

# Perceptive Process

## Technical Specifications

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Written by: Product Knowledge, R&D  
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## About Perceptive Process technical specifications

The technical specifications in this document are specific to Perceptive Process, version 3.8:

- Perceptive Process Enterprise, version 3.8
- Perceptive Process Design, version 3.8
- Perceptive Process Design Personal, version 3.8

For Perceptive Process Design and Perceptive Process Enterprise, support is divided into a client-side component and a server-side component. Requirements are listed for the following components:

- Perceptive Process Design Personal
- Perceptive Process Client
- Perceptive Process Server on a Windows platform
- Perceptive Process Server on an AIX platform
- Perceptive Process Server on a Linux platform

Not included in these specifications is the following information.

- **Hardware requirements.** Stating general hardware requirements for Perceptive Process Server is virtually impossible, because software performance also depends on many functional variables, such as the number of cases, the type of activities, the number of users and required server integration.
- **Virtualization setup.** Within a VMware, VirtualBox or Citrix environment, Perceptive Process runs on the same supported operating systems as outside the virtualization software, providing the software is configured correctly. Consult Enterprise Software Support if you need assistance with the installation of Perceptive Process.
- **Database information and database schema.** Enterprise Software reserves the right to alter the database schema to improve performance or add functionality. Because the schema is not published, we strongly recommend that you do not query the Perceptive Process database directly. Instead, you should perform queries using the available APIs or using the provided report features.

## About Java Virtual Machine

Some of the components in Perceptive Process use Java technology, and therefore a **32-bit** Java Runtime Engine (JRE) needs to be installed. For Perceptive Process Design Personal and for the Perceptive Process Client component, the “Product requirements” sections list the supported JRE versions, specifying which versions are recommended.

For JRE 1.6, there is no longer support for this version from the vendor and (public) updates are no longer provided. Moreover, due to security concerns and the new JAR signing (SHA2), we can no longer support this version.

For JRE 1.7, (public) updates are no longer provided. Hence it has become more difficult to provide updates for problems/issues specific to this version. As of version 1.7\_55 security fixes are implemented in such a way that they impact the user experience of Perceptive Process. One or two security pop-ups

display for each browser session. Nevertheless, we still advise to use the recommended version. If this leads to insurmountable problems, contact Enterprise Software Support.

For JRE 1.8, this version of Perceptive Process has been validated with both 1.8\_101 and 1.8\_121 and found to be in good working order.

Newer versions of JRE 1.8\_x might become available after our products are released. You can install a higher version of JRE 1.8 than the version we used for validation. Contact Enterprise Software Support before upgrading to a newer version to verify if known issues exist. If a higher version of JRE 1.8\_x presents an issue, we will work to support it. However, there might be some rare cases where a newer version of JRE 1.8 is found to be incompatible and cannot be used.

If the Java settings do not match the browser settings, Java displays an application error message when you use a Perceptive Process component that relies on Java technology. To prevent this error, in the Java Control Panel the option **Use browser settings** must be selected. Refer to the Installation and Setup Guide for instructions.

Contact Enterprise Software Support if you encounter issues when using Java. There might be some rare cases where a specific combination of a Java version, Java configuration, browser, and browser configuration is found to be incompatible.

## About internet browsers

To use the Perceptive Process Portal you must have an internet browser installed on the client operating system. The following points apply both to the Perceptive Process Client component (Design and Enterprise), and to Perceptive Process Design Personal.

- JavaScript must be enabled in the internet browser.
- If you use Internet Explorer on Windows Vista or Windows 7, we recommend that you add the Perceptive Process URL to your trusted sites.
- The support for Internet Explorer versions will be limited as of January 12, 2016. This means that for a number of versions updates will no longer be made available. Hence we can no longer provide updates for problems/issues specific to the non-supported versions.
- In Internet Explorer, the Compatibility View is not supported and turned off.
- In Firefox there is a problem with the releases 38.4.0 (ESR) and 42, where the Java plugin will crash after closing a case instance. Later versions do not have this problem.
- In Firefox, as of release 52, the support for the so-called NPAPI will be terminated. This will definitely lead to most features not being available. Hence it is recommended not to go past version 51.0.1.
- If you use an older update of Oracle JRE together with Mozilla Firefox version 43 or higher, Perceptive Process Portal may function or will have limited functionality. This is a result of Mozilla's policy to block *older* Java add-ons.
- In the browser, the use of TLS version(s) should be enabled, the use of the older SSLv2 and SSLv3 is no longer supported.

