Precise CLI Utility

Reference Guide

Version 10.1

IDERA

Precise CLI Utility Reference Guide

Global Headquarters
Brookhollow Central III
2950 North Loop Freeway West, Suite 700
Houston, Texas 77092
Phone: +1-877-693-1886
Fax: +1-650-898-1666

Third-party legal notices

Third-party software may be recommended, distributed, embedded, or bundled with this Precise product. Such third-party software is licensed separately by its copyright holder. All third-party copyrights associated with this product are listed in the accompanying release notes.

Customer Support

For technical assistance, visit our customer portal at http://www.idera.com/support/productsupport where you can find an extensive knowledge base, product updates and our online community forums. You can also contact our Customer Support Team using our customer portal, or go to http://www.idera.com/support/productsupport for a list of our support access numbers in your country.

Contents

Precise CLI Utility Overview

This section includes the following topics:

-
-
-
-
-
-

Usage of CLI Utility

CLI is a command line utility that allows you to perform operations on the Precise product. Using CLI you can create scripts to automate Precise related operations.

Input to CLI Utility

CLI receives its input from command line arguments and/or from parameters files. CLI input can be provided as arguments, for example, to provide server name:

    ./infra/bin/psin_cli.sh -server <my_server>

In some cases CLI input can be provided as parameters. In such cases, you can provide the parameters in CLI argument or as parameters file. For example, to provide server name parameter, you can use any one of the following:

    ./infra/bin/psin_cli.sh -parameter server=my_server

or

    ./infra/bin/psin_cli.sh -parametersfile input.xml

Where input.xml contains:

```
<parameters>
<parameter name="server" value="my_server"/>
</parameters>
```

NOTE   For all sections (unless otherwise stated), the maximum length of a parameter string is 256 characters and only integer values can be used for numeric parameters.

Where to run CLI Utility

CLI should be executed on the main Precise FocalPoint (unless otherwise stated). Always run CLI from Precise root (Precise installation folder on the server).

Authenticate to CLI Utility

Most CLI actions require authentication.

To authenticate using CLI you can use the clear text password:

Windows	infra\bin\psin_cli.bat -i3-user *admin* -i3-clear-password *admin* ...
UNIX	./infra/bin/psin_cli.sh -i3-user *admin* -i3-clear-password *admin* ...

or use encrypted password:

Windows	/infra\bin\psin_cli.bat -i3-user *admin* -i3-encrypted-password _EncryptI3_A_1_81AD2B0309 ...
UNIX	./infra/bin/psin_cli.sh -i3-user *admin* -i3-encrypted-password _EncryptI3_A_1_81AD2B0309 ...

Table 1-1 Authenticate to CLI

Element	Descriptions
i3-user	The Precise user name used for authentication Mandatory: Yes
i3-encrypted-password	Values: The encrypted password used for authentication of the user specified in -i3-user argument. For more information, see Encrypt command on page 146. Mandatory: Yes Alternatively the i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.

Error reporting

All Precise CLI utility commands return the following return codes:

- 0 The requested operation finished successfully.
- 1 The requested operation encountered errors.

In addition, the CLI prints an error report to `STDOUT/STDERR`.

- Informative errors are printed with prefix: "Informative message"
- Errors related to the CLI operation are printed to log `~i3/logs/infra.cli.log`

Installation packages

When running CLI on the server with the main Precise FocalPoint, you should verify that the Precise download is accessible on the server.

CLI automatically copies required installation files from the Precise download using the installation-cd-path parameter specified as part of the installation parameters.

If you are running CLI from a server which is not the main Precise FocalPoint server, verify that one of the options below are correct:

- Precise download is accessible to the Precise FocalPoint process on the Precise FocalPoint server (notice that in Windows, Precise FocalPoint service cannot access network share).
- You have copied all files from the `Precise x.x.x download/I3/distribution` folder to the installed main Precise FocalPoint under folder `<precise_root>\products\i3fp\distribution_source\installer`.

If you want to prevent CLI from copying files, you can copy the files yourself to the server and extract them. Note that this is not the recommended method of work.

For a list of required installation packages per each component, see About the installation files on page 160.

2

Installation with Precise CLI

This section includes the following topics:

- Installing the Precise Framework
- Installing Precise FocalPoints
- Installing Servers
- Installing secured servers with the Precise CLI utility
- Updating services Authentication using the Precise CLI Utility
- Installing a Tier with the Precise CLI utility
- Extricate command
- Edit & uninstall
- Installing a new instance while keeping historical data from an old instance

Installing the Precise Framework

The Precise Framework can be installed directly from the Precise download onto the Precise FocalPoint server. You can use the Precise CLI utility to install the following Framework components:

- Precise FocalPoint
- PMDB FocalPoint
- Alerts FocalPoint
- Report Manager FocalPoint
- Insight FocalPoint
- TPM FocalPoint

For information on manually installing the PMDB schemas, see the *Precise Installation Guide*.

How to install the Precise Framework

Install the Precise Framework by performing the following steps:

1. Prepare XML parameters file to specify the Framework installation parameters and log in to the server on which you have planned to install the Precise FocalPoint.
2. On this server, run the following command from the `<precise_root>` folder to install the CLI utility installation script:

   | **Windows** | <installation_DVD>\CLI\psin_framework_install.bat <full_path_to_XML_parameters_file> |
   | **UNIX** | <installation_DVD>/CLI/psin_framework_install.sh <full_path_to_XML_parameters_file> |

   After running the script, you may be required to perform manual post-installation tasks to complete the installation.

3. If an error occurs, fix the problem and rerun the installation scripts. (In the case of an error, there is no need to delete the installation files.) If a critical error occurs before the Precise FocalPoint is installed, an error message is displayed. At the end of CLI utility installation, a message appears "Installation complete - check logs for details". The relevant logs for installation are as follows:

   o *<precise_root>*/logs/psin_framework_install.out

   o *<precise_root>*/logs/infra.CLI.log

   If installation is successful, a message appears "Framework install setup process done".

   NOTE   For Windows Server which has the User Account Control enabled, you must run this command using Administrator permissions: Click Start Menu, right-click Command Prompt, click "Run as administrator", click Continue button, to approve the operation. Run the command specified above.

About the Precise Framework parameter file

You need to prepare the Framework parameter file by creating an XML file with tags that represent the installation parameters and inserting the appropriate values.

The following is an example of a server parameters file:

```
<parameters>
     <parameter name="setup-process" value="framework"/>
     <parameter name="setup-mode" value="install"/>
     <parameter name="installation-cd-path" value="d:\"/>
     <parameter name="i3fp-server-machine-name" value="server1"/>
     <parameter name="dbms-type" value="mssql"/>
     <parameter name="dbms-instance" value="DATABASE1"/>
     <parameter name="dbms-database" value="PWV8"/>
     <parameter name="dbms-dba-user" value="pwv8"/>
     <parameter name="dbms-dba-clear-password" value="mypass"/>
     <parameter name="gui-port" value="20820"/>
     <parameter name="gui-shutdown-port" value="20821"/>
     <parameter name="server-machine-installation-folder-server1" value="d:\precise"/>
     <parameter name="server-machine-port-server1" value="20802"/>
</parameters>
```

The parameters file is an XML file containing a list of parameters for a Precise framework installation.

Table 2-1   Elements of the Precise framework parameter file

Element	Description
server-machine-installation-folder-server-name	Indicates the folder in which Precise installation files are stored. Values: String Mandatory for Precise FocalPoint Server: Yes Mandatory for other servers: Yes, unless you prefer to perform a manual installation.
server-machine-port-*server-name*	Port of the Precise Listener on the local server. Values: Numeric 1025–65535 Mandatory: Yes
setup-process	Marked always as framework. Mandatory: Yes
setup-mode	Must be in one of the following modes: ■ install (used to install Precise Framework) ■ edit (used to update Precise Framework) ■ uninstall (used to uninstall Precise Framework) Mandatory: Yes
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes

Element	Description
i3fp-server-machine-name	Name of the Precise FocalPoint server. The name must be written in lowercase letters only. Can be a fully qualified name or IP address. Values: String Mandatory: Yes
gui-port	Port of the Graphics User Interface (GUI) server. Values: Numeric 1025–65535 (must not be identical to other ports specified) Mandatory: Yes
gui-shutdown-port	Local port for controlling the GUI. Values: Numeric 1025 -65535 (must not be identical to other ports specified) Mandatory: Yes
server-machine-service-unique-id-server-name	A unique name used in the installation of all Precise agents. This is used if you want to support more than one Precise installation system on the server (for example, in cluster applications). Relevant only for Windows servers. Values: Alphanumeric Mandatory: No
pw-server-machine-name	Name of the PMDB FocalPoint server. The name must be written in lowercase letters only. Values: String Mandatory: No, defaults to the Precise FocalPoint.
alerts-server-machine-name	Name of the Alerts FocalPoint server. The name must be written in lowercase letters only. Values: String Mandatory: No, defaults to the Precise PMDB FocalPoint.
foresight-server-machine-name	Name of the Report Manager FocalPoint server. The name must be written in lowercase letters only. Values: String Mandatory: No, defaults to the Precise PMDB FocalPoint.
insight-server-machine-name	Name of the Insight FocalPoint server. The name must be written in lowercase letters only. Values: String Mandatory: No, defaults to the Precise PMDB FocalPoint.

NOTE   The Framework CLI supports installing the framework FocalPoint on different servers. If the servers are UNIX servers, the framework's servers will be automatically installed by the framework CLI (you need to supply user and password parameters for each UNIX server). If the servers are Windows servers and different servers are required for the framework FocalPoints, perform the steps described in the following procedure.

To install the framework FocalPoint on different Windows servers

1. Only install the Precise FocalPoint using the framework CLI command.
2. Install the other FocalPoints with the Add Server CLI command. See Installing Servers on page 24.
3. Install all required framework FocalPoints with the framework CLI command.

Installing the PMDB FocalPoint using an Oracle database

Additional parameters are needed for installing the PMDB FocalPoint on an Oracle database.

The following table lists the additional parameters needed for a PMDB installation using an Oracle database.

Table 2-2   Additional parameter file elements for the PMDB on an Oracle database

Element	Description
dbms-type	Marked always as oracle. Values: String Mandatory: Yes
dbms-server	Name of the Oracle database server. Values: String Mandatory: Yes
dbms-instance	Oracle instance name (SID). Values: String Mandatory: Yes
dbms-port	Oracle instance Listener port. Values: Integer Mandatory: Yes
dbms-dba-user	User name for the Oracle user with DBA privileges. Will only be used during installation. Values: String Mandatory: Yes, if manual-schema is set to false.
dbms-tablespace-large-name	Name of the large tablespace that will be used by PMDB. Values: String Mandatory: No Default value: PRECISE_PW_TAB_LARGE
dbms-tablespace-medium-name	Name of the medium tablespace that will be used by PMDB. Values: String Mandatory: No Default value: PRECISE_PW_TAB_MEDIUM
dbms-tablespace-small-name	Name of the small tablespace that will be used by PMDB. Values: String Mandatory: No Default value: PRECISE_PW_TAB_SMALL
dbms-tablespace-infral-name	Name of the infra tablespace that will be used by PMDB. Values: String Mandatory: No Default value: PRECISE_PW_TAB_INFRA
dbms-tablespace-sts-name	Name of the sts tablespace that will be used by PMDB. Values: String Mandatory: No Default value: PRECISE_PW_TAB_STS

Element	Description
dbms-tablespace-large-initial-size	Initial size for the large tablespace. Values: Integer Mandatory: No Default value: 64
dbms-tablespace-medium-initial-size	Initial size for the medium tablespace. Values: Integer Mandatory: No Default value: 64
dbms-tablespace-small-initial-size	Initial size for the small tablespace. Values: Integer Mandatory: No Default value: 64
dbms-tablespace-infra-initial-size	Initial size for the infra tablespace. Values: Integer Mandatory: No Default value: 64
dbms-tablespace-sts-initial-size	Initial size for the STS tablespace. Values: Integer Mandatory: No Default value 32
dbms-tablespace-large-uniform-size	Uniform size for the large tablespace. Values: Integer Mandatory: No Default value: 2048
dbms-tablespace-medium-uniform-size	Uniform size for the medium tablespace. Values: Integer Mandatory: No Default value: 512
dbms-tablespace-small-uniform-size	Uniform size for the small tablespace. Values: Integer Mandatory: No Default value: 80
dbms-tablespace-infra-uniform-size	Uniform size for the infra tablespace. Values: Integer Mandatory: No Default value: 80
dbms-tablespace-sts-uniform-size	Uniform size for the STS tablespace. Values: Integer Mandatory: No Default value: 256
dbms-tablespace-large-extent-size	Extent size for the large tablespace Value: Integer Mandatory: No Default value: 512

Element	Description
dbms-tablespace-medium-extent-size	Extent size for the medium tablespace
	Value: Integer Mandatory: No
	Default value: 512
dbms-tablespace-small-extent-size	Extent size for the small tablespace
	Value: Integer Mandatory: No
	Default value: 512
dbms-tablespace-infra-extent-size	Extent size for the infra tablespace
	Value: Integer Mandatory: No
	Default value: 512
dbms-tablespace-sts-extent-size	Extent size for the sts tablespace
	Value: Integer Mandatory: No
	Default value: 1024
dbms-ind-large-name	Name of the large index tablespace that will be used by PMDB.
	Values: String
	Mandatory: No
	Default value: PRECISE_PW_IND_LARGE
dbms-ind-medium-name	Name of the medium index tablespace that will be used by PMDB.
	Values: String
	Mandatory: No
	Default value: PRECISE_PW_IND_MEDIUM
dbms-ind-small-name	Name of the small index tablespace that will be used by PMDB.
	Values: String
	Mandatory: No
	Default value: PRECISE_PW_IND_SMALL
dbms-ind-large-initial-size	Initial size for the large index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 64
dbms-ind-medium-initial-size	Initial size for the medium index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 64
dbms-ind-small-initial-size	Initial size for the small index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 64
dbms-ind-large-uniform-size	Uniform size for the large index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 1024

Element	Description
dbms-ind-medium-uniform-size	Uniform size for the medium index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 256
dbms-ind-small-uniform-size	Uniform size for the small index tablespace.
	Values: Integer
	Mandatory: No
	Default value: 80
dbms-ind-large-extent-size	Extent size for the large index tablespace
	Value: Integer
	Mandatory: No
	Default value: 512
dbms-ind-medium-extent-size	Extent size for the medium tablespace
	Value: Integer Mandatory: No
	Default value: 512
dbms-ind-small-extent-size	Extent size for the small tablespace
	Value: Integer Mandatory: No
	Default value: 512
manual-schema	Indicates if the schema should be manually installed.
	Values: true, false
	Mandatory: No.
	Default value: false
is-partitioned	Indicates if the database contains partitioning.
	Values: true, false
	Mandatory: Yes, if manual-schema is true
dbms-version	Database version. Values: 9i, 10g, 11g, 12c
	Mandatory: Yes, if manual-schema is true
dbms-dba-encrypted-password	Password for the Oracle user with DBA privileges. Will only be used during installation.
	Values: Encrypted String
	Mandatory: Yes, if manual-schema is set to false.
	Alternatively the dbms-dba-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.
dbms-i3-user	User name for the Precise user who owns the PMDB schema.
	Values: String
	Mandatory: Yes
dbms-i3-encrypted-password	Password for the Precise user with PMDB privileges.
	Values: Encrypted String
	Mandatory: Yes
	Alternatively the dbms-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.

Element	Description
dbms-tablespace-temp-name	Storage parameter name for the Precise for Oracle schema. Indicates Temporary tablespace name.
	Values: String
	Mandatory: No
	Default value: PRECISE_PMBD_TMP
dbms-tablespace-temp-file	Storage parameter for the Precise for Oracle schema. Indicates Temporary tablespace file.
	Values: String
	Mandatory: No
	Default value: PRECISE_PMBD_TMP
dbms-tablespaces-folder	Storage parameter for the Precise for Oracle schema. Indicates the folder in which Tablespace datafiles are stored.
	Values: String
	Mandatory: Yes
dbms-use-bigfile-for-tablespaces	Specify whether the tablespaces will be created as bigfiles.
	Values: true, false
	Mandatory: No
	Default value: true
dbms-service	Specify the name of oracle service in case you want to use oracle cluster
	Value: String
	Mandatory: No

Installing the PMDB FocalPoint using an MS-SQL Server database

Additional parameters are needed for installing the PMDB FocalPoint on an MS-SQL Server database.

The following table lists the additional parameters needed for a PMDB installation using an MS-SQL Server database.

Table 2-3   Additional parameter file elements for the PMDB on an MS-SQL Server database

Element	Description
manual-schema	Indicates if the schema should be manually installed.
	Values: true, false
	Mandatory: No.
	Default value: false
is-partitioned	Indicates if the database contains partitioning.
	Values: true, false
	Mandatory: Yes, if manual-schema is true
dbms-version	Database version.
	Values: 2005, 2008
	Mandatory: Yes, if manual-schema is true
dbms-type	Marked always as SQL Server (mssql).
	Mandatory: Yes
dbms-instance	MS-SQL Server instance name. (Must always be uppercase).
	Values: String
	Mandatory: Yes

Element	Description
dbms-use-win-authentication	Indicates whether the PMBD will be connected using OS authentication. Values: Boolean Mandatory: No Default value: false **NOTE:** All focals must be on the Windows server and the service must be configured to run with the user that has privileges on the PMDB. When using windows authentication, the CLI must be run by a user with permissions to connect to the SQL Server database.
dbms-database	Name of the MS-SQL Server database. Values: String Mandatory: Yes
dbms-dba-user	User name for the MS-SQL Server user with DBA privileges to install the schema. Values: String Mandatory: Not mandatory if dbms-use-win-authentication is true.
dbms-dba-encrypted-password	Password for the MS-SQL Server user with DBA privileges. Values: Encrypted String Mandatory: Not mandatory if dbms-use-win-authentication is true. Editable: No Alternatively the dbms-dba-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.
dbms-file-groups	All tables will be created under this file group. Values: String Mandatory: No
dbms-collation	New database will be created using this collation. Values: String Mandatory: No Default value: SQL_Latin1_General_CP1_CS_AS
dbms-data-growth	New database data file auto growth size in MB. Values: Integer Mandatory: No Default value: 512
dbms-data-size	New database data file size in MB. Values: Integer Mandatory: No Default value: 1024
dbms-data-path	Folder under the database server where the data file will be created. Values: String Mandatory: Yes, if the dbms-database parameter value is a database which does not exist.
dbms-log-path	Folder under the database server where the database log file will be created. Values: String Mandatory: Yes, if the dbms-database parameter value is a database which does not exist

Element	Description
dbms-log-size	New database log file size in MB.
	Values: Integer
	Mandatory: No
	Default value: 512
dbms-log-growth	New database log file auto growth size in percent.
	Values: Integer
	Mandatory: No
	Default value: 10

Installing additional parameters to servers where FocalPoints are installed

The following table lists the additional parameters needed for server installation, wherever FocalPoints are installed. These are required only if when installing the Framework FocalPoint on servers other than the Precise FocalPoint. In such cases specify the parameters below for each server and replace server-name (italic) with the real server name.

Table 2-4   Additional parameter file elements for server installation

Element	Description
server-machine-port-*server-name*	Port of the Precise Listener on the server.
	Values: Numeric 1025 -65535
	Mandatory: Yes
server-machine-installation-folder-*serv er-name*	Indicates the folder in which Precise installation files are stored.
	Values: String
	Mandatory: Yes, unless you prefer to perform a manual server installation.
server-machine-use-communication-re lay-*server-name*	Indicates whether this server should use relay communication. Select this option if the server resides behind a firewall.
	Values: (true/false)
	Mandatory for other servers: No
server-machine-flavor-*server-name*	Type of server. Must be in one of the following servers:
	Windows, Unix
	Mandatory: Yes, unless you prefer to perform a manual server installation.
server-machine-install-user-*server-na me*	User name required to install the Precise Listener on the server. Will only be used during installation.
	Values: String
	Mandatory for other servers: Yes, unless you prefer to perform a manual server installation.
server-machine-install-encrypted-pass word-*server-name*	Password for the user, required for using Precise Listener services on the server.
	Values: Encrypted String
	Mandatory: Yes, unless you prefer to perform a manual server installation.
	Alternatively the server-machine-install-clear-password-server-name can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see <u>Encrypt command</u> on page 146.

Element	Description
server-machine-service-authentication- mode-*server-name*	Server authentication mode. Precise services are using LocalSystem account. to specify other user account specify "user", and use:
	server-machine-service-authentication-user-server-name and
	server-machine-service-authentication-encrypted-password-server-name to specify the authentication details:
	Values: String
	Mandatory: No
server-machine-service-authentication- user-*server-name*	User account name for Precise services on the server.
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
	Values: String
server-machine-service-authentication- encrypted-password-*server-name*	Password for the user specified in server-machine-service-authentication-user-server-name.
	Values: Encrypted String
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
	Alternatively the server-machine-service-authentication-clear-password-server-name can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see [Encrypt command](#) on page 146.
server-machine-service-authentication- domain-*server-name*	Domain of user specified in server-machine-service-authentication-user-server-name
	Values: String
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
server-machine-bind-listener-address-*server-name*	Indicates whether the Precise Listener on this server should bind the specified server name or all the addresses on the given port.
	Values: true/false
	Mandatory: No

Installing Precise FocalPoints

Installing a Precise FocalPoint on a server

When using the CLI for installation, you must explicitly install the FocalPoint. This is unlike the GUI-based installation, in which FocalPoints are automatically installed with the first instance relevant. To install a Precise FocalPoint, the you should create an installation parameters file and run the Precise CLI utility installation script on the main Precise FocalPoint.

To install a Precise FocalPoint on a server

1. Build a parameter XML file to be used as input for the installation scripts.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <path_to_parameters_file>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <path_to_parameters_file>

About the Precise FocalPoint parameter file

You need to prepare the Precise FocalPoint parameter file by creating an XML file with tags that represent the installation parameters and inserting the appropriate values.

The following is an example of a Precise FocalPoint parameters file that installs the Oracle FocalPoint on server1:

```
<parameters>
    <parameter name="setup-process" value="focal-OR"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="focal-server-machine-name" value="server1"/>
    <parameter name="installation-cd-path" value="\\filesvr\Precise i3\ installation"/>
</parameters>
```

The following table lists the needed parameters for a Precise FocalPoint installation. The parameter format is:

```
<parameters>
    <parameter name="..." value="..."/> ...
</parameters>
```

Table 2-5   Parameter file elements for a Precise FocalPoint installation

Element	Description
setup-process	Indicates the name of the setup process
	Values: String; focal-<PRODUCT CODE>, for example: focal-JE, focal-OR. For more information, see Product Codes on page 175.
	Mandatory: Yes
	Editable: No
setup-mode	Must be in one of the following modes:
	■ install (to install)
	■ edit (to update)
	■ uninstall (to uninstall)
	Mandatory: Yes
	Editable: Yes
focal-server-machine-name	Name of the server where the Precise FocalPoint will be installed. The name must be written in lowercase letters only. Can be a fully qualified name or IP address.
	Values: String
	Mandatory: Yes
	Editable: No
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
	Editable: Yes

Installing Servers

The first stage in a server installation using the CLI utility requires installing and registering the server in Precise. The server is registered in the Precise database, a Precise Listener is started on the server, and communication between the Precise FocalPoint and the Precise Listener is enabled.

NOTE   To promote efficiency, servers can also be installed automatically. For more information, see Auto Deployment on page 83.

Before installing a server using the CLI utility, verify the following issues:

- The Precise communication port is open in both directions (between the Precise FocalPoint server and the target server).

- CLI can handle installation packages. For more information, see Installation packages on page 12. To install the servers with the CLI utility

1. Run the following command on the main Precise FocalPoint server:

   Windows

   infra\bin\psin_cli.bat
   -i3-user <user_name>
   {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
   -action list-required-files-for-new-server
   -bits <new server bits (32/64)>
   -os <os _type>

   UNIX

   ./infra/bin/psin_cli.sh
   -i3-user <*user_name*>
   {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
   -action list-required-files-for-new-server
   -bits <new server bits (32/64)>
   -os <os_type>

   The CLI creates an XML file containing the list of required installation packages for the server.

   Table 2-6 Server Installation

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always list-required-files-for-new-server Mandatory: Yes
bits	The OS bits in the new added server Values: 32 or 64 Mandatory: Yes
os	The added server OS Values: See [Operating System Type and Flavor](#) on page 176. Mandatory: Yes

2. On the new server create the installation folder and create new sub folder under it: distribution.
3. Copy the files specified the XML file created in Step 1 to the new server in the

   <*precise_root*>/distribution

4. Login to the server using the Precise user
5. CD <precise_root>

   Run the following command:

Windows	distribution\psin_ba_WIN.exe -s
UNIX	./distribution/psin_ba_<*os_type*> -s

   For more information, see [Operating System Type and Flavor](#) on page 176.

   Note the -s argument

6. For each of the other files you've copied, run the following command:

Windows	infra\bin\psin_file_new.exe -manual -extract distribution\<*the_file_name*> -event install
UNIX	./infra/bin/psin_file_new -manual -extract distribution/<*the_file_name*> -event install

7. Create an XML file containing the relevant installation parameters. Place the file in `<precise_root>` folder on the target server. You can also set up this file in advance.

   By default, installing an non-secured local server using the CLI is not enabled. To enable a non-secured CLI server installation, set the Precise registry parameter:

   registry\products\infrastructure\setup\settings\enable-local-server-cli to true, and restart Precise FocalPoint.

8. Run the following command to execute the CLI utility installation script from the `<precise_root>` folder on the target server:

Windows	infra\bin\psin_cli.bat
	-i3-user *<user_name>*
	{-i3-encrypted-password *<encrypted_password>*	-i3-clear-password *<clear_password>*}
	-action setup-server -parametersfile <server_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh
	-i3-user *<user_name>*
	{-i3-encrypted-password *<encrypted_password>*	-i3-clear-password *<clear_password>*}
	-action setup-server
	-parametersfile <server_installation_parameters_file_name>

> **NOTE** For Windows Server 2008 (Windows Longhorn) you must run this command using Administrator permissions: Click **Start Menu**, right-click **Command Prompt**, click **Run as administrator**, click **Continue**, to approve the operation. Run the command specified above.

Table 2-7 CLI utility installation script

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	always setup-server Mandatory: Yes
parametersfile	path to parameters file Mandatory: Yes

About the server parameter file

You need to prepare the Server parameter file by creating an XML file with tags that represent the installation parameters and inserting the appropriate values.

The following is an example of a server parameter file:

```
<parameters>
     <parameter name="setup-mode" value="install"/>
     <parameter name="setup-process" value="server" />
     <parameter name="installation-cd-path" value="d:\" />
     <parameter name="handle-server-machine-name" value="poolserver5" />
     <parameter name="server-machine-port-poolserver5" value="3002" />
     <parameter name="server-machine-flavor-poolserver5" value="Windows" />
     <parameter name="i3fp-server-machine-name" value="focalmachine" />
     <parameter name="focalmachine-server-machine-port" value="20702" />
</parameters>
```

The following table describes the elements of the parameter file.

Table 2-8 Elements of the servers parameter file for product Collectors

Element	Description
setup-mode	Setup mode that is used. Values: install, edit, uninstall Mandatory: Yes
setup-process	Setup process. Value: always server. Mandatory: Yes
handle-server-machine-name	Name of the local server. Can be a fully qualified name or IP address. The server name must be recognized by the Precise FocalPoint server, for example, it should be registered in DNS. Values: String Mandatory: Yes

Element	Description
server-machine-port-*server-name*	Port of the Precise Listener on the local server.
	Values: Numeric 1025–65535
	Mandatory: Yes
i3fp-server-machine-name	Name of the Precise FocalPoint server. Can be fully qualified name or IP address.
	The Precise FocalPoint server name must be recognized by the newly added server, for example, it should be registered in DNS.
	Values: String
	Mandatory: Yes
server-machine-port-*i3fp-server-name*	Port of the Precise FocalPoint Listener. Replace i3fp-server-name with the name of Precise FocalPoint as shown in Precise GUI.
	Values: Numeric 1025–65535
	Mandatory: Yes
server-machine-use-communication-relay -*server-name*	The Communication Relay provides a solution to a firewall restrictions problem. For more details see the *Precise Installation Guide*.
	Value: (true/false)
	Mandatory: No.
environment-name	Related application name
	Values: String
	Mandatory: Yes, in case of federation installation.
server-machine-service-authentication-us er-*server-name*	User account name for Precise services on the server.
	Values: String
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
server-machine-service-authentication-en crypted-password-*server-name*	Password for the user specified in server-machine-service-authentication-user-server-name.
	Values: Encrypted String
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
	Alternatively the server-machine-service-authentication-clear-password-server-name can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.
server-machine-service-authentication-do main-*server-name*	Domain of user specified in server-machine-service-authentication-user-server-name
	Values: String
	Mandatory: Only if server-machine-service-authentication-mode-*server-name* is set to "user".
server-machine-service-unique-id-*server- name*	A unique services suffix used in the installation of all Precise agents allows installation of several Precise installations folders on the same server.
	Relevant only for Windows servers.
	Values: String
	Mandatory: No

Element	Description
server-machine-service-authentication-mo de-*server-name*	Server authentication mode. Precise services are using LocalSystem account. to specify other user account specify "user", and use: server-machine-service-authentication-user-server-name and server-machine-service-authentication-encrypted-password-server-name to specify the authentication details: Values: user or localsystem Mandatory: No
server-machine-secured-protocol-*server-n ame*	The secured installation is using an existing security protocols and methods such as blowfish and SSH to ensure that the communication encryption keys are safely copied to the target server Value: true, false Mandatory: No
server-machine-security-clear-password-*server-name*	Security password. Value: String Mandatory: Only on secured remote Manual installation.
server-machine-install-user-*server-name*	User name required to install the Precise Listener on the server. Will only be used during installation. Value: String Mandatory: Only on secured remote automatic installation.
server-machine-install-encrypted-passwor d-*server-name*	Password for the user, required for using Precise Listener services on the server. Values: Encrypted String Mandatory: Yes, unless you prefer to perform a manual server installation. Alternatively the server-machine-install-clear-password-server-name can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.
server-machine-installation-folder-*server- name*	Indicates the folder in which Precise installation files are stored. Values: String Mandatory: Yes, unless you prefer to perform a manual server installation.
server-machine-flavor-*server-name*	Type of server. Must be in one of the following servers: Windows, UNIX Values: String Mandatory: Yes
server-machine-use-jre-*server-name*	Indicates whether a Java-based Listener will be installed on the server or not. **NOTE:** A Java-based Listener is required for ShortTimeSlice support. Values: true, false. Default: true for servers whose OS supports JRE 1.6. You should use false if the server's OS does not support JRE 1.6 or to reduce the memory footprint of the Precise Listener. Mandatory: No
server-machine-bind-listener-address-ser ver-name	Indicates whether the Precise Listener on this server should bind the specific server name or bind all the addresses on the given port. Values: true, false Mandatory: No

Element	Description
server-machine-ssl-server-name	Indicates whether this Listener will function as an SSL Listener.
	NOTE: An SSL Listener is necessary to communicate with remote monitored instances. Values: true, false
	Default: false
	Mandatory: No
	For more information, see J2EE Remote Instance Monitoring on page 87.
server-machine-ssl-port-server-name	Indicates the SSL port this Listener will listen too.
	Values: Integer
	Default: 443
	Mandatory: No
	For more information, see J2EE Remote Instance Monitoring on page 87.
server-machine-consumer-server-name	Indicates whether this Listener will function as a consumer that will pull data from SSL Listeners.
	Values: true, false
	Default: false
	Mandatory: No
	For more information, see J2EE Remote Instance Monitoring on page 87.
server-machine-consume-target-server-n ame	Indicates a target server that contains an SSL Listener.
	By setting this parameter, the installed server will consume remote data only from the specified target server. If this parameter is not specified and the server-machine-consumer-server-name is set to true, the installed server will consume data from all servers that contain SSL Listeners.
	This parameter should only be set if the server-machine-consumer-server-name is set to true and you want to pull data from a specific SSL Listener.
	NOTE: The target server specified in this parameter must be defined as an SSL Listener. Values: String (server name)
	Mandatory: No
	For more information, see J2EE Remote Instance Monitoring on page 87.

