



A Siemens Business

Xpedition Enterprise Flow Release Highlights

Software Version X-ENTP VX.2.2

July 2017

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Introduction

This document provides a high-level summary of the Xpedition Enterprise VX.2.2 release. It includes a summary of the new features in this release, any authorization code changes required, any major installation changes, and any transitioning issues you should be aware of before installing. Additionally, any last minute issues found in the final stages of testing are included.

This document is located on the top level of the DVD and on SupportNet. Changes may be added to this document after the release. Refer to the Release Highlights documentation on SupportNet for the most up-to-date release information.

Product Re-naming

The Xpedition Enterprise install has been greatly simplified to provide a better download experience. Many of the smaller widely used products are now delivered with the core product rather than being required to download separately. In addition, many of the products have gone through a minor name change to help identify that they are part of the Xpedition family of products.

The chart below provides details on both the renaming and how the install has been simplified

Old Product Name	New Product Name	Included with New Product Install (some items licensed separately)
xDX Designer	Xpedition Designer	Constraint Team, Layout Viewer, EDIF 2.0.0 Schematic Interface, PDF Writer, Visula Translator, Allegro Translator, SPICE Interface, EDIF Interface, Databook, ICE, Variants
xDX I/O Optimizer	Xpedition FPGA IO Optimizer	Multi-FPGA
xDX I/O Designer	Xpedition I/O Designer	
xSD System Designer	Xpedition System Designer	
xSC System Cable	Xpedition System Cable	
xPCB Layout	Xpedition Layout	Constraint Team, Schematic Viewer, Layout Planner, 3D Library, RF, ADS, AWR, 3D Model Generator, Basic Automation, Automation Pro, Embedded Passives, Flex, HDI Autoroute, High-Speed, IDF Interface, Manufacturing Toolbox, MCAD, OrCAD Interface, Report Writer, Static Team Layout, Team Client, Team Server, Variants
xPCB Fablink	Xpedition FabLink	Automation Pro, Design for Fabrication, Design for Test,
xPCB Browser	Xpedition Layout Browser	
xPCB Viewer	Xpedition Layout Viewer	

xDM Librarian	Xpedition EDM Librarian	Library Designer, Librarian, EDX Reader and Writer, 3D Manager, Component Manger, Design Editing, Design Versioning, Concurrent Design Versioning
xDM Design	Xpedition EDM Engineer	Library Designer, EDX Reader and Writer, Component Manger, Design Editing, Design Versioning, Concurrent Design Versioning
xDM Library Cache Manager	Xpedition EDM Library Cache Manager	
xDM Variant Manager Integration	Xpedition EDM Variant Manager Integration	
xDM Server Node	Xpedition EDM Server Node	
xDM Server	Xpedition EDM Server	
xDM Design Services	Xpedition EDM Design Services	
xDM Library Services	Xpedition EDM Library Services	
SystemVision	Xpedition AMS	Entry, Parametric, Integration
SystemVision Express	Xpedition AMS Express	

New Features

Xpedition Layout

xPCB Layout and xPCB Team Layout have been enhanced with a number of new features that improve product usability and efficiency in the X-ENTP VX.2.2 release. Details of the following changes can be found within the following presentations.

- [Xpedition Layout Release Highlights](#)

Xpedition Designer

The VX.2.2 release of Xpedition Designer addresses a number of user reported issues and incorporates user feedback on new functionality introduced in the past release. Details of the new features and enhancements for Xpedition Designer can be found in the [Xpedition Designer Release Highlights](#)

Xpedition Systems Designer

Xpedition Systems Designer VX.2.2 represents a focus on expanding the functionality, performance improvements and usability of the product.

Details of new features and enhancements for this release can be found in the [Xpedition Systems Designer Release Highlights](#).

Xpedition FPGA I/O Optimizer

Xpedition FPGA I/O Optimizer is the FPGA IO Optimization tool for the Xpedition flow. I/O Optimizer is an easy to use, integral part of Xpedition Designer environment. The IOPT signal to device pin assignment and the floorplan environment enables the FPGA IO optimization of single and multi-FPGAs providing productivity savings across the FPGA on board design flow.

The VX.2.2 new features can be found in the [Xpedition FPGA I/O Optimizer What's New Document](#).

Constraint Manager

As of VX.2.2 we have started delivery of an all new Constraint Manager Automation Interface which will be included as part of our Xpedition Design and Layout products. It does not include any special permissions or licensing to use, however, the API is not fully complete as of this release. Therefore customers who have gained permission to use the “classic” Constraint Manager API can continue to use the old interface even in VX.2.2. The new VX.2.2 API is independent of the “classic” API thus not cross compatible. Existing scripts that use the “classic” interface will have to be re-written using the new API in the future. We will support both new and “classic” API for a few releases until the new API is 100% complete, then we will have a phase out period where customers will need to move to the new automation interface. Existing example Constraint Manager scripts that use the “classic” API continued to be delivered, however will also be re-written once the new interface is fully delivered in 2018.