## Product requirements for Perceptive Process Design Personal

Specification	Description
<b>Display</b>	The minimum display resolution is 1024 x 768.
<b>.NET Framework</b>	Microsoft .NET Framework 2.0 is required. Perceptive Process Design Personal automatically installs and configures the database management system MS SQL Server 2005 Express.
<b>Java Virtual Machine</b>	<ul style="list-style-type: none"> <li>• Oracle JRE 1.7 from update 75, 32-bit. Limited support</li> <li>• Oracle JRE 1.8 from update 66, 32-bit. Recommended version 1.8_121</li> </ul>
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Microsoft Vista Business (SP1 and SP2), 32 bit</li> <li>• Microsoft Vista Enterprise (SP1 and SP2), 32 bit</li> <li>• Microsoft Vista Ultimate (SP1 and SP2), 32 bit</li> <li>• Microsoft Windows 7 Professional SP1, 32 bit</li> <li>• Microsoft Windows 7 Ultimate SP1, 32 bit</li> <li>• Microsoft Windows 7 Enterprise SP1, 32 bit</li> </ul>
<b>Microsoft Office Integration</b>	To use the RTF export, the import of Excel files and the email functionality of Microsoft Outlook in Perceptive Process Design Personal, one of the following versions of Microsoft Office is required. <ul style="list-style-type: none"> <li>• Microsoft Office 2007 (SP1, SP2 and SP3)</li> <li>• Microsoft Office 2010 (SP1 and SP2)</li> <li>• Microsoft Office 2013</li> <li>• Microsoft Office 2016</li> </ul>
<b>Internet Browser</b>	<ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 8, 32-bit. Not recommended, limited support</li> <li>• Microsoft Internet Explorer 9, 32-bit. Not recommended, limited support</li> <li>• Microsoft Internet Explorer 10, 32-bit</li> <li>• Microsoft Internet Explorer 11, 32 bit</li> <li>• Firefox 38.3.0 (ESR) or 41.0.2, 32 bit</li> <li>• Firefox 51.0.1, 32 bit</li> </ul>
<b>Flash Player</b>	For optimal use of process mining, Adobe Flash Player 9.0 or higher is required.

## Product requirements for Perceptive Process Client

Specification	Description
<b>Display</b>	The minimum display resolution is 1024 x 768.
<b>Java Virtual Machine</b>	<p>On Microsoft Windows:</p> <ul style="list-style-type: none"> <li>• Oracle JRE 1.7 from update 75, 32-bit. Limited support</li> <li>• Oracle JRE 1.8 from update 66, 32-bit. Recommended version 1.8_121</li> </ul> <p>On Mac OS X:</p> <ul style="list-style-type: none"> <li>• Java for Mac OS X. Recommended version 1.8_101</li> </ul> <p><b>Note</b> OS X Lion does not offer a Java Runtime Environment by default, so you need to <a href="#">install a Java Runtime Environment</a> separately. After installation, enable the applet plug-in in the Java Control Panel on the Advanced tab.</p>
<b>Operating Systems</b>	<p>On Microsoft Windows:</p> <ul style="list-style-type: none"> <li>• Microsoft Vista Business (SP1 and SP2)</li> <li>• Microsoft Vista Enterprise (SP1 and SP2)</li> <li>• Microsoft Vista Ultimate (SP1 and SP2)</li> <li>• Microsoft Windows 7 Professional SP1</li> <li>• Microsoft Windows 7 Ultimate SP1</li> <li>• Microsoft Windows 7 Enterprise SP1</li> <li>• Microsoft Windows 8.1</li> </ul> <p><b>Note</b> When using Windows 8.1 in combination with Internet Explorer, you should start Perceptive Process from the Desktop. You cannot start Perceptive Process from the Start screen, also called the <i>Modern</i> interface, because that doesn't support plug-ins such as Java, which is required for Perceptive Process.</p> <p>On Mac OS X:</p> <ul style="list-style-type: none"> <li>• 10.7 (Lion)</li> </ul> <p><b>Note</b> Perceptive Process Portal on Mac OS X is only supported for executing cases.</p>
<b>Microsoft Office Integration</b>	<p>To use the RTF export, the import of Excel files and the email functionality of Microsoft Outlook in Perceptive Process, one of the following versions of Microsoft Office is required.</p> <ul style="list-style-type: none"> <li>• Microsoft Office 2007 (SP1, SP2 and SP3)</li> <li>• Microsoft Office 2010 (SP1 and SP2)</li> <li>• Microsoft Office 2013</li> <li>• Microsoft Office 2016</li> </ul>

