sealed management pack makes it easier to export the customizations from a test environment to a production environment. It also makes it easier to delete a management pack, because you must delete any dependencies before you can delete a management pack. If customizations for all management packs are saved in the Default Management Pack and you need to delete a single management pack, you must first delete the Default Management Pack, which also deletes customizations to other management packs.

#### Setting the Discovery Interval

The management pack includes object discoveries that are run periodically to detect Microsoft Dynamics NAV components and services on computers. We recommend that discovery intervals should not run more frequently than every 4 hours (14,400 seconds). This is the default value for all discoveries.

### Security Configuration

#### Run As Profiles

When the management pack is imported, it creates the following Run As Profile.

|  |  |  |
| --- | --- | --- |
| Run As Profile Name | Associated rules and monitors | Notes |
| Microsoft Dynamics NAV 2015 Default Action Account | This profile is assigned to all rules and monitors by default. | Unless otherwise specified, all rules and monitors in the management pack run using the default action account that is defined in the Operation Manager. This is the user account under which all rules run by default on the agent.  |

For more information, see [How to Associate a Run As Account to a Run As Profile (System Center2012)](http://technet.microsoft.com/en-gb/library/hh212825.aspx).

#### Run As Accounts

Credentials are required to run rules, tasks, monitors, and discoveries on a computer. By default, the Microsoft Dynamics NAV 2015 Default Action Account profile runs under the default action account that is configured for the Operations Manager.

If you want to run the Microsoft Dynamics NAV 2015 operations using a different account, you can either create a new Run As account or use an existing account, and then associate the Run As account with the Run As Profile for the management pack.

The Run As Account must be a either a local administrator account on the computers that are running the Microsoft Dynamics NAV 2015 components or the Local System account. Other accounts will not work.

For more information, see [How to Create a Run As Account (System Center2012)](http://go.microsoft.com/fwlink/p/?LinkId=232988).

## Links to Information About System Center

The following links connect you to information about common tasks that are associated with System Center monitoring packs.

### System Center 2012 - Operations Manager

 [Management Pack Life Cycle](http://go.microsoft.com/fwlink/p/?LinkID=232986)

 [How to Import a Management Pack](http://go.microsoft.com/fwlink/p/?LinkID=219431)

 [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065)

 [How to Create a Run As Account](http://go.microsoft.com/fwlink/p/?LinkId=232988)

 [How to Export a Management Pack](http://go.microsoft.com/fwlink/p/?LinkId=232990)

 [How to Remove a Management Pack](http://go.microsoft.com/fwlink/p/?LinkId=232991)

For questions about Operations Manager and monitoring packs, see the [System Center Operations Manager community forum](http://go.microsoft.com/fwlink/?LinkID=179635).

Another useful resource is the [System Center Operations Manager Unleashed blog](http://go.microsoft.com/fwlink/?LinkId=246391), which contains “By Example” posts for specific monitoring packs.

For additional information about Operations Manager, see the [System Center 2012 - Operations Manager Survival Guide](http://go.microsoft.com/fwlink/?LinkId=246383).

Important

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## Appendix: Monitoring Pack Contents

### Object Discoveries

The Monitoring Pack for Microsoft Dynamics NAV 2015 discovers the object types described in the following sections.

#### Microsoft Dynamics NAV 2015 Server Role Discovery

Discovery Information

Discovers the seed for computers on which Microsoft Dynamics NAV Server is installed. The following table includes the discovery parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |
| Interval | 14400 seconds |  |

Related Monitors

There are no monitors associated with this discovery.

Related Rules

There are no rules associated with this discovery.

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and monitors that populate the view |
| Microsoft Dynamics NAV 2015 Computers | Displays all discovered computers on which Microsoft Dynamics NAV Server is installed. |  |

Related Reports

There are no reports associated with this discovery.

#### Microsoft Dynamics NAV 2015 Server Role Computer Group Discovery

Discovery Information

Discovers computers on which Microsoft Dynamics NAV Server is installed. The following table includes the parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |

Related Monitors

There are no monitors associated with this discovery.