EDM Server (Infrastructure)

The VX.2.2 release of EDM Server includes new functionality and feature enhancements, which can be found in the following presentation.

- [EDM Server Infrastructure & Utilities Updates](#)

EDM (EDM Common, EDM Library, EDM Design)

EDM has been enhanced with a number of new features that improve product usability and efficiency in the X-ENTP VX.2.2 release.

Details of the changes can be found within the following presentation:

- [EDM Release Highlights](#)

Xpedition AMS (SystemVision)

With the VX.2.2 release, the SystemVision environment is renamed to Xpedition AMS. Except where needed for comparison, this new name is used throughout these highlights to refer to the simulator and its applications. For more details about the name change, see the Naming & Packaging section below.

FEATURES & FUNCTIONALITY

Faster simulator startup

In earlier Xpedition versions, large designs could take several minutes to load into the simulator. In this release, load times for large designs are reduced by as much as 50 -60% over earlier simulator versions.

PSpice Converter updates/improvements

We continue updating and enhancing the Xpedition AMS PSpice converter. Converter improvements for this release include several changes to handle model syntax that did not convert properly in earlier releases.

Unified (Common) installation

Prior to this release, the Xpedition environment and the Xpedition AMS toolset were separate downloads, and required separate, sequential installations. With this release, the environment and toolset are included in the same download, and can be installed from a common installation flow.

Side-by-Side installation/invocation

The Xpedition environment, and therefore the Xpedition AMS tool set, now support installing and running multiple versions of the environment without using the Release Switcher program.

Experiment Manager performance improvements

When defining and editing experiment parameters, Experiment Manager performance is largely dependent on how the tool interacts with the design database. This release includes changes to the Experiment Manager design database access routines, resulting in faster and more efficient experiment definition and setup.

Cross-probing pin currents

Xpedition AMS now supports cross-probing (plotting) pin currents from the design schematic to Waveform Analyzer. To use this new feature, make sure to include component currents in your simulation results, then once the simulation is finished, right click on the symbol pin you want to plot the current for, and select "Plot pin current" from the pop-up menu.

Simulation convergence improvements

We continue to research and implement more efficient ways to solve tough simulation problems. This release includes support for adding shunt elements to a simulation (cshunt and gshunt), and better logic for handling divide-by-zero issues.

Faster parts placements from the Xpedition AMS toolbar

When the Xpedition Designer Properties pane was open in earlier releases, there was a delay between selecting a part in the Xpedition AMS toolbar and when the selected symbol could be placed in a design. In this release, the delay is reduced by as much as 90%.

NAMING & PACKAGING

Starting with this VX.2.2 release, the SystemVision toolset is renamed to Xpedition AMS, reflecting its tight integration and close association with the Xpedition family of printed circuit board and system design tools. Along with renaming the simulator, we have adjusted tool packaging. The new package names are Xpedition AMS 100, Xpedition AMS 200, and Xpedition AMS System. Xpedition AMS 100 is a new, SPICE-centric simulation package; Xpedition AMS 200 replaces the SystemVision Entry and SystemVision Parametric packages; and Xpedition AMS System replaces SystemVision Integration.

STANDALONE MIGRATION

The SystemVision 16.1.1 release (August 2016) was the last version to support the SystemVision Standalone configuration. If you use SystemVision Standalone, but want the benefits of the latest simulator and environment updates available in release VX.2.2, download this new release and install the base version of Xpedition Designer (formerly xDX Designer) along with Xpedition AMS. In addition to including the latest simulator updates and enhancements, this release supports migrating SystemVision Standalone projects for use with Xpedition Designer and Xpedition AMS. Prior to migrating a project, be sure to save a copy of the original SystemVision Standalone project database until you verify the migration process accuracy.

LICENSING

The changes in product names and packages described above require new licensing, whether you are transitioning from SystemVision Overlay or Standalone to one of the new Xpedition AMS options. As you update your simulator installation, you also need to update your license file. For more details, see the Licensing section in this release highlights document, check for additional details on Support Center (formerly SupportNet), or contact your local Mentor Graphics support team.

Valor NPI

The following new features are available in this release.

- Panel Designer with Material Optimization
- BOM Manager Excel Wizard
- Manufacturing Documentation (Dimensions)
- PDF Output
- Panel Design Enhancements
 - Access to the Panel Design Library
 - Replacing design revision within an existing panel
 - Auto Step&Repeat considers only placed components
 - Step and Repeat Column Sorting
 - Restricted Step Movement
 - Grouping

- Netlist Analysis Enhancements
 - Net validation considers the existence of backdrills
 - Net Validation considers the existence of plated slots
- Analysis Enhancements
 - Signal Reference Validation
 - Component Analysis- AOI test Improvements
 - HDI Fab. Signal Checks- New category Fillet Length (IDEA)
 - Refined Like Pad in Fiducial Analysis
- Graphic Station Enhancements
 - Re-do capabilities when graphic edit Undo is available (IDEA D8556)
 - New script command to select a BOM Variant

Zuken translation improvement (IDEA D14300)

General Information for X-ENTP VX.2.2

Xpedition Enterprise 64 bit information

The Xpedition Enterprise VX.2.2 release supports both native 32-bit and 64-bit for both Windows and Linux operating systems.