Installing secured servers with the Precise CLI utility

The server installation CLI described above, assumes it can use non-secured protocols such as telnet, and can transfer the communication encryption key as clear text over the network. If this is a problem, you can install the server using a secure CLI. The secured installation uses existing security protocols and methods such as blowfish and SSH to ensure that the communication encryption keys are safely copied to the target server. It's possible that the secured server installation might require more manual action items than non-secure server CLI installation. You can use one of the following methods to perform secured server installation:

- Remote Automatic mode
- Local mode

Remote Automatic mode

This mode may be used only if the target server is a UNIX server that runs SSH (secured shell).

1. Prepare the server parameters file and save it to the <*precise_root*> folder on the main Precise FocalPoint.

   For more information, see Table 2-8 on page 26. Mandatory parameters for this installation method are:

   ```
   server-machine-secured-protocol-server-name true
   server-machine-install-encrypted-password-server-
   name server-machine-installation-folder-server-
   name
   server-machine-flavor-server-name
   server-machine-install-user-server-name
   ```

   You must not supply:

   ```
   server-machine-security-clear-password-server-name
   ```

2. On the main Precise FocalPoint, run the following command from <*precise_root*> folder:

Windows	infra\bin\psin_cli.bat
	-i3-user <user_name>
	{-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
	-action setup
	-parametersfile <server_parameters_file_path>
UNIX	./infra/bin/psin_cli.sh
	-i3-user <*user_name*>
	{-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
	-action setup
	-parametersfile <server_parameters_file_path>

   > **NOTE** Precise supports most of the common SSH for UNIX. If you are unable to install using the automatic mode, try the Local mode below.

Local mode

Use this mode for Windows server or when your server does not have SSH installed.

1. Prepare server parameters file. For more information, see Table 2-8 on page 26.
   Mandatory parameters for this installation are:

   ```
   server-machine-secured-protocol-server-name true
   ```

2. On the main Precise FocalPoint server, run the following command from the <*precise_root*> folder:

Windows	infra\bin\psin_cli.bat
	-i3-user <user_name>
	{-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
	-action secure-crypt-keys
	-ba-secure-clear-password <*security_password*>
UNIX	./infra/bin/psin_cli.sh
	-i3-user <*user_name*>
	{-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>}
	-action secure-crypt-keys
	-ba-secure-clear-password <*security_password*>

   The command will generate a key file on the Precise FocalPoint server, under the products/i3fp/security/keys/ folder.

Table 2-9 Local mode

Element	Descriptions
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	always secure-crypt-keys Mandatory: Yes

Element	Descriptions
ba-secure-encrypted-password	Password used to encrypt the communication key, up to 8 characters.
	Mandatory: Yes
	Alternatively the -i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.

3. Copy and extract the server packages on the target server as specified in <u>Installing Servers</u> on page 24.
4. Copy key file from: `products/i3fp/security/keys/keys.xml` on the main Precise FocalPoint to the target server, to the `./infra` folder.
5. On the target server, run the following command from the `<precise_root>` folder:

| **Windows** | infra\bin\psin_infra.exe
-manual-extricate-crypt *<security_password>* |
| **UNIX** | ../infra/bin/psin_infra
-manual-extricate-crypt *<security_password>* |

The command will extricate the security keys on the target server.

6. On the target server, run the following command from the `<precise_root>` folder. For more information, see <u>Installing Servers</u> on page 24.

| **Windows** | infra\bin\psin_cli.bat
-i3-user *<user_name>*
{-i3-encrypted-password *<encrypted_password>* \| -i3-clear-password *<clear_password>*}
-action setup-server
-parametersfile <server_parameters_file_path> |
| **UNIX** | ./infra/bin/psin_cli.sh
-i3-user *<user_name>*
{-i3-encrypted-password *<encrypted_password>* \| -i3-clear-password *<clear_password>*}
-action setup-server
-parametersfile <server_parameters_file_path> |

Updating services Authentication using the Precise CLI Utility

To update the user authentication of your Precise Windows services, fill in the following authentication parameters and then run the server setup installation in edit mode.

```
server-machine-service-authentication-mode-server-name

server-machine-service-authentication-domain-server-name

server-machine-service-authentication-user-server-name

server-machine-service-authentication-encrypted-password-server-name
```

For parameter details, see <u>Table 2-10</u> on page 33.

Installing a Tier with the Precise CLI utility

Once you installed the Precise framework, you can install the Tiers that comprise your Precise suite. Click on the relevant section below, for how to install your Tier using CLI:

- Installing Precise for Oracle with the Precise CLI utility
- Installing Precise for Storage with the Precise CLI utility
- Installing Precise for J2EE with the Precise CLI utility
- Installing Precise for Web with the Precise CLI utility
- Installing Precise for Microsoft .NET with the Precise CLI utility
- Installing Precise for SQL Server with the Precise CLI utility
- Installing Precise for SAP with the Precise CLI utility
- Installing Precise for Sybase with the Precise CLI utility
- Installing Precise for Sybase Replication Server with the Precise CLI utility
- Installing Precise for DB2 with the Precise CLI utility

- Installing a Tuxedo instance with the Precise CLI utility

- Installing a WebSphere MQ instance with the Precise CLI utility

- Installing an Oracle Applications instance with the Precise CLI utility

- Installing Other Tier Collectors with the Precise CLI utility

- Installing an OS instance with the Precise CLI utility

- Installing an extension for Siebel with the Precise CLI utility

- Installing Precise for vCenter Server with the Precise CLI utility

Installing Precise for Oracle with the Precise CLI utility

Before installing an Oracle instance with the Precise CLI utility, verify the following issues:

- The Precise for Oracle FocalPoint was installed.

- The Precise Listener on the target server on which the Precise for Oracle agent is to be installed was installed.

To install Precise for Oracle with the Precise CLI utility

1. Create the Precise for Oracle parameter file and save it to the *<precise_root>* folder on the main Precise FocalPoint. For more information, see
2. Run the following command from the *<precise_root>* folder on the main Precise FocalPoint to execute the Precise CLI installation script.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_oracle_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_oracle_installation_parameters_file_name>

About the Precise for Oracle parameter file

You need to prepare the Precise for Oracle parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a Precise for Oracle parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-OR"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="server5"/>
    <parameter name="instance-name" value="ORCL"/>
    <parameter name="oracle-home" value="C:\oracle\product\10.1.0\Db_1"/>
    <parameter name="oracle-version" value="100"/>
    <parameter name="oracle-port" value="1521"/>
    <parameter name="oracle-dba-user" value="system"/>
    <parameter name="oracle-dba-clear-password" value="dba"/>
    <parameter name="oracle-connect-as" value="SYSDBA"/>
    <parameter name="oracle-create-new-user" value="true"/>
    <parameter name="oracle-i3-user" value="I3_OR_1234"/>
    <parameter name="oracle-i3-clear-password" value="mypassword"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file. Element names marked with an asterisk (*) can be updated after installation.

Table 2-10 Elements of the Precise for Oracle parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. always apptier-OR Mandatory: Yes
setup-mode*	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for Oracle Collector will be installed. Values: String Mandatory: Yes
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
instance-name	Oracle instance name (SID). Values: String Mandatory: Yes
oracle-home*	Full path of Oracle home. Values: String Mandatory: Yes
oracle-version	Oracle instance version Values: 81, 90, 100, 110 The values represent the following versions: 81 = Version 8.1 90 = Version 9.0 100 = Version 10 110 = Version 11 Mandatory: Yes
oracle-port*	Oracle instance Listener port. Values: Numeric Mandatory: Yes
oracle-dba-user	User name for Oracle user with DBA privileges. Will only be used during installation. Values: String Mandatory: Yes
oracle-dba-encrypted-password	Password for Oracle user with DBA privileges. Will only be used during installation. Values: Encrypted String Mandatory: Yes Alternatively the oracle-dba-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. See Encrypt command on page 146.

Element	Description
oracle-connect-as	Connection option for Oracle user with DBA privileges.
	When using a manual schema (see the "*How to manually install Precise for Oracle database schemas*" section in the *Precise Installation Guide*), this must be specified as Normal.
	Values: SYSDBA, Normal
	Mandatory: Yes
network-ports	Oracle listener ports.
	Specify all the ports you want the Insight Savvy for Network to sample. At least one port must be specified.
	Values: port=x||port=y (for example: port=1111||port=2222)
	Mandatory: Yes if Install-network is 'true'.
oracle-create-new-user	Indicates whether the oracle-i3-user is an existing user or the installation should create a new user.
	Values: (true/false)
	Mandatory: Yes
	NOTE: If an Oracle DB schema has been installed manually before the current collector installation, then this parameter should appear explicitly in the parameters file and its value must be "false".
oracle-i3-user	User name of the Oracle user who owns the Precise for Oracle schema.
	Values: String
	Mandatory: Yes
oracle-i3-encrypted-password	Password of the Oracle user who owns the Precise for Oracle schema.
	Values: Encrypted String
	See Encrypt command on page 146.
	Mandatory: Yes
	Alternatively the oracle-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
oracle-sap-system-name	The SAP system name.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
oracle-sap-default-application-server	The Application server name used to create the first connection with the SAP system.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
oracle-sap-system-number	The SAP system number.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
oracle-sap-user	The SAP system user name.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
oracle-sap-encrypted-password	The SAP system encrypted password.
	Values: Encrypted String
	Mandatory: Yes, if install-sap-inter-point is true.
	See Encrypt command on page 146.
	Alternatively the sap-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.

Element	Description
oracle-sap-client-id	The client ID used to create the first connection with the SAP system. Values: String Mandatory: Yes, if install-sap-inter-point is true.
apptier-name	Name of the Tier. Values: String Mandatory: No
install-alert-customized	Value: (true/false) Mandatory: No Set to true to in case you want to have customized alerts metrics for this instance.
oracle-tablespace-name	Storage parameter for the Precise for Oracle schema. Indicates Tablespace name. Values: String Mandatory: No
oracle-tablespace-file	Storage parameter for the Precise for Oracle schema. Indicates Tablespace datafile. Values: String Mandatory: No
oracle-tablespace-temp-name	Storage parameter for the Precise for Oracle schema. Indicates Temporary tablespace name. Values: String Mandatory: No
oracle-tablespace-temp-file	Storage parameter for the Precise for Oracle schema. Indicates Temporary tablespace file. Values: String Mandatory: No
install-psoft-extension*	Installs the PeopleSoft extension Values: true, false Mandatory: No
install-sap-inter-point	Indicates whether you want to install a SAP Interpoint. Values: true, false Mandatory: No
oracle-history-size*	Oracle session information period (in hours). Values: 1, 2, 4, 8, 12, 24, 28 Mandatory: No
oracle-collapse-statements*	Collapses statements with different constants in their text into single statements with bind variables. Values: true, false Mandatory: No
install-storage-type*	Install Precise for Storage. Values: empty - for no Precise for Storage ORXP - for HP crosspoint storage Mandatory: No
oracle-tablespaces-folder	Storage parameter for the Precise for Oracle schema. Indicates the folder in which datafiles are stored. Values: String Mandatory: No

Element	Description
install-network*	Associates Oracle activity with network statistics.
	Values: true, false
	Mandatory: No
oracle-cluster-name	Oracle instance cluster name
	Values: string
	Mandatory: No
oracle-connection-pool-server	Server name used in the connection pool for the Oracle instance. In case this parameter is not supplied, the collector-server-machine-name is used.
	The Precise Oracle FocalPoint creates JDBC connections to the Oracle instance. Use this parameter in case you want the Oracle FocalPoint to connect to the instance using a server name different than the server name specified in collector-server-machine-name parameter.
	Value: String
	Mandatory: No

Installing Precise for Storage with the Precise CLI utility

Installing Storage Tier Collectors on a server enables you to sample Storage instances on the server. Before installing Storage Tier Collector with the CLI utility, verify the following

- The Precise for Oracle FocalPoint or Precise for SQL Server FocalPoint is installed.

- The Precise Listener has been installed on the server where Precise for Storage agent is to be installed.

To install Precise for Storage with the Precise CLI utility
1. Create the Precise for Storage parameter file and save it to the *<precise_root>* folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see <u>About the Precise for Storage parameter file</u> on page 36.
2. Run the following command from the *<precise_root>* folder on the main Precise FocalPoint to execute the Precise CLI utility installation script.

Windows	infra\bin\psin_cli.bat -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <precise_for_storage_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <precise_for_storage_installation_parameters_file_name>

About the Precise for Storage parameter file

You need to prepare the Precise for Storage parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a Precise for Storage parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-SM"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="sun3"/>
    <parameter name="storage-type" value="EMC"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file.

Table 2-11 Elements of the Precise for Storage parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
setup-process	Setup process. always apptier-SM Mandatory: Yes
setup-mode	Setup mode
	Values: install, edit, uninstall
	Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for Storage Collector will be installed.
	Values: String
	Mandatory: Yes
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No
emc-database-file	EMC Solution Enabler Database file location.
	Values: String
	Mandatory: No
emc-gatekeeper-enabled	Enable remote gatekeeper.
	Values: true or false
	Mandatory: No
emc-gatekeeper-ip	Remote gatekeeper server IP.
	Values: String
	Mandatory: Yes, if emc-gatekeeper-enabled is true.
emc-gatekeeper-port	Remote gatekeeper server port.
	Values: Numeric
	Mandatory: Yes, if emc-gatekeeper-enabled is true.
emc-asm-enabled	Enable Oracle ASM support for the EMC Storage agent.
	Values: true or false
	Mandatory: No
emc-asm-instance	ASM instance name.
	Values: String
	Mandatory: Yes, if emc-asm-enabled is true.
emc-asm-port	ASM instance port.
	Values: String
	Mandatory: Yes, if emc-asm-enabled is true.
emc-asm-home	ASM instance home.
	Values: String
	Mandatory: No

Element	Description
emc-asm-user	User name of an Oracle ASM user with DBA privileges.
	Values: String
	Mandatory: Yes, if emc-asm-enabled is true.
emc-asm-encrypted-password	Password of an Oracle ASM user with DBA privileges.
	Values: Encrypted string
	Mandatory: Yes, if emc-asm-enabled is true. See Encrypt command on page 146.
	Alternatively the emc-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.

Installing Precise for J2EE with the Precise CLI utility

Installing J2EE Tier Collectors on a server enables you to sample a J2EE instance on the server. Before installing a J2EE Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise Listener has been installed on the server where Precise for J2EE agent is to be installed. To install Precise for J2EE with the Precise CLI utility

1. Create the Precise for J2EE parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. See About the Precise for J2EE parameter file on page 38.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script.

Windows
infra\bin\psin_cli.bat
-i3-user *<user_name>*
{-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*}
-action setup
-parametersfile <precise_for_j2ee_installation_parameters_file_name>

UNIX
./infra/bin/psin_cli.sh
-i3-user *<user_name>*
{-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*}
-action setup
-parametersfile <precise_for_j2ee_installation_parameters_file_name>

About the Precise for J2EE parameter file

You need to prepare the Precise for J2EE parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a Precise for J2EE parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-JE"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="instance-identifier" value="J2EE-Application"/>
    <parameter name="collector-server-machine-name" value="sun3"/>
    <parameter name="j2ee-type" value="JES"/>
    <parameter name="j2ee-version" value="3"/>
    <parameter name="j2ee-java-home" value="" />
    <parameter name="is-cluster" value="false"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file.

Table 2-12 Elements of the Precise for J2EE parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes

Element	Description
setup-process	Setup process. always apptier-JE
	Mandatory: Yes
setup-mode	Setup mode
	Values: install, edit, uninstall
	Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for J2EE Collector will be installed.
	Values: String
	Mandatory: Yes
instance-name	J2EE instance name.
	Values: String
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.
instance-identifier	Used to create the instance name.
	Values: String
	Mandatory: Yes
is-cluster	Indicates that this instance is part of a cluster.
	Values: (true/false).
	Mandatory: Yes
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false)
	Values: true/false
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.
j2ee-type	J2EE application server type.
	Values: WebLogic, WebSphere, JBoss, JEUS, JES, JRun, Tomcat, Resin, Oracle, SAP, Other
	Mandatory: Yes

Element	Description
j2ee-version	J2EE application server version.
	Values:
	For WebLogic: 7.0, 8.1, 8.1 (Portal), 9.0, 9.1, 9.2, 9.2 (Portal), 10.0, 10.0 (Portal), 10.3, 10.3(Portal)
	For WebSphere: 5.0, 5.1, 5.1 (Portal), 6.0, 6.1
	For JBoss: 3.2, 4.0
	For JEUS: 4.2, 5.0
	For JES: 2, 3
	For JRun: 4.x
	For Tomcat: 4.x, 5.0, 5.5
	For Resin: 2.1, 3.x
	For Oracle 9i AS:
	1.0.2.2.2 (Release 1)
	9.0.2.x (OC4Jstandalone)
	9.0.2.x (Enterprise Edition)
	9.0.3.0.0 (OC4J standalone)
	9.0.3.0.0 (Enterprise Edition)
	9.0.4
	11.5.8 (Oracle Applications-Forms Listener Servlet Mode)
	10.1.2
	10.1.3
	For Other: Other
	For SAP: 6.4
	Mandatory: Yes
j2ee-java-home	J2EE application server java home.
	Value: String
	Mandatory: Yes (can be empty)
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No
install-alert-customized	Values: true/false
	Mandatory: No
	Set to true in case you want to have customized alerts metrics for this instance.
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
install-network*	Associates J2EE activity with network statistics.
	Values: true, false
	Mandatory: No
network-ports	Network ports used by the J2EE instance, specify at least one port.
	Values: port=x||port=y (for example: port=1111||port=2222)
	Mandatory: Yes if install-network is set to true.

Element	Description
j2ee-weblogic-started-by-node-man ager	Indicates whether this is a managed WebLogic.
	Values: true/false
	Mandatory: Yes, if j2ee-type is WebLogic.

Installing Precise for Web with the Precise CLI utility

Installing Web Tier Collectors on a server enables you to sample a Web instance on the server. Before installing a Web Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise for Web FocalPoint is installed and running.

- The Precise Listener on the target server on which the Precise for Web agent is to be installed, was installed. To install Precise for Web with the Precise CLI utility

1. Create the Precise for Web parameter file and save it to the *<precise_root>* folder on the main Precise FocalPoint. You can also set up this file in advance. See About the Precise for Web parameter file (Precise CLI utility) on page 41.
2. Run the following command from the *<precise_root>* folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>*|-i3-clear-password *<clear_password>*} -action setup -parametersfile <precise_for_web_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>*|-i3-clear-password *<clear_password>*} -action setup -parametersfile <precise_for_web_installation_parameters_file_name>

About the Precise for Web parameter file (Precise CLI utility)

You need to prepare the Precise for Web parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

Example:

```
<parameters>
    <parameter name="setup-process" value="apptier-WW"/>
    <parameter name="collector-server-machine-name" value="server1"/>
    <parameter name="web-type" value="IIS"/>
    <parameter name="instance-identifier" value="WEB1" />
    <parameter name="is-cluster" value="false" />
    <parameter name="web-real-name" value="Default Web Site" />
    <parameter name="web-server-version" value="6.x" />
    <parameter name="web-application-used" value="Web" />
    <parameter name="install-filters" value="true" />
    <parameter name="install-instrumentation" value="true" />
    <parameter name="install-dynamic-instrumentation" value="true" />
    <parameter name="web-collect-extended-information" value="false" />
    <parameter name="web-ports" value="port=80;ip=server1;ssl=true"/>
    <parameter name="web-iis-instance-number" value="1"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

Table 2-13 Elements of the Precise for Web parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
setup-process	Setup process. always apptier-WW
	Mandatory: Yes
setup-mode	Setup Mode
	Values: install, edit, uninstall
	Mandatory: Yes
collector-server-machine-name	Name of the server of the Collector.
	Values: String
	Mandatory: Yes
instance-name	The unique name of the Web server instance as identified on the Web server. This unique name helps to distinguish between several instances.
	Values: String
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall
instance-identifier	Used to create the instance name.
	Values: String
	Mandatory: Yes
is-cluster	Indicates that this instance is part of a cluster.
	Values: (true/false). Can only be set to true for WebLogic and WebSphere.
	Mandatory: Yes
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false)
	Values: true/false
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.
web-type	Indicates type of server where the Web server instance is running.
	Values: IIS, Apache, iPlanet, WebLogic, WebSphere, Tomcat, Sun ONE, SAP WAS J2EE, Oracle AS, Other J2EE, Other.
	Mandatory: Yes
web-configuration-file	The full path for a Web server configuration file.
	Values: String
	Mandatory: Yes for Web Servers - Apache, iPlanet, WebLogic, Sun ONE, WebSphere, Tomcat, Oracle AS.
	Mandatory: Web Servers - IIS, Other, Other J2EE, SAP WAS J2EE should all be specified as empty parameter.
web-apache-configuration-file	The full path for an Apache HTTP Web server configuration file.
	Values: String
	Mandatory: Yes, only for Oracle AS servers.

Element	Description
web-server-version	The Web server version. Values: String For IIS: Mandatory: Yes Versions: 5.x, 6.x For Other, Other J2EE, SAP WAS J2EE. Mandatory: No For Apache: Mandatory: Yes. Versions: 1.3.x, 2.0.x, 2.2.x For WebLogic: Mandatory: Yes. Versions: 8.x, 9.x, 10.x For WebSphere: Mandatory: Yes. Versions: 6.0, 6.1-6.x, 7.x For Tomcat: Mandatory: Yes. Versions: 5.x, 6.x For iPlanet: Mandatory: Yes Version: 6.x For Sun ONE: Mandatory: Yes Version: 6.1 For Oracle AS: Mandatory: Yes. Version: "9.0.4.0.1 - 10.1.3" (Notice the additional spaces)
web-real-name	The IIS Web site name. Values: String Mandatory: Yes, only for IIS servers.
web-iis-instance-number	The IIS Web site number. Values: String Mandatory: Yes, only for IIS servers.
web-application-used	The application served by this Web server site. Values: Web Siebel PeopleSoft Mandatory: Yes
web-application-used-version	The application version served by this Web server site. Values: String **For PeopleSoft**: Mandatory: Yes Values: ■ If the monitored web server is WebSphere: **"8.1 - 8.49"** ■ If the monitored web server is WebLogic 8.x, 9.x or 10.x: **"8.44 - 8.49"** ■ If the monitored web server is Oracle Application Server: **"8.44 - 8.49"** ■ If the monitored web server is "Other J2EE": **"8.1 - 8.49" For Web:** Values: Do not enter a value. **For Siebel:** Mandatory: Yes Values: **"7.5 - 7.7"**
install-filters*	Indicates whether to install a filter on the Web server to collect server-side performance information. Values: true, false Mandatory: Yes **NOTE:** Note: Dependent on Web server type (some types do not support this, some force this installation).

Element	Description
install-dynamic-instrumentation*	Indicates whether to perform dynamic instrumentation. Values: true, false Mandatory: Yes, only if "install-instrumentation" is true. **NOTE:** Dependent on Web server type (some types do not support this, some force this installation).
web-ports*	The ports to be used by the Web Tier Collectors. Use two pipelines "||" as a separator between the ports. Specify at least one port. Values: port=port number;ip=[ip value|ALL];host-header=host headers;ssl=[true|false] (for example: port=3333;ip=ALL;host-header=srv2;ssl=true||port=4444;ip=ALL;host-header=srv1;ssl=true). Mandatory: Yes, if install-network is true and is-cluster is false.
web-server-bits	Web server bits. Values: 32, 64 Mandatory: Yes for Web Servers - Apache, iPlanet.
web-server-root	The root of the Web site root. Mandatory: Yes, only for an Other Web server type.
web-ssl-client-certification-path	full path to the client certificate file Values: String Mandatory: Yes if "web-ssl-use-client-certification" is true
web-server-i3-user-name	Web sever client name. Values: String Mandatory: Yes if "web-server-uses-authentication" is true
web-server-i3-password(encrypted)	Web server encrypted password. Values: String Mandatory: Yes if "web-server-uses-authentication" is true Alternatively the web-server-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see [Encrypt command] on page 146.
web-server-domain	Web server domain. Values: String Mandatory: Yes if "web-server-uses-authentication" is true
web-server-method	Web server method. Values: Basic, Digest, NTLM Mandatory: Yes if "web-server-uses-authentication" is true
web-ssl-client-certification-password (encrypted)	Encrypted password for the client certificate Values: String Mandatory: No Alternatively the web-ssl-client-certification-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see [Encrypt command] on page 146.
web-ssl-client-certification-key-path	Full path to the client certificate private key file Values: String Mandatory: No
web-server-uses-authentication	Is the web server requires client authentication to establish a connection Values: true\false Mandatory: No

Element	Description
apptier-name	Name of the Tier for the added instance.
	Values: String
	Mandatory: No
environment-name	Name of the application for the added instance.
	Values: String
	Mandatory: Yes, for a federation installation
install-alert-customized	Value: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance.
web-site-name	Site name, sometimes called context root.
	Values: String
	Mandatory: No
web-use-special-ssl-configuration	The only way to connect to the web server is using a secured connection (SSL).
	Values: true\false
	Mandatory: No
web-special-ssl-ciphers	Cipher list.
	Values: Specify the ciphers to be used Comma separated.
	Mandatory: No
web-ssl-use-client-certification	Specifies whether the web server requires the client certificate to have a certificate to establish a connection.
	Values: true\false
	Mandatory: No
install-network	Indicates whether to correlate the data collected by the Web server filter with the data collected by the Insight Savvy for Network.
	Values: true, false
	Mandatory: No

Installing Precise for Microsoft .NET with the Precise CLI utility

Installing Microsoft .NET Collectors on a server enables you to sample Microsoft .NET instances on the server. A Microsoft .NET Tier Collector can be installed only on servers running Microsoft .NET instances.

Before installing a Microsoft .NET Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise Listener on the target server on which the Precise for Microsoft .NET agent is to be installed, was installed.

To install Precise for Microsoft .NET with the Precise CLI utility

1. Create the Precise for Microsoft .NET parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. For more information, see
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_microsoft _.net_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*>| -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_microsoft_.net_installation_parameters_file_name>

About the Precise for Microsoft .NET parameter file

You need to prepare the Precise for Microsoft .NET parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following table describes the updated elements of the Microsoft .NET parameter file. Parameters file example:

```
<root>
    <parameter name="setup-process" value="apptier-DN"/>
    <parameter name="collector-server-machine-name" value="serverwin1004"/>
    <parameter name="instance-name" value="MyInstance"/>
    <parameter name="type" value="web" />
    <parameter name="application-name" value="IIS5" />
    <parameter name="process-name" value="aspnet_wp.exe" />
    <parameter name="installation-cd-path" value="d:\"/>
</root>
```

Table 2-14 Elements of the Precise for Microsoft .NET parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. always apptier-DN Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for Microsoft .NET Collector will be installed. Values: String Mandatory: Yes
instance-name	The unique alphanumeric string used by Precise for Microsoft .NET and Insight to identify the monitored application instance. Values: String using English characters. Mandatory: Yes

Element	Description
type	Indicates the type of the Microsoft .NET instance.
	Available types are as follows:
	■ web. Select this option when monitoring an ASP.NET application.
	■ general. Select this option when monitoring other Microsoft .NET processes.
	Mandatory: Yes
application-name	If this instance is an ASP Microsoft .NET instance, the value for this field depends on the Internet Information Server (IIS) type: IIS5, or IIS6.
	For a regular Microsoft .NET instance the field should be left empty.
	Values: IIS5, IIS6, or empty
	Mandatory: Yes, for ASP Microsoft .NET instances. For all other instances, this must remain empty.
process-name*	Indicates the name of the .NET process executable file.
	For a regular Microsoft .NET instance, the field should include the path and name of the Microsoft .NET executable file.
	For an ASP Microsoft .NET instance, the value for this field depends on the type of Internet Information Server (IIS) as follows:
	■ For IIS 5: `aspnet_wp.exe`
	■ For IIS 6: `w3wp.exe`
	process-name can only be updated after installation if the instance type is general.
	Values: String
	Mandatory: Yes
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance.
application-pool	Specifies the application pool(s) to be monitored by this instance. Use "*" to specify multiple application pools for monitoring.
	Values: String
	Mandatory: No

Installing Precise for SQL Server with the Precise CLI utility

Installing SQL Server Tier Collectors on a server enables you to sample SQL Server instances on the server. An SQL Server Tier Collector can be installed on Windows servers running SQL Server instances, or it can be installed on any Windows server and the SQL Server instances can be sampled remotely.

Before installing a SQL Server Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise for SQL Server FocalPoint was installed.

- The Precise Listener on the target server on which the SQL Server Tier Collector is to be installed, was installed.

To install Precise for SQL Server with the Precise CLI utility

1. Create the Precise for SQL Server parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. See <u>About the Precise for SQL Server parameter file</u> on page 48.

2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sql_server_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sql_server_installation_parameters_file_name>

About the Precise for SQL Server parameter file

You need to prepare the Precise for SQL Server parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values in them.

The following is an example of a Sql Server instance parameters file:

```
<parameters>
    <parameter name="installation-cd-path" value="d:\"/>
    <parameter name="setup-process" value="apptier-SQ" />
    <parameter name="setup-mode" value="install" />
    <parameter name="collector-server-machine-name" value="server1" />
    <parameter name="instance-name" value="SERVER1" />
    <parameter name="sqlserver-authentication" value="sql" />
    <parameter name="sqlserver-i3-user" value="sa" />
    <parameter name="sqlserver-i3-clear-password" value="" />
</parameters>
```

The following table describes the updated elements of the parameter file. Field names marked with an asterisk (*) can be updated after installation.

Table 2-15   Elements of the Precise for SQL Server parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. always apptier-SQ Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
instance-name	SQL Server instance name. (Must always be uppercase). Values: String Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for SQL Server Collector will be installed. Values: String Mandatory: Yes

Element	Description
os-user	Specifies the Windows user that the SQL Server Collector should use.
	Values: String
	Mandatory: Only if the instance does not reside on the same server as the collector, or when the PMDB uses Windows authentication.
os-domain	Specifies the Windows user's domain that the SQL Server Collector should use.
	Values: String
	Mandatory: Only if the instance does not reside on the same server as the collector, or when the PMDB uses Windows authentication.
os-encrypted-password	Specifies the Windows password that the SQL Server Collector should use.
	Values: Encrypted String. For more information, see Encrypt command on page 146.
	Mandatory: Only if the instance does not reside on the same server as the collector, or when the PMDB uses Windows authentication. Alternatively the os-clear-password parameter can be used, allowing you to specify a clear password instead of an encrypted string.
sqlserver-authentication*	Specifies how the Collector will connect to the SQL Server instance. (Windows authentication/SQL authentication).
	Values: sql, nt
	Mandatory: Yes
sqlserver-i3-user*	User name.
	Values: String
	Mandatory: Only mandatory if authentication is 'sql'.
sqlserver-i3-encrypted-password*	Password for SQL Server.
	Values: Encrypted String.
	Mandatory: Only mandatory if authentication is 'sql'. For more information, see Encrypt command on page 146.
	Alternatively the sqlserver-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
install-storage-type*	Install Precise for Storage.
	Values: empty - for no Precise for Storage SQWIN - for Windows storage
	Mandatory: No
install-psoft-extension*	Installs the PeopleSoft extension.
	Values: true, false
	Mandatory: No
sqlserver-sap-system-name	The SAP system name.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
sqlserver-sap-default-application-se rver	The Application server name used to create the first connection with the SAP system.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.
	You can only specify one default-app-server and app-rout-string.
sqlserver-sap-system-number	The SAP system number.
	Values: String
	Mandatory: Yes, if install-sap-inter-point is true.

Element	Description
sqlserver-sap-user	The SAP system user name. Values: String Mandatory: Yes, if install-sap-inter-point is true.
sqlserver-sap-encrypted-password	The SAP system encrypted password. Values: Encrypted String Mandatory: Yes, if install-sap-inter-point is true. For more information, see Encrypt command on page 146. Alternatively the sqlserver-sap-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
sqlserver-sap-client-id	The client ID used to create the first connection with the SAP system. Values: String Mandatory: Yes, if install-sap-inter-point is true.
install-sap-inter-point	Indicates whether you want to install SAP Interpoint Values: true, false Mandatory: No
apptier-name	Name of the Tier. Values: String Mandatory: No
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
os-user	Specifies the Windows user that the collector should use. Values: String Mandatory: Must be specified if the PMBD uses Windows authentication.
os-domain	Specifies the Windows user's domain that the collector should use. Values: String Mandatory: Must be specified if the PMBD uses the Windows authentication.
os-encrypted-password	Specifies the Windows password that the Collector should use. Values: Encrypted String. For more information, see Encrypt command on page 146. Alternatively the os-clear-password parameter can be used, allowing you to specify a clear password instead of an encrypted string. Mandatory: Must be specified if the PMBD uses Windows authentication.
install-alert-customized	Values: true/false Mandatory: No Set to true to in case you want to have customized alerts metrics for this instance.

Installing Precise for SAP with the Precise CLI utility

Installing SAP Collectors on a server enables you to sample a remote SAP system.

Before installing the SAP Tier Collector with the Precise CLI utility, verify the following issue:

- Precise for SAP FocalPoint was installed.

To install Precise for SAP with the Precise CLI utility

1. Create the Precise for SAP parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see <u>About Precise for SAP parameter file</u> on page 82.

2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sap_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sap_installation_parameters_file_name>

About Precise for SAP parameter file

You need to prepare the Precise for SAP parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following table describes the updated elements of the parameter file. Element names marked with an asterisk (*), in this table, can be updated after installation.

Example:

```
<parameters>
    <parameter name="setup-process" value="apptier-SP"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="instance-name" value="H47_TEST2" />
    <parameter name="sap-system" value="H47" />
    <parameter name="default-app-server" value="poolhp3" />
    <parameter name="app-server-exist" value="true" />
    <parameter name="app-rout-string-exist" value="false" />
    <parameter name="app-rout-string" value="" />
    <parameter name="db-system-number" value="00" />
    <parameter name="sap-user" value="adm" />
    <parameter name="sap-clear-password" value="precise" />
    <parameter name="client-id" value="000" />
    <parameter name="environment-name" value="Default" />
    <parameter name="app-servers" value="host=poolhp3;routing-str=;port=00;name=poolhp3_H47_00" />
    <parameter name="clients" value="lang=E;number=000||lang=E;number=001||lang=E;number=066||lang=E;number=100" />
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

Table 2-16   Elements of the Precise for SAP parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. always apptier-SP Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
instance-name	The unique name for the instance. This unique name helps to distinguish between several instances. Values: String Mandatory: Yes

Element	Description
sap-clients	The SAP clients numbers and language that the SAP Collector should monitor. Use two pipelines "||" as a separator between the clients names. lang=E;number=000||lang=E;number=001||lang=E;number=066||lang=E;number=100
	Value: String
	Mandatory: No
	If not specified, all clients detected will be monitored.
sap-system	The SAP system name.
	Values: String
	Mandatory: Yes
default-app-server*	The Application server name used to create the first connection with the SAP system.
	Values: String
	Mandatory: Yes, if app-rout-string is not provided.
app-rout-string*	The Application server route string used to create the first connection with the SAP system.
	Values: String
	Mandatory: Yes, if default-app-server is not provided.
sap-connection-type	The connection type to use when connecting to SAP
	Values: String (CustomApplicationServer/LogonGroup)
	Mandatory: No
	Default value: CustomApplicationServer
sap-logon-group	Group/Server to use when connecting to SAP
	Values : String
	Mandatory: Yes, if sap-connection-type is LogonGroup
db-system-number*	The SAP system number.
	Values: String
	Mandatory: Yes
sap-user*	The SAP system user name.
	Values: String
	Mandatory: Yes
sap-encrypted-password*	The SAP system encrypted password.
	Values: Encrypted String
	Mandatory: Yes. For more information, see Encrypt command on page 146.
	Alternatively the sap-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
client-id*	The client ID used to create the first connection with the SAP system.
	Values: String
	Mandatory: Yes

Element	Description
app-servers*	The Application servers that the SAP Collectors should monitor. Use two pipelines "||" as a separator between the Application server names.
	Format: name=application-server-name;host=host-name; routing-str=routing-string;port=port-number
	Values: String
	Mandatory: No
	If not specified, all application servers detected will be monitored.
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No
environment-name	Name of an existing application.
	Values: String
	Mandatory: Yes

Installing Precise for Sybase with the Precise CLI utility

Installing the Sybase Tier Collector on a server enables you to sample a Sybase instance on the server. A Sybase Tier Collector can be installed on Windows servers running Sybase instances on any Windows server and sample the Sybase instance remotely. Before installing the Sybase Tier Collector with the Precise CLI utility, verify the following issues:

- Precise for Sybase FocalPoint was installed.

- The Precise Listener was installed on the target server on which the Sybase Tier Collector is to be installed.

- The Precise Listener and all FocalPoints installed on the target server are running and accessible on the network. To install Precise for Sybase with the Precise CLI utility

1. Create the Precise for Sybase parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can create this file in advance. See About the Precise for Sybase parameter file on page 84.
2. Run the following command from the Precise root folder on the main Precise FocalPoint. This executes the Precise CLI utility installation script.

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sybase_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_sybase_installation_parameters_file_name>

About the Precise for Sybase parameter file

When you install Precise for Sybase with the Precise CLI utility, you must first create an XML file that contains all relevant installation parameters and their respective values. This file is referenced by the Precise CLI utility installation script during the installation process.

The following is an example of an Precise for Sybase parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-SY"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="apptier-name" value="Sybase"/>
    <parameter name="environment-name" value="Default"/>
    <parameter name="collector-server-machine-name" value="pifa102"/>
    <parameter name="instance-server-machine-name" value="sun12"/>
    <parameter name="sybase-instance-name" value="sun12_12_0"/>
    <parameter name="sybase-port" value="5100"/>
    <parameter name="sybase-i3-user" value="sa"/>
    <parameter name="sybase-i3-encrypted-password" value="IE"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The identity of a Sybase instance is determined by a concatenation of the instance-server-machine-name tag and the sybase-instance-name tag. The following table describes the updated elements of the parameter file. Field names marked with an asterisk (*) can be updated after installation.

Table 2-17 Elements of the Precise for Sybase parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
setup-process	Setup process. always apptier-SY
	Mandatory: Yes
setup-mode	Setup mode.
	Values: install, edit, uninstall
	Mandatory: Yes
instance-server-machine-name	Name of the server that the Sybase instance is installed on.
	Values: String
	Mandatory: Yes
sybase-instance-name	Name of the Sybase instance.
	Values: String
	Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for Sybase Collector will be installed.
	Values: String
	Mandatory: Yes
sybase-port*	The number of the port that the Sybase instance is listening on.
	Values: Integer
	Mandatory: Yes
sybase-i3-user	The name of the user.
	Values: String
	Mandatory: Yes
sybase-i3-encrypted-password	The password for the user name.
	Values: Encrypted String.
	Mandatory: Yes. For more information, see Encrypt command on page 146. Alternatively the sybase-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
sybase-ssl-enable	Indicates whether the monitored Sybase instance is SSL enabled.
	Values: Yes, No
	Mandatory: No If this parameter is set to true, trusted.txt file must be copied to: <precise_root_dir>\products\Sybase\install\etc\ before running the CLI.
sybase-password-encryption-type-value	Indicates whether the passwords sent to the Sybase instance need to be encrypted.
	Values: Encrypted, Plaintext
	Mandatory: No
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No

Element	Description
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance.

Installing Precise for Sybase Replication Server with the Precise CLI utility

Installing the Sybase Replication Server Tier Collector on a server, enables you to sample a Sybase Replication Server instance on the server.

Sybase Replication Server Tier Collector can be installed on Windows servers running Sybase Replication Server instances, or it can be installed on any Windows server and sample the Sybase Replication Server instance remotely.

Before installing the Sybase Replication Server Tier Collector with the Precise CLI utility, verify the following issues:

- Precise for Sybase FocalPoint was installed.
- The Precise Listener was installed on the target server on which the Sybase Replication Server Tier Collector is to be installed.
- The Precise Listener and all FocalPoints installed on the target server are running and accessible on the network. To install Precise for Sybase Replication Server with the Precise CLI utility

1. Create the Precise for Sybase Replication Server parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also create this file in advance. For more information, see <u>About the Precise for Sybase Replication Server parameter file</u> on page 86.
2. With the user that you created when defining the Precise server, run the following command from the `<precise_root>` folder on the main Precise FocalPoint. This executes the CLI utility installation script.

Windows	infra\bin\psin_cli.bat -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <name_of_the_sybase_replication_server_parameters_file>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <name_of_the_sybase_replication_server_parameters_file>

About the Precise for Sybase Replication Server parameter file

When you install Precise for Sybase Replication Server with the Precise CLI utility, you must first create an XML file that contains all relevant installation parameters and their respective values. This file is referenced by the Precise CLI utility installation script during the installation process. The following is an example of a Precise for Sybase Replication Server parameters file:

```
<root>
    <parameter name="setup-process" value="apptier-RS"/>
    <parameter name="sybase-replication-server-instance-name" value="POOLSUN1_1501_REP"/>
    <parameter name="instance-server-machine-name" value="poolsun1"/>
    <parameter name="collector-server-machine-name" value="pifa100"/>
    <parameter name="sybase-replication-server-port" value="5006"/>
    <parameter name="sybase-replication-server-i3-user" value="sa"/>
    <parameter name="sybase-replication-server-i3-encrypted-password" value="IE"/>
    <parameter name="sybase-replication-server-sql-ini-path" value="C:\\sybase\\ini\\sql.ini"/>
    <parameter name="sybase-replication-server-rssd-instance" value="I4SQLV65_1502"/>
    <parameter name="sybase-replication-server-rssd-database" value="POOLSUN1_1501_REP_RSSD"/>
    <parameter name="sybase-replication-server-rssd-host" value="i4sqlv65"/>
    <parameter name="sybase-replication-server-rssd-port" value="5001"/>
    <parameter name="sybase-replication-server-rssd-i3-user" value="sa"/>
    <parameter name="sybase-replication-server-rssd-encrypted-password" value="IE"/>
    <parameter name="installation-cd-path" value="d:\"/>
</root>
```

The identity of a Sybase Replication Server instance is determined by a concatenation of the instance-server-machine-name tag and the sybase-replication-server-instance-name tag.

The following table describes the updated elements of the parameter file. Field names marked with an asterisk (*) can be updated after installation.

Table 2-18   Elements of the Sybase Replication Server parameter file

Element	Description
collector-server-machine-name	Name of the server on which the Sybase Replication Server Collector will be installed. Values: String Mandatory: Yes
instance-server-machine-name	Name of the server that the Sybase Replication Server instance is installed on. Values: String Mandatory: Yes
setup-mode	Values: install, edit, uninstall Mandatory: Yes
setup-process	always apptier-RS Mandatory: Yes
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
sybase-replication-server-instance-name	Name of the Sybase Replication Server instance. Values: String Mandatory: Yes
sybase-replication-server-port*	The number of the port that the Sybase Replication Server instance is listening on. Values: Integer Mandatory: Yes
sybase-replication-server-i3-user	The name of the user. Values: String Mandatory: Yes
sybase-replication-server-i3-encrypted-passwo rd	The password for the user name. Values: Encrypted String. Mandatory: Yes. For more information, see [Encrypt command](#) on page 146. Alternatively the sybase-replication-server-i3-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
sybase-replication-server-sql-ini-path	The path to Sybase Replication Server instance sql.ini file Values: String Mandatory: Yes
sybase-replication-server-rssd-instance	Name of the Sybase Replication Server ASE instance. Values: String Mandatory: Yes

Element	Description
sybase-replication-server-rssd-database	Name of the Sybase Replication Server ASE database. Values:String Mandatory: Yes
sybase-replication-server-rssd-host	Name of the Sybase Replication Server ASE host Values: String Mandatory: Yes
sybase-replication-server-rssd-port*	Port of the Sybase Replication Server ASE Values: Integer Mandatory: Yes
sybase-replication-server-rssd-i3-user	The name of the Sybase Replication Server ASE user Values: String Mandatory: Yes
sybase-replication-server-rssd-encrypted-pass word	The password of the user of Sybase Replication Server ASE Values: Encrypted String. Mandatory: Yes. For more information, see Encrypt command on page 146. Alternatively the sybase-replication-server-rssd-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
apptier-name	Name of the Tier. Values: String Mandatory: No
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false Mandatory: No Set to true to in case you want to have customized alerts metrics for this instance.
os-user	Specifies the Windows user that the collector should use. Values: String Mandatory: Must be specified if the PMBD uses Windows authentication.
os-domain	Specifies the Windows user's domain that the collector should use. Values: String Mandatory: Must be specified if the PMBD uses the Windows authentication.

Element	Description
os-encrypted-password	Specifies the Windows password that the Collector should use.
	Values: Encrypted String. For more information, see Encrypt command on page 146. Alternatively the os-clear-password parameter can be used, allowing you to specify a clear password instead of an encrypted string.
	Mandatory: Must be specified if the PMBD uses Windows authentication.

Installing Precise for DB2 with the Precise CLI utility

Installing DB2 Tier Collectors on a server enables you to monitor DB2 instances on the server. A DB2 Tier Collector should be installed for each DB2 instance on the server that will be monitored. Before installing a DB2 Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise for DB2 FocalPoint was installed.

- The Listener on the target server on which the Precise for DB2 agent is to be installed was installed. To install Precise for DB2 with the Precise CLI utility

1. Create the Precise for DB2 parameter file and save it to the <*precise_root*> folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About the Precise for DB2 parameter file on page 84.
2. Run the following command from the <*precise_root*> folder on the main Precise FocalPoint to execute the Precise CLI installation script:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_db2_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <precise_for_db2_installation_parameters_file_name>

About the Precise for DB2 parameter file

You need to prepare the Precise for DB2 parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a Precise for DB2 parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-UD"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="sun3"/>
    <parameter name="db2-instance" value="db2inst1" />
    <parameter name="db2-database" value="SAMPLE" />
    <parameter name="db2-user" value="db2inst1" />
    <parameter name="db2-clear-password" value="db2inst1" />
    <parameter name="db2-port" value="60000" />
    <parameter name="db2-partition" value="0" />
    <parameter name="db2-tablespace" value="APM_DB2" />
    <parameter name="db2-tablespace-container" value="APM_DB2" />
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the elements of the Precise for DB2 parameter file. Element names marked with an asterisk (*) can be updated after installation.

Table 2-19 Elements of the Precise for DB2 parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. Values: apptier-UD Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server on which the Precise for DB2 Collector will be installed. Values: String Mandatory: Yes
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
db2-instance	DB2 instance name. Values: String Mandatory: Yes
db2-database	DB2 database name. Values: String Mandatory: Yes
db2-partition	DB2 partition number. Values: Numeric Mandatory: Yes
db2-dba-user	User name for DB2 user with DBA privileges. Will only be used during installation. Values: String Mandatory: Yes
db2-encrypted-password	Password for DB2 user with DBA privileges. Will only be used during installation. Values: Encrypted String Mandatory: Yes. For more information, see Encrypt command on page 146. Alternatively the db2-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
db2-port*	DB2 instance Listener port. Values: Numeric Mandatory: Yes

Element	Description
db2-tablespace	Storage parameter for the Precise for DB2 schema. Indicates Tablespace name. Values: String Mandatory: Yes
db2-tablespace-container	Tablespace container. Values: String Mandatory: Yes
install-storage	Install Precise for Storage for Precise file systems and logical volumes. Values: true, false Mandatory: No, default is false.
symmetric-api-path	EMC path Value String Mandatory:Yes if install storage is true
install-sap-inter-point	Indicates whether you want to install sap interpoint Values: true, false Mandatory: No
db2-sap-system-name	The SAP system name. Values: String Mandatory: Yes, if install-sap-inter-point is true.
db2-sap-default-application-server	The Application server name used to create the first connection with the SAP system. Values: String Mandatory: Yes, if install-sap-inter-point is true.
db2-sap-system-number	The SAP system number. Values: String Mandatory: Yes, if install-sap-inter-point is true.
db2-sap-user	The SAP system user name. Values: String Mandatory: Yes, if install-sap-inter-point is true.
db2-sap-encrypted-password	The SAP system encrypted password. Values: Encrypted String Mandatory: Yes, if install-sap-inter-point is true. For more information, see Encrypt command on page 146. Alternatively the db2-sap-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
db2-sap-client-id	The client ID used to create the first connection with the SAP system. Values: String Mandatory: Yes, if install-sap-inter-point is true.
apptier-name	Name of the Tier. Values: String Mandatory: No

Element	Description
install-alert-customized	Value: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance.

Installing a Tuxedo instance with the Precise CLI utility

Installing Tuxedo Collectors on a server enables you to sample Tuxedo instances on the server. A Tuxedo Tier Collector can be installed only on servers running Tuxedo instances.

Before installing a Tuxedo Tier Collector with the Precise CLI utility, verify the following issues:

- The Insight FocalPoint is installed.

- The Precise Listener on the target server on which the Tuxedo Collector is to be installed, was installed. To install Tuxedo instance with the Precise CLI utility

1. Create the Tuxedo instance parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About Tuxedo Collector parameter file on page 84.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <insight_savvy_for_tuxedo_ installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <insight_savvy_for_tuxedo_ installation_parameters_file_name>

About Tuxedo Collector parameter file

You need to prepare the Insight Savvy for Tuxedo parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a Tuxedo instance parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-TU"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="apptier-name" value="Tuxedo"/>
    <parameter name="environment-name" value="Default"/>
    <parameter name="collector-server-machine-name" value="pifa102"/>
    <parameter name="tuxedo-domain" value="tux_aix1"/>
    <parameter name="instance-name" value="myInstance"/>
    <parameter name="tuxedo-directory" value="/Oracle2/Tuxedo/65"/>
    <parameter name="tuxedo-config-file" value="/Oracle2/Tuxedo/65/apps/ simapp/tuxconfig"/>
    <parameter name="tuxedo-version" value="65"/>
    <parameter name="install-network" value="true"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file. Element names marked with an asterisk (*) in this table can be updated after installation.

Table 2-20   Elements of the Tuxedo Collector parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
setup-process	Setup process. Always apptier-TU
	Mandatory: Yes
setup-mode	Setup mode.
	Values: install, edit, uninstall
	Mandatory: Yes
collector-server-machine-name	Name of the server on which the Tuxedo Collector will be installed.
	Values: String
	Mandatory: Yes
instance-name (component identifier field)	Name of the Tuxedo instance that will be installed.
	Values: String
	Mandatory: Yes
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false)
	Values: true/false
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.
tuxedo-domain	Name of the Tuxedo domain where the Tuxedo Tier will be installed.
	Values: String
	Mandatory: Yes
tuxedo-directory*	The installation home folder for the Tuxedo information system.
	Values: String
	Mandatory: Yes
tuxedo-config-file*	The full binary path of the configuration file for the Tuxedo information system that is planned to be monitored.
	Values: String
	Mandatory: Yes
tuxedo-version*	The BEA Tuxedo version. Precise supports BEA Tuxedo 6.4 to 9.0.
	Values: String (XY[_64]). XY are the two digits for the version number. Add "_64" for 64-bits domains. For example: for BEA Tuxedo version 7.1 32-bits use "71"; for 9.0 64-bits use "90_64"
	Mandatory: Yes
install-network*	Associates a Tuxedo activity with network statistics.
	Values: true, false
	Mandatory: No
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No

Element	Description
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance

Installing a WebSphere MQ instance with the Precise CLI utility

Installing WebSphere MQ Collectors on a server enables you to sample WebSphere MQ instances on the server. A WebSphere MQ Tier Collector can be installed only on servers running WebSphere MQ instances.

Before installing a WebSphere MQ Tier Collector with the Precise CLI utility, verify the following issues:

- The Insight FocalPoint is installed.

- The Precise Listener on the target server on which the WebSphere MQ Tier Collector is to be installed, was installed.

To install the WebSphere MQ instance with the Precise CLI utility

1. Create the WebSphere MQ instance parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About WebSphere MQ instance parameter file on page 83.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*>	-i3-clear-password <*clear_password*>} -action setup -parametersfile <insight_savvy_for_websphere_mq_ installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*>	-i3-clear-password <*clear_password*>} -action setup -parametersfile <insight_savvy_for_websphere_mq_ installation_parameters_file_name>

About WebSphere MQ instance parameter file

You need to prepare the WebSphere MQ instance parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of a WebSphere MQ instance parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-MQ" />
    <parameter name="instance-name" value="mqTest" />
    <parameter name="collector-server-machine-name" value="server1" />
    <parameter name="mq-queue-manager-name" value="mqTest" />
    <parameter name="mq-home-directory" value="D:\Program Files\IBM\WebSphere MQ" />
    <parameter name="mq-library" value="D:\Program Files\IBM\WebSphere MQ\Exits" />
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file. Element names marked with an asterisk (*), in this table, can be updated after installation.

Table 2-21 Elements of the WebSphere MQ instance parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. Always apptier-MQ Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server the MQ Tier will be installed on. Values: String Mandatory: Yes
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false) Values: true/false Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.
instance-name	A unique name of the WebSphere MQ instance. This unique name helps to distinguish between several instances. Use the name of the corresponding Queue Manager. Values: String Mandatory: Yes
mq-queue-manager-name	The Queue Manager that the WebSphere MQ Tier Collector will sample. Values: String Mandatory: Yes
mq-home-directory*	The full folder path of the WebSphere MQ software component configuration, to be used with this instance. Values: String Mandatory: Yes
mq-library*	The full folder path of the library where WebSphere MQ software components keep the API exits. Values: String Mandatory: Yes
install-network*	Associates WebSphere MQ activity with network statistics. Values: true, false Mandatory: No, default is false
network-ports*	WebSphere MQ listener ports. Use two pipelines "||" as a separator between the ports. Specify all the ports you want the Insight Savvy for Network to sample. At least one port must be specified. Values: port=x||port=y (for example: port=1111||port=2222) Mandatory: Yes if `install-network` is "true".

Element	Description
apptier-name	Name of the Tier.
	Values: String
	Mandatory: No
environment-name	Name of the application.
	Values: String
	Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false
	Mandatory: No
	Set to true to in case you want to have customized alerts metrics for this instance.

Installing an Oracle Applications instance with the Precise CLI utility

Installing Oracle Applications Collectors on a server enables you to sample Oracle Applications instances on the server.

Before installing an Oracle Applications Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise for Oracle FocalPoint and Precise for Oracle Collector are installed and running.

- The Precise Listener on the target server on which the Oracle Applications Tier Collector is to be installed, was installed.

- If Insight is to monitor the instance and the listener mode is Forms Servlet Mode, then the Precise for J2EE Collector must be installed to monitor the Oracle Applications forms JVM.

To install Oracle Applications Tier Collector with the Precise CLI utility

1. Create the Oracle Applications Tier Collector parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About Oracle Applications Tier Collector parameter file on page 83.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action setup -parametersfile <insight_savvy_for_oracle_applications_installation_ parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action setup -parametersfile <insight_savvy_for_oracle_applications_installation_ parameters_file_name>

About Oracle Applications Tier Collector parameter file

You need to prepare the Oracle Applications Tier Collector parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of an Oracle Applications Tier Collector parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-OA"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="sun3"/>
    <parameter name="instance-server-machine-name" value="sun4"/>
    <parameter name="instance-name" value="OA1"/>
    <parameter name="oracle-instance-name" value="ORCL"/>
    <parameter name="oa-form-mode" value="forms_listener"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the elements of the parameter file. Element names marked with an asterisk (*), in this table, can be updated after installation.

Table 2-22 Elements of the Oracle Applications Tier Collector parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. Always apptier-OA Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the related Oracle instance server machine. Values: String Mandatory: Yes
instance-server-machine-name	Name of the server of the OA instance. Values: String Mandatory: Yes
oa-real-instance-name	Name of the real Oracle Applications instance. Values: String Mandatory: No
oa-rac-instances*	Names of the Oracle Applications RAC instances. Use two pipelines "||" as a separator between the instances. Specify only additional oracle instances. Do not specify the oracle instance specified in "oracle-instance-name". (For example: name=ORA817;server=sun3||name=OR920;server=sun5) Mandatory: No
instance-name	A unique name of the Oracle Applications instance. This unique name helps to distinguish between several instances. Values: String Mandatory: Yes
oracle-instance-name	The Oracle database SID name. This instance must be monitored by the Precise for Oracle Collector. Values: String Mandatory: Yes
oa-form-mode*	The Oracle Applications forms server component work mode: ■ Listener mode: Oracle Applications uses a Forms Listener process to handle incoming client connections; Insight uses the Savvy for Network to collect Oracle Applications information in this mode. ■ Forms Listener Servlet mode. Oracle Applications uses a Forms Listener Servlet (running within a Java process) to handle incoming client connections. Insight uses the Precise for J2EE Collector to collect Oracle Applications information in this mode. Values: `forms_servlet`, `forms_listener` Mandatory: Yes
j2ee-instance-name	The J2EE instance that should collect the Oracle Applications forms data. Values: String Mandatory: Yes, only if the listener is `forms_servlet`.

Element	Description
install-insight*	Indicates whether to use Insight to collect Oracle Applications data. Values: true, false Mandatory: No, default is false.
apptier-name	Name of the Tier. Values: String Mandatory: No
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
network-ports	OA listener ports. Use two pipelines "||" as a separator between the ports. Values: port=x||port=y (for example: port=1111||port=2222) Mandatory: No
install-alert-customized	Values: true/false Mandatory: No Set to true to in case you want to have customized alerts metrics for this instance.

Installing Other Tier Collectors with the Precise CLI utility

Installing Other Tier Collectors on a server enables you to sample any Tier which provides service over TCP/IP in your application. You can monitor an application that is running with an Insight Savvy for Network locally. When you want to monitor an application remotely, the Insight Savvy for Network should be installed on the remote server.

Before installing an Other Tier Collector with the Precise CLI utility, verify the following issues:

- The Insight FocalPoint was installed.

- The Precise Listener on the server(s) on which the Insight Savvy for Network Collector is to be installed, was installed.

To install Other Tier Collectors with the Precise CLI utility

1. Create the Other Tier Collectors parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About Other Tier Collectors parameter file on page 83.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows
```
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action setup
-parametersfile <insight_savvy_for_other_ installation_parameters_file_name>
```

UNIX
```
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action setup
-parametersfile <insight_savvy_for_other_ installation_parameters_file_name>
```

About Other Tier Collectors parameter file

You need to prepare the Insight Savvy for Other parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

Example:
```
<parameters>
    <parameter name="setup-process" value="apptier-OT" />
    <parameter name="instance-name" value="Other_Instance" />
    <parameter name="instance-server-machine-name" value="server1" />
    <parameter name="other-protocol-type" value="normal"/>
    <parameter name="other-apptier-type" value="FE" />
    <parameter name="other-monitor-method" value="local" />
```

```
    <parameter name="other-monitor-ports" value="static" />
    <parameter name="other-static-ports" value="from=50;to=90||from=100;to=120" />
    <parameter name="installation-cd-path" value="d:\"/>
  </parameters>
```

The following table describes the elements of the parameter file. Element names marked with an asterisk (*) can be updated after installation.