Related Rules

There are no rules associated with this discovery

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and monitors that populate the view |
| Microsoft Dynamics NAV 2015 Computers | Displays all discovered computers on which Microsoft Dynamics NAV Server is installed. |  |

Related Reports

There are no reports associated with this discovery.

#### Microsoft Dynamics NAV 2015 Server Instance Discovery

Discovery Information

Discovers Microsoft Dynamics NAV Server instances on computers where Microsoft Dynamics NAV Server is installed. The following table includes the discovery parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |
| Interval in seconds | 14400 seconds |  |
| Time at which to do initial discovery |  |  |
| Timeout seconds | 300 |  |

Related Monitors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset behavior | Corresponding rule | Enabled |
| Microsoft Dynamics NAV 2015 Server Instance Event Monitor | Application event log of the computer that is running Microsoft Dynamics NAV Server Instances. |  | TrueAlert priority: MediumAlert severity:WarningFor information about override parameters, see [Microsoft Dynamics NAV 2015 Server Instance Event Monitor](#_Microsoft_Dynamics_NAV). | Automatic  | Microsoft Dynamics NAV 2015 Server Instance Event Collection Rule | True  |
| Server instance to SQL | Application event log of the computer that is running Microsoft Dynamics NAV Server. |  | TrueAlert priority: HighAlert severity: Error For information about override parameters, see [Microsoft Dynamics NAV 2015 Server Instance to SQL Monitor](#_Microsoft_Dynamics_NAV_1). | Automatic (reset by external event log entry)  |  | True  |
| Service Running State | Basic Service Monitor from Windows Server Management Pack |  | TrueAlert priority: LowAlert severity: Error | Automatic |  | True |
| Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time | Performance counter: 'Microsoft Dynamics NAV\Heartbeat time (ms) | 5 minutes | TrueAlert priority: HighAlert severity: Error For information about override parameters, see [Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time Monitor](#_Microsoft_Dynamics_NAV_2). | Automatic | Microsoft Dynamics NAV\Heartbeat time (ms) | True  |

Related Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule | Data source | Alert | Notes | Corresponding monitor | Enabled |
| Microsoft Dynamics NAV\Heartbeat time (ms) | Performance counter: 'Microsoft Dynamics NAV\Heartbeat time (ms) | False | The time that it takes to complete a single write operation to a system table. Every 30 seconds, the Microsoft Dynamics NAV Server instance writes a record to indicate that the instance is active. | Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time | True |
| Microsoft Dynamics NAV 2015 Server Instance Event Collection Rule | Events: Windows Application event log | False | Collects event log entries that meet the following requirements:* The source is a Microsoft Dynamics NAV Server instance name.
* The server instance name is included the message.
 | Microsoft Dynamics NAV 2015 Server Instance Event Monitor | True |
| Thread Count | Performance counter  | False | Number of threads in the monitored service.Management Pack: Windows Service Library |  | True |
| Collect Process\Private Bytes | Performance counter  | False | This rule collects memory usage for the Windows service. Management Pack: Windows Service Library  |  | True |
| Working Set | Performance counter  | False | Working set of the monitored service. Management Pack: Windows Service Library |  | True |
| Collect Process\% Processor Time | Performance counter  | False | This rule collects processor utilization for the Windows service. Management Pack: Windows Service Library |  | True |
| Handle Count | Performance counter  | False | Number of handles in the monitored service.Management Pack: Windows Service Library |  | True |
| Collect Event Log Events | Performance counter | False | Rule that collects service control events about the monitored service.Management Pack: Windows Service Library |  | True |

Note

Disable the rule and enable its corresponding monitor to enable alerts, state changes, and health rollup.