The 32-bit compiled version will run on either a 32-bit or 64-bit Operating System. However, the native 64-bit compiled version is only compatible with 64-bit Operating Systems.

NOTE: The Mentor Install Program will prevent native 64-bit compiled programs from being installed on 32-bit Operating Systems

Graphics Card and Driver Version

The following graphics cards and drivers were used when testing the X-ENTP VX.2.2 release of xPCB Layout and xPCB Team Layout:

Host	GFX card	OS	driver ver.	mode
		WINDOWS		
T3600	FirePro W7000	Windows 2016 Server 64bit	16.50.3201	GDI
T3600	FirePro W7000	Windows 2016 Server 64bit	16.50.3201	OpenGL
T3600	FirePro W7000	Windows 2016 Server 32bit	16.50.3201	GDI
T3600	FirePro W7000	Windows 2016 Server 32bit	16.50.3201	OpenGL
T3600	FirePro W7000	Windows 2016 Server 64bit (Remote)	16.50.3201	GDI
T3600	FirePro W7000	Windows 2016 Server 64bit (Remote)	16.50.3201	OpenGL
T3600	Quadro K2200	Windows 2016 Server 64bit	377.11	GDI
T3600	Quadro K2200	Windows 2016 Server 64bit	377.11	OpenGL (Workstation App Mode)

T3600	Quadro K2200	Windows 2016 Server 64bit	377.11	OpenGL
T3600	Quadro K2200	Windows 2016 Server 64bit (Remote)	377.11	GDI
T3600	Quadro K2200	Windows 2016 Server 64bit (Remote)	377.11	OpenGL (Workstation App Mode)
T3600	Quadro K2200	Windows 2016 Server 64bit (Remote)	377.11	OpenGL
T3600	Quadro K2200	Windows 2016 Server 32bit	377.11	OpenGL (Workstation App Mode)
T3600	Quadro K2200	Windows 2016 Server 32bit	377.11	OpenGL
T3600	Quadro K2200	Windows 2016 Server 32bit	377.11	GDI
		Linux		
T3600	Quadro K2200	Linux SLES11SP4 64bit	375.39	GDI
T3600	Quadro K2200	Linux SLES11SP4 64bit	375.39	OpenGL
T3600	Quadro K2200	Linux SLES11SP4 32bit	375.39	GDI
T3600	Quadro K2200	Linux SLES11SP4 32bit	375.39	OpenGL

In the process of validating this release we've found that you can try the following steps when you notice performance problems in certain situations:

1. When running on Linux with some NVidia drivers:
Uncheck the "Sync to VBlank" option.
2. When running on Linux in GDI mode using some AMD drivers:
Enable OpenGL or use the default system driver.
3. When running on Windows in GDI mode with Aero enabled:
Enable OpenGL or disable Aero. If you have an NVidia device that supports Dynamic Streaming, you should enable this feature.

Licensing

As of VX.1, the license consumption model has changed in the X-ENTP release. Applications that previously checked out licenses using a set of values consisting of user/host/display now check out licenses using user/host/design_project. For more detail, please refer to TechNote MG588427 <https://supportnet.mentor.com/portal?do=reference.technote&id=MG588427>

The license consumption model has changed in releases X-ENTP VX.1 and higher
This release delivers Mentor Standard Licensing v2016_2.

For this release a license server running FlexNet v11.13.1.2 or higher is required

The upgrade can be loaded from the install media onto your license server via the "Manage Licensing" option on the main install menu. Alternatively, the licensing software can be separately downloaded

from SupportNet at <http://supportnet.mentor.com/portal?do=releases&id=201305039&prod=C106-S128-G159-P11292>.

Data Centric Licensing

With the Board Systems Division VX-based flow releases forward, a change was implemented whereby for a single user on a single client system, a license authorization code was required to invoke each design or project that is opened for editing. In addition, if a subsequent design is opened on that system, an option is given to invoke that design/project in read-only mode which does not consume a license authorization code. We refer to this licensing implementation "Data-Centric Licensing".

This change is in line with industry standards and was implemented to ensure compliance with the intended license policy and the terms of the Mentor standard End User License Agreement (EULA) agreement.

We understand that this new license policy enforcement will cause a change in behavior in some use cases whereby multiple designs were opened at the same time by a single user on a single system but we believe that with a change in design management practice, and with the ability to open multiple designs in read-only mode for reference purposes that the use cases that we are aware of can be addressed.

We are aware there are a few very specific cases, where multiple designs were opened for simultaneous edits. In these cases and in line with the above mentioned compliance requirements, additional licenses may be required. The Board Systems Division has focused efforts underway to mitigate the extended amount of time opening designs, specifically on the layout side to eliminate the need for these use cases.