Table 2-23   Elements of the Other Tier Collectors parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to.
	Values: String
	Mandatory: Yes
setup-process	Setup process. Always apptier-OT
	Mandatory: Yes
setup-mode	Setup mode.
	Values: install, edit, uninstall
	Mandatory: Yes
instance-name (component identifier field)	The unique name of the Tier that the Insight Savvy for Other Tier will monitor (for example, Citrix_Production, AS400_DB).
	Values: String
	Mandatory: Yes
other-apptier-type*	Indicates the position and role of the Tier in your application. The options are as follows:
	■ FE (Front-end). The first connection or input side in your application.
	■ AP (Application Server). The middle Tier in your application. It is responsible for the business logic.
	■ DB (Database). The back-end Tier in your application. Values: String
	Mandatory: Yes
other-protocol-type*	The network protocol for the monitored application. Two protocol types are supported:
	■ ica (Citrix). The monitored application is a Citrix Presentation server application.
	■ normal (Other). The monitored application uses any other protocol. Values: String
	Mandatory: Yes
other-monitor-method	The location from where the server is monitored. Two location types are available:
	local (Locally). Check this option if you want the Insight Savvy for Network to monitor TCP traffic on a local Listener port.
	remote (Remotely). Check this option if you want the Insight Savvy for Network to monitor all TCP traffic to a remote server port. Remote monitoring is usually used to monitor services on the computers the file is installed on, that cannot be monitored locally (for example: mainframe or unsupported operating systems running TCP applications).
	Values: local, remote
	Mandatory: Yes
other-monitor-ports*	Other monitor ports.
	Values: static (if monitoring fixed ports), dynamic (if monitoring dynamic ports)
	Mandatory: Yes

Element	Description
instance-server-machine-name	The name of the server where you will install the Other Tier. The server name or IP address will be valid if you previously defined this server as a Precise server. Values: String. Mandatory: Yes
other-remote-servers*	The names of the servers where you want to monitor the remote Tier. These are names whose ports will be monitored separated by two pipelines "||". Format: remote-server=server-name||remote-server=server-name Values: String. Mandatory: Yes, only if `other-monitor-method="remote"`. Otherwise, this must be empty without the value attribute:
other-static-ports*	The TCP/IP fixed port or ports listened to by the monitored application. Use two pipelines "||" as a separator between the port ranges as follows: from=80;to=90||from=100;to=120. Do not define if the dynamic `other-dynamic-ports-include-programs` or `other-dynamic-ports-exclude-programs` fields are present. Values: String Mandatory: No.
other-dynamic-ports-include-progra ms*	The dynamic ports to be monitored; they are listened to by the monitored application. These are names of programs whose ports will be monitored. The program name will be matched against the first 9 characters of the names in the list separated by two pipelines "||". Format: program=program-name||program=program-name. Do not define if the `other-static-ports` field is present. Values: String. Mandatory: No. Up to three values can be defined.
other-dynamic-ports-exclude-progra ms*	The dynamic ports, listened to by the monitored application, that should NOT to be monitored. These are names of programs whose ports will NOT be monitored. The program name will be matched against the first 9 characters of the names in the list separated by two pipelines "||". Format: program=program-name||program=program-name. Do not define if the `other-static-ports` field is present. Values: String. Mandatory: No. Up to three values can be defined.
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false) Values: true/false Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.

Installing an OS instance with the Precise CLI utility

Installing OS Collectors on a server enables you to sample OS instances on the server.

Before installing an OS Tier Collector with the Precise CLI utility, verify the following issues:

- The Insight FocalPoint is installed.

- The Precise Listener on the target server on which the OS Collector is to be installed, was installed. To install OS Collectors with the Precise CLI utility

1. Create the OS Collectors parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script. Use the Precise user that was created when the Precise server was defined.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <insight_savvy_for_os_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action setup -parametersfile <insight_savvy_for_os_installation_parameters_file_name>

About OS Collectors parameter file (Precise CLI utility)

You need to prepare the Insight Savvy for OS parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of an Insight Savvy for OS parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-OS"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="pifa102"/>
    <parameter name="instance-name" value="pifa102"/>
    <parameter name="installation-cd-path" value="d:\"/>
</parameters>
```

The following table describes the updated elements of the parameter file.

Table 2-24 Elements of the OS Collectors parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. always apptier-OS Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server on which the OS Collector will be installed. Values: String Mandatory: Yes
instance-name	Name of the server on which the OS Collector will be installed. Values: String Mandatory: Yes
environment-name	Name of the application. Values: String Mandatory: Yes, for a federation installation
install-alert-customized	Values: true/false Mandatory: No Set to true to in case you want to have customized alerts metrics for this instance.

Element	Description
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false)
	Values: true/false
	Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.

Installing an extension for Siebel with the Precise CLI utility

Installing Siebel Collectors on a server enables you to sample Siebel instances on the server. A Siebel Tier Collector can be installed on all servers.

Before installing a Siebel Tier Collector with the Precise CLI utility, verify the following issues:

- The Precise for Oracle FocalPoint and Precise for Oracle Collector instance or Precise for SQL Server FocalPoint and Precise for SQL Collector instance are installed and running.

- The Precise Listener on the target server on which the Insight Savvy for Siebel Collector is to be installed was installed.

To install Interpoint for Siebel

1. Create the Interpoint for Siebel parameter file and save it to the `<precise_root>` folder on the main Precise FocalPoint. You can also set up this file in advance. For more information, see About the Interpoint for Siebel parameter file on page 83.
2. Run the following command from the `<precise_root>` folder on the main Precise FocalPoint to execute the Precise CLI utility installation script.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <interpoint_for_siebel_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action setup -parametersfile <interpoint_for_siebel_installation_parameters_file_name>

About the Interpoint for Siebel parameter file

You need to prepare the Interpoint for Siebel parameter file by creating an XML file with elements that represent the installation parameters and inserting the appropriate values.

The following is an example of an Interpoint for Siebel parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-SB"/>
    <parameter name="setup-mode" value="install"/>
    <parameter name="collector-server-machine-name" value="srv1"/>
    <parameter name="instance-name" value="EnDev"/>
    <parameter name="siebel-database-server-name" value="dbsrv2"/>
    <parameter name="siebel-database-instance-name" value="SBLDB"/>
    <parameter name="siebel-gateway-server" value="srv2"/>
    <parameter name="siebel-path" value="d:\sea752\siebsrv"/>
    <parameter name="siebel-user" value="sadmin"/>
    <parameter name="siebel-encrypted-password" value="ICLFAHMGHKEAII"/>
</parameters>
```

The following table describes the updated elements of the parameter file. Element names marked with an asterisk (*) can be updated after installation.

Table 2-25   Elements of the Interpoint for Siebel parameter file

Element	Description
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes
setup-process	Setup process. Values: apptier-SB Mandatory: Yes
setup-mode	Setup mode. Values: install, edit, uninstall Mandatory: Yes
collector-server-machine-name	Name of the server the Siebel Tier will be installed on. Values: String Mandatory: Yes
instance-name	Indicates the Siebel connection name. This name must be unique. Values: String Mandatory: Yes
siebel-database-server-name	The server on which the Precise for Oracle Collector is running. Values: String Mandatory: Yes If using an SQL Server, this field is not required.
siebel-database-instance-name	Indicates the Oracle or SQL Server database instance name. Values: String Mandatory: Yes
siebel-gateway-server*	Indicates the Siebel gateway name. Values: String Mandatory: Yes
siebel-path*	Indicates the Siebel installation path. Values: String Mandatory: Yes
siebel-user*	Indicates the Siebel user name. Values: String Mandatory: Yes
siebel-encrypted-password*	Password for Siebel. Values: Encrypted String. For more information, see Encrypt command on page 146. Mandatory: Yes. Alternatively the siebel-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.
install-alert-customized	Values: true/false Mandatory: No Set to true in case you want to have customized alerts metrics for this instance.

Installing Precise for vCenter Server with the Precise CLI utility

The installation of Precise for vCenter Server can be performed using AdminPoint and by using the Precise CLI utility. For information on installing Precise for vCenter Server using AdminPoint, see the *Precise Installation Guide*.

Before installing Precise for vCenter Server with the Precise CLI utility, verify the following issue:

- The server on which you install Precise for vCenter Server must contain a Precise Listener

To install Precise for vCenter Server

1. Prepare XML parameters file to specify the Precise for vCenter Server installation parameters.
2. Prepare the log in details for the server with VMware vCenter Server.
3. On the FocalPoint, run the following command from the `<precise_root>` folder to install the CLI utility installation script:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action setup -parametersfile <precise_for_vcenter_server_installation_parameters_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action setup -parametersfile <precise_for_vcenter_server_installation_parameters_file_name>

About the Precise for vCenter Server parameter file

You need to prepare the Precise for vCenter Server parameter file by creating an XML file with tags that represent the installation parameters and inserting the appropriate values.

The following is an example of a server parameters file:

```
<parameters>
    <parameter name="setup-process" value="apptier-VC" />
    <parameter name="setup-mode" value="install" />
    <parameter name="collector-server-machine-name" value="inf-fw-10" />
    <parameter name="instance-server-machine-name" value="phy-vmtest-db1" />
    <parameter name="vmware-center-user" value="VCuser" />
    <parameter name="vmware-center-clear-password" value="VCpassword" />
    <parameter name="vmware-center-exclude-servers" value="server=vm*|server=inf-fw-20" />
    <parameter name="vmware-center-port" value="443" />
    <parameter name="vmware-center-use-ssl-configuration" value="true" />
    <parameter name="vmware-center-ssl-use-certificate" value="true" />
</parameters>
```

The parameters file is an XML file containing a list of parameters for a Precise for vCenter Server installation.

Table 2-26   Elements of the Precise for vCenter Server parameter file

Element	Description
setup-process	Name of the setup process. Always apptier-VC Mandatory: Yes
setup-mode	Must be in one of the following modes: ■ install (used to install Precise for vCenter Server) ■ edit (used to update Precise for vCenter Server) ■ uninstall (used to uninstall Precise for vCenter Server) Mandatory: Yes
collector-server-machine-name	Name of the server where Precise is located. The name must be written in lowercase letters only. Values: String Mandatory: Yes

Element	Description
instance-server-machine-name	Name of the server where the vCenter Server is located. The name must be written in lowercase letters only. Values: String Mandatory: Yes
vmware-center-user	Name of the user who has permissions for the vCenter Server. Values: String Mandatory: Yes
vmware-center-encrypt-password	Password of the user who has permissions for the vCenter Server. Values: Encrypted string Mandatory: Yes. Alternatively the vmware-center-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see Encrypt command on page 146.
vmware-center-exclude-servers	Names of the servers that are excluded from the VCenter Server. Values: String separated by |. For example server=vm*|server=inf-fw-20 Mandatory: No
vmware-center-port	Port of the vCenter Server instance. Values: Numeric Mandatory: Yes
vmware-center-use-ssl-configurat ion	Indicates if SSL configuration is used. Values: (true/false). The default setting is true. Mandatory: No
vmware-center-ssl-use-certificate	Indicates if an SSL server certificate needs to be used. Values: (true/false). The default setting is false. Mandatory: No.
show-historical-data	Indicates if historical data from the deleted instance is shown (true) or deleted (false) Values: true/false Mandatory: No. This parameter is only relevant when the setup-mode is uninstall.

Extricate command

Extricate CLI allows you to fetch installation related parameters. For example, if you have installed an Oracle instance in Precise, you can run extricate CLI to find all Oracle instance installation parameters. You can then use these parameters for informative purpose, and/or use the parameters to edit and modify the instance settings using CLI edit mode. For more information, see Edit & uninstall on page 82.

To use extricate CLI you should identify the related installation. This includes the following:

- For Framework installation - supply the Precise FocalPoint server name parameter and setup-process=framework

- For Precise FocalPoint installation - supply the Precise FocalPoint product code and server name parameters and setup-process=focal-<PRODUCT_CODE> (see Product Codes on page 175.)

- For instance installation - supply the instance name, and instance/collector server name parameters and setup-process=apptier-<TECHNOLOGY_CODE> (see Technology Codes on page 174.)

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action extricate [-parametersfile <path_to_input_parameters_file>] [-parameter <name=value>] [-output-file *<file>*]

UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action extricate [-parametersfile <path_to_input_parameters_file>] [-parameter <name=value>] [-output-file <*file*>]

For example:

```
infra\bin\psin_cli.bat
-i3-user admin
-i3-clear-password admin
-action extricate
-parameter setup-process=apptier-OR
-parameter collector-server-machine-name=poolsun5
-parameter instance-name=ORCL
```

The output will be done to an XML parameters file which is created by the CLI.

Table 2-27   Elements of the Extricate command parameters file

Element	Description
i3-user	See <u>Authenticate to CLI Utility</u> on page 12.
i3-encrypted-password	See <u>Authenticate to CLI Utility</u> on page 12.
action	Values: always extricate Mandatory: Yes
parameter	Specify parameters to identify the related installation. Mandatory: Yes
parameters-file	Specify the parameters to identify the related installation. The parameters can be specified in the command line as arguments and in a parameters file in the following format: <parameters> </parameters>
output-file	Path to a file that will be created. The file will contain the installation related parameters that are extracted. Values: String Mandatory: No. If this is omitted, the CLI utilities will set the path for the output file and will notify you of its location.

Edit & uninstall

Using CLI you can install, edit, and uninstall components in Precise. Editing an installation allows you to modify its settings. For example - change Precise password used for Oracle instance, or change instrumentation folders for Web instance.

To edit an installation

Use the Extricate command. For more information, see <u>Extricate command</u> on page 84.

Update the related parameters in the parameters file. Run CLI setup using parameter setup-mode=edit. For more information, see <u>Installation with Precise CLI</u> on page 13.

To uninstall an installation

Prepare an input XML file with the required parameters to identify the installation. For more information, see <u>Extricate command</u> on page 84.

Run CLI setup using parameter setup-mode=uninstall. For more information, see <u>Installation with Precise CLI</u> on page 13.

Installing a new instance while keeping historical data from an old instance

There are cases in which you want to install a new instance and use the historical data from an old instance (this might be required in case you have moved or renamed your instance).To do so, use the old instance ID for the new installed instance. The following procedure describes how to do this.

NOTE	Data related to deleted instances may be deleted permanently by the PMDB maintenance process. If you intend to use the deleted instance's data, you should check that it is not deleted by the PMDB. You can see if the check box of the purge parameter in the PMDB Maintenance (Weekly) process is not marked.

NOTE	Old instance data is kept as part of the related FocalPoint schema. This means that the instance historical performance data is only kept while the FocalPoint is installed. If you uninstall the related FocalPoint, you no longer can recover the instance historical performance data.

To install a new instance using an uninstalled instance ID

NOTE	Trying to install an instance, while using an ID that was not deleted will cause an error (You will also get this error when you try to install an instance with an ID of an unmonitored instance). Therefore, if the old instance is not yet uninstalled, uninstall it now without historical data using the GUI or CLI.

1. From the `<precise_root>` folder on the main Precise FocalPoint, run the following query command to retrieve the instance ID:

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action get-instance-id -technology <technology_code> -instance <instance_name> -server <server_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action get-instance-id -technology <technology_code> -instance <instance_name> -server <server_name>

Table 2-28   Elements of the Retrieve instance ID query command

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	always get-instance-id Mandatory: Yes
technology	Values: Technology code. For more information, see Technology Codes on page 174. Mandatory: Yes
instance	The instance name Values: String Mandatory Yes
server	The instance server name Values: String Mandatory Yes

2. If there are several instances with the same name, the CLI utility will provide the latest instance ID in the output. A non-deleted instance will appear as installed.
3. Create CLI parameters file to install the new instance. Add the `recovered-instance-id` parameter to the parameters file with the instance ID that was detected and run the CLI to install the new instance. For more information, see Installing a Tier with the Precise CLI utility on page 31.

3

Auto Deployment

This section includes the following topics:

- [About auto deployment](#)
- [Preparing auto deployment](#)
- [Installing with the Template Listener](#)

About auto deployment

To enhance the installation experience a new option has been developed that helps you install servers faster. This option is called "Template Listener" and is set up from the Main Precise FocalPoint. The option consists of two CLI utility commands that prepare the Template Listener for installing new servers and the installation based on the Template Listener. The Template Listener is a set of files that is relevant for a defined type of servers.

The Template Listener needs to be recreated if one of the following cases is applicable:

- The original version of the software on the server is upgraded (e.g. v9.0 to v10.0)
- You have applied an update that include updated packages of psin_ba* or jre_*

Preparing auto deployment

Using the CLI utilities, you can prepare the Template Listener on the Main Precise FocalPoint. This command creates a self extract file that should be extracted on the server that the Precise Listener will be installed on.

To prepare the Template Listener, run the following command from the Main Precise FocalPoint root folder:

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action template-listener-prepare -bits <*bits*> -os "<*os_type*>" -cpu-model <*model*> [-output-file <*file*>] [-proxy-alias <*node_alias*>] [-parameter server-machine-port-template-listener <*port*>] [-parameter server-machine-security-encrypted-password-template-listener <*encrypted_password*>] [-installation-cd-path <*installation_path*>]
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action template-listener-prepare -bits <*bits*> -os "<*os_type*>" -cpu-model <*model*> [-output-file <*file*>] [-proxy-alias <*node_alias*>] [-parameter server-machine-port-template-listener <*port*>] [-parameter server-machine-security-encrypted-password-template-listener <encrypted_*password*>] [-installation-cd-path <*installation_path*>]

Table 3-1   Elements of the Prepare command

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always template-listener-prepare Mandatory: Yes
bits	The OS bits of the server in the template Values: 32 or 64 Mandatory: Yes
os	The type of operating system used Values: See Operating System Type and Flavor on page 176. Mandatory: Yes
cpu-model	The CPU model Values: AMD or ITANIUM Mandatory: Only used for Windows or Linux 64 bits
output-file	The location of the output Values: string Mandatory: No
proxy-alias	Alias of the node Values: string Mandatory: Yes, only in a federation installation
parameter server-machine-port-template-li stener	The listener port for the Template Listener server Values: string Mandatory: No
parameter server-machine-security-encrypt ed-password-template-listener	The password used to encrypt the communication key of the Listener. If this parameter is used, it must also be used in the template-listener-install command for the Template Listener server Values: string Mandatory: No
installation-cd-path	The path of the installation media. Values: string Mandatory: No

Installing with the Template Listener

Using the CLI utilities, you can install the new server based on the prepared Template Listener. The initial process is to copy the self extract file to a dedicated folder on the new server and run it. This can be done by including the extracted files as part of the server's template, or ad-hoc step. If you intend to monitor cluster application servers on the server, verify that you extract the Template Listener to the same folder and drive on every server (so the Precise root folder will be identical). You need to recreate this image in those cases as described at the beginning of this section.

If the main Precise FocalPoint is Windows server and this server is a UNIX server, perform the following step after extracting the self extract file on the new server:

- chmod -R 775 *<the folder in the new server with the template files>* This command handles the permission for this folder.

To install the Template Listener, run the following command from the root folder of the new server:

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action template-listener-install [-parameter server-machine-security-clear-password-template-listener=<*clear_password*>]
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action template-listener-install [-parameter server-machine-security-clear-password-template-listener=<*clear_password*>]

Table 3-2 Elements of the Install command

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always template-listener-install Mandatory: Yes
parameter server-machine-security-clear-p assword-template-listener	The password for the template listener written in clear text Values: string Mandatory: Must be specified when supplied in the template-listener-prepare command

Additionally settings can be adapted using the `template-listener_override.xml` file.

About the template-listener_override.xml parameter file

Template Listener settings can be changed by using the `template-listener_override.xml` file that you need to create in the root folder of the new server. This file is an optional file. If it does not exist in the installation root folder, defaults will be used according to the ones in the template. Apply the following parameters that will override the standard settings:

```
<template-listener-override>
    <override>
        <parameter name="template-listener-server-machine-name" value="<name>"/>
        <parameter name="server-machine-port-template-listener" value="<port>"/>
        <parameter name="server-machine-use-communication-relay-template-listener" value="true|false"/>
    </override>
    <instance>
        parameters for instances as described in this guide (optional)
    </instance>
</template-listener-override>
```

NOTE	The instance tag section can contain instances that you want to install on the server automatically. To specify parameter values which contain the server name (which may be unknown at the time of the template creation) use the word "template-listener". For example: `<parameter name="collector-server-machine-name" value="template-listener"/>`.

Table 3-3   Elements of the Install parameters file

Element	Description
template-listener-server-machine-name	The name of the template-listener server. Values: string Mandatory: No. If not specified the host name is applied.
server-machine-port-template-listener	The listener port for the template-listener server Values: string Mandatory: No
server-machine-use-communication-relay-template-lis tener	Indicates whether this server should use relay communication. Select this option if the server resides behind a firewall. **NOTICE**: Firewall must be opened at the time of installation. Only block the connection with the server after the installation is complete. Values: (true/false) Mandatory: No

4

J2EE Remote Instance Monitoring

This section includes the following topics:

About J2EE remote instance monitoring

If there are security restrictions that prevent the installation of the Precise Listener on the monitored JVM server, you can monitor J2EE instances remotely without installing the Precise Listener there. In that case, the following features which are available in regular J2EE monitoring, are not available:

- It is not possible to configure the agent using the UI Settings menu.

- The patch mechanism will not work. You will need to deploy the patches manually.

- If the JVM is part of a PeopleSoft application, the PeopleSoft related data is not displayed.

- The Availability indication for remote instances will not differentiate between the `Collector is down` and `JVM is down` status. Both statuses will be reported as `JVM is not loading data`.

- It is not possible to generate a Support file for the monitored instance server.

Remote J2EE monitoring uses an SSL-based Listener as part of the Precise Listener which receives requests from the remote J2EE instances. To enable monitoring of a remote J2EE instance, you need to extract the deployment package on the instance server and modify the instance startup to use this folder.

The data is sent from the remote monitored J2EE instance to the SSL listeners, and then processed by Precise Listeners which are configured as consumers. SSL and Consumer configurations can be applied on one or more Precise Listeners. Consumers can be configured to consume data from all SSL listeners or from a specific one. This flexibility can answer Security and performance issues.

For example:

- **Performance case**. If you have a very large activity amount which is sent to one SSL listener, you can configure several Precise Listeners as consumers to load balance the data processing and the load to the PMDB.

- **Security case**. If the monitored server and the FocalPoint are located in different security zones (the monitored server zone cannot approach to the FocalPoint zone), you can configure an SSL Listener in the monitored server zone, and a consumer Listener in the FocalPoint zone, so that the FocalPoint zone will initiate the communication. The SSL and Consumer configuration can be applied to both the Precise FocalPoint and Precise Listener.

Preparing J2EE remote instance monitoring

The preparation of J2EE remote instance monitoring is described in three parts:

- Installing an SSL Listener
- Installing a consumer Listener
- Creating the deployment package

Perform the part in the order as described.

Installing an SSL Listener

Install a new Precise Listener or edit an existing Precise Listener installation and configure the server to be an SSL Listener.

NOTE	The SSL Listener can also be configured on the Precise FocalPoint.

The SSL Listener mode is set by the `server-machine-ssl-<SERVER_NAME>` property. The SSL Listener port is set by the `server-machine-ssl-port-<SERVER_NAME>` property. For example, to enable the SSL Listener on server `sun5`, run the following CLI utility command on the Main Precise FocalPoint server:

Windows	infra\bin\psin_cli.bat -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-ssl-sun5=true -parameter server-machine-ssl-port-sun5=1443
UNIX	infra/bin/psin_cli.sh -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-ssl-sun5=true -parameter server-machine-ssl-port-sun5=1443

Installing a consumer Listener

Install a new Precise Listener or edit an existing Precise Listener installation and configure the server to be a consumer Listener. The consumer Listener mode is set by the server-machine-consumer-mode-<*SERVER_NAME*>property. For example, to enable the consumer Listener on server `sun5`, run the following CLI utility command on the Main Precise FocalPoint server:

Windows	infra\bin\psin_cli.bat -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-consumer-mode-sun5=true
UNIX	infra/bin/psin_cli.sh -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-consumer-mode-sun5=true

The consumer Listener processes the data from the remote J2EE instances. The consumer Listener serves all the J2EE instances. If you have installed many remote J2EE instances and the load on the consumer Listener is high, you can configure additional Precise Listeners to be consumer Listeners.

By default the consumer Listener consumes data from all SSL listeners. If you want to consume data from a specific SSL Listener you can set the server-machine-consume-target-<*SERVER_NAME*>property. For example, to set the consumer Listener on server `sun5` to consume data from SSL Listener `hp2`, run the following CLI utility command on the Main Precise FocalPoint server:

Windows	infra\bin\psin_cli.bat -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-consumer-mode-sun5=true -parameter server-machine-consume-target-sun5=hp2
UNIX	infra/bin/psin_cli.sh -i3-user admin -i3-clear-password admin -action setup -parameter setup-process=server -parameter handle-server-machine-name=sun5 -parameter setup-mode=edit -parameter server-machine-consumer-mode-sun5=true -parameter server-machine-consume-target-sun5=hp2

Creating the deployment package

To create the deployment package

Run the following CLI utility script to create the `deployment.zip` file that should later be extracted on the remote monitored instance server. The `deployment.zip` file can be created once and there is no need to recreate the `deployment.zip` file for each instance that you want to monitor. This `deployment.zip` file is later used in the installation stage.

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action ssl-deployment {-server <*SSL target server*>}
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action ssl-deployment {-server <*SSL target server*>}

Table 4-1   Elements of the deployment command

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always ssl-deployment. Mandatory: Yes
server	SSL target server name Value: String Mandatory: No, unless you have more than one SSL Listener.

Installing the J2EE remote instance

To monitor a remote J2EE instance, perform the following steps to install the J2EE remote instance:

1. Copy the `deployment.zip` file to the J2EE instance server.
2. Extract it to a local folder.

NOTE	Verify that the JVM user has full permissions in the local folder, as the JVM must have access to the folder and files within it to initiate the installation of the J2EE instance. The files also contain the access key to the Precise installation and should only be accessible to the relevant JVM user.

NOTE	You should keep one folder per monitored instance on the server.

3. Add the following JVM parameters to the JVM startup script, where *<LOCAL_LIB>* is the extracted directory name.
   a. For WebSphere, see Installation on WebSphere
   b. For anything else:

      -javaagent:*<LOCAL-LIB>*/products/j2ee/lib/indepthj2ee-agent.jar

      Alternatively, you can run the `displayParams` script, which will generate the JVMparameter.

NOTE	For more information on JVM arguments, see [JVM arguments](#).

4. Restart the JVM to initiate the instance installation.

JVM arguments

This section describes recommended guidelines to follow for the JVM aguments.

- All JVM arguments should appear as a single line.

- The format of the parameter generated by the displayParam script is

  `-javaagent:<LOCAL-LIB>/products/j2ee/lib/indepthj2ee-agent.jar=com.precise.javaperf.javaagent.agents.DefaultJavaAgent`

NOTE	Use the correct file separator style for UNIX and Windows '\' or '/'.

- To use an instance name other than the server name, add `-Djvm.name=<JVM-NAME>`. For more information on what happens if the JVM name argument is not supplied, see [JVM naming](#).

- You can optionally add `-DPRECISE_SSL_APPLICATION=<APPLCIATION_NAME>` to configure the instance application, and `-DPRECISE_SSL_TIER=<TIER_NAME>` to configure the instance Tier.

- To communicate with the SSL server using a proxy, you can add the following proxy parameters:

  `-DPRECISE_SSL_PROXY_HOST=<PROXY_HOST>`
  `-DPRECISE_SSL_PROXY_PORT=<PROXY_PORT>`
  `-DPRECISE_SSL_PROXY_PROTOCOL=<PROXY_PROTOCOL>`

  Supported values are `SOCKS,` `HTTP,` and `DIRECT`. The default value is `SOCKS`.

JVM naming

It is highly recommended to specify the JVM name in the JVM arguments as described in [JVM arguments](#)! If you did not follow the recommendation, the JVM name will be resolved automatically in the following way:

- For WebLogic and WebSphere JVMs running as WebLogic/WebSphere console managed servers correspondingly, the JVM name will be set to the server name if it was not specified explicitly.

- For the rest of the JVMs the JVM name will be set to *<server_name>_<running_number>*, where *<server_name>* is the name of the server on which the JVM runs, while *<running_number>* will help to distinguish between different JVMs running on the same server, but using different extracted Precise folders.

- ***(Requires testing and decision if we support this case!!!!)***If more than one JVM will be run on the same server using the same extracted Precise folder and for none of them the JVM name argument is supplied, the activity of both JVMs will be presented in the same invocations tree and the metrics values will be displayed as average values between all the JVMs.

Shared script JVMs

If several JVMs are sharing the startup script where Precise JVM arguments were added, all of them will be started up with the same JVM name, whether it was specified or not. In such case all the data of the JVMs will be presented in the same way as described in the third bullet of JVM naming.

Advanced installation notes

This section contains advanced installation notes.

- If you have uninstalled a remote J2EE instance, and you want to install it again, on the Precise FocalPoint remove the `products/infra/var/<INSTANCE_NAME>_id.txt` file from the local extraction folder, and restart the JVM.

- By default, the reinstalled instance includes history data from the previously uninstalled instance. If the server name or instance name has changed and you want the newly installed instance to include the history data of the previously uninstalled instance, you can add the following property after the removal of the `products/infra/var/<INSTANCE_NAME>_id.txt` file and before restarting of the JVM:

  `-DPRECISE_SSL_RECOVERED_ID=<PREVIOUS_ID>`

  The find the related instance ID, use the `get-instance-id` command, see Installing a new instance while keeping historical data from an old instance on page 82.

Installation on WebSphere

This section describes the installation procedure for WebSphere and if Java 2 Security is enabled.

Installation procedure for WebSphere

For J9, add the following to the JVM argument:

`-javaagent:<PRECISE_LIB>\products\j2ee\lib\indepthj2ee-agent.jar=com.precise.javaperf.javaagent.agents.IBMJavaAgent`

For example:

`-javaagent:E:\Precise\products\j2ee\lib\indepthj2ee-agent.jar=com.precise.javaperf.javaagent.agents.IBMJavaAgent`

For all the others, add the following to the JVM argument:

`-javaagent:<LOCAL-LIB>/products/j2ee/lib/indepthj2ee-agent.jar`

Alternatively, you can run the `displayParams` script, which will generate the JVMparameter.

Java 2 Security is enabled

Perform the following procedure.

To determine whether or not Java 2 Security is enabled

1. Connect to the WebSphere admin console with a user that has administration rights.
2. In **Admin Console>Security>Global Security**, check if the Java 2 Security check box is checked.
   a. If Java 2 Security is enabled, certain permissions need to be explicitly granted in a `server.policy` file.
      i. Determine the location of the `server.policy` file. This can be found by examining the JVM startup command and locating the `-Djava.security.policy` argument. It typically looks like this:
         `-Djava.security.policy=<IBM Installation folder>\WebSphere\AppServer\profiles\<PROFILE>\properties\server.policy` where `<PROFILE>` is the profile name.
   b. If no such argument is found, add one using the above example.

