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Microsoft .NET Framework Plug-in User's Guide
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Contents

Preface	v
Audience	v
Documentation Accessibility	v
Conventions	v
What's Changed	v
1 Microsoft .NET Framework Plug-in Overview and Prerequisites	
1.1 Microsoft .NET Framework Plug-in Overview	1-1
1.2 Supported Versions	1-2
1.3 Prerequisites.....	1-2
1.4 Downloading the Plug-in	1-2
1.5 Deploying the Plug-in	1-3
1.6 Upgrading the Plug-in	1-3
1.7 Undeploying the Plug-in	1-3
2 Discover Microsoft .NET Framework Targets in Cloud Control	
2.1 Discovering Microsoft .NET Framework Targets	2-1
2.2 Verifying and Validating the Plug-in.....	2-2
2.3 Configuring a Remote Agent	2-2
Index	

Preface

This document provides a brief description about the Oracle System Monitoring plug-in for Microsoft .NET Framework, details on the versions the plug-in supports, prerequisites for installing the plug-in, and step-by-step instructions on how to download, install, verify, and validate the plug-in.

Audience

This document is intended systems and database administrators tasked with monitoring Microsoft .NET Framework through Enterprise Manager Cloud Control.

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

What's Changed

This table provides a brief overview of the document changes for the latest publication of the *Oracle Enterprise Manager Microsoft .NET Framework Plug-in User's Guide*:

Part Number	Change Summary
E66402-01	Updated for Enterprise Manager Cloud Control 13c.

Microsoft .NET Framework Plug-in Overview and Prerequisites

This chapter provides an overview description of the Oracle system monitoring plug-in for Microsoft .NET Framework and summarizes the prerequisites required before configuration.

Microsoft .NET Framework is a component of the Microsoft Windows operating system used to build and run Windows-based applications. The following topics are presented:

- [Microsoft .NET Framework Plug-in Overview](#)
- [Supported Versions](#)
- [Prerequisites](#)
- [Downloading the Plug-in](#)
- [Deploying the Plug-in](#)
- [Upgrading the Plug-in](#)
- [Undeploying the Plug-in](#)

1.1 Microsoft .NET Framework Plug-in Overview

The System Monitoring plug-in for Microsoft .NET Framework extends Oracle Enterprise Manager Cloud Control to add support for managing the Microsoft .NET Framework. By deploying the plug-in within your Cloud Control environment, you gain the following management features for Microsoft .NET Framework:

- Monitor availability and receive Microsoft .NET Framework Server data for the following performance areas:
 - .NET CLR Memory
 - .NET CLR Networking
 - .NET CLR Locks and Threads
 - .NET CLR Exceptions
- Perform trend analysis on collected performance information.
- Receive e-mail and/or page notification concerning potential problems surrounding availability, performance, and/or configuration data.
- Gain access to rich out-of-box reports.

- Support monitoring by a remote Agent. For remote monitoring, the Agent does not need to be on the same computer as the .NET Framework.

1.2 Supported Versions

This plug-in supports the following versions of products:

- Enterprise Manager Cloud Control 13c Release 1 or higher
- Oracle Management Agent 13c Release 1 or higher for Microsoft Windows
- Microsoft .NET Framework 1.1.x, 2.0.x, 3.0.x, 3.5.x, and 4.0 running on supported Microsoft Windows Server (see note below):

Note: For details on which editions (such as Enterprise, Standard, and so forth) and versions of Windows operating systems that this Microsoft product is supported to run on, refer to the Microsoft website and/or documentation.

1.3 Prerequisites

The following prerequisites must be met before you can deploy the plug-in:

- Microsoft .NET Framework 1.1.x, 2.0.x, 3.0.x, 3.5.x, or 4.0 is installed.
- The following components of Oracle Enterprise Manager Cloud Control 13c Release 1 or higher are installed:
 - Oracle Management Service with Oracle Management Repository
 - Oracle Management Agent for Windows

You can install the Agent on the same computer as .NET Framework (referred to as local Agent monitoring), or you can install the Agent on a different computer from .NET Framework (referred to as remote Agent monitoring).

- Ensure that the Windows Management Instrumentation Service is up and running.
- For remote Agent monitoring, a remote Agent must be properly configured. See [Configuring a Remote Agent](#) for the procedure.
- User privileges for the Job system of Enterprise Manager. For the procedure, refer to "Setting Credentials for the Job System to Work with Enterprise Manager" in *Database Installation Guide for Microsoft Windows*:

http://docs.oracle.com/cd/E11882_01/install.112/e24186/postcfg.htm#BABFAEIG

This guide is listed in the Installing and Upgrading section of the Oracle Database Documentation Library at:

<http://www.oracle.com/pls/db112/homepage>

Note: If you do not assign the correct privileges for users, the deployment will fail.

1.4 Downloading the Plug-in

You can download plug-ins in online or offline mode. *Online mode* refers to an environment where you have Internet connectivity, and can download the plug-in

directly through Enterprise Manager from My Oracle Support. *Offline mode* refers to an environment where you do not have Internet connectivity, or where the plug-in is not available from My Oracle Support.

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for details on downloading the plug-in in either mode:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mgr.htm#CJGBEAHJ

1.5 Deploying the Plug-in

You can deploy the plug-in to an Oracle Management Service instance using the Enterprise Manager Cloud Control console, or using the EM Command Line Interface (EMCLI). While the console enables you to deploy one plug-in at a time, the command line interface mode enables you to deploy multiple plug-ins at a time, thus saving plug-in deployment time and downtime, if applicable.