Authorization Codes

To use the latest releases, you must be on support contracts for these products as of July 2017. For more information about "Exact Access" authorization code formats, see the explanation on SupportNet at:

http://www.mentor.com/supportnet/process_policy/exact_access.html

You may download your site's existing authorization codes from SupportNet at:

<http://www.mentor.com/supportnet/licenses>

Two new authorization codes have been added to enable the Assembly Panel Design module, vlrnpiseatpd or vlrnpistnapd and are available with purchases of new vSeat and vStn Assembly Panel Design products.

Installation Information

New for VX.2.2-Downloading and Installing Software and Documentation from the Cloud

The Online Installer, which requires only a small download (50-65 MB) from SupportNet enables you to download and install Mentor Graphics products from the cloud. This is a much faster method and uses less space on your system because you only download and install the products you want. You can either download and install in one operation or download a local copy for later installation.

Please refer to page 29 of the Administrator's Guide for X-ENTP VX.2.2 for more information.

Documentation Delivered in a Separate Install Download

With this release of Xpedition Enterprise Flow, product documentation is provided as a separate download from the software. This requires two separate downloads and installs of the complete Xpedition Enterprise Flow:

- Download and install product software
- Download and install product documentation.

You are given the option of performing a **Typical Install** of the software and documentation to a single location. This option most closely resembles the install you may be familiar with if you have previously installed Mentor Graphics products. Both software and documentation reside on the same computer.

Refer to “Installing Mentor Graphics Software and Documentation” in the *Managing Mentor Graphics Systems Software* manual for more information.

Shared Documentation Installation

As a second installation option, you can **install the software and specify a shared documentation location** from the software install(s). The following are points for consideration with this choice:

- You want to install the documentation to a single location and allow multiple software installs access to that documentation location; documentation does not have to be installed on every computer.
- The documentation tree is self-contained so you can have software installs on different platforms (Windows, UNIX, and Linux) access the documentation from a single location. For example, you have installed the documentation on a UNIX server; software installs on Windows, Linux, and UNIX can access the documentation from this one UNIX server.

-
- The documentation can be installed to a web server (as the shared documentation location) as long as it is within your company’s firewall (think same city, same campus).

Refer to “Installing Mentor Graphics Software and Documentation” in the *Managing Mentor Graphics Systems Software* manual for more information.

The Mentor Graphics Documentation System

This release includes the updated v3 Mentor Graphics Documentation System. The System consists of a search and navigational interface called InfoHub™, and documents in PDF and HTML formats.

NOTE: [An updated v3 movie is available on SupportNet](#) (accessible from this link and from the “InfoHub Overview” link in the InfoHub footer). Watch the movie for an overview of highlights and tips on getting the most from InfoHub.

InfoHub Enhancements

- Substantially improved search performance.
- Refined search algorithm, to increase relevancy of hits.
- Results list appears within InfoHub (instead of the **Search** tab in the sidebar of a document). Additional results list improvements:
 - SupportNet-like results, with filtering options, snippets, and page navigation.
 - contextual links to submit searches to SupportNet, for quick access to content not available in InfoHub.
- New **Release Information** scope — enables you to quickly scan the available release content, as well as other materials pertinent to the release.
- New **My Document List** scope — enables you to create a custom list of documents for quick access to documents and enhanced searching.
- **Custom** tab displayed by default — enables you to add links to the Custom tab of InfoHub to customize the interface.

Custom Tab

Effective in v3, the **Custom** tab displays by default. Use this tab to customize the InfoHub experience by providing company-specific links to information. To learn how to customize the Custom tab, click the “Custom Tab” link in the InfoHub footer.

HTML Document Enhancements

- Substantially improved search performance and other enhancements:
 - search limited to current document only.
 - filtering options.
-

-
- search snippets display by default.
 - results list page navigation.
 - contextual links to submit searches to SupportNet, for quick access to content not available in InfoHub.
 - Support for native browser bookmark/favorites.
 - Refined index navigation — index entries limited to current document only.

Providing Feedback

We welcome your feedback on the documentation system. You can access the feedback form in multiple ways, for example:

- Click **Feedback** in the button bar of HTML documents.
- Click **Documentation Feedback** in the Bookmark list of PDF documents.

If interested, you can discuss your feedback with the technical writer responsible for the documentation for your product line.

Additional Release Notes and Workarounds

From the VX.1 release onward it has always been possible to install more than one version of Mentor Graphics PCB software simultaneously. In order to support these side-by-side installs each release has its own unique WDIR directory for its configuration settings. At installation time you will be prompted to copy the content of your previous WDIR to this new version specific WDIR.

Also as of the VX.1 release we are promoting a new enhanced color scheme with a white background as the default setting in xDX Designer when the product is installed. If you wish to retain your previous color scheme you may do so by selecting the option to copy the previous WDIR contents at the time you install VX.2.