Specification	Description
<b>Internet Browser</b>	On Microsoft Windows: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 8, 32-bit. Not recommended, limited support</li> <li>• Microsoft Internet Explorer 9, 32-bit. Not recommended, limited support</li> <li>• Microsoft Internet Explorer 10, 32-bit</li> <li>• Microsoft Internet Explorer 11, 32 bit</li> <li>• Firefox 38.3.0 (ESR) or 41.0.2, 32 bit</li> <li>• Firefox 51.0.1, 32 bit</li> </ul>
	On Mac OS X: <ul style="list-style-type: none"> <li>• Safari 6.1</li> <li>• Firefox 41.0.2</li> <li>• Firefox 48.0.2</li> </ul>
<b>Flash Player</b>	For optimal use of process mining, Adobe Flash Player 9.0 or higher is required.



## Product requirements for Perceptive Process Server (Windows)

Specification	Description
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2003 SP1 and SP2</li> <li>• Microsoft Windows Server 2003 R2 SP1 and SP2</li> <li>• Microsoft Windows Server 2008 SP1 and SP2</li> <li>• Microsoft Windows Server 2008 R2 SP1</li> <li>• Microsoft Windows Server 2012</li> <li>• Microsoft Windows Server 2012 R2</li> </ul> <p>Notes</p> <ul style="list-style-type: none"> <li>• Supported editions for Windows Server 2008 and 2012 are Standard, Enterprise and Datacenter.</li> <li>• For database communication, Perceptive Process Server requires 32-bit drivers and/or a 32-bit database client. Therefore, on 64-bit versions of Windows Server, 32-bit compatibility must be available.</li> </ul>
<b>Database Systems</b>	<p>On a Windows platform you can use Perceptive Process Server with a Microsoft SQL Server database, or an Oracle database.</p> <p>Microsoft SQL Server</p> <ul style="list-style-type: none"> <li>• SQL Server 2005 with SQL Server Native Client v9.0</li> <li>• SQL Server 2008 with SQL Server 2008 Native Client</li> <li>• SQL Server 2008 R2 with SQL Server 2008 Native Client</li> <li>• SQL Server 2012 with SQL Server 2012 Native Client</li> </ul> <p>Oracle</p> <ul style="list-style-type: none"> <li>• Oracle 10.2 on Windows Server 2008 64-bit with Oracle Client 10.2.0.4</li> <li>• Oracle 10.2 on other platforms with Oracle Client 10.2.0.3</li> </ul> <p><b>Note</b> Installing Perceptive Process Server on Oracle 10.2.0.3 requires installation of Oracle patch 5699495.</p> <ul style="list-style-type: none"> <li>• Oracle 11.1 on Windows Server 2008 64-bit with Oracle Client 11.1.0.7.0</li> <li>• Oracle 11.1 on other platforms with Oracle Client 11.1.0.6.0</li> <li>• Oracle 11.2 with Oracle Client 11.2.0.1.0</li> <li>• Oracle 12c with Oracle Client 12.1.0.2</li> </ul> <p><b>Note</b> For Oracle clients, the Oracle ODBC driver must be installed.</p>

Specification	Description
<b>External Logon Services</b>	<p>The following LDAP library is supported.</p> <p>WinLDAP connector (lsldap.dll)</p> <p>Both LDAP and AD are supported. Also secure LDAP and AD are supported.</p>
<b>IIS</b>	<p>For Monitoring, Internet Information Services (IIS) 5.0, 6.0, 7.0 or 7.5 is required. You can install IIS on a different machine than Perceptive Process Server. If Monitoring will not be used, there is no need to install IIS.</p>
<b>Integration Framework</b>	<ul style="list-style-type: none"> <li>• Magic iBolt 3.2</li> <li>• Magic XPI 3.4</li> </ul>

## Product requirements for Perceptive Process Server (AIX)

If Perceptive Process Server is installed on an AIX server, the functionality is limited compared to an installation on a Windows server. Because Perceptive Process Design does not support AIX, the following features are not available.