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for instructions on deploying the plug-in:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mgr.htm#CJGCDHFG

1.6 Upgrading the Plug-in

The Self Update feature allows you to expand Enterprise Manager's capabilities by updating Enterprise Manager components whenever new or updated features become available. Updated plug-ins are made available via the Enterprise Manager Store, an external site that is periodically checked by Enterprise Manager Cloud Control to obtain information about updates ready for download. See the *Updating Cloud Control* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to update the plug-in:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/self_update.htm

1.7 Undeploying the Plug-in

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to undeploy the plug-in:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mgr.htm#CJGEFADI

Discover Microsoft .NET Framework Targets in Cloud Control

This chapter describes how to discover your Microsoft .NET Framework target with Enterprise Manager Cloud Control.

The following topics are provided:

- [Discovering Microsoft .NET Framework Targets](#)
- [Verifying and Validating the Plug-in](#)
- [Configuring a Remote Agent](#)

2.1 Discovering Microsoft .NET Framework Targets

After successfully deploying the plug-in, follow these steps to add the plug-in target to Cloud Control for central monitoring and management:

1. Log in to Enterprise Manager Cloud Control.
2. Click **Setup**, then **Add Targets**, and finally **Add Targets Manually**.
3. Select **Add Non-Host Targets by Specifying Target Monitoring Properties**. From the Target Type drop-down, select the **Microsoft .NET Framework** target type. Click **Add Manually**.
4. Provide the following information for the properties:
 - **Name:** Unique target name across all the Cloud Control targets, such as .net_Hostname. The name represents this .NET target across all user interfaces within Cloud Control.
 - **Host:** Full name (inclusive of domain, such as machineA.com) or the IP address of the host
 - **Username:** Host user name (must be an Admin account). Required only for remote Agent monitoring.
 - **Password:** Password for the user name. Required only for remote Agent Monitoring.
 - **Agent Location:** "Remote" specifies that the Agent monitoring .NET Framework targets *is not* on the same computer as the target being monitored. (See [Configuring a Remote Agent](#) for more information.) "Local" specifies that the Agent monitoring the target *is* on the same computer as the target being monitored.

Notes:

- The agent chosen must also be an agent running on a Windows host.
 - The "remote" and "local" identifiers are case-sensitive and should be lowercase.
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5. Click **Test Connection** to make sure the parameters you entered (such as the password) are correct. If the test was successful, proceed with adding targets.

Note: After you deploy and configure the plug-in to monitor one or more targets in the environment, you can customize the monitoring settings of the plug-in. This alters the collection intervals and threshold settings of the metrics to meet the particular needs of your environment. If you decide to disable one or more metric collections, this could impact the reports that the metric is a part of.

2.2 Verifying and Validating the Plug-in

After waiting a few minutes for the plug-in to start collecting data, use the following steps to verify and validate that Enterprise Manager is properly monitoring the plug-in target:

1. Click **Targets**, then **All Targets**. On the All Targets page, click the **Microsoft .NET Framework** target link from the Monitored Targets table. The Microsoft .NET Framework home page appears.
2. Verify that no metric collection errors are reported in the Metrics table.
3. Ensure that reports can be seen and no errors are reported by selecting the **Reports** property page.

2.3 Configuring a Remote Agent

The steps for deploying the plug-in are the same for remote Agent monitoring and local Agent monitoring. However, if the Agent is on a remote computer from the plug-in target, certain configuration changes are required to access the Windows Management Instrumentation (WMI) data on the computer where the plug-in target resides.

In a scenario where computer A runs the Agent, and the target is installed on computer B, do the following to set up computer A:

1. Go to the Windows Control Panel and select Administrative Tools, then Services.
2. Select the Oracle Enterprise Manager Agent service from the listed computer where the Agent is running.
3. Right-click the service, then select **Properties**.
4. Click the **Log On** tab. By default, this service is started with the Local System account.
5. Change the default account by selecting the **This account** radio button, and provide an account and password that exist on both computer A and computer B.

Note that the account should be a member of the Administrators group, and the account should have administrative privileges on computer B. The password should not be left blank.

6. Click **OK**, then restart the Agent service.
7. Ensure that the Windows Management Instrumentation Service is up and running on both computers.

The Agent should now be able to collect data from the remote plug-in target computer. If the configuration above is not initiated, metric collection errors can appear for the plug-in target's metrics.

To ensure that metric collection errors do not occur within Enterprise Manager, Oracle recommends reviewing the Microsoft documentation on the WMI setup. Refer to the Microsoft documentation from the Microsoft website for additional configuration details.

Note: For a remote Agent, the platform to which the Agent is installed can be any Windows type that may not be supported for .NET Framework. For example, if .NET Framework is running on Windows 2003, you can install the remote Agent on Windows XP to monitor it.

Index

C

configure remote agent
 remote agent
 configure, 2-2

D

deploy plug-in, 1-3
discovery, 2-1
document change summary, v
download plug-in, 1-2

O

overview, 1-1

P

plug-in
 deploy, 1-3
 download, 1-2
 overview, 1-1
 prerequisites, 1-2
 properties, 2-1
 supported versions, 1-2
 undeploy, 1-3
 upgrade, 1-3
 verify and validate, 2-2
prerequisites, 1-2
properties, 2-1

R

remove, 1-3

S

supported versions, 1-2

T

target discovery, 2-1

U

undeploy plug-in, 1-3

upgrade plug-in, 1-3

V

verify and validate plug-in, 2-2

W

what's changed, v