3. Add the following to the `server.policy` file:

grant {
permission java.util.PropertyPermission "indepth.j2ee.classLoaderHandle", "read";
};
grant codeBase "file: *<PRECISE_LIB>*/-" {
permission java.security.AllPermission;
};

> **NOTE** The *<PRECISE_LIB>* inside the `server.policy` file needs to be specified using URL format. For example:
>
> Windows
>
> ```
> grant codeBase "file:/E:/Precise/-" {
> permission java.security.AllPermission;
> };
> ```
>
> UNIX
>
> ```
> grant codeBase "file:/opt/precise/-" {
> permission java.security.AllPermission;
> };.
> ```

Additional information

For information on uninstallation of the remote J2EE instance, see the *Deleting a Tier instance or cluster* and Uninstalling a J2EE remote instance sections in the Precise Installation Guide.

For information on monitoring settings for a remote J2EE instance, see the *About monitoring settings for a remote* J2EE instance section in the Administration Guide.

5

Applying Updates with the Precise CLI Utility

This section includes the following topic:

- Applying updates using the Precise CLI utility

Applying updates using the Precise CLI utility

To apply an update, you need to load the update related zip file to the Main Precise FocalPoint. This step is performed only once for the `updates.zip`, and there is no need to load the `update.zip` again as part of applying it to servers. Once the update is loaded, you can apply the update to one or more servers. Applying an update consists of 2 stages, which must be run one after the other for the same group of servers:

1. Prepare – check the related servers' disk space and produce pre-update action items that must be completed before you continue to stage #2.
2. Install – apply the updates to the servers.

Loading the updates.zip file

To load the `updates.zip` file, perform the following steps. To load the `updates.zip` file

1. Copy the `update.zip` file to the Main Precise FocalPoint.
2. Run the following command from the `<precise_root>` folder on the Main Precise FocalPoint:.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action i3-update-load -zip-file <update zip file path>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action i3-update-load -zip-file <update zip file path>

Table 5-1   Elements of the Update.zip file

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always i3-update-load.
zip-file	Path to the `update.zip` file located on the Main Precise FocalPoint.

Prepare and install the update

To install the update, perform the following steps:

1. Load the `update.zip` file (see previous section).
2. Prepare the updates on a selected group of servers.
3. Install the update on the same selected group of servers as in step #2. To prepare/install updates
4. Run the following command from the `<precise_root>` folder of the Main Precise FocalPoint:

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action {i3-update-prepare | i3-update-install} [-proxy-alias <node_alias>] {-servers "<servers>" | -all-servers true} [-installation-cd-path <Precise_v9.8.x_download_path>] -updates-ids "<updates_ids>"
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action {i3-update-prepare | i3-update-install} [-proxy-alias <node_alias>] {-servers "<servers>" | -all-servers true} [-installation-cd-path <Precise_v9.8.x_download_path>] -updates-ids "<updates_ids>"

Table 5-2   Elements of the Update.zip file

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Either i3-update-prepare or i3-update-install. Mandatory: Yes
proxy-alias	The alias of the servers' node. Mandatory: No
servers	Comma separated list of servers to prepare/install. Mandatory: Yes, if -all-servers is not specified
all-servers	Indicates that the update should be prepared/installed on all related servers. Values: true, false Mandatory: Yes, if -servers is not specified
installation-cd-path	The path of the installation media. Mandatory: Only for upgrade Precise version related updates
updates-ids	Comma separated list of updated IDs to prepare/install. Mandatory: Yes

Handling Precise Agents

This section includes the following topics:

- About handling Precise agents
- Remote Agent Control
- Local Agent Control

About handling Precise agents

The CLI provides the ability to stop/start/get status of installed Precise agents in a similar manner to AdminPoint->Agents dialog. There are 2 types of agents CLI

- Remote Agent Control: Allows all operations on all agents on all servers, except for starting Precise Listener or Precise FocalPoint agent. It should be executed in the main Precise FocalPoint

NOTE	Usage of remote CLI is preferred since it requires less manual action items (enablement of the CLI on the server).

- Local Agent Control: Allows all operations on all agents on a specific server. It must be executed on the agent server.

Remote Agent Control

To use Remote Agent Control CLI, run the following command on the main Precise FocalPoint

Windows	infra\bin\psin_cli.bat -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action control-agent [-proxy-alias <*node_alias*>] -product <product_code> -server <server_name> -installation <installation_code> -type <*type*> [-instance-name <*instance_name*>]
UNIX	./infra/bin/psin_cli.sh -i3-user <*user_name*> {-i3-encrypted-password <*encrypted_password*> | -i3-clear-password <*clear_password*>} -action control-agent [-proxy-alias <*node_alias*>] -product <*product_code*> -server <*server_name*> -installation <*installation_code*> -type <*type*> [-instance-name <*instance_name*>]

Table 6-1 Elements if the Remote Agent Control

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Values: control-agent Mandatory: Yes
server	The agent's server Values: string Mandatory: Yes
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation
product	The agent's product code Values: See [Product Codes](#) on page 175. Mandatory: Yes
installation	The agent installation type code Values: See [Installation Type Codes](#) on page 175. Mandatory: Yes
type	Operation to perform on the agent Values: One of STATUS STOP START Mandatory:
instance-name	The agent's instances name Values: string Mandatory: Instance name argument should be supplied for agent which are per instance (instance column in AdminPoint>Agent, contains instance name)

Local Agent Control

To use local agent control

1. Run the following command on the agent server:

    Windows
    ```
    infra\bin\psin_cli.bat
    -i3-user <user_name>
    {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
    -action control-agent-local
    [-proxy-alias <node_alias>]
    -product <product_code>
    -installation <installation_code>
    -type <type>
    [-instance-name <instance_name>]
    ```

    UNIX
    ```
    ./infra/bin/psin_cli.sh
    -i3-user <user_name>
    {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
    -action control-agent-local
    [-proxy-alias <node_alias>]
    -product <product_code>
    -installation <installation_code>
    -type <type>
    [-instance-name <instance_name>]
    ```

Table 6-2   Elements of the Local Agent Control

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Values: control-agent-local Mandatory: Yes
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation
product	The agent's product code Values: See [Product Codes](#) on page 175. Mandatory: Yes
installation	The agent installation type code Values: See [Installation Type Codes](#) on page 175. Mandatory: Yes
type	Operation to perform on the agent Values: One of: STATUS, STOP, START, IVP
instance-name	The agent's instances name Values: string Mandatory: Instance name argument should be supplied for agent which are per instance (instance column in AdminPoint>Agent, contains instance name)

7

Exporting and Importing AdminPoint Settings

This section includes the following topics:

About exporting and importing AdminPoint settings

The CLI utility lets you import or export location, grouping, and SLA settings from AdminPoint. This can be useful if you want to copy specific settings from one Precise installation to another, or if you prefer to add or edit settings without using the AdminPoint user interface.

Export Settings command

The Export Settings command exports the settings defined in the following AdminPoint dialog boxes to an output file in XML format:

- Location Settings
- Grouping Settings
- SLA Settings

This command uses the following format:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action export-settings -dialog <settings_dialog_type> -settingsfile <path_&_name_of_output_file>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action export-settings -dialog <settings_dialog_type> -settingsfile <path_&_name_of_output_file>

Dialog argument

The following table describes the syntax of the `dialog` argument.

Table 7-1   Elements of the Dialog argument

Element	Description
dialog settings_dialog_name	The type of dialog to be exported. The possible values are: ■ locations ■ grouping ■ sla
settingsfile path_name_of_output_file	The name of the XML file to export the setting dialogs data to.

Import Settings command

The Import Settings command imports the settings defined in the following AdminPoint dialog boxes from an input file in XML format:

- Location Settings
- Grouping Settings
- SLA Settings

Before the import process, all definitions are backed up and saved to the folder that contains the import file. See <u>Preparing the settings import files</u> on page 102.

The `import settings` command uses the following format:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action import-settings -dialog <settings_dialog_type> -settingsfile <path_&_name_of_output_file>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action import-settings -dialog <settings_dialog_type> -settingsfile <path_&_name_of_output_file>

Dialog argument

The following table describes the syntax of the `dialog` argument.

Table 7-2   Elements of the Import-related arguments

Element	Description
dialog settings_dialog_name	The type of dialog to be exported. The possible values are: ■ locations ■ locations-full ■ grouping ■ sla
settingsfile path_name_of_output_file	The name of an XML file to export the dialog settings data to.

Preparing the settings import files

The settings import file assembles the settings that are defined in the following AdminPoint dialog boxes:

- Location Settings
- Grouping Settings
- SLA Settings

Each dialog box requires its own import file. You can create this file either manually or by running the `export settings` command. See Export Settings command on page 100.

About the locations/locations-full settings import file

Below are details regarding the various locations settings import file.

Locations

Use the locations option when you want to append locations to your previous locations definitions.

Locations-full

Use the locations-full setting if the location settings file represents the entire locations definitions that should be defined in the system.

NOTE	Using this setting will replace all previous locations definitions.

Import file structure

The locations/locations-full settings import file is structured as follows:

```
<locations>
    <location name="<name>" proxy_alias="<Framework node alias>" >
        <ip from="<ip address>" to="<ip address>" />
        1...n
    </location>
    1...n
</locations>
```

The following is an example of a location settings import file:

```
<locations>
    <location name="USA Sales" proxy_alias="win-1">
        <ip from="10.1.1.100" to="10.1.2.100" />
        <ip from="10.3.1.100" to="10.3.1.100" />
    </location>
    <location name="France Support" proxy_alias="*">
        <ip from="80.1.2.150" to="80.1.2.200" />
    </location>
</locations>
```

The following table describes the elements of the location settings import file.

Table 7-3 Elements of the location settings import file

Element	Description
Location name	The name of the location. May not exceed 20 characters.
IP from	The lowest IP within the range. The address should suit the IP mask 253.255.255.255.
IP to	The highest IP within the range. The address should suit the IP mask 253.255.255.255.
Location proxy_alias	The alias name of the warehouse system the Location is assigned to. '*' indicates all warehouse systems.

About the grouping settings import file

The grouping settings import file is structured as follows:

```
<grouping>
    <group name="<name>" technology="<technology code>"
    entity="<entity code>" proxy_alias="<Framework node alias>">
        <identifier name="<identifier string>" />
        1...N
    </group>
    1...N
<grouping>
```

The following is an example of a grouping settings import file:

```
<grouping>
    <group name="OA Users" technology="OA" entity="U" proxy_alias="win-1">
        <identifier name="admin" />
        <identifier name="visitor" />
        <identifier name="operations" />
    </group>
<grouping>
```

The following table describes the elements of the grouping settings import file.

Table 7-4   Elements of the grouping settings import file

Element	Description
Group name	The name of the group. May not exceed 20 characters.
Group technology	The technology code of the group. To find a valid code, see Table 7-5 on page 103.
Group entity	The entity code of the corresponding technology. To find a valid code, see Table 7-5 on page 103.
Identifier name	The identifier text associated with the group. Full string and % wildcard characters allowed.
Group proxy_alias	The alias name of the warehouse system the Group is assigned to. '*' indicates all warehouse systems.

The following table shows how the different grouping technologies can be mapped to entities.

Table 7-5   Mapping grouping technologies to entities

Technology name	Technology code	Entity name	Entity code
SAP	SP	Transactions	A
SAP	SP	Application Servers	P
SAP	SP	Servers	S
Web	WW	URLs	A
Web	WW	Transactions	P_T
Web	WW	SAP Titles	P_ST
Web	WW	Siebel Titles	P_ST
Web	WW	PeopleSoft Panels	P_PG
Web	WW	Servers	S
Web	WW	Instances	I
Web	WW	Pages	BT
Web	WW	URL File Extensions	UE
Web	WW	Domains	SI
Web	WW	Page Siebel Views	PV

About the SLA settings import file

The SLA settings import file is structured as follows:

```
<slas>
    <sla name="<sla name>" entity="<entity code>"
    technology="<technology code>"
    sla-type="<sla type>" activity-type="<activity type>"
    application="<application name>" red="<breach threshold>"
        yellow="< breach threshold >" proxy_alias="<Framework node alias>">
        <identifier name="<identifier string>" />
        <identifier name="<identifier string>" />
    </sla>
</slas>
```

The following is an example of an SLA settings import file:

```
<slas>
    <sla name="Tuxedo default SLA" entity="A" technology="TU"
    sla-type="S" activity-type="" application="" red="5000"
    yellow="2000" proxy_alias="win-1">
        <identifier name="%PAP" />
        <identifier name="APP%" />
    </sla>
</slas>
```

The following table describes the elements of the SLA settings import file.

Table 7-6   Elements of the SLA settings import file

Element	Description
SLA name	The name of the SLA. May not exceed 20 characters.
SLA technology	The technology code of the SLA. To find a valid code, see Table 7-7 on page 104.
SLA entity	The entity code of the corresponding technology. To find a valid code, see Table 7-7 on page 104.
SLA Type	Either service time (S) or response time (R). To find the corresponding type for each technology, see Table 7-7 on page 104.
SLA proxy_alias	The alias name of the warehouse system the SLA is assigned to. '*' indicates all warehouse systems.

The following table shows how the different SLA technologies can be mapped to entities.

Table 7-7   Mapping SLA technologies to entities

SLA type	Technology name	Technology code	Entity name	Entity Code
Service time	Microsoft .NET	DN	Servers	S
Service time	J2EE	JE	Servers	A
Service time	Oracle	OR	Program	P
Service time	Oracle Applications	OA	Forms	A
Service time	Other	OT	Tiers	A
Service time	SQL Server	SQ	Programs	P
Service time	Tuxedo	TU	Services	A
Service time	WebSphere MQ	MQ	Reader Applications	GA
Service time	Web (server)	WW	URLs	A
Response time	SAP	SP	Transactions	A
Response time	Web (client)	WW	Pages	A1

Action Items

This section includes the following topics:

About managing action items

The CLI utilities provides the ability to manage action items. This includes fetching action items, executing them, and marking them as done.

List action items

To list all action items per instance, run the following command from the main Precise FocalPoint root:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action action-item-list [-server <server_name>] [-proxy-alias <node_alias>] [-instance-name <instance_name>] [-technology <technology_code>] [-id <sequence_id>] [-resource-id <resource_id>] [-status <status>]
UNIX	./infra/bin/psin_cli.sh -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action action-item-list *[*-server *<server_name>*] [-proxy-alias *<node_alias>*] *[-instance-name <instance_name>]* *[*-technology *<technology_code>*] *[*-id *<sequence_id>*] *[*-resource-id *<resource_id>*] *[*-status *<status>*]

NOTE	The instance details can be dropped to show action items which are not per instance. This creates an XML file containing all relevant action items and their details.

Table 8-1   Elements of the List action items

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Values:action-item-list Mandatory: Yes
server	Filter action items by server Values: string Mandatory: No
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation
instance	Filter action items per instance name Values: string Mandatory: No
technology	Filter action items by technology code. For more information, see [Technology Codes](#) on page 174. Values: string Mandatory: No
id sequence	Filter action items to a specific action item Values: number Mandatory: No
resource-id	Filter action items to a specific type of action item. Values: number Mandatory: No
status	Filter action items by status Values: WAIT, DONE, ERROR

Perform action items

To perform action item(s), run the following command from main Precise FocalPoint root:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action action-item-handle -type <type> [-server <server_name>] [-proxy-alias <node_alias>] [-instance-name <instance_name>] [-technology <technology_code>] [-id <id_sequence>] [-resource-id <resource_id>] [-parameter user=<admin3> -parameter password=<@HH>]
UNIX	./infra/bin/psin_cli.sh -i3-user *<user_name>* {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action action-item-handle -type *<type>* [-server *<server_name>*] [-proxy-alias *<node_alias>*] [-instance-name *<instance_name>*] [-technology *<technology_code>*] [-id *<id_sequence>*] [-resource-id *<resource_id>*] [-parameter user=<admin3> -parameter password=<@HH>]

Table 8-2   Elements of the Perform action items

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Values: action-item-list Mandatory: Yes
server	Filter action items by server Values:string Mandatory: No
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation
instance	Filter action items per instance name Values:string Mandatory:No
technology	Filter action items by technology code. For more information, see Technology Codes on page 174. Values:string Mandatory:No
id sequence	Filter action items to a specific action item Values:number Mandatory:No
resource-id	Filter action items to a specific type of action item Values:number Mandatory: No
type	Values: run or performed You can specify "run" only for action items which allows automatic execution. This instructs Precise to automatically perform the related action item. Specify "performed" for action item you've already performed (similar to GUI's "Mark as done").
status	Filter action items by status Values: WAIT, DONE, ERROR Mandatory: No **NOTE:** Not specifying the status will return all action items.

9

Roles and Users Management

This section includes the following topics:

-
-

Roles management

Manage roles command

Managing roles using CLI is done using the following command:

Windows
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action manage-roles
-roles-parametersfile <roles_parameters.xml>

UNIX
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action manage-roles
-roles-parametersfile <roles_parameters.xml>

Table 9-1   Elements of the Manage roles command

Element	Description
action	Values: manage-roles Mandatory: yes
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
roles-parametersfile	Values: the parameters file that holds the roles definitions Mandatory: Yes

The parameters file contains the definitions for one or more roles. The file structure is as follows
```
<root>
    <role>
        Role definition
    </role>
…additional roles definitions
</root>
```

NOTE   When managing only one role the <role> tag is not required.

```
<root>
    Role definition
</root>
```

Required permissions

To activate the roles management command the user must have ADMINISTRATE.EXECUTE permissions for Precise technology.

Roles definitions limitations

A user activating this command can add/edit/delete roles only if the permissions the role contains are in the scope of the user's permissions.

For example, if a user has ADMINISTRATE.VIEW permission on an Oracle instance he can create a new role with ADMINISTRATE.VIEW permission on the Oracle instance he has the same permission on, however, he will not be able to assign ADMINISTRATE.VIEW on another instance or define ADMINISTRATE.EXECUTE on the same instance.

Handling errors

The CLI mechanism always skips to the next role and does not halt the whole operation in case of error. In case the CLI fails for a specific role a message is issued to the screen and the problem is logged in the CLI log file.

Adding a new role

The definition for adding a new role is as follows:

```
<root>
    <parameter name="action" value="add"/>
    <parameter name="role-name" value="role-name"/>
    <parameter name="role-scope" value="role-scope"/>
    <complex name="permissions">
        <parameter permission-type="permission-type" permission-operation="permission-operation"/>
        …additional permissions definitions
    </complex>
    <complex name="resources" [value="*"]>
        [<parameter [resource-information]/>
        …additional resources definitions ]
    </complex>
    [<complex name="nodes" [value="*"]>
        <parameter node-name="node-name"/>
        …additional nodes definitions
    </complex>]
</root>
```

Table 9-2   Parameter values for Adding a new role

Parameter	Description
action	The action we wish to perform on the defined role.
	Value: add.
role-name	Value: The name of the role to be added.
	Mandatory: Yes
role-scope	The scope of the role the user wants to define the permissions on.
	Value: technology, application, Tier, or instance.
	See Table 9-3 on page 111.
	Mandatory: Yes
permissions	The permissions we wish to assign to this role.
	NOTE: When assigning permission to a role all the dependencies of this permission are automatically assigned to the role as well (i.e. assigning MONITOR.WHAT_IF will automatically assign MONITOR.EXPLAIN as well).
	Mandatory: Yes
permission-type	The permission type name we wish to assign to this role, for example: monitor
	Mandatory: Yes

Parameter	Description
permission-operation	The permission operation name we wish to assign to this role, for example: view Mandatory: Yes
resources	The resources the role permissions apply to. Mandatory: Yes
resource-information	Resource information holds the information of the resource the permission is granted on. This information is derived from the role scope parameter, as shown in Table 9-3 on page 111. Mandatory: Yes
nodes	This parameter is relevant only to 'technology' role scope. Use this parameter to define technologies permissions on specific nodes. If this parameter is not defined the technology permissions will apply on all nodes. Value: Name of the node **NOTE**: To define permission on all the resources of a specific type and all future resources as well (i.e. all instances), do not specify any resource information. Instead, define the resources value attribute as "*". To define permission on all the nodes do not specify any node name. Instead, define the nodes value attribute as "*". Mandatory: No

Table 9-3 Role scope parameters

Role scope parameter	Resource information	Example
technology	technology-code: the technology code the permission should be granted on	`<parameter technology-code="OR"/>`
environment	environment-name: the name of the application the permission should be granted on	`<parameter environment-name="Default"/>` Note: View permission can only be set on the application resource.
apptier	apptier-name: the name of the Tier the permission should be granted on environment-name: the name of the application the Tier belongs to	`<parameter apptier-name="Oracle" environment-name="Default"/>`
instance	instance-name: the name of the instance the permission should be granted on technology-code: this parameter is optional, specifies the instance technology code. This parameter should be used if the instance name is not unique. server-name: this parameter is optional, specifies the server the instance is installed on. If this parameter is specified the technology code parameter must be specified as well. This parameter should be used if the instance name and technology are not unique.	`<parameter instance-name="ORCL" technology-code="OR" server-name="orcl-server"/>`

Example

In this example we will be adding two roles as follows:

- First role definition:
  - role name: test-role1
  - role scope: technology
  - role permissions:
    - MONITOR.FULL_CONTROL
    - ADMINISTRATE.EXECUTE
  - Role resources
    - Oracle technology
    - Oracle Applications technology
  - Role nodes
    - node1
    - node2
- Second role definition
  - role name: test-role2
  - role scope: application
  - role permissions:
    - MONITOR.VIEW
  - Role resources:
    - All applications

The roles parameters file will look as follows:

```
<root>
    <role>
        <parameter name="action" value="add"/>
        <parameter name="role-name" value=" test-role1"/>
        <parameter name="role-scope" value="technology"/>
        <complex name="permissions">
            <parameter permission-type="monitor" permission-operation="full_control"/>
            <parameter permission-type="administrate" permission-operation="execute"/>
        </complex>
        <complex name="resources">
            <parameter technology-code="OR"/>
            <parameter technology-code="OA"/>
        </complex>
        <complex name="nodes">
            <parameter node-name="node1"/>
            <parameter node-name="node2"/>
        </complex>
    </role>
    <role>
        <parameter name="action" value="add"/>
        <parameter name="role-name" value=" test-role2"/>
        <parameter name="role-scope" value="application"/>
        <complex name="permissions">
            <parameter permission-type="monitor" permission-operation="view"/>
        <complex name="resources" value="all=true"/>
    </role>
</root>
```

Deleting a role

The definition for deleting a role is as follows:

```
<root>
    <parameter name="action" value="delete"/>
    <parameter name="role-name" value="role-name"/>
</root>
```

NOTE   The role 'I3 Manager' cannot be deleted.

Verifying user's roles assignment before deletion

Deleting a role can cause a situation where one or more users will be left with no roles assigned to them (i.e. this role is the only role assigned to one of the users).

It is possible to define that if a role deletion creates this kind of situation, an error will be issued. This definition can be done by setting the following registry parameter to 'false':

    products\i3fp\registry\products\infrastructure\roles\settings\ignore-last-role-on-delete

NOTE   This parameter default value is 'true'.

Parameters specification

Table 9-4   Parameter values for Deleting a role

Parameter	Description
action	The action we wish to perform on the defined role. Value: delete. Mandatory: Yes
role-name	The name of the role we wish to delete. Mandatory: Yes

Example

In this example we will be deleting one role 'test-role1':

```
<root>
    <parameter name="action" value="delete"/>
    <parameter name="role-name" value=" test-role1"/>
</root>
```

Editing a role

The definition for editing a new role is as follows:

```
<root>
    <parameter name="action" value="edit"/>
    <parameter name="role-name" value="role-name"/>
    [<parameter name="role-scope" value="role-scope"/>]
    [<parameter name="role-new-name" value="role-new-name"/>]
    <complex name="permissions">
        <parameter permission-type="permission-type" permission-operation="permission-operation"/>
        …additional permissions definitions
    </complex>
    <complex name="resources" [value="*">]
        [<parameter [resource-information]/>
        …additional resources definitions ]
    </complex>]
    [<complex name="nodes" [value="*"]>
        [<parameter node-name="node-name"/>
        …additional nodes definitions ]
    </complex>]
</root>
```

NOTE   The role 'I3 Manager' cannot be edited.

Parameters specification

Table 9-5   Parameter values for Editing a role

Parameter	Description
Action	The action we wish to perform on the defined role
	Value: Edit
	Mandatory: Yes
Role-name	The name of the role we wish to edit.
	Mandatory: Yes
Role-scope	The scope of the rode the user wants to define the permissions on.
	Values: technology, application, Tier, or instance.
	Mandatory: Yes
Role-new-name	The new role name.
	Mandatory: No
Permissions	The permissions we wish to assign to this role.
	Mandatory: No
	NOTE: When assigning permission to a role, all the dependencies of this permission are automatically assigned to the role as well (i.e. assigning MONITOR.WHAT_IF will automatically assign MONITOR.EXPLAIN as well).
	■ Permission-type: the permission type name we wish to assign to this role
	■ Permission-operation: the permission operation name we wish to assign to this role
	NOTE: Permissions that are already assigned to the role and are not specified in edit will be removed from the role definition.
Resources	The resources the role permissions apply on.
	■ Resource-information: See Table 9-3 on page 111.
	NOTE: Resources that are already assigned to the role and are not specified in edit will be removed from the role definition.
	Mandatory: Yes, if permissions are changed.
Nodes	This parameter is relevant only to 'technology' role scope. Use this parameter to define technologies permissions on specific nodes. If this parameter is not defined the technology permissions will apply on all nodes.
	Node-name: the name of the node
	Nodes that are already assigned to the role and are not specified in edit will be removed from the role definition. If no proxies are specified in edit mode then the role's proxies will remain unchanged.
	Mandatory: No

Example

In this example we will be editing the following role:

- Role name: test-role1
- Role scope: technology
- Role permissions
  - MONITOR.FULL_CONTROL
  - TUNE.EXECUTE

- o ADMINISTRATE.EXECUTE
- Role resources:
  - o Oracle technology
  - o Oracle Applications technology
- Role nodes
  - o node1
  - o node2

We will remove the first two permissions and add a new permission – MONITOR.EXECUTE. We will set the role to apply on all nodes and also change the role name to 'test-role1-updated'. After the edit operation is completed, the role definition will be:

- Role name: test-role1-updated (the new name)
- Role scope: technology (wasn't affected by the update)
- Role permissions
  - o MONITOR.EXECUTE (new permission)
  - o ADMINISTRATE.EXECUTE (redefined by the update)
- Role resources
  - o Oracle technology (redefined by the update)
  - o Oracle Applications technology (redefined by the update)
- Role nodes: all nodes (updated definition) The roles parameters file will look as follows:

```
<root>
    <parameter name="action" value="edit"/>
    <parameter name="role-name" value=" test-role1"/>
    <parameter name="role-new-name" value=" test-role1-updated"/>
    <complex name="permissions">
        <parameter permission-type="monitor" permission-operation="execute"/>
        <parameter permission-type="administrate" permission-operation="execute"/>
    </complex>
    <complex name="resources">
        <parameter instance-name="ORCL" technology-code="OR" server-name="srv1"/>
        <parameter instance-name="OA1" technology-code="OA" server-name="srv2"/>
    </complex>
    <parameter name="nodes" value="*"/>
    <parameter name="role-scope" value="INSTANCE"/>
</root>
```

Users management

Manage users command

Managing users using CLI is done using the following command:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action manage-users -roles-parametersfile <users_parameters.xml>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action manage-users -roles-parametersfile <users_parameters.xml>

Table 9-6   Elements for the Manage users command

Parameter	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.

Parameter	Description
role-parametersfile	Values: the parameters file that holds the users definitions Mandatory: Yes
action	Values: manage-users Mandatory: Yes

The parameters file contains the definitions for one or more users. The file structure is as follows

```
<root>
    <user>
        User definition
    </user>
    …additional users definitions
</root>
```

NOTE   When managing only one user the <user> tag is not required.

```
<root>
        User definition
</root>
```

Required permissions

Activating the user's management command requires ADMINISTRATE.EXECUTE permissions on Precise technology.

User roles definitions limitations

A user activating this command can add/remove roles to the managed user, only if the permissions of the roles granted/removed from the managed user, are in the scope of the managing user's roles permissions.

For example, if a user has ADMINISTRATE.VIEW permission on an Oracle instance he can create a new user and assign a role with ADMINISTRATE.VIEW permission on the Oracle instance he has the same permission on, however, he will not be able to assign a role with ADMINISTRATE.VIEW on another instance or ADMINISTRATE.EXECUTE on the same instance.

Handling errors

CLI mechanism always skips to the next user and does not halt the whole operation in case of error. In case the CLI fails for a specific user, a message is issued to the screen and the problem is logged in the CLI log file.

Adding a new user

The definition for adding a new user is as follows:

```
<root>
    <parameter name="action" value="add"/>
    <parameter name="user-name" value="user-name"/>
    {<parameter name="user-clear-password" value="clear-password"/> |
    <parameter name="user-encrypted-password" value="encrypted-password"/>}
     [<complex name="user-roles">
        <parameter role-name="role-name"/>
        …additional roles definitions
    </complex>]
</root>
```

Table 9-7   Parameters for Adding a new user

Parameter	Description
action	The action we wish to perform on the defined user. Values: Add Mandatory: Yes
User-name	The name of the user we wish to add. Mandatory: Yes
user-clear-password or user-encrypted-password	The user's password as clear or encrypted text. Mandatory: Yes

Parameter	Description
User-roles	The roles we wish to assign to this user ■ Role-name: The name of the role we wish to assign to this user. **NOTE**: The Role name is case sensitive. Mandatory: Yes

Example

In this example we will be adding two users.

```
<root>
    <user>
        <parameter name="action" value="add"/>
        <parameter name="user-name" value="koby"/>
        <parameter name="user-clear-password" value="1234"/>
        <complex name="user-roles">
            <parameter role-name="Tuxedo Manager"/>
            <parameter role-name="SQL Server Administrator"/>
        </complex>
    </user>
    <user>
        <parameter name="action" value="add"/>
        <parameter name="user-name" value="yossi"/>
        <parameter name="user-clear-password" value="5678"/>
        <complex name="user-roles">
            <parameter role-name="Web Manager"/>
        </complex>
    </user>
</root>
```

Deleting a user

The definition for deleting a user is as follows:

```
<root>
 <parameter name="action" value="delete"/>
 <parameter name="user-name" value="user-name"/>
</root>
```

NOTE   The 'admin' user cannot be deleted. The user activating this command cannot delete himself.

