

# Precise requirements for installation

Use the following links to access requirements for each specific database supported by Precise:

- [Precise for MS-SQL requirements](#)
- [Precise for Oracle requirements](#)
- [Precise for Db2 requirements](#)
- [Precise for Sybase requirements](#)

For further detailed requirements, see [Precise minimum requirements for installation](#).

## Precise for MS-SQL requirements

In order to monitor MS-SQL with Precise, you first must set up the framework server.

### Precise framework server

Install the Precise Framework Application on a physical server or virtual machine. It should conform to the specifications shown in the following table. Note that you may use smaller specifications for an evaluation environment, but if you want to use the Precise framework server for production, make sure that the server is sized large enough to support the expected number of monitored instances.

**Table 1** Required hardware for the Precise framework server

	Cores	Real Memory	File System	PMDB Storage	Comments
<b>Small systems</b> (5-20 instances)	2-4	4 GB-10 GB	20 GB - 50 GB	20 GB - 50 GB	
<b>Medium systems</b> (21-100 instances)	4-8	10 GB - 32 GB	20 GB - 50 GB	80 GB - 200 GB	
<b>Large systems</b> (101-500 instances)	8-16	32 GB - 80 GB	20 GB - 50 GB	400 GB - 2000 GB	See <a href="#">System configuration requirements for large environments</a>



On large systems, it is recommended that you use two servers: one for the framework and one for the PMDB. In addition, the PMDB should be on an external storage system.

### Supported OS versions for the Precise framework server

The Precise framework server includes the following operating system requirements:

- Microsoft Windows Server
  - 2008
  - 2012
  - 2016
  - 2019

### Precise PMDB database

The Precise framework server also needs an MS-SQL database instance to support the Precise Performance Management Data Base (PMDB) database.

### Supported database versions for the PMDB database

The Precise framework server includes the following MS-SQL database requirements:

- MS-SQL
  - 2012
  - 2014
  - 2016
  - 2017
  - 2019

Precise creates a database in the MS-SQL instance for the Precise PMDB database, which is case sensitive.



It is recommended that you use MS-SQL Enterprise edition for the Precise PMDB. Precise does work with MS-SQL Standard edition, but you must switch off partitioning in the installation section.

## Communication requirements

Precise ports are as follows:

- Precise Listener is on 20702 external
- Precise GUI (Tomcat) is on 20790 external

If your environment is firewall protected, enable the TCP ports noted above. If this port range is already in use, see [Advanced adding servers](#) for information about how to change ports.

### Additional framework requirements

**Table 2** Additional framework requirements

Product/Framework	Privilege
All product installation on each server	Any installation on Microsoft Windows servers requires local administrator privileges.
PMDB	OS authentication or MS-SQL authentication. The user must have Sysadmin permissions.  When the PMDB is installed using Windows authentication, you must provide a user that can connect to both the PMDB and the monitored instance.

### Recommend / what-if functionality

If you want to use the Recommend/What-If feature in Precise for MS-SQL, you must install the SQL Server Client tool on both the Precise for MS-SQL FocalPoint and Collector servers. Make sure that the versions match on all servers. For example, when using MS-SQL 2019, make sure to install the 2019 client on both the FocalPoint and collector servers.

### Requirements for the user interface

The user interface includes the following software requirements.

**Table 3** User interface software requirements

Item	Version
Browser	<ul style="list-style-type: none"><li>• Microsoft Edge Chromium</li><li>• Chrome</li><li>• Firefox</li></ul>
Report Manager - Reports	Adobe Acrobat 6 or later
Report Manager - Customized Reports	Microsoft Excel 2007 or later



Microsoft Internet Explorer is not fully supported for the Precise AdminPoint.

The user interface includes the following hardware requirements.

**Table 4** User interface hardware requirements

Item	Version or Size
Operating system	Microsoft Windows <ul style="list-style-type: none"><li>• 7</li><li>• 8</li><li>• 10</li></ul> OR Microsoft Windows Server <ul style="list-style-type: none"><li>• 2008</li><li>• 2012</li><li>• 2016</li><li>• 2019</li></ul>
Memory	1 GB+

Display	24-bit color palette and SVGA (1024-768) resolution or higher
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The Precise user interface uses pop-up windows. If you use pop-up blockers, you must prevent them from blocking Precise-related pop-up windows.