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and monitors that populate the view |
| Microsoft Dynamics NAV 2015 Service Instances | Displays all Microsoft Dynamics NAV Server instances on discovered computers. | Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time |

#### Microsoft Dynamics NAV 2015 Server Instance Tenants Discovery

Discovery Information

Discovers tenants that are mounted on Microsoft Dynamics NAV Server instances. The following table includes the discovery parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |
| Interval in seconds | 14400 seconds |  |
| Time at which to do initial discovery |  |  |
| Timeout seconds | 300 |  |

Related Monitors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset behavior | Corresponding rule | Enabled |
| Microsoft Dynamics NAV 2015 Server Instance Tenant Event Monitor | Application event log of the computer that is running Microsoft Dynamics NAV Server Instances. |  | TrueAlert priority: MediumAlert severity:WarningFor information about override parameters, see [Microsoft Dynamics NAV 2015 Server Instance Tenant Event Monitor](#_Microsoft_Dynamics_NAV_3). | Automatic  | Microsoft Dynamics NAV 2015 Server Instance Tenant Event Collection Rule | True  |
| Tenant to SQL | Application event log of the computer that is running Microsoft Dynamics NAV Server Instances. |  | TrueAlert priority: HighAlert severity: Critical For information about override parameters, see [Microsoft Dynamics NAV 2015 Server Instance to SQL Monitor](#_Microsoft_Dynamics_NAV_1). | Automatic |  | True |

Related Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule | Data source | Alert | Notes | Corresponding monitor | Enabled |
| Microsoft Dynamics NAV 2015 Server Instance Tenant Event Collection Rule | Events: Windows Application event log | False | Collects event log entries that meet the following requirements:* The source is a Microsoft Dynamics Server instance name
* The message contains the server instance name and tenant name.
 | Microsoft Dynamics NAV 2015 Server Instance Tenant Event Monitor | True |

#### Microsoft Dynamics NAV 2015 Web Server Role Discovery

Discovery Information

Discovers the computers on which Microsoft Dynamics NAV Web Server components are installed. The following table includes the discovery parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |
| Interval | 14400 seconds |  |

Related Monitors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset behavior | Corresponding rule | Enabled |
| Microsoft Dynamics NAV 2015 Web Server Role Event Monitor | Windows Application event log of the computer on which Microsoft Dynamics NAV Web Server components are installed.  |  | TrueAlert priority: MediumAlert severity:WarningFor information about override parameters, see [Microsoft Dynamics NAV 2015 Web Server Role Event Monitor](#_Microsoft_Dynamics_NAV_3). | Automatic  | Microsoft Dynamics NAV 2015 Server Instance Event Collection Rule | True  |

Related Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule | Data source | Alert | Notes | Corresponding monitor | Enabled |
| Microsoft Dynamics NAV 2015 Web Server Role Event Collection Rule | Events: Windows Application event log | False | Collects event log entries that have the source MicrosoftDynamicsNAVClientWebClient and the level of Warning or Error. | Microsoft Dynamics NAV 2015 Server Instance Event Monitor | True |

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and monitors that populate the view |
| Microsoft Dynamics NAV 2015 Computers | Displays all discovered computers on which Microsoft Dynamics NAV Web Server components are installed. |  |

Related Reports

There are no reports associated with this discovery.

#### Microsoft Dynamics NAV 2015 Web Server Instance Discovery

Discovery Information

Discovers the web server instances on computers that are running Microsoft Dynamics NAV Web Server components. The following table includes the discovery parameters that you can override.

|  |  |  |
| --- | --- | --- |
| Parameter  | Default | Notes |
| Enabled | True |  |
| Interval | 14400 seconds |  |

Related Monitors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset behavior | Corresponding rule | Enabled |
| Microsoft Dynamics NAV 2015 Web Server Instance Event Monitor | Windows Application event log of the computer on which Microsoft Dynamics NAV Web Server components are installed.  |  | TrueAlert priority: MediumAlert severity:WarningFor information about override parameters, see [Microsoft Dynamics NAV 2015 Web Server Role Event Monitor](#_Microsoft_Dynamics_NAV_3). | Automatic  | Microsoft Dynamics NAV 2015 Web Server Instance Event Collection Rule | True  |

Related Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule | Data source | Alert | Notes | Corresponding monitor | Enabled |
| Microsoft Dynamics NAV 2015 Web Server Role Event Collection Rule | Events: Windows Application event log | False | Collects event log entries that have the source MicrosoftDynamicsNAVClientWebClient and the level of Warning or Error. | Microsoft Dynamics NAV 2015 Server Instance Event Monitor | True |

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and monitors that populate the view |
| Microsoft Dynamics NAV 2015 Web Server Instances | Displays all discovered web server instances on which Microsoft Dynamics NAV Web Server components are installed. |  |

Related Reports

There are no reports associated with this discovery.