Table 9-8   Parameters for Deleting a user

Parameter	Description
Action	The action we wish to perform on the defined user. Values: Delete Mandatory: Yes
User-name	The name of the user we wish to delete. Mandatory: Yes

Example

In this example we will be deleting one user 'koby':

```
<root>
    <parameter name="action" value="delete"/>
    <parameter name="user-name" value="koby"/>
</root>
```

Editing a user

The definition for editing or adding a user is as follows:

```
<root>
<parameter name="action" value="edit"/>
<parameter name="user-name" value="user-name"/> [<parameter name="user-
new-name" value="user-new-name"/>] [{<parameter name="user-clear-password"
value="clear-password"/> |
<parameter name="user-encrypted-password" value="encrypted-password"/>}]
 [<complex name="user-roles">
      <parameter role-name="role-name"/>
      …additional roles definitions
</complex>]
  </root>
```

Table 9-9   Parameters for Editing a user

Parameter	Description
-action	The action we wish to perform on the defined user.
	Values: Edit
	Mandatory: Yes
User-name	The name of the user we wish to edit.
	Mandatory: Yes
user-clear-password or user-encrypted-password	The user's password as clear or encrypted text.
	Mandatory: Yes
User-roles	The roles we wish to assign to this user.
Role-name	The name of the role we wish to assign to this user.
	NOTE: The Role name is case sensitive.
	NOTE: Roles that are already assigned to the user and are not specified in edit will be removed from the user assigned roles.
	Mandatory: Yes

Example

In this example we will be editing the user 'user1'. This user has the following roles assigned to him:

- Tuxedo Manager
- SQL Server Administrator

We will remove the role 'SQL Server Administrator' from his assigned roles and add the following role – 'Oracle Administrator'. After the edit operation the user will have the following roles assigned to him:

- Tuxedo Manager
- Oracle Administrator

We don't want to change the user's password or name.

```
<root>
    <user>
        <parameter name="action" value="edit"/>
        <parameter name="user-name" value="user1"/>
        <complex name="user-roles">
            <parameter role-name="Oracle Administrator"/>
            <parameter role-name="Tuxedo Manager"/>
        </complex>
    </user>
</root>
```

Exporting users/roles

The roles-export command prints the current users/roles defined in Precise. The export result can later be used to define/update roles/users.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action roles-export -mode {users|roles|all} [-output-file <file_name>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action roles-export -mode {users|roles|all} [-output-file <file_name>]

Table 9-10   Elements for Exporting users/roles

Elements	Description
Mode	The required export mode. Values: export users, export roles, or export users and roles. Mandatory: Yes
output-file	The file path to which the export will be written. Value: If not specified: <precise_root>\infra\cli2\output\cli_export_<mode>.xml. Mandatory: No

Command output

The roles export output is written to an output file as described in the previous table.

Output format

The output format can be users, roles or all.

Export users output

```
<users>
    <user>
        <parameter name="action" value="add" />
        <parameter name="user-encrypted-password" value="IAJDFKJBI@" />
        <parameter name="user-name" value="usr1" />
        <complex name="user-roles">
            <parameter role-name="Oracle view only" />
        </complex>
    </user>
    <user>
        <parameter name="action" value="add" />
        <parameter name="user-encrypted-password" value="ICDDFK@FFA" />
        <parameter name="user-name" value="usr2" />
        <complex name="user-roles">
            <parameter role-name="Precise Manager" />
        </complex>
    </user>
    ...additional users
</users>
```

Export roles output

```xml
<roles>
    <role>
        <parameter name="action" value="add" />
        <parameter name="nodes" value="*" />
        <complex name="permissions">
            <parameter permission-operation="FULL_CONTROL" permission-type="ADMINISTRATE" />
            <parameter permission-operation="FULL_CONTROL" permission-type="TUNE" />
            <parameter permission-operation="FULL_CONTROL" permission-type="MONITOR" />
        </complex>
        <parameter name="resources" value="*" />
        <parameter name="role-name" value="Precise Manager" />
        <parameter name="role-scope" value="TECHNOLOGY" />
    </role>
    <role>
        <parameter name="action" value="add" />
        <parameter name="nodes" value="*" />
        <complex name="permissions">
            <parameter permission-operation="VIEW" permission-type="MONITOR" />
            <parameter permission-operation="VIEW" permission-type="ADMINISTRATE" />
            <parameter permission-operation="VIEW" permission-type="TUNE" />
        </complex>
        <complex name="resources">
            <parameter technology-code="OR" />
        </complex>
        <parameter name="role-name" value="Oracle view only" />
        <parameter name="role-scope" value="TECHNOLOGY" />
    </role>
    ...additional roles
</roles>
```

Export all output

```xml
<all>
    <user>
        <parameter name="action" value="add" />
        <parameter name="user-encrypted-password" value="IAJDFKJBI@" />
        <parameter name="user-name" value="usr1" />
        <complex name="user-roles">
            <parameter role-name="Oracle view only" />
        </complex>
    </user>
    <user>
        <parameter name="action" value="add" />
        <parameter name="user-encrypted-password" value="ICDDFK@FFA" />
        <parameter name="user-name" value="usr2" />
        <complex name="user-roles">
            <parameter role-name="Precise Manager" />
        </complex>
    </user>
    ...additional users
    <role>
        <parameter name="action" value="add" />
        <parameter name="nodes" value="*" />
        <complex name="permissions">
            <parameter permission-operation="FULL_CONTROL" permission-type="ADMINISTRATE" />
            <parameter permission-operation="FULL_CONTROL" permission-type="TUNE" />
            <parameter permission-operation="FULL_CONTROL" permission-type="MONITOR" />
        </complex>
        <parameter name="resources" value="*" />
        <parameter name="role-name" value="Precise Manager" />
        <parameter name="role-scope" value="TECHNOLOGY" />
    </role>
    <role>
        <parameter name="action" value="add" />
        <parameter name="nodes" value="*" />
        <complex name="permissions">
            <parameter permission-operation="VIEW" permission-type="MONITOR" />
            <parameter permission-operation="VIEW" permission-type="ADMINISTRATE" />
            <parameter permission-operation="VIEW" permission-type="TUNE" />
```

```
        </complex>
        <complex name="resources">
            <parameter technology-code="OR" />
        </complex>
        <parameter name="role-name" value="Oracle view only" />
        <parameter name="role-scope" value="TECHNOLOGY" />
    </role>
    ...additional roles
</all>
```

User permissions summary

User permissions summary prints a summary of the permissions a user has. Managing users using CLI is done using the following command:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action permissions-summary [-user-name <user_name>] [-output-file <file_name>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action permissions-summary [-user-name <user_name>] [-output-file <file_name>]

Table 9-11   Elements for the User permissions summary

Element	Description
user-name	The user we wish to generate the permissions summary for. If this parameter is not specified, the permissions summary will be generated for the user activating this command according to the i3-user parameter. Mandatory: Yes
output-file	The file the command output will be written to. If this parameter is not specified the output will be written as follows: ■ An xml file will be generated under the following folder: infra\cli2\permissions ■ The file name will be of the following format: permissions_summary_YYYY.MM.DD_HH_MM_S S.xml Mandatory: No

Command output

The user permissions summary is printed to an output file as described above in the Parameters specification section.

Output format

The output xml structure will be as follows:

```
<user-permissions-summary user-name="user-name">
    <roles-permissions-summary>
        <role role-name="role-name">
            <permission>
            <description>permission description</description>
            <permission-type>permission type</permission-type>
            <permission-operation>permission operation</permission-operation>
            <resource resource-type="resource type" [resource-information] />
            <affected-instances>
            <instance>
            <instance-name>instance name</instance-name>
            <server-name>instance server name</server-name>
            <technology-code>instance technology</technology-code>
            </instance>
            ...additional instances
            </affected-instances>
            </permission>
```

```
        …additional permissions
      </role>
      …additional roles
      </roles-permissions-summary>
  </user-permissions-summary>
```

Output specification

- User-name: the name of the user this summary was generated for

- Role-name: the name of a role assigned to this user

- Permission: role's permission specification

- Description: the description of this permission

- Permission-type: the permission type

- Permission-operation: the permission operation

- Resource: the resource this permission was granted on

- Resource-type: the type of the Resource-type can have one of the following values: technology, application, Tier or instance

- Resource-information: See resource information definitions in <u>Table 9-3</u> on page 111.

- Affected-instances: the list of instances derived from the resource the permission was granted on (i.e. if the resource is the 'Default' application all the instances connected to the 'Default' application will be listed here)

- Instance-name: the name of the instance

- Server-name: the name of the server the instance is installed on

- Technology-code: the technology code of the instance

Example

This is an example of a permissions summary file for user 'usr1' with roles that contains the following permissions:

- MONITOR.VIEW on the 'Default' application

- ADMINISTRATE.FULL_CONTROL on an SQL Server instance

- MONITOR.EXECUTE on 'SQL Server' Tier in the 'Default' application

```
<user-permissions-summary user-name="usr1">
  <roles-permissions-summary>
    <role role-name="monitor default environment" role-scope="ENVIRONMENT">
      <permission>
<description>'Monitor.View' permission on the selected applications</description>
        <permission-type>MONITOR</permission-type>
        <permission-operation>VIEW</permission-operation>
        <resource resource-type="ENVIRONMENT" environment-name="Default" />
        <affected-instances>
          <instance>
            <instance-name>PIFA1000</instance-name>
            <server-name>pifa1000</server-name>
            <technology-code>SQ</technology-code>
          </instance>
          <instance>
            <instance-name>H47_TEST</instance-name>
            <server-name>poolhp3</server-name>
            <technology-code>SP</technology-code>
          </instance>
          <instance>
            <instance-name>H47_TEST2</instance-name>
            <server-name>poolhp3</server-name>
            <technology-code>SP</technology-code>
          </instance>
        </affected-instances>
      </permission>
    </role>
  <role role-name="monitor sql apptier" role-scope="APPTIER">
      <permission>
        <description>'Monitor.View' permission on the selected Tiers</description>
        <permission-type>MONITOR</permission-type>
```

```
      <permission-operation>VIEW</permission-operation>
      <resource resource-type="APPTIER" environment-name="Default" apptier-name="SQL Server" />
      <affected-instances>
        <instance>
          <instance-name>PIFA1000</instance-name>
          <server-name>pifa1000</server-name>
          <technology-code>SQ</technology-code>
        </instance>
      </affected-instances>
    </permission>
    <permission>
      <description>'Monitor.Execute' permission on the selected Tiers</description>
      <permission-type>MONITOR</permission-type>
      <permission-operation>EXECUTE</permission-operation>
      <resource resource-type="APPTIER" environment-name="Default" apptier-name="SQL Server" />
      <affected-instances>
        <instance>
          <instance-name>PIFA1000</instance-name>
          <server-name>pifa1000</server-name>
          <technology-code>SQ</technology-code>
        </instance>
      </affected-instances>
    </permission>
  </role>
  <role role-name="administrate sql instance" role-scope="INSTANCE">
    <permission>
      <description>'Administrate.Execute' permission on the selected instances</description>
      <permission-type>ADMINISTRATE</permission-type>
      <permission-operation>EXECUTE</permission-operation>
      <resource resource-type="INSTANCE" instance-name="PIFA1000" server-name="pifa1000" technology-code="SQ" />
      <affected-instances>
        <instance>
          <instance-name>PIFA1000</instance-name>
          <server-name>pifa1000</server-name>
          <technology-code>SQ</technology-code>
        </instance>
      </affected-instances>
    </permission>
    <permission>
      <description>'Administrate.Full Control' permission on the selected instances</description>
      <permission-type>ADMINISTRATE</permission-type>
      <permission-operation>FULL_CONTROL</permission-operation>
      <resource resource-type="INSTANCE" instance-name="PIFA1000" server-name="pifa1000" technology-code="SQ" />
      <affected-instances>
        <instance>
          <instance-name>PIFA1000</instance-name>
          <server-name>pifa1000</server-name>
          <technology-code>SQ</technology-code>
        </instance>
      </affected-instances>
    </permission>
    <permission>
      <description>'Administrate.View' permission on the selected instances</description>
      <permission-type>ADMINISTRATE</permission-type>
      <permission-operation>VIEW</permission-operation>
      <resource resource-type="INSTANCE" instance-name="PIFA1000" server-name="pifa1000" technology-code="SQ" />
      <affected-instances>
        <instance>
          <instance-name>PIFA1000</instance-name>
          <server-name>pifa1000</server-name>
          <technology-code>SQ</technology-code>
        </instance>
      </affected-instances>
    </permission>
  </role>
 </roles-permissions-summary>
</user-permissions-summary>
```

10

Windows Services Authentication

This section includes the following topics:

- About Windows Services authentication
- Services List command
- Services Authentication Update command

About Windows Services authentication

The functionality described in this section supplies the ability to perform a wide authentication update for Precise Windows services.

Services List command

The following CLI Utility command retrieves a list of Precise Windows services names from a specified server.

Windows	infra\bin\psin_cli.bat -action services-list -server <server_name> -proxy-alias <node_alias>
UNIX	./infra/bin/psin_cli.sh -action services-list -server <server_name> -proxy-alias <node_alias>

Table 10-1   Elements for the Services List

Element	Description
action	Always services-list Mandatory: Yes
server	The server to retrieve the services names from. Values: String Mandatory: Yes
proxy-alias	Alias of the node Values: string Mandatory: Yes, only in a federation installation

Services Authentication Update command

The following CLI Utility command updates the authentication of the Precise WIndows services. The services to be updated are set according to given services names. If you would like to update all services, set the "all" value.

Windows

```
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action services-authentication-update
-services <"service_name1 service_name2"|all>
-authentication-mode <user|localsystem>
{-authentication-user <user_name>}
{-authentication-encrypted-password <encrypted_password> | -authentication-clear-password
<clear_password>}
{-authentication-domain <domain>}
-server <server_name>
-proxy-alias <node_alias>
```

UNIX

```
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action services-authentication-update
-services <"service_name1 service_name2"|all>
-authentication-mode <user|localsystem>
{-authentication-user <user_name>}
{-authentication-encrypted-password <encrypted_password> | -authentication-clear-password
<clear_password>}
{-authentication-domain <domain>}
-server <server_name>
-proxy-alias <node_alias>
```

Table 10-2   Elements for the Services Authentication Update

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always services-authentication-update. Mandatory: Yes
services	Service names separated by spaces and bounded by quotes ("") or "all" if you want to update all the services. Values: String Mandatory: Yes
authentication-mode	Authentication type. Values: user or localsystem Mandatory: Yes
authentication-user	Authentication user. Values: String Mandatory: Yes, only if authentication-mode value is user.
authentication-encrypted-passw ord	Authentication password. Values: The encrypted password used for authentication of the user specified in -authentication-user argument. For more information, see Encrypt command on page 146. Mandatory: Yes, only if authentication-mode value is user. Alternatively the authentication-clear-password can be used, allowing you to specify a clear password instead of an encrypted string.

Element	Description
authentication-domain	Authentication domain.
	Values: String
	Mandatory: Yes, only if authentication-mode value is user.
server	The server to retrieve the services names from.
	Values: String
	Mandatory: Yes
proxy-alias	Alias of the node
	Values: string
	Mandatory: Yes, only in a federation installation

Federation Installations

This section includes the following topics:

- Attach
- Detach
- Main Precise FocalPoint Crash

Attach

Using CLI you can attach an existing node to an existing main Precise FocalPoint. To attach an existing node to an existing main Precise FocalPoint

1. Copy the following folder

   `infra/listener/etc/crypt`

   From the Precise FocalPoint (proxy) to the main Precise FocalPoint

   `~i3/proxy_key (create a new temporary folder)`

   o Copy the folder - do not move or use link to a shared folder among main and proxy.

   o Do not copy the folder more than once since once you run the command below, the folder content on the proxy is changed.

   o Copy the files from the proxy from the `Infra/listener/etc/crypt` folder, to a temporary folder on the main *<precise_root>*. Do not copy sub-folders.

   Run the following command from the Main Precise FocalPoint root folder:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action attach [-alias <proxy_alias>] -server <proxy_host_name> -port <proxy_infra_port> -folder <proxy_key> -proxy-user <user> {-proxy-clear-password <clear_password> -proxy-encrypted-password <encrypted_password>} relay-to-focalpoint true | false -relay-to-servers true | false
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action attach [-alias <proxy_alias>] -server <proxy_host_name> -port <proxy_infra_port> -folder <proxy_key> -proxy-user <user> {-proxy-clear-password <clear_password> -proxy-encrypted-password <encrypted_password>} -relay-to-focalpoint true | false -relay-to-servers true | false

Once the command is successfully completed, remove the proxy_key temporary folder.

Table 11-1   Elements for Attach

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-clear-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always attach Mandatory: Yes
alias	The display name for the added proxy Values: String Mandatory: No, will use Precise FocalPoint proxy server name by default
server	Added Precise FocalPoint proxy server fully qualified name Values: String Mandatory: Yes
port	Added Precise FocalPoint proxy listener communication port (not the GUI port) Values: Numeric Mandatory: Yes
folder	Values: path to the folder you've copied (proxy_key) Mandatory: Yes
proxy-user	Values: proxy's Precise administrative user name Mandatory: Yes
proxy-clear-password	The proxy's Precise administrative user encrypted password Values: encrypted string Mandatory: Yes Alternatively the proxy-clear-password can be used, allowing you to specify a clear password instead of an encrypted string. For more information, see [Encrypt command](#) on page 146.
relay-to-focalpoint	Restrict Precise FocalPoint proxy access to the main Precise FocalPoint Values: true, false Mandatory: No
relay-to-servers	Restrict main Precise FocalPoint access to the Node servers Values: true, false Mandatory: No

Detach

Using CLI you can detach an attached Node. Run the following command from the main Precise FocalPoint to the *<precise_root>* folder:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action detach -alias <proxy_alias>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action detach -alias <proxy_alias>

Table 11-2 Elements for Detach

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always detach Mandatory: yes
alias	Node's display name Values: String Mandatory: yes

Main Precise FocalPoint Crash

In a federation installation the main Precise FocalPoint is a single point of failure. If the main Precise FocalPoint is down, the users will not be able to login to any of its nodes to view data.

NOTE	Only GUI is not functional, but the instance's data is still collected.

Therefore, the recommendation is to use cluster server installation for the main Precise FocalPoint.

However, if the Precise FocalPoint main server has crashed and no cluster solution was provided, you can use the workaround described below.

Once the Precise FocalPoint main server has crashed, you can force-detach the main Precise FocalPoint's nodes. This allows the users to login directly into the detached node.

Run the following command on the *<precise_root>* of each proxy that you want to detach. You can detach one or more proxies (there is no need to detach all proxies), that you need to be active while the main Precise FocalPoint is down.

Force detach on Proxy

NOTE	If JAAS is used for login verification you might need to manually enable JAAS on the proxy before running this command. This command produces action items.

To force detach a proxy, run the following command on the Precise FocalPoint of Node that you want to detach.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password *<encrypted_password>* | -i3-clear-password *<clear_password>*} -action forced-detach-on-proxy
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action forced-detach-on-proxy

Table 11-3   Elements for Force Detach on Proxy

Element	Descriptions
action	Always forced-detach-on-proxy Mandatory: Yes
i3-user	See <u>Authenticate to CLI Utility</u> on page 12.
i3-encrypted-password	See <u>Authenticate to CLI Utility</u> on page 12.

Force detach on Main

If the main Precise FocalPoint cannot be recovered, complete the action items related to the force detach on the proxy. Then you can install a brand new main Precise FocalPoint and connect the proxies to it.

If the main Precise FocalPoint is recovered, you can re-attach the detached proxies to it.

To do this, first run the following command on the main Precise FocalPoint for each detached proxy, and then attach the proxy using CLI or GUI.

Windows
```
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action forced-detach-on-main
-alias <proxy_alias>
```

UNIX
```
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action forced-detach-on-main
-alias <proxy_alias>
```

NOTE   Many attach and detach operations might affect Precise performance. For more information, see <u>Clean Main DB and Infra DB CLI command</u> on page 149.

Table 11-4   Elements for Force Detach on Proxy

Element	Descriptions
action	Always forced-detach-on-main Mandatory: Yes
i3-user	See <u>Authenticate to CLI Utility</u> on page 12.
i3-encrypted-password	See <u>Authenticate to CLI Utility</u> on page 12.
alias	Display name of the Node you want to detach Values: String Mandatory: Yes

12

Alerts Metrics

This section includes the following topic:

- [Managing Alerts with CLI](#)

Managing Alerts with CLI

You can manage Precise Alerts using CLI. To manage alerts metrics using CLI

1. Use the relevant parameters file. To select one, see
2. Run the following command:

Windows	infra\bin\psin_cli.bat -action alerts-settings -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -parametersfile <path_to_parameters_file>
UNIX	./infra/bin/psin_cli.sh -action alerts-settings -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -parametersfile <path_to_parameters_file>

Parameter Files

The following are parameter files you can use to manage Alerts with CLI:

- Enabling/Disabling Alerts

- Setting Alerts Metrics Actions

- Clearing Alerts Actions

Enabling/Disabling Alerts

To enable/disable alerts metric use the following parameters file:

```
<parameter name="metric-settings-action" value="enable-disable" />
<parameter name="metric-set" value="Customized" />
<parameter name="target-instance-server-name" value="server1" />
<parameter name="target-instance-name" value="ORCL" />
<parameter name="target-instance-technology-code" value="OR" />
<parameter name="enable" value="true" />
```

Table 12-1   Elements for Enabling/Disabling Alerts

Element	Description
metric-settings-action	Always enable-disable Mandatory: Yes
metric-set	The metric name. Values: string Mandatory: Yes
target-instance-server-name	The related instance server name Values: String Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
target-instance-name	The related instance name Values: string Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
target-instance-technology-code	The related instance technology code Values: String. For more information, see Technology Codes on page 174. Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
enable	Values: true/false Mandatory: Yes
filter-instances-by-technology	Required technology or a comma separated list. Values: String Mandatory: Only if specific target parameters are not used.
filter-instances-by-environment	Required application or a comma separated list. Values: String Mandatory: Only if specific target parameters are not used.

Setting Alerts Metrics Actions

To set Alert Metrics Actions, use the following parameters file with some of the parameters described in Additional parameters on page 133.

```
<parameter name="metric-settings-action" value="configure-actions" />
<parameter name="metric-set" value="Customized" />
<parameter name="target-instance-server-name" value="server1" />
<parameter name="target-instance-name" value="ORCL" />
<parameter name="target-instance-technology-code" value="OR" />
```

Table 12-2   Elements for Setting Alerts Metrics Actions

Element	Description
metric-settings-action	Values: configure-actions Mandatory: Yes
metric-set	The metric name. Values: string Mandatory: Yes
target-instance-server-name	The related instance server name. Values: String Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.

Element	Description
target-instance-name	The related instance name.
	Values: string
	Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
target-instance-technology-code	The related instance technology code
	Values: String. For more information, see Technology Codes on page 174.
	Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
filter-instances-by-technology	Required technology or a comma separated list.
	Values: String
	Mandatory: Only if specific target parameters are not used.
filter-instances-by-environment	Required environment or a comma separated list.
	Values: String
	Mandatory: Only if specific target parameters are not used.

Additional parameters

```
<parameter name="action-type" value="mail" />
<parameter name="action-email-address" value="arnold.layne@precise.com" />
<parameter name="action-alert-reoccurrence" value="1" />
<parameter name="action-alert-level" value="critical" />
<parameter name="action-email-content" value="Hello!" />
<parameter name="action-inform-mom-snmp-on-level-changing" value="true/false"/>
<parameter name="action-message-text" value="${text}"/>
<parameter name="action-program" value="${program path}"/>
<parameter name="action-program-server" value="alerts-focal/instance"/>
<parameter name="action-inform-mom-snmp-on-level-changing" value="true/false"/>
```

Table 12-3 Elements for Additional parameters

Element	Description
action-type	Values:
	■ mail
	■ message
	■ program
	■ snmp
	■ mom
	Mandatory: Yes
action-email-address	Email address
	Values: string
	Mandatory: Yes, if action type is mail
action-alert-reoccurrence	Alerts reoccurrence level
	Values: Numeric
	Mandatory: Yes, if action type is mail
action-alert-level	Alert Level
	Values: one of critical or warning
	Mandatory: Yes, if action type is mail
action-email-content	Text of the email message
	Values: string
	Mandatory: Yes, if action type is mail

Element	Description
action-inform-mom-snmp-on-level-changi ng	Values: true/false Mandatory: Yes, if action type is mom/snmp
action-message-text	Values: string Mandatory: Yes, if action type is message
action-program	The program to run Values: string Mandatory: Yes, if action type is program
action-program-server	The server to run the program on Values: string Mandatory: Yes, if action type is program
action-inform-mom-snmp-on-level-changi ng	Values: true/false Mandatory: Yes, if action type is program

Clearing Alerts Actions

To clear Alerts Actions, use the following parameters file:

```
<parameter name="metric-settings-action" value="remove-actions" />
<parameter name="metric-set" value="Customized" />
<parameter name="target-instance-server-name" value="server1" />
<parameter name="target-instance-name" value="ORCL" />
<parameter name="target-instance-technology-code" value="OR" />
<parameter name="action-types" value="MAIL" />
```

Table 12-4   Elements for Clearing Alerts Actions

Element	Description
metric-settings-action	Always remove-actions Mandatory: Yes
metric-set	The metric name. Values: string Mandatory: Yes
target-instance-server-name	The related instance server name Values: String Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
target-instance-name	The related instance name Values: string Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.
target-instance-technology-code	The related instance technology code Values: String. For more information, see <u>Technology Codes</u> on page 174. Mandatory: Yes, if filter-instances-by-technology or filter-instances-by-environment are not set.

Element	Description
action-types	Values: ■ mail ■ message ■ program ■ snmp ■ mom Mandatory: Yes
filter-instances-by-technology	Required technology or a comma separated list. Values: String Mandatory: Only if specific target parameters are not used.
filter-instances-by-environment	Required application or a comma separated list. Values: String Mandatory: Only if specific target parameters are not used.

Rename and Move

This section includes the following topics:

- Renaming the Precise FocalPoint server
- Moving the Precise FocalPoint server
- Moving the PMDB FocalPoint to another server
- Moving the PMDB to another server

Renaming the Precise FocalPoint server

Using CLI you can rename the Precise FocalPoint server. This can be used, if due to IT requirements, you need to rename the Precise FocalPoint server.

Limitations

- If the FocalPoint server has instances or Collectors installed on it, you can't rename it. The only exceptions to this, are the following agents:
  - o   Alerts InformPoint
  - o   Precise for SAP agent
- If you have a Collector other than the ones above, installed on the FocalPoint server, contact Customer Support for further assistance.
- If you have already installed updates on one of your components, verify with Customer Support whether you have to reapply these updates after performing the Move and Rename procedure.

Procedure

To rename the FocalPoint server

1. Before running the rename server CLI, verify that you completed physically renaming the server (using the related server operating system tools).
2. Manually stop all Precise agents on the server including on the Precise FocalPoint server. Don't use the GUI to stop them.
3. Delete the infra/host/hostname.txtfile

4. Run the following command from the ⟨*Precise_root*⟩ folder on the renamed server:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action rename-server -old-name <previous_server_name> -new-name <new_server_name> -proxy-alias <proxy_alias> -installation-cd-path <installation_cd_path>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action rename-server -old-name <previous_server_name> -new-name <new_server_name> -proxy-alias <proxy_alias> -installation-cd-path <installation_cd_path>

Table 13-1   Elements for Renaming the Precise FocalPoint server

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always rename server Mandatory: Yes
old-namer	The server name before the rename. Values: previous-server-name Mandatory: Yes
new-name	The server name after the rename. Values: new-server-name Mandatory: Yes
proxy-alias	The renamed node alias. Mandatory: Yes
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes

Moving the Precise FocalPoint server

Using CLI you can move the Precise FocalPoint server. This can be used if, due to IT requirements, you need to move all Precise FocalPoints on the server to another server.

Limitations

- The instructions refer to moving all Precise components that are installed on the Precise FocalPoint server to another server. Partial moving, or moving components from a server other than the Precise FocalPoint server, is not supported. If you want to move only one FocalPoint, contact Customer Support.

- If the FocalPoint server has instances or collectors installed on it, you can't move it. The only exceptions to this, are the following agents:
  - Alerts InformPoint
  - Precise for SAP agent

- If you have a Collector not from the list above installed on the FocalPoint server, contact Customer support for further assistance.

- Only the PMDB FocalPoint is handled; the PMDB is not moved during this procedure. To move the PMDB, see

- Datafiles in the Precise FocalPoint that were not loaded to the PMDB are lost.

- The server to which the Precise FocalPoint is moved should have the same characteristics as the original Precise FocalPoint server.

  - Identical operating system vendors.

  - Same operating system type. However, the version may be different. For example: A transition from Linux 6.2 to Linux 7.0 and vice versa is not supported, but a transition from Linux 7.0 to Linux 7.1 and vice versa is possible.

  - Same bit version. Moving components from 64-bit servers to 32-bit server, or vice versa, is not supported.

  - Same CPU model. Moving components from AMD CPU to ITANIUM CPU, or vice versa, is not supported.

- You cannot move the Precise framework and the product frameworks to a server that is already installed as part of your federation installation.

- If you have already installed updates on one of your components, verify with Customer Support whether you have to reapply these updates after performing the Move and Rename procedure.

Procedure

To move the FocalPoint server

1. Stop all agents on all servers except for infra agents (listeners and Precise FocalPoint)
2. Manually stop the Precise FocalPoint
3. Copy the entire `<precise_root>` folder from the origin server to the target server.

NOTE	For UNIX, verify that the *<precise_root>* folder is moved to the target server with the original folder permissions. If the original folder permissions are not saved on the target server, problems may occur.

4. After the copy is completed, delete the file `infra/host/hostname.txt` from the new server.
5. Start the Precise FocalPoint on the original server.
6. Run the following CLI on the new server using IN as the product-code argument value:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-focal -product <product_code> -old-server <old_server_name> -new-server <new_server_name> -installation-cd-path <cd_path> -proxy-alias <proxy_alias>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-focal -product <product_code> -old-server <old_server_name> -new-server <new_server_name> -installation-cd-path <cd_path> -proxy-alias <proxy_alias>

NOTE	After the move, the old server contains only the Precise Listener. You can uninstall it using setup for server CLI. The CLI might produce action items.

7. For each FocalPoint you have installed on the old server, run the same command as above on the new main Precise FocalPoint server (change the -product argument value). When running the CLI, run it according to the following order:

   - SAP FocalPoint (if installed) - product code SP

   - Alerts FocalPoint (if installed) - product code PF

   - All other installed FocalPoints product codes

Table 13-2 Elements for Moving the Precise FocalPoints server

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always move-focal Mandatory: Yes
product	Values:The FocalPoint product code. See [Product Codes](#) on page 175. Mandatory: Yes
old-server	The old server name. Values: string Mandatory: Yes
new-server	The new-server-name. Values: string Mandatory: Yes
installation-cd-path	Path to the folder where the Precise download was downloaded to. Values: string Mandatory: Yes
proxy-alias	The renames ode alias. Values: string Mandatory: Yes

Post-move adjustments and updates

After moving the FocalPoint server, you will need to make adjustments and updates for the following:

- Adjustment for Precise for SAP FocalPoint and agents on the new server
- Updating SAP on the original server

Adjustment for Precise for SAP FocalPoint and agents on the new server

To adjust the Precise for SAP framework on the new server

1. Run the following commands from the *<precise_root>* folder (to uninstall Precise for SAP FocalPoint services):
   ```
   products\sap\bin\pssp_install_fp.bat
   products\sap\bin\pssp_install_agents.bat IS1
   ```
2. Open the `products\sap\cfg\IS1\agents-config.xml` file and replace the original server's Precise root folder with the new server's Precise root folder in the following elements:
   - homedir
   - cfgdir
   - logdir
   - rfgdir
3. Start the agents on the new server.