## Precise MS-SQL Agent (Collector)

You can use Precise to monitor MS-SQL using remote collectors or local collectors on the monitored instance. The user on the server from which you are running the SQL Server collector must have admin rights on both the local host and to the server where the SQL instance is running. The password is required for installation.

## Recommend / what-if functionality

If you want to use the Recommend/What-If feature in Precise for MS-SQL, you must install the SQL Server Client tool on both the Precise for MS-SQL FocalPoint and Collector servers. Make sure that the versions match on all servers. For example, when using MS-SQL 2019, make sure to install the 2019 client on both the FocalPoint and collector servers.

## Precise for Oracle requirements

In order to monitor Oracle with Precise, you first must set up the framework server.

## Precise framework server

Install the Precise Framework Application on a physical server or virtual machine. It should conform to the specifications shown in the following table. Note that you may use smaller specifications for an evaluation environment, but if you want to use the Precise framework server for production, make sure that the server is sized large enough to support the expected number of monitored instances.

**Table 5** Required hardware for the Precise framework server

	Cores	Real Memory	File System	PMDB Storage	Comments
<b>Small systems</b> (5-20 instances)	2-4	4 GB-10 GB	20 GB - 50 GB	20 GB - 50 GB	
<b>Medium systems</b> (21-100 instances)	4-8	10 GB - 32 GB	20 GB - 50 GB	80 GB - 200 GB	
<b>Large systems</b> (101-500 instances)	8-16	32 GB - 80 GB	20 GB - 50 GB	400 GB - 2000 GB	See <a href="#">System configuration requirements for large environments</a>



On large systems, it is recommended that you use two servers: one for the framework and one for the PMDB. In addition, the PMDB should be on an external storage system.

## Supported OS versions for the Precise framework server

The Precise framework server includes the following operating system requirements.

**Table 6** Precise framework server operating system requirements

Operating System	Version
Microsoft Windows Server	<ul style="list-style-type: none"> <li>• 2008</li> <li>• 2012</li> <li>• 2016</li> <li>• 2019</li> </ul>
Sun Solaris (x86 & SPARC)	<ul style="list-style-type: none"> <li>• 10</li> <li>• 11</li> </ul>
IBM AIX (64-bit)	<ul style="list-style-type: none"> <li>• 6.1</li> <li>• 7.1</li> <li>• 7.2</li> </ul>

Linux (x86 64-bit)	<ul style="list-style-type: none"> <li>• RHEL <ul style="list-style-type: none"> <li>◦ 6</li> <li>◦ 7</li> <li>◦ 8</li> </ul> </li> <li>• SUSE <ul style="list-style-type: none"> <li>◦ 9</li> <li>◦ 10</li> <li>◦ 11</li> <li>◦ 12</li> </ul> </li> </ul>
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## Precise PMDB database

The Precise framework server also needs an Oracle database instance to support the Precise Performance Management Data Base (PMDB) database.

### Supported database versions for the PMDB database


The Precise framework server includes the following Oracle database requirements:

- 11.2.0.4
- 12.1.0.1 - 12.1.0.2
- 12.2.0.1
- 18c
- 19c


The charset must not be AL32UTF8.

Precise creates a schema in the Oracle instance for the Precise PMDB database.

If the Oracle instance is a containerized instance, you must create the PMDB database in one of the Pluggable databases (PDBs) and not the container root.


It is recommended that you use Oracle Enterprise edition for the Precise PMDB. Precise does work with Oracle Standard edition, but you must switch off partitioning in the installation section.

The Precise Framework server also needs the Oracle client installed so that it can communicate with the PMDB database instance.

## Communication requirements

Precise ports are as follows:

- Precise Listener is on 20702 external
- Precise GUI (Tomcat) is on 20790 external

If your environment is firewall protected, enable the TCP ports noted above. If this port range is already in use, see [Advanced adding servers](#) for information about how to change ports.