### Monitor Overrides

This section describes the override parameters of the monitors that are available in the System Center Management Pack for Microsoft Dynamics NAV 2015. You can change the values of the override parameters to tune the monitoring of the Microsoft Dynamics NAV 2015 environment.

#### Microsoft Dynamics NAV 2015 Server Instance Event Monitor

Monitors the errors that are generated by a Microsoft Dynamics NAV 2015 Server instance.

The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Warning (yellow) by default.

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies where the health state is critical or warning when the alert is activated. | Critical |
| Alert Priority | Specifies the priority of the generated alert. | Medium |
| Alert Severity | Specifies the severity of the generated alert. | Warning |
| Auto Reset Interval | Specifies the amount of time (in seconds) after which to reset the alert. | 300 |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert which is defined by the *Repeat N times and in X seconds. X=* and *Repeat N times. N=* parameters. | True |
| Repeat N times in X seconds. X= | Used together with the *Repeat N times. N=* parameter to set the event rate limit. The limit is defined as the number of events (X) over a specified number of seconds (X).The *Repeat N times in X seconds. X=* parameter specifies the time in seconds for the time period. | 300 |
| Repeat N times. N= | Specifies the maximum number of events that can be recorded over the time period that is defined by the *Repeat N times in X seconds. X=* parameter*.* If the measured number exceeds this value, then the health changes to Warning (yellow), and an alert is generated. | 3 |

#### Microsoft Dynamics NAV 2015 Server Instance to SQL Monitor

Monitors the connection from the Microsoft Dynamics NAV Server Instance to the SQL server database. When the monitor detects a lost connection message from the Microsoft Dynamics NAV Server Instance, the health turns to Critical (red) and an alert is generated. The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Critical (red).

**Note:** The monitor only monitors errors that occur on the Microsoft Dynamics NAV Server instance. Errors that are related to a tenant are not considered.

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies if the health state is critical or provides a warning when the alert is activated. | The monitor is in a critical state. |
| Alert Priority | Specifies the priority of the generated alert. | High |
| Alert Severity | Specifies the severity of the generated alert. | Critical |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert when the connection to SQL server is lost. | True |

#### Microsoft Dynamics NAV 2015 Server Instance Heartbeat Time Monitor

Monitors the amount of time that it takes to complete a single write operation to the system table of the Microsoft Dynamics NAV 2015 solution. The monitor uses data from the Microsoft Dynamics NAV\Heartbeat time (ms) performance counter to set a threshold comparison on the performance counter for changing the health to Critical and generating an alert. The following table includes the configurable parameters of the monitor that trigger change the health state to Critical (red) and generates an alert.

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies if the health state is critical or provides a warning when the alert is activated. | The monitor is in a critical state. |
| Alert Priority | Specifies the priority of the generated alert. | High |
| Alert Severity | Specifies the severity of the generated alert. | Critical |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Frequency | Specifies the time interval (in seconds) to be used to update the state.  | 300 |
| Generates Alert | Specifies whether the monitor generates an alert that is defined by the *Repeat N times and in X seconds. X=* and *Repeat N times. N=* parameters. | True |
| Number of Samples | Used together with the *Threshold* parameter to determine the health and alert state. Specifies the number of consecutive samples over which to compare the measured heartbeat with the threshold. | 2 |
| Threshold | Specifies the threshold time (in milliseconds) to compare with the measured heartbeat time. If the measured heartbeat time for the specified number of samples exceeds the threshold value, then health changes to Critical (red), and an alert is generated. | 100 |

#### Microsoft Dynamics NAV 2015 Server Instance Tenant Event Monitor

Monitors the errors that are generated by tenants that are mounted on Microsoft Dynamics NAV Server instances.

The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Warning (yellow) by default.