Updating SAP on the original server

To update SAP on the original server

- Run the following commands from the *<precise_root>* folder to uninstall the Precise for SAP FocalPoint services:
  ```
  products\sap\bin\pssp_uninstall_fp.bat
  products\sap\bin\pssp_uninstall_agents.bat IS1
  ```

Verification

After moving the Precise FocalPoint's server, perform the following verifications in the new installation:

- Check the agent's status in Adminpoint
- Check that the Performance Warehouse processes are running and that data is loaded
- Check that data is displayed in the various products

Moving the PMDB FocalPoint to another server

Using CLI you can move the PMDB FocalPoint to a new server.

Limitations

- The new server should be installed (with BA) before the PMDB FocalPoint is moved.

- Only the PMDB FocalPoint is handled; the PMDB is not moved during this procedure. To move the PMDB, see

Procedure

To move the PMDB FocalPoint

- Run the following command from the main Precise FocalPoint server.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-focal -product PW -old-server <old_server_name> -new-server <new_server_name> [-installation-cd-path <cd_path>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-focal -product PW -old-server <old_server_name> -new-server <new_server_name> [-installation-cd-path <cd_path>]

NOTE	This CLI might produce action items. In case of failure, the command can be executed again.

Table 13-3 Elements for Moving the PMDB FocalPoint to another server

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always move-focal Mandatory:Yes
product	Always PW Mandatory: Yes
old-server	The old PW server name. Values: string Mandatory: Yes
new-server	The new PW server name. Values: string Mandatory: Yes
installation-cd-path	The path to the path to the folder where the Precise download was downloaded to. Values: string Mandatory: Yes

Moving the PMDB to another server

Using CLI, you can move the PMDB to another server.

NOTE	When moving the PMDB FocalPoint to a server other than the Precise FocalPoint server, restart the Precise Listener on the new PMDB FocalPoint server.

Limitations

- You can only move the PMDB. No agents are involved.

- You can only move to the same DBMS type (for example, Oracle to Oracle and SQL Server to SQL Server).

  However, you can move to another DBMS version.

  o For an SQL Server based database, you must use the same authentication mode (SQL authentication or Windows OS Authentication), and the new database should have the same collation.

  o For an Oracle database, you must use the same charset.

For guidelines regarding export and import, see <u>Examples for exporting and importing an SQL Server or Oracle based PMDB</u> on page 142.

Procedure

To move the PMDB

1. Stop all agents, including Precise Listeners and the Precise FocalPoint.
2. Manually export the PMDB, and import it to the new DBMS. For an Oracle PMDB, export the PMDB tablespaces metadata also.
3. Start the Precise FocalPoint.
4. Run the CLI command on the main Precise FocalPoint server. The command updates the Precise registry with the related information.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-pw-db -parameter <parameter_name>=<parameter_value>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action move-pw-db -parameter <parameter_name>=<parameter_value>

NOTE	You need to specify only the parameters that were changed. For the list of parameters, see <u>Installing the Precise Framework</u> on page 13.

For example:

For SQL Server in Windows:	infra\bin\psin_cli.bat -i3-user admin -i3-clear-password admin -action move-pw-db -parameter dbms-instance=NEW_DATABASE1 -parameter dbms-dba-user=sa -parameter dbms-dba-clear-password=sa
For Oracle in UNIX:	./infra/bin/psin_cli.sh -i3-user admin -i3-clear-password admin -action move-pw-db -parameter dbms-server=new_poolhp6 -parameter dbms-instance=NEW_ORCL dbms-dba-user=SYSTEM dbms-dba-clear-password=MANAGER

Table 13-4 Elements for Moving the PMDB to another server

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always move-pw-db Mandatory: Yes
parameter	The changed parameters. For more information about Performance Management DBMS related parameters, see Installing the Precise Framework on page 13. Values: parameters in format name=value Mandatory: Yes

Verification

After moving the PMDB to another server, perform the following verifications in the new installation:

- Check the agent's status in Adminpoint
- Check that the Performance Warehouse processes are running and that data is loaded
- Check that data is displayed in the various products

Examples for exporting and importing an SQL Server or Oracle based PMDB

The following section provides examples of the export and import procedures for SQL Server and Oracle based PMDBs.

Exporting and importing an SQL Server based PMDB

To export an SQL Server based PMDB

1. Open the Microsoft SQL Server Management Studio.
2. Right-click on the Performance Warehouse database.
3. Select the **Tasks > Back Up …** option.
4. Configure the backup file and click **OK**.
5. Wait for confirmation of a successful export.

To import an SQL Server based PMDB

1. Copy the created backup file to the new server.
2. Open the Microsoft SQL Server Management Studio on the new server.
3. Right-click on **Databases**.
4. Select Restore Database….
5. In the "to database?" field, enter the previous database name.
6. In the "from device" field, click on the **...** (browse) button, and select the backup meda file.
7. Select **Add**.
8. Select the backup file.
9. Click **OK.**
10. Select the most recent backup.
11. Click **OK** on the restore confirmation message.

Exporting and importing an Oracle based PMDB

When using Oracle as the PMDB repository, you can use the export and import utilities to move data. For more information, see http://wiki.oracle.com/page/Oracle+export+and+import+.

NOTE	These utilities are available under the `<ORACLE_HOME>/bin` folder.

To export an Oracle based PMDB

1. Open a command line.
2. Execute "exp" with the tablespaces' parameter.
3. Follow the instructions in the script (you can use most of default values).
4. For "user to be exported", enter the PMDB user, for example: PRECISE_PMDB

   If error 942 occurs while using the export utility, execute the following as system user:

   `@c:\oracle\ora92\rdbms\admin\catexp.sql`

To import an Oracle based PMDB

1. Copy the exported data to the new database.
2. Open a command line in the new database.
3. Execute the "imp" command and follow the script instructions.

SDK

This section includes the following topics:

- [How to plug-in the SDK using the CLI Utilities](#)
- [How to plug-out the SDK using the CLI Utilities](#)

How to plug-in the SDK using the CLI Utilities

This section describes how to plug-in the SDK using the CLI Utilities.

Preparation

Before running the command line to plug-in the SDK, you should copy all the relevant SDK files to the distribution folder under the *<precise_root>* of the server with the Precise FocalPoint. Typically the files will be *<SDK_name>*.xmland *<SDK_name>*.zip.

Running the Plug-in command

Go to the *<precise_root>* folder of the server with the Precise FocalPoint and run the following command:

Windows	infra\bin\psin_cli.bat -action in-sdk-plug-in -i3-user admin -i3-clear-password admin -parameter installation-package=<SDK_name>.xml
UNIX	./infra/bin/psin_cli.sh -action in-sdk-plug-in -i3-user admin -i3-clear-password admin -parameter installation-package=<SDK_name>.xml

How to plug-out the SDK using the CLI Utilities

This section describes how to plug-out the SDK using the CLI Utilities.

Preparation

Before using the plug-out command, verify that you don't have a running SDK instance of the technology that you are about to plug-out.

Running the Plug-out command

Go to the *<precise_root>* folder of the server with the Precise FocalPoint and run the following command:

Windows	infra\bin\psin_cli.bat -action in-sdk-plug-out -i3-user admin -i3-clear-password admin -parameter sdk-technology-code=<*SDK_technology_code*>.xml
UNIX	./infra/bin/psin_cli.sh -action in-sdk-plug-out -i3-user admin -i3-clear-password admin -parameter sdk-technology-code=<*SDK_technology_code*>.xml

Additional Precise CLI Utilities

This section includes the following topics:

Encrypt command

The Encrypt command encrypts passwords that are used as parameters. The encryption is based on the encryption type that is currently configured on the site.

The encrypted password is displayed in the standard output. The Encrypt command uses the following format:

Windows	infra\bin\psin_cli.bat -action encrypt -password <password>
UNIX	./infra/bin/psin_cli.sh -action encrypt -password <password>

password element

The following table describes the syntax of the `password` element.

Table 15-1   Password element

Element	Description
password password	Contains the value of the password to be encrypted. To encrypt an empty password, type "".
	NOTE: Any password parameter can be a clear text value. To create a clear text value, replace the name of the parameter from encrypt to clear.
	For example, replace:
	dba-encrypted-password
	to:
	dba-clear-password

Apply License command

The Apply License CLI applies a new license to Precise.

To apply the license, run the following command on the main Precise FocalPoint server:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action apply-license -license-file <license_file_name>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action apply-license -license-file <license_file_name>

License file name element

The following table describes the syntax of the license file name element.

Table 15-2   license file name element

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always apply-license Mandatory: Yes
license-file	Specifies the path to the license file name that needs to be applied.

Change an installed Precise Listener port

The Listener Port Change command enables you to change the port number of an installed Precise Listener.

| NOTE | This command must be executed on the server itself. You are not allowed to change the Precise FocalPoint Listener port number. |

To change listener port, run the following command:

| **Windows** | Infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> \| -i3-clear-password <clear_password>}
-action port-change
-port <port_number> |
| **UNIX** | ./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> \| -i3-clear-password <clear_password>}
-action port-change
-port <port_number> |

Create support file command

The Create a support file command enables you to generate a support file for Precise. The created support file is saved in the `<precise_root>/support` folder on the main Precise FocalPoint.

To create a support file, run the following command on the main Precise FocalPoint.:

| **Windows** | Infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> \| -i3-clear-password <clear_password>}
-action support
-mode <support_mode>
-servers <servers_list>
[-proxy-alias <node_alias>] |
| **UNIX** | ./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> \| -i3-clear-password <clear_password>}
-action support
-mode <support_mode>
-servers <servers_list>
[-proxy-alias <node_alias>] |

Table 15-3   Elements for Create support file

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always support Mandatory: Yes
mode	The type for the support file. Values: ■ Full - for creating a full support file. ■ Express - for creating an express support file. Mandatory: Yes
servers	The names of the servers for which you want to create support files. The servers names are separated by a comma. The servers list should contain at least one server name. If the list contains more than one server name, it should be wrapped with double quotes. The following format is used: "server1, server2, ..., serverN" Mandatory: Yes

Element	Description
proxy-alias	The proxy alias
	Values: alias of the related node
	Mandatory: Only for a federated installation

Update main registry command

The update main registry command updates the main registry with the proxy registry. The command should run on the proxy that the change was made on, and will update the main registry.

The update-main-registry command uses the following format:

Windows	Infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action update-main-registry -registry-path <registry_path>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action update-main-registry -registry-path <registry_path>

Table 15-4   Elements for Update main registry

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Update-main-registry Mandatory: Yes
registry-path	The registry path that was updated in the proxy should start with /registry. It should not be a relative, nor an absolute path. The path should be the path to an existing registry file without the .xml suffix, for example /registry/products/infrastructure/thin.

Clean Main DB and Infra DB CLI command

Precise maintains logically deleted entities for its operation. This allows, for example, reusing deleted instance's historical data for new instance installation. However as the Precise system ages, performance might be affected. To improve performance, clean the deleted entities using the following CLI.

Run the following command from the Main Precise FocalPoint root folder:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action clean-infra-db
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action clean-infra-db

Table 15-5   Elements for Clean Main DB and Infra DB CLI

Element	Descriptions
action	Always clean-infra-db Mandatory:Yes
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.

NOTE   Reusing deleted instance's historical data will not be available once this is used.

LDAP Sync command

Precise can use LDAP for its roles & users management. For more details about LDAP and Precise integration, see the *Precise Administration Guide and/or the Precise* Installation Guide. Precise automatically runs LDAP sync once a day at 00:08.

If you have changed LDAP configuration (add/removed users and/or groups) it will be applied at the next 00:08. In case you have changed the LDAP configuration and you don't want to wait, you can force the LDAP sync. Run the LDAP Sync command on the main Precise FocalPoint from the `<precise_root>`:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>} -action ldap-sync
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>} -action ldap-sync

Table 15-6   Elements for LDAP Configuration

Element	Descriptions
action	Always ldap-sync Mandatory: Yes
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.

List Applications, Tiers, and instances

Using CLI you can list the entire Precise applications, Tiers and instances structure in a XML formatted file. To list, run the following command on the main Precise FocalPoint from the `<precise_root>`:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>} -action environments-list [-output-file <output_file>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>} -action environments-list [-output-file <output_file>]

Table 15-7   Elements for List Applications, Tiers, and instances

Element	Descriptions
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always environments-list Mandatory: Yes
output-file	Values: path to output file If output-file argument is omitted, output will be redirected to a new file created in infra/cli/output folder. Mandatory: No

Associate/Disassociate instance Tier

This command associates or disassociates instances to the Tier. Please note the following:

- You can connect an instance to only one Tier in an application.

- An instance must be part of at least one Tier.

- To move an instance to another Tier, first associate the instance with the target Tier, and then disassociate the instance from the original Tier.

- The OS Tier name must be "OS".

- The Other Tier name must be identical to the instance name.

- If you are associating an instance to a non-existent Tier and application, the specified Tier and application are automatically created.

- If you are disassociating an instance from an Tier, and the Tier no longer contains instances, the Tier is automatically deleted. If there are no more Tiers in the related application, the application is also deleted.

- Any Tier change performed on an instance which is part of a cluster, is automatically applied to all instances of that cluster.

Windows
```
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action instance-apptier
-technology <technology_code>
-instance-server-machine-name <server_machine_name>
[-proxy-alias <node_alias>]
-instance-name <instance_name>
-apptier-name <Tier_name>
-environment-name <application_name>
-type <type>}
[-apptier-application <application_code>] [-apptier-frontend {true|false}]
[-force {true|false}]
```

UNIX
```
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action instance-apptier
-technology <technology_code>
-instance-server-machine-name <server_machine_name>
[-proxy-alias <node_alias>]
-instance-name <instance_name>
-apptier-name <Tier_name>
-environment-name <application_name>
-type <type>
[-apptier-application <application_code>] [-apptier-frontend {true|false}]
[-force {true|false}]
```

Table 15-8 Elements for Associate/Disassociate instance Tier

Element	Descriptions
i3-user	See <u>Authenticate to CLI Utility</u> on page 12.
i3-encrypted-password	See <u>Authenticate to CLI Utility</u> on page 12.
action	Always instance-apptier Mandatory: Yes
technology	Values: Technology code. For more information, see <u>Technology Codes</u> on page 174. Mandatory: Yes
instance-server-machine-name	The instance server machine name. Values: string Mandatory: Yes
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation
instance-name	The instance name. Values: string Mandatory: Yes
apptier-name	The Tier name. Values: string Mandatory: Yes
environment-name	The application name. Values: string Mandatory: Yes
type	Values: one of DISSOCIATE,ASSOCIATE use ASSOCIATE to add an instance to a Tier use DISSOCIATE to remove an instance from a Tier Mandatory: Yes
apptier-application	Values: Application code is optional and can be specified only for the following technologies: Other – CTX, .Net - ASP,DNT, WEB - WEB, SAP, PST, SBL Mandatory: No
apptier-frontend	Indicates whether the Tier is a frontend Tier. Values: true or false Mandatory: No
force	Indicates whether this operation should be performed even if it affects several instances. Values: true or false Mandatory: Yes if changing the instance Tier when the instance is part of a cluster

Copy Report Manager Reports

CLI enables you to copy reports from one Tier to another. This can also be done between different Nodes, meaning between 2 applications on the same Precise federated installations that each belongs to different Node. To copy Report Manager reports from one Tier to another run the following command from the main Precise FocalPoint root folder:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action fs-copy-foresight-custom-report -parametersfile <parameters_file_path>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action fs-copy-foresight-custom-report -parametersfile <parameters_file_path>

An example of the parameters file is:

```
<parameters>
        <parameter name="source-environment" value="Default"/>
        <parameter name="source-apptier" value="SQL Server"/>
        <parameter name="source-report" value="a_test"/>
        <parameter name="destination-environment" value="test"/>
        <parameter name="destination-apptier" value="SQL Server"/>
</parameters>
```

NOTE To copy a Cross-Tier report, you should use the following string for both the "source-apptier" and "destination-apptier" parameter: "Cross-AppTiers".

Table 15-9   Elements for Attach

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-clear-password	See Authenticate to CLI Utility on page 12.
action	Values: fs-copy-foresight-custom-report Mandatory: Yes
parametersfile	Values: Mandatory:

Create inventory report

The create inventory report enables you to create an Excel file containing information regarding your installation servers, nodes, PW, and instances.

To create an inventory report, run the following command on the main Precise FocalPoint:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action inventory-report [-output-file <output_file_name>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action inventory-report [-output-file <output_file_name>]

Table 15-10   Elements for Create an inventory report

Element	Description
i3-user	See <u>Authenticate to CLI Utility</u> on page 12.
i3-encrypted-password	See <u>Authenticate to CLI Utility</u> on page 12.
action	Values: Always inventory-report. Mandatory: Yes
output-file	The file name to save report to: Values: Path Mandatory: No

Clean Logger cache

Each agent that uses the logger has a cached configuration for the logger. When you want to update the logger configuration, you need to remove the logger cache, so that the related agent will reload the new updated configuration.

To update the logger configuration, run the following command on the Main Precise FocalPoint:

Windows	infra\bin\psin_cli.bat -action clean-logger-cache -server <*server_name*> [-proxy-alias <*node_alias*>]
UNIX	./infra/bin/psin_cli.sh -action clean-logger-cache -server <*server_name*> [-proxy-alias <*node_alias*>]

Table 15-11   Elements for Clean Logger cache

Element	Descriptions
action	Always clean-logger-cache Mandatory: Yes
server	The server name where the related agent is installed. Mandatory: Yes
proxy-alias	The proxy alias Values: alias of the related node Mandatory: Only for a federated installation

Change GUI server port

You can change the GUI server port using CLI. To change the GUI server port run the following command on the Precise FocalPoint whose GUI server port you want to change:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action change-gui-port -port <the_new_port> [-shutdown-port <the_new_shutdown_port>] [-url <the_gui_server_url>]
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action change-gui-port -port <the_new_port> [-shutdown-port <the_new_shutdown_port>] [-url <the_gui_server_url>]

Table 15-12 Elements for Change GUI server port

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-clear-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always change-gui-port Mandatory: Yes
port	The new port used for GUI server Mandatory: Yes
shutdown-port	Local port used to control the GUI server Mandatory: No
url	URL used to access the GUI server. This can also be used in case you have changed GUI server to use SSL, and you want to update Precise of this. Mandatory: No

Join instances to cluster

Web and J2EE technologies support cluster installation. When installing an instance, you can choose whether to install the instance as a standalone instance or as a cluster.

If you have installed instances as standalone instances and they should have been installed as a cluster, you can uninstall the instances and reinstall one instance as a cluster instead. This, however does not keep historical data for the newly installed cluster's instances. If you want to keep the historical data related to the instances, you can use the join instances to cluster CLI utility command.

Prerequisites for using the Join instances to cluster command

The following list describes the prerequisites for using the Join instances to cluster command:

- Only Web (WebSphere and WebLogic only) and J2EE instances are supported.
- All instances' servers must contain the same Precise version as the Main Precise FocalPoint. If upgrading from version 8.7, complete the upgrade related action items.
- All instance's servers must have the same path to the Precise installation folder.
- All instances must be of the same type (and for Web also of the same application) and must be standalone instances (you cannot join instances which are already installed as a cluster).
- Before a Web instance can be joined, it must run at least once.

The Join instances to cluster command

To join the instances, run the following CLI utility command from the Main Precise FocalPoint root folder:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> -i3-clear-password <clear_password> -action join-instances-to-cluster [-proxy-alias<proxy alias>] -instances-ids "<instances_ids>" -cluster-name <cluster_name> -[template <template>] [[-installation-cd-path <cd_path>]

UNIX	infra/bin/psin_cli.sh
	-i3-user <user_name>
	-i3-clear-password <clear_password>
	-action join-instances-to-cluster
	[-proxy-alias<proxy alias>]
	-instances-ids "<instances_ids>"
	-cluster-name <cluster_name> [template <template>]
	[[-installation-cd-path <cd_path>]

Table 15-13 Elements for Join instances to cluster

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-clear-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always join-instances-to-cluster Mandatory: Yes
proxy-alias	Alias of the instance's related node. Mandatory: Yes, only in a federation installation.
instances-ids	Comma separated list of IDs related to the instances that need to be joined. To get the IDs related to the instances, use the get-instance-id CLI utility command. See [Installing a new instance while keeping historical data from an old instance](#) on page 82. Mandatory: Yes
cluster-name	The name of the cluster to install. Mandatory: Yes
template	The ID of the instance that will be used as the template to install the new cluster. If omitted, the first instance in -instances-ids is used as the template instance. Mandatory: No
installation-cd-path	Indicates the absolute path to the folder where the Precise download was downloaded to. Values: String Mandatory: Yes

Configure SmartLink for an application

SmartLink is set by default for an application containing Web/J2EE/.NET Tiers. If you want to disable SmartLink for the application, run the following CLI utilities command on the main Precise FocalPoint:

Windows	infra\bin\psin_cli.bat
	-i3-user <user_name>
	{-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>}
	-action smartlink-config
	-environment-name <application_name>
	-enable <enable_smartlink>
UNIX	./infra/bin/psin_cli.sh
	-i3-user <user_name>
	{-i3-encrypted-password <encrypted_password>	-i3-clear-password <clear_password>}
	-action smartlink-config
	-environment-name <application_name>
	-enable <enable_smartlink>

Table 15-14 Elements to configure SmartLink

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always smartlink-config Mandatory: Yes
environment-name	The name of the application on which SmartLink should be enabled/disabled. Mandatory: Yes
enable	Indicates whether SmartLink schould be enabled or disabled for the application. Values: true, false Mandatory: Yes

Downtime command

The downtime command defines new downtime rules for an application, server, or specific Instance. Define the downtime using CLI utilities by running the following command:

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action downtime {-environment-name <application_name> | -server <server_name> | -instance-name <instance_name> -technology <technology_code> -server <server_name>} -proxy-alias <proxy_alias_name> -start date <start_date> -start time <start_time> -end date <end_date> -end time <end_time>
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action downtime {-environment-name <application_name> | -server <server_name> | -instance-name <instance_name> -technology <technology_code> -server <server_name>} -proxy-alias <proxy_alias_name> -start date <start_date> -start time <start_time> -end date <end_date> -end time <end_time>

Table 15-15 Elements to configure the downtime

Element	Description
i3-user	See [Authenticate to CLI Utility](#) on page 12.
i3-encrypted-password	See [Authenticate to CLI Utility](#) on page 12.
action	Always downtime Mandatory: Yes
environment-name	The name of the application on which the downtime needs to be defined. The downtime rules will be applied to all instances on this application Values: String Mandatory: Yes, unless the downtime rule is defined per server or an instance.

Element	Description
server	The name of the server on which the downtime needs to be defined. The downtime rules will be applied to all instances on this server
	Values: String
	Mandatory: Yes, unless the downtime rule is defined per application.
technology	The related technology code.
	Values: String. See [Technology Codes](#) on page 174.
	Mandatory: Yes, when the downtime rule is applied to a specific instance.
proxy-alias	The proxy alias related to the downtime definition.
	Values: String
	Mandatory: No, unless there is more than one proxy.
start-date	The start date of the downtime rule.
	Values: Date (format: YYYY-MM-DD)
	Mandatory: Yes
start-time	The start time of the downtime rule.
	Values: Time (format: HH24:MI:SS)
	Mandatory: Yes
end-date	The end date of the downtime rule.
	Values: Date (format: YYYY-MM-DD)
	Mandatory: Yes
end-time	The end time of the downtime rule.
	Values: Time (format: HH24:MI:SS)
	Mandatory: Yes

AdminPoint Dashboard acknowledgement

The AdminPoint Dashboard provides information regarding health of the Precise installation. The information is displayed in categories for each category per components. If you want to ignore a report for a specific component, for instance because the problem is currently being handled, you will have to add the Unique Key column to the Dashboard and use this relevant key in a CLI utillities command.

To ignore a specific component on the Dashboard:

1. In Precise, enter the AminPoint Dashboard.
2. On the right side of the screen, click the Column chooser icon, and add the Unique Key column to the visible field. Now each component shows its unique key.
3. Find the unique key of the component of which you want to ignore its condition.
4. Run the CLI utillities script below to ignore the component's condition.

    NOTE   Ignored components are shown with a gray severity icon.

NOTE	If you have added the type add for the ignored item, it will also be listed in a new category named Acknowledged.

NOTE	You can specify an expiration date for the acknowledgement and you can also delete them.

Windows	infra\bin\psin_cli.bat -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action dashboard-ignore-handle -dashboard-key <dashboard_key> -type {add|remove} {-expire-in-days<expire_in_days>}
UNIX	./infra/bin/psin_cli.sh -i3-user <user_name> {-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>} -action dashboard-ignore-handle -dashboard-key <dashboard_key> -type {add|remove} {-expire-in-days<expire_in_days>}

Table 15-16 Elements to configure the Dashboard acknowledgement

Element	Description
i3-user	See Authenticate to CLI Utility on page 12.
i3-encrypted-password	See Authenticate to CLI Utility on page 12.
action	Always dashboard-ignore-handle Mandatory: Yes
dashboard-key	The Unique Key of the Dashboard component. Values: String **NOTE**: Use quotes to specify a key that includes spaces. Mandatory: Yes.
type	Add or remove the Dashboard acknowledgement. Values: add, remove Mandatory: Yes.
expire-in-days	Relevant for adding ignore. It specifies the amount of days that the ignore is relevant for. If not specified, the acknowledge is enabled for good. Values: Integer Mandatory: No.

A

Installation Files

This appendix includes the following topic:

- [About the installation files](#)

About the installation files

The CLI utility automatically manages installation files deployment on servers. This is the recommended best practice. If you don't want to use automatic deployment of files, you can deploy the installation files yourself. To do this, run one of the following two CLI utility commands. Each CLI utility command creates a file with a list of required files for the installation. The first command lists files for an existing server and the second one lists files for new servers that have not yet been installed. Use the command that is applicable in your case.

| NOTE | The list of files is dynamic and may change whenever you apply an update on your servers. Once you have the list of required files, you should copy and deploy them on the required servers. |

| NOTE | Instance installation might install more than one agent, for example: An Oracle instance installation might require an Oracle Collector and Insight network agent. In such case, run the CLI utility command for each required agent. |

List files for existing servers

Windows   infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action list-required-files-for-existing-server
-server <server_name>
-product <product_code>
-installation <installation_type_code>

UNIX   ./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action list-required-files-for-existing-server
-server <server_name>
-product <product_code>
-installation <installation_type_code>

Table A-1   List required files for existing server Parameter and Descriptions

Parameter	Descriptions
-action	Always list-required-files-for-existing-server Mandatory: Yes
-server	Name of the server with similar OS details (OS type, 32/64 bits, and CPU type AMD/IA64) as the one on which you plan to make the installation. Mandatory: Yes
-product	Product code. See [Product Codes](#) on page 175. Mandatory: Yes

Parameter	Descriptions
-installation	Installation type code. See [Installation Type Codes](#) on page 175. Mandatory: Yes
-i3-user	See [Authenticate to CLI Utility](#) on page 12.
-i3-clear-password	See [Authenticate to CLI Utility](#) on page 12.

List files for new servers

Windows

```
infra\bin\psin_cli.bat
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action list-required-files-for-new-server
-bits {32|64}
-os <operating_system_type_flavor>
-proxy-alias <proxy_alias_name>
-product <product_code>
-installation <installation_type_code>
```

UNIX

```
./infra/bin/psin_cli.sh
-i3-user <user_name>
{-i3-encrypted-password <encrypted_password> | -i3-clear-password <clear_password>}
-action list-required-files-for-new-server
-bits {32|64}
-os <operating_system_type_flavor>
-proxy-alias <proxy_alias_name>
-product <product_code>
-installation <installation_type_code>
```

Table A-2   List required files for existing server Parameter and Descriptions

Parameter	Descriptions
-action	Always list-required-files-for-existing-server Mandatory: Yes
-bits	The amount of bits of the server; 32 or 64. Mandatory: Yes
-os	The operating system type and flavor. See [Operating System Type and Flavor](#) on page 176. Mandatory: Yes
-proxy-alias	The alias of the proxy. Value: String. Mandatory: Yes
-product	Product code. See [Product Codes](#) on page 175. Mandatory: Yes
-installation	Installation type code. See [Installation Type Codes](#) on page 175. Mandatory: Yes
-i3-user	See [Authenticate to CLI Utility](#) on page 12.
-i3-clear-password	See [Authenticate to CLI Utility](#) on page 12.

Deploy a package on a server

To deploy a package on the server, copy the installation package to the server under `<precise_root>/distribution` folder, and run the following command:

Windows	infra\bin\psin_file_new.exe -manual -extract distribution*<the_file_name>* -event install
UNIX	/infra/bin/psin_file_new.exe -manual -extract distribution*<the_file_name>* -event install

NOTE	Each package has an indication file under *<precise_root>*/distribution/<package>_extracted
	If the indication file exists it means the package was already deployed on the server. You must not deploy package on a server in case it is already deployed.

B

Codes Used by the CLI Utility

This appendix includes the following topics:

- Technology Codes
- Product Codes
- Installation Type Codes
- Operating System Type and Flavor

Technology Codes

Technology' code should be specified in some CLIs. The table below lists the technology codes used by Precise. The following table describes the syntax of the `technology code` argument.

Table B-1   Technology code argument

Technology Code	Technology Name
DN	Microsoft .NET
JE	J2EE
MQ	WebSphere MQ
OA	Oracle Applications
OR	Oracle
OS	OS
OT	Other
PS	PeopleSoft
RS	Sybase Replication Server
SB	Siebel
SI	SAP Interpoint
SP	SAP
SQ	SQL Server
SM	Storage
ST	Storage
SY	Sybase
TU	Tuxedo
UD	DB2
VC	vCenter Server
VM	vCenter Server (instance of the Virtual Server)
WW	Web

Product Codes

Product code should be specified in some CLIs. The table below lists the product codes used by Precise.