## Additional framework requirements

**Table 7** Additional framework requirements

Product/Framework	Privilege
All product installation on each server	<p><b>Windows:</b> Any installation on Microsoft Windows servers requires local administrator privileges.</p> <p><b>Unix:</b> The Precise software owner account must have the following characteristics:</p> <ul style="list-style-type: none"> <li>• Password, other than NULL</li> <li>• Authorization to use the <b>cron</b> facility. <i>Only required if you intend to install an Oracle App Tier collector on the respective server.</i></li> <li>• <b>Linux only:</b> read and write permissions to the /dev/null special file</li> <li>• <b>Linux only:</b> An initial korn shell (KSH). Otherwise, the installation fails. In addition, many of the shell scripts included in Precise require KSH. Precise uses PDKSH.</li> <li>• Make sure that the user limits are specified in the list of higher. Change or configure the user limit using the ulimit command. <ul style="list-style-type: none"> <li>◦ time (seconds) unlimited</li> <li>◦ file (blocks) unlimited</li> <li>◦ data (kbytes) unlimited</li> </ul> </li> </ul>


PMDB	Oracle user with DBA privilege.
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## Requirements for the user interface

The user interface includes the following software requirements.

**Table 8** User interface software requirements


Item	Version
Browser	<ul style="list-style-type: none"> <li>• Microsoft Edge Chromium</li> <li>• Chrome</li> <li>• Firefox</li> </ul>
Report Manager - Reports	Adobe Acrobat 6 or later
Report Manager - Customized Reports	Microsoft Excel 2007 or later

 Microsoft Internet Explorer is not fully supported for the Precise AdminPoint.

The user interface includes the following hardware requirements.

**Table 9** User interface hardware requirements

Item	Version or Size
Operating system	Microsoft Windows <ul style="list-style-type: none"> <li>• 7</li> <li>• 8</li> <li>• 10</li> </ul> OR Microsoft Windows Server <ul style="list-style-type: none"> <li>• 2008</li> <li>• 2012</li> <li>• 2016</li> <li>• 2019</li> </ul>
Memory	1 GB+
Display	24-bit color palette and SVGA (1024-768) resolution or higher

 The Precise user interface uses pop-up windows. If you use pop-up blockers, you must prevent them from blocking Precise-related pop-up windows.

## Precise Oracle Agent (Collector)

Precise monitors Oracle as a single instance. In addition, it monitors Multi Tenant Architecture (Containers) and Oracle RAC instances.

In order to monitor Oracle, Precise needs to install an agent on the monitored instance. The Precise for Oracle agent reads the Oracle SGA directly. To do so, the Precise user must be in the same group as the Oracle user to have access to the Oracle shared memory.

When installing a new Oracle agent on Windows with Oracle 12c and later, where:

- the listener is already installed, and
  - the Oracle server is running using Oracle home user who is a standard Windows user and not part of the Admin group:
1. Allow full access to the Oracle home user on the Precise root directory on the monitored machine (the machine where you are attempting to install the Oracle agent or where the Oracle instance is running)
  2. Add the Oracle home user to the performance monitoring group

## UNIX

For UNIX servers:

1. Create a Precise user on every monitored server.
2. Add the Precise user to the same group as the Oracle software owner (e.g. **dba** or **oinstall**). Your DBA group should be the primary group of the Precise user.

## Windows

For Windows servers:

1. Create a domain user, who is then granted local administrator permissions as required on the monitored servers.
2. Add the Precise user to the **ora\_dba** group. On monitored Oracle servers, add the Precise user to the same group as the Oracle user, typically **ora\_dba**.
3. Make sure you have an Oracle DBA user name and password. The user should also have SYSDBA privileges.
4. If you are installing on a Sun Solaris operating system, verify that the /proc file system is available.
5. On Linux servers, verify that the file system where you plan to install the software is mounted with the **SETUID** option.
6. Verify that the shared library path variable (LD\_LIBRARY\_PATH, SHLIB\_PATH, or LIB\_PATH, depending on the operating system) is not set in the Precise user environment. The Init.ora parameter timed\_statistics should be set to **TRUE**. The instance parameter ALLOW\_GROUP\_ACCESS\_TO\_SGA must be set to **TRUE**.



