# Perceptive Process

## Technical Specifications

### Version: 4.8.x

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# About Perceptive Process Technical Specifications

The technical specifications in this document are specific to Perceptive Process, version 4.8:

- Perceptive Process Enterprise, version 4.8

- Perceptive Process Design, version 4.8

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 Client

- Perceptive Process Server on a Windows 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 Hyland Technical Support if you need assistance with the installation of Perceptive Process.

- **Database information and database schema**. Hyland 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 the Perceptive Process Client component, the "Product requirements" sections list the supported JRE versions, specifying which versions are recommended.

For JRE 1.8, this version of Perceptive Process has been validated with 1.8.0_202 and found to be in good working order.

Newer versions of JRE 1.8 might be or 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 Hyland Technical Support before upgrading to a newer version to verify if known issues exist. If a higher version of JRE 1.8.0_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 Hyland Technical 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.

- JavaScript must be enabled in the internet browser.

- In Firefox, as of release 52, the support for the so-called NPAPI is terminated. This will definitely lead to most features not being available. Therefore version 52 and above are not supported. An exception to this rule is the so-called ESR release, Firefox 52 ESR does still offer the NPAPI support. Please look at Firefox Java support.
Unfortunately, the software cannot detect the difference between a 52 release and a 52 ESR release. Hence, when using the 52 ESR release, a remark will show up during login and when working with the portal.

- Support from Microsoft for the Internet Explorer 11 browser will be terminated as of June 15, 2022. This browser has therefore been removed from the list of supported browsers.

- Support from Microsoft for the Edge browser with the so-called **IE mode** is announced to run to at least 2029. This browser has therefore been added to the list of supported browsers.

- The working of the Google Chrome browser with the **IE Tab** extension in combination with **IE Helper** has been verified and has been found to have the necessary functionality. This browser has therefore been added to the list of supported browsers.

   **NOTE**
   License fees apply for **IE Tab** / **IE Helper** to unlock all features.

- In any browser, the use of TLS version(s) should be enabled, the use of the older SSLv2 and SSLv3 is no longer supported.


This version of Perceptive Process has been validated with the following browsers:

- Microsoft Edge Version 97.0.1072.55
- Google Chrome Version 97.0.1072.55
   - IE Tab Version 14.11.12.1
   - IE Helper Version 14.11.12.1
- Pale Moon Version 29.4.3

and found to be in good working order.

# Product requirements for Perceptive Process Client

| Specification | Description |
|---|---|
| **Display** | The minimum display resolution is 1024 x 768. |
| **Java Virtual Machine** | On Microsoft Windows:<br>• Oracle JRE 1.8 from update 66, 32-bit. Recommended version 1.8.0_202 |
| | On Mac OS X:<br>• Java for Mac OS X. Recommended version 1.8.0_202<br>Note<br>OS X does not offer a Java Runtime Environment by default, so you need to install a Java Runtime Environment separately. After installation, enable the applet plug-in In the Java Control Panel on the Advanced tab. |
| **Operating Systems** | On Microsoft Windows:<br>• Microsoft Windows 10 |
| | On Mac OS X:<br>• 10.7 (Lion)<br>Note<br>Perceptive Process Portal on Mac OS X does not have support for starting a modeller. |
| **Microsoft Office Integration** | To use the RTF export, the import of Excel files, the export to Excel files and the email functionality of Microsoft Outlook in Perceptive Process, one of the following versions of Microsoft Office is required:<br>• Microsoft Office 2013<br>• Microsoft Office 2016 |
| **Internet Browser** | On Microsoft Windows:<br>• Microsoft Edge with **IE Mode**<br>• Google Chrome with **IE Tab** extension and **IE Helper**<br>• Firefox 51.0.1, 32 bit<br>• Firefox 52.1.0 ESR, 32 bit<br>• Pale Moon 28.10.0, 32 bit |
| | On Mac OS X:<br>• Safari 6.1<br>• Firefox 41.0.2<br>• Firefox 48.0.2 |

# Product requirements for Perceptive Process Server (Windows)

| Specification | Description |
|---|---|
| **Operating Systems** | <ul><li>Microsoft Windows Server 2012</li><li>Microsoft Windows Server 2012 R2</li><li>Microsoft Windows Server 2016</li><li>Microsoft Windows Server 2019</li></ul>Note<br>Supported editions for Windows Server are Standard, Enterprise and Datacenter.<br>Note<br>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. |
| **Database Systems** | On a Windows platform you can use Perceptive Process Server with a Microsoft SQL Server database, or an Oracle database. |
| | Microsoft SQL Server |
| | <ul><li>SQL Server 2016 with SQL Server 2016 Native Client</li><li>SQL Server 2017 with SQL Server 2017 Native Client</li></ul> |
| | Oracle |
| | <ul><li>Oracle 12c (release 1) with Oracle Client 12.1.0.2</li><li>Oracle 19c</li></ul>Note<br>For Oracle clients, the Oracle ODBC driver must be installed. |
| **External Logon Services** | The following LDAP library is supported:<ul><li>WinLDAP connector (lsldap.dll)</li></ul>Both LDAP and AD are supported. Also secure LDAP and AD are supported. |
| **Integration Framework** | <ul><li>Magic iBolt 3.2</li><li>Magic XPI 3.4</li></ul> |

# Product requirements for Perceptive Process Server (Linux)

When 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 |
|---|---|
| **Operating Systems** | <ul><li>Red Hat Enterprise Linux 6.7 (64 bits)</li><li>Red Hat Enterprise Linux 7.4 (64 bits) **</li></ul> |
| **Database Systems** | Oracle 12c (release 2)<br>Oracle 19c<br>Preferably available on a different server machine. |
| **C-compiler** | 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:<br>gcc compiler for Linux |
| **SSL** | OpenSSL 1.0.2e (recommended) |
| **External Logon Services** | The following LDAP library is supported.<br>OpenLDAP connector (liblsldap.so)<br>Both LDAP and AD are supported. Also secure LDAP and AD are supported. |
| **Integration Framework** | <ul><li>Magic iBolt 3.2</li><li>Magic XPI 3.4</li></ul>Note<br>The Integration Framework Designer is not available on Linux. The runtime part of Integration Framework however, is supported on Linux.<br>Case integration projects should be developed on Microsoft Windows and then tested and deployed on a Linux server. |

**\*\*** As Red Hat Enterprise Linux 7.x contains an updated FFI library, it is necessary to add a symbolic link for the required version to this new version:

> **% cd /usr/lib64**                           **#** *where FFI library is installed*
>
> **% ln –s libffi.so.6.0.1 libffi.so.5**

As Red Hat Enterprise Linux 7.x, by default, does **not** have the 32-bits compatibility importing PAL files will not work. The 32-bits compatibility needs to be installed before the import of PAL files can be done:

> **% yum install glibc.i686**                       **#** *provides /lib/libdl.so.2*
>
> **% yum install libgcc.i686 libgcc.x86_64**       **#** *provides /lib/libgcc_s.so.1*
>
> **% yum install libstdc++.i686 libstdc++.x86_64**    **#** *provide /li/libstdc++.so.6*

This 32-bits compatibility is not needed for other parts of the application.