Table B-2   Product code argument

Product Code	Product Name
DN	Precise for Microsoft .NET
FS	Report Manager
IN	Precise Management
IS	Insight
JE	Precise for J2EE
OR	Precise for Oracle
PU	Alerts
PF	Alerts FocalPoint
PW	PMDB
SQ	Precise for SQL Server
SP	Precise for SAP
ST	Precise for Storage
SY	Precise for Sybase
TP	Precise TPM
UD	Precise for DB2
VC	Precise for vCenter Server
WW	Precise for Web

Installation Type Codes

Installation type code should be specified in some CLIs. The table below lists the installation type codes used by Precise.

Table B-3   Installation type code

Installation Type Code	Installation Type Name
DNCOL	Precise for Microsoft .NET Collector
FP	FocalPoint
INBA	Precise Listener
ISMQ	Insight MQ Collector
ISOA	Insight Oracle Applications Collector
ISOS	Insight OS Collector
ISTCP	Insight Network Collector
ISTUX	Insight Tuxedo Collector
ISVC	Insight vCenter Server Collector
ISVM	Insight vCenter Server (instance of the Virtual Server) Collector
JECOL	Precise for J2EE Collector
MN	Main Precise FocalPoint
ORBV	Precise for Oracle Bind Variable Collector

Installation Type Code	Installation Type Name
ORCOL	Precise for Oracle Collector
OROA	Precise for Oracle Oracle Applications Collector
ORPPS	Precise for Oracle PeopleSoft Collector
ORSAP	Precise for Oracle SAP Interpoint Collector
ORSBL	Precise for Oracle Siebel Collector
ORXP	Precise for Oracle Shark Point Collector
PUPNT	InformPoint
PUSNM	Alerts SNMP Collector
SPCOL	Precise for SAP Collector
SQCOL	Precise for SQL Server Collector
SQCOM	Precise for SQL Server Interpoint COM Collector
SQPPS	Precise for SQL Server PeopleSoft Collector
SQSAP	Precise for SQL Server SAP Interpoint Collector
SQSBL	Precise for SQL Server Siebel Collector
SQWIN	Precise for SQL Server Windows Storage Collector
STCOL	Precise for Storage Collector
STMAP	Precise for Storage Collector
SYCOL	Precise for Sybase Collector
SYREP	Precise for Sybase Replication Server Collector
UDCOL	Precise for DB2 Collector
UDSAP	Precise for DB2 SAP Interpoint Collector
UDSYC	Precise for DB2 Symmetric Collector
UDSYM	Precise for DB2 Symmetric Mapping Collector
WWCOL	Precise for Web Collector
WWDYN	Precise for Web Dynamic Instrumentation Collector
WWNCL	Precise for Web Filters Collector
WWWEB	Precise for Web Web Server Collector

Operating System Type and Flavor

Table B-4   Operating System Types

Operating System Types
AIX
HP-UX
"WIN" when used for packages suffix, or "Windows NT" otherwise
Linux
s390
SunOS
SunOS_x86

Table B-5   Operating System Flavors

Operating System Flavors
WIN
UNIX

abandonment rate	In Web, a counter that keeps track of the percentage of users that abandon the loading of the Web page before it completes downloading.
action	An operation that Alerts FocalPoint automatically performs when detecting a warning or critical status for a specific metric. According to the defined action, Alerts FocalPoint opens a message box, sends an email or SNMP trap, or executes a program.
action item (manual)	Some installation steps cannot be executed automatically by Precise Installer. The administrator is required to execute them manually. Action Items are presented (when necessary) at end of installation or product update.
AdminPoint	The central administration console of Precise that facilitates the maintenance, configuration, and management of all installed Precise components, such as monitoring the status of all Precise agents and PMDB processes, getting license information, starting and stopping the agents, getting log data on agents and events, changing PMDB settings, and installing patches.
	See also PMDB.
	See also agent.
advice	In Oracle, an algorithm that is designed to recommend on gathering statistics, creating new indexes, change existing indexes, and add or delete hints to make Oracle's Optimizer choose a better access path and make the statement perform better. Can be activated from any DML (Data Manipulation Language) statement.
agent	A program that runs on a server machine to collect, process, or communicate performance information. The Precise installation consists of multiple agents.
alert	The state of an Alerts metric that has reached a near-critical or critical status. An alert is issued by Alerts, triggering an action and informing of a problem that has occurred or is likely to occur within the area sampled by the specific metric.
	See also action.
Alerts	These product provide alerts to problematic conditions before they turn into performance problems, based on predefined metrics and thresholds. Alerts can automatically perform an action, such as displaying a pop-up message, sending an email message or SNMP trap, or running a program.
Alerts FocalPoint	An agent that receives data from the InformPoint agents, stores it, and performs any action that has been user-defined for that specific alert, such as displaying a pop-up message, sending an email message or SNMP trap, or running a program.
	See also InformPoint.
alert type	In Alerts, the status of all metrics belonging to a metric group or a monitored instance, indicating the current performance level through colors.
	See also alert.
	See also metric.
application server metric	In J2EE, a metrics that is provided by the application server or by customer code. This can include metrics published by the Java Management Extension (JMX) APIs or vendor-specific APIs, such as IBM's Performance Management Interface (PMI).
AppTier	The abbreviation for an application tier in a Precise environment. An AppTier contains one or more instances of the same technology and purpose. Application tiers do not necessarily correspond to distinct physical servers: in many cases, the tiers are logical, with one server running multiple AppTiers or one AppTier spans a cluster of servers. A Precise environment may contain multiple AppTiers on the same technology. For example, you may group J2EE instances (JVMs) into a J2EE Presentation AppTier and a J2EE Business Logic AppTier. Segmenting application service time into the contribution of individual application tiers is helpful in identifying the source of performance problems. Analyzing the performance and behavior of each tier separately is crucial for isolating the root causes of performance problems.
cabinet	In Oracle, SQL Server, DB2, and Sybase, the highest logical level in the SQL workspace hierarchy. A cabinet contains folders and, within folders, statements.

call path	A subset of a stack trace including only those methods that have been instrumented.
client cache	In Web, a counter that keeps track of the percentage of requests taken from the client cache (http status 304).
client-side collection	See Web client browser-side.
cluster	A group of servers or instances that are configured to be treated as a single entity. In Oracle, all Oracle instances of the same Oracle database (RAC configuration) are treated as a cluster and presented in the Precise for Oracle UI as a Database. In J2EE, a group of JVMs that serve the same application can be defined as Cluster (even if they are not defined as a cluster in the application server configuration). All JVMs of the same cluster share the same configuration.
collapsed access plan	In SQL Server and Sybase, the access plan of a unique group of statements or batches that belong to the same collapsed statement or batch but have different access plans. This can differ due to the constants in the text of the original (not collapsed) statements.
	See also explained statement.
	See also collapsed statement.
collapsed statement	In Oracle, SQL Server, Sybase, and DB2, a statement whose constants are replaced with parameters. Each collapsed statement can have several access plans, according to the occurrences of its statements.
	See also collapsed access plan.
Collector	The program that runs on the monitored server to collect performance information.
	Some technologies allow a single Collector (agent) to serve multiple instances running on the same server. Other technologies require a dedicated Collector per monitored instance.
	In most cases, it must be installed on the monitored server. Collectors for SAP, SQL Server, and Sybase may reside on a remote server.
	See also agent.
collector slice size	In J2EE, the smallest unit of data presentation and storage. It can be configured as 30 seconds or five minutes. If SmartLink is configured, relevant Web and Microsoft .NET Collectors will report to SmartLink using the same collector slice size. Regardless of the defined collector slice size, the most granular slice size presented on both the Precise for Web UI and the Precise for Microsoft .NET UI will be 15 minute intervals.
completion rate	In Web, a counter that keeps track of the percentage of users that completed the loading of a Web page.
count	The number of occurrences observed during a measurement interval.
CPU time	The average amount of time consumed by the operating system actively processing instructions on behalf of a running activity.
critical status	In Alerts, the status represented by a red bullet indicating that the value of the sampled metric has exceeded the near-critical and critical threshold values.
	See also metric.
Cross-AppTiers	In Insight, Report Manager, and Alerts, a perspective that provides high-level information about the performance of all AppTiers in an environment, including operating system data. It provides a holistic view of the entire environment and helps understand how the AppTiers interact.
	See also AppTier.
current data	In SmartLink, the end-to-end activity, detected by Precise over the last five minutes, including activities that are still in progress. In all databases products, a workspace that presents Current Sessions and the SQL statements that were executed including statements that are still in progress.
custom	Represents invocations of a type not specifically defined.
	See also work time.
customized metric	In Alerts, a user-defined metric that measures site-specific parameters.
drilldown	Within Precise products and Insight SmartLink, the filtering of analyzed data by clicking a specific entity. Then, additional information about the selected entity is presented, plus a breakdown of its activity by another entity. For example, drilldown on a transaction and get an overtime graph of the selected transaction, plus a list of top users that executed the selected transaction.
entry point	Usually a top-level HTTP or EJB request. An entry point can originate when a user clicks in a browser or an E-commerce server invokes a remote EJB. J2EE makes a distinction between service request invocations and other invocations. The first HTTP or EJB invocation within a call path is designated as an entry point.

environment	The highest Precise logical group. It may contain multiple AppTiers of various technologies that serve an application together. For example, a Payroll Production environment may contain all Web servers, application servers, transaction managers, databases, and servers that serve this application. Alternatively, it may contain any set of instances that form together an administrative group. Since Precise version 8.5, an instance can belong to more than one environment. Let's say a single Oracle database serves two different applications plus the DBA wants to associate this database with a group of other databases under his responsibility regardless of served applications. In this case the Oracle database will be associated to three different Precise environments. See also AppTier. See also instance.
ERP Extension	In Oracle, DB2, and SQL Server, an extension to the Collector that provides detailed information on the activities and resource consumption of packaged application components. It correlates the database information, and the packaged application information and lets you see users, transactions, reports, and other elements of ERP applications, such as Oracle Applications, SAP, PeopleSoft, and Siebel.
event	In Alerts, the occurrence of a sampling or progress. A sampling occurrence occurs every time a metric samples. A progress occurrence occurs when a metric's progress status is changed or when the investigated status reaches the end of the given investigation time. In AdminPoint, all occurrences reported by Precise agents, including informational events, warnings, and errors related to one of the agents. All events are shown in the Events view. See also metric. See also progress.
executions	In Oracle, SQL Server, DB2, and Sybase, the number of times a SQL statement was executed during the selected time frame. In SmartLink and SAP, the number of times a transaction was executed during the selected time frame.
explained statement	In Oracle, SQL Server, DB2, and Sybase, a statement whose access path (chosen by the RDBMS Optimizer) is clarified and translated into a visual display. Explained results include information on the objects referenced by the statement and the operations performed on these objects.
extended collection	In Oracle, a function that proactively specifies a future period during which Oracle activity data is collected and organized for subsequent analysis. Extended collections are an easy means to view collected information, assess application resource consumption, and identify bottlenecks that are inhibiting application performance and end-user productivity.
Federated Precise	Federated Precise is a version of Precise (starting with version 8.5) that can manage multiple Precise installations within unified StartPoint and AdminPoint screens, displaying and managing all environments, instances, and installations.
findings	A ranked list of top performance problems in the selected context. They are presented in Oracle, SQL Server, .NET, and J2EE. Each finding provides: a short explanation of the problem, detailed background information, and most important: one or more links to further investigate the problem and possibly get more granular findings on the selected context.
first byte time	In Web, a counter that keeps track of the time that it takes from the moment a new Web page is called until the first byte arrives back from the Web server.
FocalPoint	An agent that communicates with the Listeners installed on the monitored servers, receives data from the Collectors, periodically processes and stores this data in the PMDB, and serves UI requests.
folder	In SQL Server, Oracle, DB2, and Sybase, the intermediate logical level in the SQL workspace hierarchy. Folders are grouped into cabinets and contain SQL statements. See also cabinet.
Framework Installer	The application that facilitates the installation of Precise framework components. It can be invoked from the installation DVD or Precise v9.0 download to install a new Precise deployment. It can also be invoked from an existing Precise deployment to install an additional framework node and attach it to the originating Precise deployment. See also Framework node.
Framework node	A set of FocalPoint agents that are installed together and manages a set of monitored instances. The performance data of these instances will be loaded into a dedicated PMDB. A single Precise deployment may contain multiple framework nodes (using a separate PMDB for each node). An environment cannot span over multiple framework nodes.

garbage collection	An automatic process in the Java runtime environment that periodically reclaims memory used by objects that are no longer referenced. The process can impact an application's performance while memory is being reclaimed. Java programmers may initiate garbage collection explicitly.
grouper	In Web, the identifier that is used to group other identifiers, such as sites or URLs.
hint	In Oracle, an instruction directed at the Oracle Optimizer that includes considerations for an execution plan. The Oracle Optimizer will build an execution plan based on the hint, ignoring its own set of considerations.
hour group	A unit that reflects the type and level of activity within the system at different times. By defining the times of the day that are peak and off-peak, or day and night, the performance analysis can be focused on those particular times of the day. If, for example, most performance problems occur within nighttime and weekend batches, it can be useful to focus only on them.
InformPoint	In Alerts, an agent that retrieves performance data from all installed Precise products, analyzes it, and sends an alert to the Alerts FocalPoint when the predefined thresholds are exceeded. See also agent.
Insight	The Precise product family that facilitates the process of monitoring and correlating system performance. It consists of Insight. See also Report Manager. See also FocalPoint.
Insight FocalPoint	An agent that receives performance information from Insight Savvies, which monitor the environment. Insight FocalPoint then correlates, processes, and stores this information in a centralized location. The Insight performance history is stored in the PMDB. See also Savvy. See also PMDB.
instance	A monitored object of a specific technology. The following list specifies what constitutes an instance for the various supported technologies: J2EE - a Java Virtual Machine (JVM - a logical name set by the user), Microsoft .NET - a Common Language Runtime (CLR - a logical name set by the user), Oracle Applications - an Oracle Applications Form server, Oracle - an Oracle instance, SAP - a SAP system, SQL Server - an SQL instance, Sybase - a Sybase instance, Tuxedo - a Tuxedo domain, Web - a Web server, WebSphere MQ - an IBM WebSphere Queue Manager, DB2 - a DB2 non-partitioned database or a DB2 database partition. During installation, the instance is associated with one AppTier and environment. An Instance can be moved to a different environment or associated with multiple environments without re-installation nor losing historical data. See also environment.
instance statistics	See performance counter.
instance/database changes	In SQL Server and Oracle, the part of the Collect Schema Changes process that captures instance definition changes and database option changes and saves them in the PMDB.
instrumentation	The process of inserting fault-tolerant recording hooks in Java byte code, .NET MSIL, HTML pages, or other monitored components, resulting in the capture of performance metrics. In J2EE, a mechanism that enables collecting performance information when an application is executed. The process involves inserting special fault-tolerant recording hooks into application class objects. In WEB, the insertion of recording hooks into HTML pages can either be in memory (Dynamic Instrumentation) or file-based (Static Instrumentation).
instrumentation context	See invocation context.
internal invocation	The process of invoking a request from an HTTP request (Servlet or JSP) or an EJB. J2EE displays an internal invocation like any other invocation.
invocation	An execution of a J2EE entity (a Servlet, EJB, SQL Statement, method, and so on). When mentioned in plural (Invocations), means the amount of times that the entity was executed.
invocation context	The context within which a method is invoked. For example, if Method A is invoked both from Method B and from Method C, there will be two different invocation contexts for the performance metrics collected for Method A, one for when it is invoked from Method B and one for when it is invoked from Method C. See also call path and instrumentation context.
JRE (Java Runtime Environment)	As the runtime part of the Java software, the combination of the components that enable the execution of a Java program: a Java virtual machine, the core class libraries, and the files that form the Java platform.

JSP (Java Server Page)	An HTML page with special tags for Java scripting. An application server processes the tags and generates a Servlet.
JVM (Java Virtual Machine)	An instance of a JRE that executes Java programs. A server-side Java application server is itself a Java program that runs inside a JVM. Servlets, JSPs and EJBs are Java programs (applications) that run within the application server's JVM. J2EE monitors the JVM running the application server and the server-side Java applications within the application server.
JVM Heap Memory	The amount of real computer memory that is allocated to the JVM for executing Java programs.
key metric	In Alerts, a parameter that monitors a very important performance aspect. The status of the Oracle instance (up/down), for example, is crucial for system performance. If the instance is down, this is the first problem that needs to be solved. Marking a metric as key metric ensures that a critical alert raised for this metric receives top priority by the person that is responsible to handle alerts at any time. It can also help determine which alert to handle first in case of multiple alerts. In Alerts, key metrics are always displayed at the top of a metric table when it is sorted by alerts so that they get immediate attention.
Listener	The agent that facilitates the communication between the various Precise agents across different servers must be installed on every server where Collectors or FocalPoint agents are installed. The Listener allows communication with all other agents installed on the monitored server, while only the Precise Listener port is known by other servers.
login name	In SQL Server and Sybase, the session identifier that represents the credential used to connect to the database. When an ERP extension is installed, the user name of the packaged application's client overrides the login name. For example, when SAP extension is installed, the SAP user name overrides the login name.
machine	A session identifier. A machine as sampled, for example, by the SQL Server Collector is the identification of the machine where the client process executes. Machine is also sampled by Oracle, DB2 and Sybase. In Insight terminology Machine is called Client machine.
Main framework node	A main framework node is the single point for login and also serves as the Precise FocalPoint for the entire deployment.
major collection count	Number of estimated major garbage collection events that occurred during the last J2EE collector slice. A major garbage collection can stop the application while JVM heap memory is being reclaimed. See also garbage collection.
major garbage collection time	Percentage of time spent by the JVM executing major garbage collection events during the displayed interval. See also garbage collection.
MBean	A Java object that represents a manageable resource. In J2EE, MBeans, or Managed Beans, are used for application server metrics.
memory logger interval	The interval at which the J2EE Collector gathers JVM heap memory data. All snapshots of the memory logger's data collected according to the memory logger interval are summarized with counters in the current aggregation interval. The memory logger interval's time span is typically a small fraction of the aggregation interval.
metric	In Alerts, a query that helps measure performance in the environment. Three types of metrics are available: System metrics relate to the internal resources, operations, and objects of the monitored infrastructure; application metrics reflect the way the applications perform; user-defined metrics can be customized to specifically relate to a site. When a metric's value exceeds one of the defined thresholds, its status changes to near-critical (yellow bullet) or critical (red bullet). See also key metric.
metric set	In Alerts, a unit that groups metrics that measure related performance aspects. The following metric sets exist: Status: includes metrics that alert to functional problems related to the instance. Performance: includes metrics that alert to performance problems related to the instance. Load: includes metrics that alert to instance-related load problems that may later cause errors or crashes. Service: includes metrics that alert to instance-related SLA breaches. The metrics in this set are sampled by Insight. Performance Trending: includes metrics that alert to potential future performance problems. The metrics in this set are sampled by Report Manager.

Load Trending: includes metrics that alert to potential future load problems. The metrics in this set are sampled by Report Manager.

Customized: includes user-defined metrics.

Precise Status: includes metrics that alert to the near-critical or critical status of the installed Precise environment.

module	A session identifier. In Oracle it contains the value of MODULE column in V$SESSION table. In DB2 it contains the command name of non-SQL statements or the package name for SQL statements.
near-critical status	In Alerts, a status indicating that the value of the sampled metric has exceeded the defined near-critical threshold. A near-critical status is indicated by a yellow bullet.
network time	In Web, a counter that keeps track of the time spent on network activity from the server side perspective. This includes the time to read the request from the network and the network time to send the response back to the client.
node	See Framework node.
	Note: when creating a new installation from DVD, it would be called "Framework." In the UI screens (columns in tables, choosing a system for a new environment etc), we would call them "Nodes." For example: choose a node for the new environment.
	When adding a new system within AdminPoint, it would be called a "Framework node".
packaged application	An application that is created and/or maintained by a third party and is not custom-built to one's specific needs. The following packaged applications have special treatment by Precise: SAP, Oracle Applications, PeopleSoft, and Siebel. They are harder to modify because the application code is either not available or hard to understand.
	See also ERP Extension.
page size	In Web, a counter that keeps track of the amount of data loaded from the server to display the page.
page views	In Web, a counter that keeps track of the number of Web pages viewed at a specific Web site during a selected time period.
parent metric	In Alerts, a joining of several child metrics. Each time a parent metric samples, it gathers data from a set of child metrics and presents it as a single metric query. The individual child metric values are displayed on the Thresholds tab of the Properties dialog box in Alerts.
	See also submetric.
performance counter	In SQL Server, a Windows performance counter as reported by the operating system. In Oracle, an instance level statistic as gathered from some Oracle V$ views. In Sybase, a sysmonitors counter collected by Sybase. In Web, an operating system or a Web server performance counter.
PMDB	The Precise data warehouse of performance and availability data. It can be hosted on an Oracle or SQL Server database.
portal server	An application server for Web-based applications that commonly provide personalization, single sign-on, and content aggregation from different sources and that host the presentation layer of Information Systems. Aggregation is the action of integrating content from different sources within a Web page. A portal may have sophisticated personalization features to provide customized content to users. Portal pages may have a different set of portlets creating content for different users.
portlet	A Java-based Web component, managed by a portlet container, that processes requests and generates dynamic content. Portlets are used by portals as pluggable user interface components that provide a presentation layer to Information Systems.
Precise deployment	An independent Precise system. It contains and manages various agent types and provides centralized monitoring and administration. A Precise deployment may contain multiple framework nodes. One of them is defined as the main framework node and it manages all other nodes of the Precise deployment.
Precise FocalPoint	See Precise FocalPoint agent.
Precise FocalPoint agent	An agent that manages all agents in a single Precise deployment. Additional product FocalPoint agents manage specific technologies and resources.
Precise Proxy agent	When multiple Framework Nodes are managed by a single Precise deployment, the Precise FocalPoint agent manages all of the agents of the main Framework node, while every other framework node has a Precise Proxy agent to manage all its agents.
Precise_root	This is the term used in a path for the Precise installation directory. The terms *<i3_root>* or i3 root can appear in text too.

program	A session identifier in Oracle, DB2, SQL Server, Sybase, Insight, and Alerts. A program as sampled, for example, by the SQL Server Collector, is the name of the executable that connects to the database. Applications that do not set the application name have N/A as program. When a SAP extension is installed, the SAP transaction overrides the program, and it may change during the application's lifetime. When a Siebel extension is installed, the Siebel views override the program, and it may change during the application's lifetime. In Insight, program is the name of an executable as recognized by the operating system. If an executable is invoked from a script (a batch or a shell), the script is displayed as the command entity. In Alerts, program is part of the customized metrics definition and is the name of the executable or stored procedure executed in the database that runs when the metric is sampled. In action definitions, program is the name of the executable that will run if the metric exceeds its threshold.
progress	In Alerts, the management state of a metric for which an alert has been raised. The following statuses exist:
	Open: An alert is raised.
	Investigated: The alert is taken care of.
	Closed: The problem has been solved.
Proxy FocalPoint	See Precise Proxy agent
recommended index	In SQL Server, a function that uses the Microsoft Index Tuning Wizard to recommend on adding indexes or statistics for a selected statement, batch, or table. Based on the results of this function, the Optimizer will choose a better access plan and make the respective statement or batch perform better. For statements and batches, recommendations are based on the content of the statement or batch. For tables, recommendations are based on all the statements that are stored in the PMDB, are executed during the selected time period, and have an average duration time greater than the value defined in the registry (where 0 is the default).
	See also advice.
related SQL	In Oracle, a generated statement that uses alternative syntax to access the database in different ways and returns the same output as the original statement.
relative frequency	Number of contributor invocations per entry point. For example, if a service request calls three methods each time it is invoked, the Relative Frequency for the method is three invocations per service request execution. Similarly, if a service request calls one method every other time it is invoked (half of the time), the Relative Frequency for the method is 0.5 invocations per service request execution.
rendering time	In Web, a counter that keeps track of the time that it takes for a Web page to be loaded from the moment the first byte arrives until the Web page is fully loaded or the user interrupts or abandons the loading process.
report	A collection of queries, programming code, and layout settings that Report Manager executes to generate graphical results like tables and charts.
Report Manager	Uses historical information to identify problematic conditions, track long-term performance, volume trends and patterns, view availability problems over long periods of time and on different levels, compare the performance of similar systems, correlate between performance metrics of different products, assist in capacity planning, and generate demand-driven, user-defined reports.
Report Manager FocalPoint	An agent that examines the PMDB tables to produce scheduled performance reports.
	See also PMDB.
report parameter	In Report Manager, a keyword used in a report. Its value is set during the report execution. A parameter's value can be updated either permanently or for the current execution only.
report property	In Report Manager, the attributes that define a specific report, consisting of report parameters and scheduling information.
	See also report parameter.
request	In Web, a counter that keeps track of the number of HTTP requests sent for a viewed entity. **request**
error	In Web, a counter that keeps track of the percentage of requests completed with an HTTP error.
sampling	In Alerts, the process during which a metric queries a Precise product for a specific instance, retrieves values, and calculates the metric's alert level.
sampling base	In Alerts, the start time of a scheduled sampling process (by default Sunday, 00:00 AM).
sampling period	In specific Alerts metrics, the time frame during which statistical data is returned from other Precise products. Such a metric is for example Oracle's General Behavior metric, which returns database behavior for a certain period of time.

sampling rate	In Alerts, the frequency of a metric's regular sampling schedule. The sampling rate is measured in minutes.
Savvy	An Insight agent that collects AppTier-specific performance data.
scalability	A system's ability to withstand load. For example, positive scalability means that the system continues to function properly even when it is called upon to service a larger number of users.
schema changes	In Oracle and SQL Server, a process that captures schema changes and saves them in the PMDB. In SQL Server, instance configuration parameters and database option changes are also captured.
Script Installer	A component of Precise Agent Installer that enables adding a small JavaScript script, also known as a Web browser-side agent, to the Web pages of your Web site.
server	Also called a host machine or server machine. The combination of a computer and associated operating system software that is accessed by multiple clients to perform requested functions and typically returns results to the clients.
server-side collection	In Web, the collecting of performance data from the Web server instance through the Web server agent.
service + network time	In Web, a counter that keeps track of the service and network time, including the total amount of time the request took to reach the server.
Service Level Agreement	See SLA (Service Level Agreement).
service time	In Web and SmartLink, the time elapsed from when a request is received by the server to the time a response is sent back to the computer that made that request. The service time is measured on the server side. In J2EE, the time it takes an invocation to complete execution. In other words, service time is the average length of time between the start time and end time of a Java method execution. For example, the SQL service time is the time it takes the JDBC method executing the SQL statement to be completed. The service time includes CPU and wait time. The service times are reported in the interval in which they complete execution. Though a contributor's average service time may be very small, the contributor may be called many times. As a result, a contributor's overall contribution to performance may be large even though its average service time is low.
servlet	A class that is loaded only once and for which the application server uses multithreading to process requests. The servlet generates an HTML page that is sent back to the Web browser.
size	In Web, a counter that keeps track of the bytes sent and received.
SLA (Service Level Agreement)	A formal definition of an information system's performance goals. Within Precise, an SLA consists of clauses corresponding to various system activities. Once a system's SLA is defined, its SLA compliance can be analyzed, and breaches can be isolated to identify their causes.
SmartLink	In Insight, a component that provides transactive, correlated information across AppTiers from the user's perspective. Insight SmartLink functions in PeopleSoft and Web applications environments.
SmarTune	In Oracle, SQL Server, and .NET, an algorithm that analyzes performance metrics, identifies and ranks potential problem areas, and provides advice for correcting the problems.
socket	An I/O abstraction layer that enables processes to communicate with each other, regardless of whether they are on the same server. Sockets are bi-directional FIFO pipes that look like regular file I/O to the developer with the abstraction layer handling all of the low-level communication details.
StartPoint	The opening page of Precise. It provides a quick overview of the environment status and links to launch any of the Precise products.
Statistics workspace	In Oracle, DB2, SQL Server, Sybase, J2EE, and Web this workspace presents instance level statistics such as hit ratios, utilization, JMX metrics, logging, and more.
submetric	Also called child metric. In Alerts, the subquery of a parent metric. A child metric gathers its own data and combines it with the data gathered by other child metrics to form the result of the parent metric. Each child metric has its own thresholds and may be enabled or disabled individually. See also parent metric.
summary table	A container that stores the information collected by the Precise agents and loads it into the PMDB. Summary tables store the same data at different levels of granularity: time slice, hourly, daily, weekly, and monthly. By storing data in multiple summary tables, Precise can present a detailed view and progressively higher-level views of the same data. Summary tables are particularly useful for data aging. A data purging policy can be implemented for each summary table so that detailed data is retained for short-term historical analyses while more summarized data is used for long-term analyses and trending.

technology	A technology identifies the monitored object. For example, Oracle, SQL Server, Sybase, and DB2 are different technologies, while all Web servers (such as: Apache, IIS, and WebSphere) are defined as a single Web technology. A single monitored object can be monitored by two different technology's Collectors. For example, WebLogic server can be monitored by both a Web Collector and a J2EE Collector.
throughput	The number of average completions per second that are observed during an interval.
time slice	A unit used to break up long sessions into smaller time periods. The length of a time slice is preset and cannot be changed. It represents the maximum time that passes before the data collected can be displayed. For example, if the length of a time slice is 15 minutes, the collection is only updated at 15-minute intervals.

The length of a time slice is different for each technology: In Oracle, SQL Server, Sybase, DB2, Web, .NET, MQ, Tuxedo, Network, and OS, a time slice is 15 minutes. In J2EE and SmartLink, a time slice is either 30 seconds or 5 minutes. In Precise for SAP, a time slice is 5 minutes.

See also collector slice size. |
URI (Uniform Resource Identifier)	The relative path to a resource after the location (network node) is found.
URL mapping	In Web, a function that defines rules that map URLs (Uniform Resource Locators) with dynamic parameters originating from a specific domain to a format that identifies the Web pages and prevents them from having different URLs.
Web client browser-side	In Web, the gathering of performance data from the browser running on the desktop of the Web application's user, through the static or dynamic instrumentation of Web pages.
Web server	A program that receives client requests for Web pages, retrieves the static pages and/or issues a request for dynamic page creation to an application server, and sends the pages to the client. In Web, a computer that delivers (serves up) Web pages. Every Web server has an IP address and possibly a domain name.
work time	The time spent in the specific entity excluding time spent by called (other) entities. In J2EE, work time of a method is calculated as the service time of that method minus the service time of the methods it invoked.
work type	In Web, a counter that keeps track of the type of the Web instance, such as Web, PeopleSoft, SAP, or Siebel.
workspace	A display unit in Precise products. All workspaces display data from different perspectives. For example, in Oracle, SQL Server, and Sybase, the Current workspace shows information on the sessions currently active in an application, and the Objects workspace displays information on Oracle or SQL Server database objects that can be used to understand relationships and associations between database schema objects.