During the Oracle agent installation, the installer creates a schema in the Oracle database. To do so, it is required to specify an Oracle user with sysdba privileges. This is used only during the installation.

Precise products do not use or save the DBA user name or password for future use.

During the installation, a Super-user (root) privilege is required on Linux operating systems.

## Precise for Db2 requirements

In order to monitor Db2 with Precise, you first must set up the framework server.

### Precise framework server

Install the Precise Framework Application on a physical server or virtual machine. It should conform to the specifications shown in the following table. Note that you may use smaller specifications for an evaluation environment, but if you want to use the Precise framework server for production, make sure that the server is sized large enough to support the expected number of monitored instances.

**Table 10** Required hardware for the Precise framework server

	Cores	Real Memory	File System	PMDB Storage	Comments
<b>Small systems</b> (5-20 instances)	2-4	4 GB-10 GB	20 GB - 50 GB	20 GB - 50 GB	
<b>Medium systems</b> (21-100 instances)	4-8	10 GB - 32 GB	20 GB - 50 GB	80 GB - 200 GB	
<b>Large systems</b> (101-500 instances)	8-16	32 GB - 80 GB	20 GB - 50 GB	400 GB - 2000 GB	See <a href="#">System configuration requirements for large environments</a>



On large systems, it is recommended that you use two servers: one for the framework and one for the PMDB. In addition, the PMDB should be on an external storage system.

### Supported OS versions for the Precise framework server


The Precise framework server includes the following operating system requirements.

**Table 11** Precise framework server operating system requirements

Operating System	Version
Microsoft Windows Server	<ul style="list-style-type: none"><li>• 2008</li><li>• 2012</li><li>• 2016</li><li>• 2019</li></ul>
Sun Solaris (x86 & SPARC)	<ul style="list-style-type: none"><li>• 10</li><li>• 11</li></ul>

IBM AIX (64-bit)	<ul style="list-style-type: none"> <li>• 6.1</li> <li>• 7.1</li> <li>• 7.2</li> </ul>
Linux (x86 64-bit)	<ul style="list-style-type: none"> <li>• RHEL <ul style="list-style-type: none"> <li>◦ 6</li> <li>◦ 7</li> <li>◦ 8</li> </ul> </li> <li>• SUSE <ul style="list-style-type: none"> <li>◦ 9</li> <li>◦ 10</li> <li>◦ 11</li> <li>◦ 12</li> </ul> </li> </ul>

## Precise PMDB database

 Db2 is supported only on an Oracle PMDB database instance.

The Precise framework server also needs an Oracle database instance to support the Precise Performance Management Data Base (PMDb) database.

### Supported database versions for the PMDB database

The Precise framework server includes the following Oracle database requirements:

- 11.2.0.4
- 12.1.0.1 - 12.1.0.2
- 12.2.0.1
- 18c
- 19c

 The charset must not be AL32UTF8.

Precise creates a schema in the Oracle instance for the Precise PMDB database.

If the Oracle instance is a containerized instance, you must create the PMDB database in one of the Pluggable databases (PDBs) and not the container root.

 It is recommended that you use Oracle Enterprise edition for the Precise PMDB. Precise does work with Oracle Standard edition, but you must switch off partitioning in the installation section.

## Communication requirements

Precise ports are as follows:

- Precise Listener is on 20702 external
- Precise GUI (Tomcat) is on 20790 external

If your environment is firewall protected, enable the TCP ports noted above. If this port range is already in use, see [Advanced adding servers](#) for information about how to change ports.