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies where the health state is critical or warning when the alert is activated. | Warning |
| Alert Priority | Specifies the priority of the generated alert. | Medium |
| Alert Severity | Specifies the severity of the generated alert. | Warning |
| Auto Reset Interval | Specifies the amount of time (in seconds) after which to reset the alert. | 300 |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert which is defined by the *Repeat N times and in X seconds. X=* and *Repeat N times. N=* parameters. | True |
| Repeat N times in X seconds. X= | Used together with the *Repeat N times. N=* parameter to set the event rate limit. The limit is defined as the number of events (X) over a specified number of seconds (X).The *Repeat N times in X seconds. X=* parameter specifies the time in seconds for the time period. | 300 |
| Repeat N times. N= | Specifies the maximum number of events that can be recorded over the time period that is defined by the *Repeat N times in X seconds. X=* parameter*.* If the measured number exceeds this value, then the health changes to Warning (yellow), and an alert is generated. | 3 |

#### Microsoft Dynamics NAV 2015 Server Tenants to SQL Monitor

Monitors the connection from the Microsoft Dynamics NAV Server Instance to the tenant database in SQL server. When the monitor detects a lost or failed connection message from the Microsoft Dynamics NAV Server Instance, the health turns to Critical (red) and an alert is generated. The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Critical (red).

**Note:** The monitor only monitors errors that occur on the Microsoft Dynamics NAV Server instance connection to a specific tenant database.

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies if the health state is critical or provides a warning when the alert is activated. | The monitor is in a critical state. |
| Alert Priority | Specifies the priority of the generated alert. | High |
| Alert Severity | Specifies the severity of the generated alert. | Critical |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert when the connection to SQL server is lost. | True |

#### Microsoft Dynamics NAV 2015 Web Server Role Event Monitor

Monitors the errors that are generated by Microsoft Dynamics NAV Web Server components on IIS websites. The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Warning (yellow).

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies if the health state is critical or provides a warning when the alert is activated. | The monitor is in a critical state. |
| Alert Priority | Specifies the priority of the generated alert. | Medium |
| Alert Severity | Specifies the severity of the generated alert. | Warning |
| Auto Reset Interval | Specifies the amount of time (in seconds) after which to reset the alert. | 300 |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert that is defined by the *Repeat N times and in X seconds. X=* and *Repeat N times. N=* parameters. | True |
| Repeat N times in X seconds. X= | Used together with the *Repeat N times. N=* parameter to set the event rate limit. The limit is defined as the number of events (X) over specified number of seconds (X).The *Repeat N times in X seconds. X=* parameter specifies the time in seconds for the time period. | 300 |
| Repeat N times. N= | Specifies the maximum number of events that can be recorded over the time period that is defined by the *Repeat N times in X seconds. X=* parameter. If the measured number exceeds this value, then the health changes to Warning (yellow), and an alert is generated. | 3 |

#### Microsoft Dynamics NAV 2015 Web Server Instance Event Monitor

Monitors the errors that are generated by Microsoft Dynamics NAV Web Server components that are running on web server instances on IIS websites. The following table includes the configurable parameters of the monitor that trigger alerts and change the health state to Warning (yellow).

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Default value |
| Alert On State | Specifies if the health state is critical or provides a warning when the alert is activated. | The monitor is in a critical state. |
| Alert Priority | Specifies the priority of the generated alert. | Medium |
| Alert Severity | Specifies the severity of the generated alert. | Warning |
| Auto Reset Interval | Specifies the amount of time (in seconds) after which to reset the alert. | 300 |
| Auto-Resolve Alert | Specifies whether the alert is resolved automatically. | True |
| Enabled | Specifies whether the monitor is enabled. | True |
| Generates Alert | Specifies whether the monitor generates an alert that is defined by the *Repeat N times and in X seconds. X=* and *Repeat N times. N=* parameters. | True |
| Repeat N times in X seconds. X= | Used together with the *Repeat N times. N=* parameter to set the event rate limit. The limit is defined as the number of events (X) over specified number of seconds (X).The *Repeat N times in X seconds. X=* parameter specifies the time in seconds for the time period. | 300 |
| Repeat N times. N= | Specifies the maximum number of events that can be recorded over the time period that is defined by the *Repeat N times in X seconds. X=* parameter. If the measured number exceeds this value, then the health changes to Warning (yellow), and an alert is generated. | 3 |