If you do not copy the previous content of your WDIR directory to the VX.2 WDIR directory but still wish to change the color scheme to the EE7.9.x colors you may do so by selecting a scheme in Settings – Display – Objects. The default EE7.9.x color scheme name is Expedition.dxc. If you have a customized color scheme it should also be listed in this dialog.

On Linux you will not have the option to copy the previous WDIR content. To restore your previous color scheme you may manually copy the content of your previous WDIR to the new VX.2 WDIR or change the scheme in Settings – Display – Objects.

Note about Spares in Xpedition Layout X-ENTP VX.2.2

Prior to X-ENTP VX.2.2, the Xpedition Layout Project Integration dialog option to delete spares was not actually deleting spares if they did not have part numbers. This has been fixed in VX.2.2, so these spares will now be correctly deleted. However, while validating this change, we found some designs

associated with customer defects that showed cases where they were specifically using spares for other purposes and were able to do so, only because of this defect. For example, one had a Cell that was their company logo that was a package cell, had a reference designator, but did not have a part number. Because of the defect, this stayed on the board. But, now that we have fixed the defect, this spare will be removed from the board. There will be a warning in the Forward Annotation log file similar to this:

WARNING: "SP1" is being removed from the Layout since it is no longer in the schematic.

xDX Designer Color Scheme

For both Windows and Linux we include a utility to revert the new color scheme to the default xPCB Layout color scheme (this will not restore any custom color scheme you may be using).

Under Windows this new command must be run from within an MGC Console window (accessible from the Start Menu – All Programs – Xpedition Enterprise VX.2. - Administrative Tools – MGC PCB Command Window VX.2).

```
mgcmd> c:\MentorGraphics\EEVX.1\SDD_HOME\wv\<platform>\bin\whitebackground.exe –  
off
```

Under Linux this can be run from a terminal window directly:
<SDD_HOME>/common/<Platform>/bin/ whitebackground –off

ODBC Connections

64 bit applications are not compatible with 32-bit Microsoft ODBC Drivers. (Access and Excel)

If using a 64-bit version of the Mentor tools then 64-bit ODBC drivers must be installed.
64-bit drivers can be downloaded from the Microsoft web site

If using MS Access or MS Excel as a data source then either:
The 64-bit version of Microsoft Office should be installed to support compatible drivers
If no version of Office is installed on the client then 64-bit drivers should be installed.

Suggested grid color settings for the new Lined Grid in DxDesigner?

For customers using their own color schemes and settings it is suggested that the new lined grid be set with the following values, though users may of course set their own values. The following entries are suggested for the settings within the color scheme settings file (*.dxc file).

For white backgrounds

```
<item name="GRID" color="0xb2b2b2"/>
```

For black backgrounds

<item name="GRID" color="0x484848"/>

Notes on supported characters for object names in xDx Designer?

xDx Designer is able to support a large number of special characters for net names and object names though some of these may prevent downstream tools such as Simulators and net list outputs from working. For this reason it is suggested that the following characters be avoided in the 'name' attribute.

For nets

@ \$ 'space' ' \ / " * % #

For blocks

/ \ 'space' * % < > ? , =

Where can I find application program interface documentation for xDxDesigner?

Please refer to the Automation and Scripting InfoHub, which includes automation documentation for xDX Designer, Constraint Manager, xPCB Layout, and other applications. All automation reference titles are provided in PDF and HTML formats.

What are the recommended Central Library permissions?

To prevent individuals from making changes to a Central Library but still allow Read access for viewing library data, the Central can be write protected as desired to control access. Adjust permissions on the individual library files to enforce your desired security policy.

Note: Windows users can use the Properties/Security dialog box and Linux/UNIX users can use the chmod command to adjust Central Library permissions to corporate guidelines.

Files that can be permission-controlled are:

- Common property (centlib.prp) file
- Padstack library (padstackDB.psk) file located in the Layout folder
- Layout template and Panel template files
- Files in the CellDBLibs, IBISModels, PartDBLibs, and SymbolLibs subdirectories.
- Parts Manager database (partsmanager.mdb) file (DC/DV to Expedition flow only)

All other files in the central library should remain "Everyone = Change" (read-write) to ensure proper operation of the library. The Windows share that allows access to the central library directory from

remote machines must have permissions set to “Everyone = Full Control”. The share permissions are superseded by the individual file permissions.

Is client/server setup available for the Windows platform?

Yes. The Server Setup for Client installs is used to install the software to a server-class system where multiple Windows client machines actually run the software across the network. This provides a use model similar to that commonly used in Linux environments, where a single software tree is accessed by multiple users on different workstations.

The System Administrator should install the desired applications onto the server and select the Server Setup for Client Installs > Client/Server Setup option at the same time. The Client/Server Setup option installs a file called ClientInstallSetup.exe onto the server during installation.

To set up the clients, map a network drive to the location on the server where the applications were installed and run ClientInstallSetup.bat in the dialog that displays. Enter the path to the location where the applications are installed on the server.