## Additional framework requirements

**Table 12** Additional framework requirements

Product/Framework	Privilege
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All product installation on each server	<p><b>Windows:</b> Any installation on Microsoft Windows servers requires local administrator privileges.</p> <p><b>Unix:</b> The Precise software owner account must have the following characteristics:</p> <ul style="list-style-type: none"> <li>• Password, other than NULL</li> <li>• Authorization to use the <b>cron</b> facility. <i>Only required if you intend to install an Oracle App Tier collector on the respective server.</i></li> <li>• <b>Linux only:</b> read and write permissions to the /dev/null special file</li> <li>• <b>Linux only:</b> An initial korn shell (KSH). Otherwise, the installation fails. In addition, many of the shell scripts included in Precise require KSH. Precise uses PDKSH.</li> <li>• Make sure that the user limits are specified in the list of higher. Change or configure the user limit using the ulimit command. <ul style="list-style-type: none"> <li>◦ time (seconds) unlimited</li> <li>◦ file (blocks) unlimited</li> <li>◦ data (kbytes) unlimited</li> </ul> </li> </ul>
PMDB	Oracle user with DBA privilege.

## Requirements for the user interface

The user interface includes the following software requirements.

**Table 13** User interface software requirements


Item	Version
Browser	<ul style="list-style-type: none"> <li>• Microsoft Edge Chromium</li> <li>• Chrome</li> <li>• Firefox</li> </ul>
Report Manager - Reports	Adobe Acrobat 6 or later
Report Manager - Customized Reports	Microsoft Excel 2007 or later

 Microsoft Internet Explorer is not fully supported for the Precise AdminPoint.

The user interface includes the following hardware requirements.

**Table 14** User interface hardware requirements

Item	Version or Size
Operating system	<p>Microsoft Windows</p> <ul style="list-style-type: none"> <li>• 7</li> <li>• 8</li> <li>• 10</li> </ul> <p>OR</p> <p>Microsoft Windows Server</p> <ul style="list-style-type: none"> <li>• 2008</li> <li>• 2012</li> <li>• 2016</li> <li>• 2019</li> </ul>
Memory	1 GB+
Display	24-bit color palette and SVGA (1024-768) resolution or higher

 The Precise user interface uses pop-up windows. If you use pop-up blockers, you must prevent them from blocking Precise-related pop-up windows.

## Precise Db2 Agent (Collector)

Precise monitors Db2 as a single instance or as a partitioned environment.



In order to monitor Db2, Precise needs to install an agent on the monitored instance. Make sure the following requirements are met:

- You must create a dedicated Precise OS user on each monitored DB2 server or partition.
- It must be connected to the DB2 SYSADM group (as reported by the DB2 GET DBM CFG command).
- For monitoring purposes, the Precise user must have the **DBADM** and **SYSMON** privileges or **SYSADM** privileges.

## Precise for Sybase requirements

In order to monitor Sybase with Precise, you first must set up the framework server.

### Precise framework server

Install the Precise Framework Application on a physical server or virtual machine. It should conform to the specifications shown in the following table. Note that you may use smaller specifications for an evaluation environment, but if you want to use the Precise framework server for production, make sure that the server is sized large enough to support the expected number of monitored instances.

**Table 15** Required hardware for the Precise framework server

	Cores	Real Memory	File System	PMDB Storage	Comments
<b>Small systems</b> (5-20 instances)	2-4	4 GB-10 GB	20 GB - 50 GB	20 GB - 50 GB	
<b>Medium systems</b> (21-100 instances)	4-8	10 GB - 32 GB	20 GB - 50 GB	80 GB - 200 GB	
<b>Large systems</b> (101-500 instances)	8-16	32 GB - 80 GB	20 GB - 50 GB	400 GB - 2000 GB	See <a href="#">System configuration requirements for large environments</a>



On large systems, it is recommended that you use two servers: one for the framework and one for the PMDB. In addition, the PMDB should be on an external storage system.

### Supported OS versions for the Precise framework server

The Precise framework server includes the following operating system requirements:

- Microsoft Windows Server
  - 2008
  - 2012
  - 2016
  - 2019

### Precise PMDB database



Sybase is supported only on an MS-SQL PMDB database instance.

The Precise framework server also needs an MS-SQL database instance to support the Precise Performance Management Data Base (PMDB) database.