- Reporting to RTF
- Reporting to HTML
- Process mining
- Simulation
- Import of design files (PQL / PRM)

The menu options for these features are disabled or not available.

Specification	Description
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• IBM AIX v6.1 (64 bits)</li> <li>• IBM AIX v7.1 (64 bits)</li> </ul>
<b>Database Systems</b>	<ul style="list-style-type: none"> <li>• Oracle 11.2 Preferably available on a different server machine.</li> </ul>
<b>C-compiler</b>	<p>To be able to compile case types and related C/C++ modules, a compiler must be installed on the same machine as Perceptive Process Server. Use a recent version of the compiler, to prevent problems with compiling modules you have developed yourself. The following compiler is supported.</p> <ul style="list-style-type: none"> <li>• C++ For AIX</li> </ul>
<b>Crash Dumps</b>	<p>To facilitate support, crash dumps will be generate in case of very serious problems. To be able to do that a special library is required:</p> <ul style="list-style-type: none"> <li>• libptools_ptr.a</li> </ul> <p>This library may be installed through the <i>bos.adt.debug</i> package.</p>
<b>SSL</b>	<ul style="list-style-type: none"> <li>• openssl.base.1.0.515 (recommended)</li> </ul>
<b>External Logon Services</b>	<p>The following LDAP libraries are supported.</p> <ul style="list-style-type: none"> <li>• IBM ldap connector (liblslsap.so)</li> <li>• OpenLDAP connector (liblopenldap.so)</li> </ul> <p>Both LDAP and AD are supported. Also secure LDAP and AD are supported.</p>
<b>Perceptive Process Monitoring</b>	<p>Perceptive Process Monitoring can be used only in combination with IIS. For this reason you must install the Monitoring server components on a different machine than Perceptive Process Server.</p>

Specification	Description
<b>Integration Framework</b>	<ul style="list-style-type: none"><li data-bbox="500 369 704 401">• Magic iBolt 3.2</li></ul> <p data-bbox="451 411 1365 470"><b>Note</b> The Integration Framework Designer is not available on AIX. The runtime part of Integration Framework however, is supported on AIX.</p> <p data-bbox="500 485 1333 543">Case integration projects should be developed on Microsoft Windows and then tested and deployed on an AIX server.</p>

## Product requirements for Perceptive Process Server (Linux)

If Perceptive Process Server is installed on a Linux server, the functionality is limited compared to an installation on a Windows server. Because Perceptive Process Design does not support Linux, the following features are not available.

- Reporting to RTF
- Reporting to HTML
- Process mining
- Simulation
- Import of design files (PQL / PRM)

The menu options for these features are disabled or not available.

Specification	Description
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Red Hat Enterprise Linux 6.5 (64 bits)</li> <li>• Red Hat Enterprise Linux 6.7 (64 bits)</li> </ul>
<b>Database Systems</b>	<ul style="list-style-type: none"> <li>• Oracle 11.2 Preferably available on a different server machine.</li> </ul>
<b>C-compiler</b>	<p>To be able to compile case types and related C/C++ modules, a compiler must be installed on the same machine as Perceptive Process Server. Use a recent version of the compiler, to prevent problems with compiling modules you have developed yourself. The following compiler is supported.</p> <ul style="list-style-type: none"> <li>• gcc compiler for Linux</li> </ul>
<b>SSL</b>	<ul style="list-style-type: none"> <li>• OpenSSL 1.0.1e (recommended)</li> </ul>
<b>External Logon Services</b>	<p>The following LDAP library is supported.</p> <ul style="list-style-type: none"> <li>• OpenLDAP connector (liblslldap.so)</li> </ul> <p>Both LDAP and AD are supported. Also secure LDAP and AD are supported.</p>
<b>Perceptive Process Monitoring</b>	<p>Perceptive Process Monitoring can be used only in combination with IIS. For this reason you must install the Monitoring server components on a different machine than Perceptive Process Server.</p>
<b>Integration Framework</b>	<ul style="list-style-type: none"> <li>• Magic iBolt 3.2</li> <li>• Magic XPI 3.4</li> </ul> <p><b>Note</b> The Integration Framework Designer is not available on Linux. The runtime part of Integration Framework however, is supported on Linux.</p> <p>Case integration projects should be developed on Microsoft Windows and then tested and deployed on a Linux server.</p>