Analysis (HyperLynx Support)

Version and Platform support for Xpedition Analysis Control (XAC)

The supported versions for the HyperLynx analysis products for this release are listed below:

- HyperLynx SI/PI 9.4.2 (HL DC Drop)
- HyperLynx DRC 6.5
- HyperLynx Advanced Solvers 6.1.3

The PCB Flow products and Xpedition Analysis Control (XAC) clients HL DRC and HL DC Drop should use matching platforms (win32, win64).

Since HyperLynx Fast 3D Solver is not available on win32 it supports integration with both win32 and win64 PCB flow products.

Note: XAC is only available on the Windows platforms.

Browser Support for X-ENTP VX.2.2

VX.2.2 supports Internet Explorer 11, Firefox 17+, Chrome 23+, and Microsoft Edge, but with 2 limitations as noted below.

-
- 1) **xDM Design and xDM Library applications.** The xDM applications use the Java plug-in to provide support for xDM Server Single Sign on capabilities and for xDM Library web-based clients.

Google has recently removed support for the Java plug-in from Chrome, and Microsoft Edge has never supported the Java plug-in. Therefore, Chrome and Edge will function in VX.2 with the following restrictions:

- xDM Library web-based clients cannot be invoked from the xDM Server using either Chrome or Edge
- Logins to the xDM Server using either Chrome or Edge will display a message box “You need 1.6.0_29 or higher Java(TM) Runtime Environment. Would you like to install? At this point, the user can select “Cancel” and continue to login. However, any Single Sign on capabilities configured in the xDM Server will not work, resulting in the user being prompted more frequently during their login session for their User Name and Password.

To avoid these issues, please use Internet Explorer or Firefox when interacting with xDM Server applications.

- 2) **Online Documentation.** In Windows 10, Microsoft now includes the Edge browser. Microsoft Edge will only run if User Account Control (UAC) is at least partially enabled in the system. If UAC has been disabled in Windows, then this error may appear when invoking the browser, or launching Mentor Graphics online documentation:

“This app can’t open. Microsoft Edge can’t open while User Account Control is turned off. Turn on User Account Control.”

To avoid these issues with UAC disabled, please use Internet Explorer, Firefox or Chrome when invoking a web browser or using Mentor Graphics Online Help. To use Microsoft Edge, please enable User account Control.

Supported Platforms

Over all Notes

- With the X-ENTP VX.2 release the following operating systems are no longer supported: Windows Server 2008, Windows Server 2003, Windows Vista, and RHEL 5.
- Specified patches below are minimum levels. Later versions of the patches are valid, supported configurations, except where specifically noted.
- Except as noted, all products are supported on all platforms.

-
- Processor and memory requirements assume a single user for the system. Recommended requirements are for general usage with one or two Mentor applications and moderate size data sets. While the product may function minimally with lesser configurations, those configurations are not recommended for typical usage. Users who use many applications simultaneously or who work with high-end designs will benefit from even larger memory configurations. These requirements also do not attempt to quantify the impact of non-Mentor applications, system infrastructure requirements like virus scanners, network monitoring, etc. In general, more memory results in better performance. More detailed information about system requirements is available for service-based products (such as xDM Service products or the RSCM Server) in the respective documentation for those products.
 - For server configurations supporting multiple concurrent interactive users (via remote desktop or X Windows technologies), the memory requirements should be scaled by the number of concurrent users.

Processor Note for Intel/AMD Processors

All Windows and Linux OS variants run on Intel or AMD x86 or x64 processors. In the past, the processor GHz speed determined the performance, but recent changes in the internal architecture of both Intel and AMD processors have made these comparisons difficult. Therefore, the following recommendations are being made for **all** Windows and Linux systems.

- Supported processors and systems are those manufactured since 2008 which conform to the subsequent requirements.
- Intel Celeron processors are not recommended.
- Minimum requirement is a dual-core (or dual processor) system. A quad core is recommended for improved overall system performance. A hyperthreaded processor should be considered a single processor, not a dual processor. Serviced-based products which require an xDM Server may have different requirements. Consult the xDM Server documentation for details.
- For best results, maximize processor speed and L1/L2/L3 processor cache memory.
- Typically, cost is the best indicator of performance, and extra investment in processor capability returns better system performance.