### Supported database versions for the PMDB database

The Precise framework server includes the following MS-SQL database requirements:

- 2012
- 2014
- 2016
- 2017
- 2019

Precise creates a database in the MS-SQL instance for the Precise PMDB database, which is case sensitive.



It is recommended that you use MS-SQL Enterprise edition for the Precise PMDB. Precise does work with MS-SQL Standard edition, but you must switch off partitioning in the installation section.

## Communication requirements

Precise ports are as follows:

- Precise Listener is on 20702 external

- Precise GUI (Tomcat) is on 20790 external

If your environment is firewall protected, enable the TCP ports noted above. If this port range is already in use, see [Advanced adding servers](#) for information about how to change ports.

## Additional framework requirements

**Table 16** Additional framework requirements

Product/Framework	Privilege
All product installation on each server	Any installation on Microsoft Windows servers requires local administrator privileges.
PMDB	OS authentication or MS-SQL authentication. The user must have Sysadmin permissions.  When the PMDB is installed using Windows authentication, you must provide a user that can connect to both the PMDB and the monitored instance.

## Requirements for the user interface

The user interface includes the following software requirements.

**Table 17** User interface software requirements


Item	Version
Browser	<ul style="list-style-type: none"> <li>• Microsoft Edge Chromium</li> <li>• Chrome</li> <li>• Firefox</li> </ul>
Report Manager - Reports	Adobe Acrobat 6 or later
Report Manager - Customized Reports	Microsoft Excel 2007 or later

 Microsoft Internet Explorer is not fully supported for the Precise AdminPoint.

The user interface includes the following hardware requirements.

**Table 18** User interface hardware requirements

Item	Version or Size
Operating system	Microsoft Windows <ul style="list-style-type: none"> <li>• 7</li> <li>• 8</li> <li>• 10</li> </ul> OR Microsoft Windows Server <ul style="list-style-type: none"> <li>• 2008</li> <li>• 2012</li> <li>• 2016</li> <li>• 2019</li> </ul>
Memory	1 GB+
Display	24-bit color palette and SVGA (1024-768) resolution or higher

 The Precise user interface uses pop-up windows. If you use pop-up blockers, you must prevent them from blocking Precise-related pop-up windows.

## Precise Sybase Agent (Collector)

Precise monitors Sybase using remote collectors or local collectors on the monitored instance.

Supported Sybase versions include:

- ASE 12.5.4.0
- ASE 15.0.0 - 15.0.3
- ASE 15.5
- ASE 15.7
- ASE 16.0 SP03
- Replication Server
  - 15.1
  - 15.2
  - 15.6
  - 15.7

## Installation tips

- The user on the server from where you are running the Sybase collector must have admin rights on both the local host and to the server where the Sybase instance is running. The password is also required for the installation.
- Make sure you have access to an existing Sybase user name with the system administrator privileges.
- Check that the Open Client and related ODBC version is one of the following:

Open Client	ODBC Version
12.5.1 ESD #2	Sybase Adaptive Server Enterprise ODBC driver 4.20.00.67
12.5.1 ESD #15	Adaptive Server Enterprise 12.05.01.529
15.x	Adaptive Server Enterprise 15.00.00.152

- Make sure that the user used to monitor the Sybase instance is a member of the **mon\_role** and **sa\_role** server roles.
- Check that the mon and master tables are activated.
- Run the **sp\_sysmon** system stored procedure with the **noclear** option. For example, sp\_sysmon 00:01:00, noclear
- To enable monitoring of the Sybase app tier, adjust the Adaptive Server Enterprise (ASE) configuration parameters as specified in the following table:

Parameter	Value
max SQL text monitored	16384
enable monitoring	1
SQL batch capture	1
wait event timing	1
SQL text pipe active	0
plain text pipe active	0
statement pipe active	0
errorlog pipe active	0
deadlock pipe active	0
process wait events	0
object lockwait timing	0
statement statistics active	0
per object statistics active	0



The value given for the event buffer per engine parameter in the table is a minimum value. You may also use a higher value, if required.