Red Hat Enterprise Linux WS 7 (RHEL7.0 - 7.3)

The following RPM packages and all of their dependencies need to be loaded on the RHEL 7 machines: (Both 64-bit and 32-bit packages should be loaded on a 64-bit machine where possible.) Most of the packages are available on the Red Hat media, but some* require a registered Red Hat Network to obtain.

```
Kernel version 3.10.0+  
gdm-3  
xorg-x11-server-Xorg-1  
motif-2
```

libXtst-1
libX11-1
libxcb-1
libXau-1
mesa-dri-drivers
mesa-libGLU
mesa-libGL
libstdc++-4
compat-libstdc++-33*
libSM-1
libXmu-1
ncurses-libs
nspr-4
libXft-2
libXinerama-1
glib2-2
libpng-1
libtiff-4
libjpeg
dos2unix
libXrandr-1
redhat-lsb-4
xorg-x11-server-Xvfb*
gtk2-2
compat-libcap1
libcap-2
libcanberra-gtk2
PackageKit-gtk3-module
openldap-2.4
openssl098e-0
libxslt-1
compat-openldap-2
libaio-0
libelf-0
numactl-2
libXdmcp-1
dmidecode-2
compat-libtiff3
libpng12

Red Hat Enterprise Linux WS 6 (RHEL6.6 - 6.8)

-
- Given the announcement from RedHat to end support for RHEL6.5 and prior versions <**click here**> , we have adjusted our test and support strategy with the VX.2.1 release to support the following RHEL 6 OS release versions:

- RHEL6.6
- RHEL6.7

We strongly urge you to make plans, if you have not already, to move forward to one of the supported RHEL OS releases *as this will be the last release where RHEL6.5 and prior versions will be supported*. In the meantime we have not changed our environment check routine to preclude you from running on the RHEL OS versions supported in our VX.2 release in order to provide you the time to migrate your environment forward

This release supports both the 32-bit and 64-bit versions of RHEL6. Customers running AMD64-based systems or Intel Pentium4 or Xeon-based systems should use 64-bit operating systems together with 32-bit applications support.

The version numbers of the packages shown below as output of the uname or rpm command are for the RHEL Update noted in parentheses, and are included as examples of the output. For RHEL Updates supported but whose package versions are not shown below, the version information may vary, but the package is required, and must be the version that is delivered with that RHEL Update.

Note that when OS updates are applied they may upgrade libraries to a newer, unsupported version. You are advised not to apply any OS updates until you know it will not directly or indirectly (through dependencies on other packages which may be automatically selected for installation) update the libraries required by Mentor Graphics applications. More details are available on SupportNet at this location: <https://supportnet.mentor.com/portal?do=reference.technote&id=MG591739>

OS Version:

```
$ uname -rs
Linux 2.6.32-71 (RHEL6 Base Version) or newer
```

Recommended Installation:

Select the following options on the Package Groups offered from the interactive install:

Install set - Software Development Workstation

Package group selection

- Base System
 - Base
 - dos2unix
 - unix2dos
 - Compatibility libraries
 - Debugging Tools
 - Directory Client

-
- Java Platform
 - Legacy UNIX compatibility
 - rsh
 - rsh-server
 - telnet
 - telnet-server
 - ksh
 - Network file system client
 - Performance Tools
 - Perl Support
 - Printing client
 - Servers
 - CIFS file server
 - FTP server
 - NFS file server
 - Server Platform
 - Web Services
 - PHP Support
 - Web Server
 - Databases
 - (nothing)
 - System Management
 - SNMP Support
 - Virtualization
 - (nothing)
 - Desktops
 - Desktop
 - Desktop Debugging and Performance
 - Desktop Platform
 - Fonts
 - General Purpose Desktop
 - Graphical Administration Methods
 - Input Methods
 - KDE Desktop
 - Legacy X Window System compatibility
 - libXp
 - openmotif
 - openmotif22
 - Remote Desktop Clients
 - X Window System
 - Applications
 - Emacs
 - Internet Applications
 - Internet Browser
 - Office Suite and Productivity
 - Development
 - Additional Development
 - openmotif-devel
 - Desktop Platform Development
 - Development tools
 - Eclipse
 - Server Platform Development
 - Languages
 - (nothing)

The following package groups are required for a conformant RHEL6 installation. While not all applications require all packages, predictability and support of the installation is best when all of the following guidelines are followed.

Package Groups:

These are the kickstart package groups used when installing RHEL6:

```
# Package groups
@additional-devel
@base
@basic-desktop
@cifs-file-server
@compat-libraries
@debugging
@desktop-debugging
@desktop-platform
@desktop-platform-devel
@development
@directory-client
@eclipse
@emacs
@fonts
@ftp-server
@general-desktop
@graphical-admin-tools
@input-methods
@internet-applications
@internet-browser
@java-platform
@kde-desktop
@legacy-unix
@legacy-x
@network-file-system-client
@network-tools
@nfs-file-server
@office-suite
@performance
@perl-runtime
@php
@print-client
@remote-desktop-clients
@server-platform
@server-platform-devel
@system-management-snmp
@web-server
@x11
```

These are the package groups as seen from an interactive installation:
Install set - Software Development Workstation

Package group selection

- Base System
 - Base
 - dos2unix

-
- unix2dos
 - Compatibility libraries
 - Debugging Tools
 - Directory Client
 - Java Platform
 - Legacy UNIX compatibility
 - rsh
 - rsh-server
 - telnet
 - telnet-server
 - ksh
 - Network file system client
 - Performance Tools
 - Perl Support
 - Printing client
 - Servers
 - CIFS file server
 - FTP server
 - NFS file server
 - Server Platform
 - Web Services
 - PHP Support
 - Web Server
 - Databases
 - (nothing)
 - System Management
 - SNMP Support
 - Virtualization
 - (nothing)
 - Desktops
 - Desktop
 - Desktop Debugging and Performance
 - Desktop Platform
 - Fonts
 - General Purpose Desktop
 - Graphical Administration Methods
 - Input Methods
 - KDE Desktop
 - Legacy X Window System compatibility
 - libXp
 - openmotif
 - openmotif22
 - Remote Desktop Clients
 - X Window System
 - Applications
 - Emacs
 - Internet Applications
 - Internet Browser
 - Office Suite and Productivity
 - Development
 - Additional Development
 - openmotif-devel
 - Desktop Platform Development
 - Development tools
 - Eclipse

-
- Server Platform Development
 - Languages
 - (nothing)

Native File Sets:

The following additional RPMs are required for this release. Note that these must be the 32-bit or 64-bit versions of these file sets, depending upon the platform. (If installed interactively, using the previously listed interactive package groups, most of these should already be installed.)

```
# Individual RPMs
libXp
openmotif
openmotif22
ksh
gdm-2
xorg-x11-server-Xorg
xorg-x11-server-Xvfb (Must be downloaded from Red Hat directly.)
dos2unix
unix2dos
```

32/64-bit File Sets:

The following additional file sets and rpms are required for this product. Note that both the 32-bit and 64-bit versions of these file sets must be installed (*.i686.rpm and *.x86_64.rpm), if the platform is 64-bit. In RHEL6, Red Hat no longer loads the 32-bit versions by default on a 64-bit machine. The *package groups* listed previously will install these RPM files on a 32-bit or a 64-bit machine. These are the additional 32-bit RPMs that must be installed on a 64-bit machine: (If installed interactively, using the previously listed interactive package groups, most of these should already be installed.)

```
#32-bit packages
openmotif22.i686
libXext.i686
libX11.i686
libxcb.i686
libXau.i686
libXp.i686
libXtst.i686
libXi.i686
libdrm.i686
expat.i686
libselinux.i686
libtalloc.i686
libstdc++.i686
mesa-dri-drivers.i686
libXxf86vm.i686
libXfixes.i686
libXdamage.i686
mesa-libGL.i686
mesa-libGLU.i686
compat-libstdc++-33.i686
libICE.i686
libuuid.i686
libSM.i686
libXt.i686
libXmu.i686
ncurses-libs.i686
nspr.i686
libXrender.i686
freetype.i686
fontconfig.i686
libXft.i686
libXinerama.i686
```

```
gamin.i686
glib2.i686
zlib.i686
lib-png.i686
libtiff.i686
libjpeg.i686
compat-expat1.i686
libXrandr.i686
nss-util.i686
readline.i686
sqlite.i686
nss-softokn.i686
nss.i686
audit-libs.i686
cracklib.i686
db4.i686
pam.i686
redhat-lsb-core.i686
libXcomposite.i686
libXcursor.i686
atk.i686
pixmap.i686
cairo.i686
dbus-libs.i686
avahi-libs.i686
libcom_err.i686
libgpg-error.i686
libgcrypt.i686
libtasn1.i686
gnutls.i686
keyutils-libs.i686
krb5-libs.i686
cups-libs.i686
jasper-libs.i686
libthai.i686
pango.i686
gtk2.i686
compat-libcap1.i686
libattr.i686
libcap.i686
libpng.i686
gtk2-engines.i686
libcanberra-gtk2.i686
PackageKit-gtk-module.i686
openssl1098e-0.9.i686
compat-readline5.i686
compat-libtermcap.i686
libxslt.i686
compat-openldap.i686
libaio.i686
elfutils-libelf.i686
numactl.i686
libXdmcp.i686
```

IT Administration Notes:

Optionally disable firewall and SELinux (This option is needed for xPCB Team Layout, and may be needed for other system-level administrative activities.)

-
1. Applications->SystemSettings-> Security Level
 2. Firewall Options tab select Security Level: Disable firewall
 3. SELinux tab uncheck “Enabled (Modification Requires Reboot)”
 4. Reboot the system

Minimum Required OS Patches: None

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 8 GB Recommended (This amount is adequate for most single user workstations, however if service based products are installed that require an xDM Server, this amount may not be. Consult the xDM Server documentation for details)

Swap Space: 2X the amount of RAM

Kernel Parameters: No changes required.

WHERE IS RED HAT LINUX 7.1-7.2

SuSE Linux Enterprise 11 (SLES 11.3- 11.4)

OS Version:

```
$ uname -rs
```

```
Linux 2.6.32 (SuSE Linux Enterprise Server 11 or later)
```

```
Linux 3.0. (SuSE Linux Enterprise Server 11 or later)
```

Windowing System:

```
$ /bin/rpm -q gdm  
gdm-2.24
```

```
$ /bin/rpm -q xorg-x11-server  
Xorg-x11-server-6.9  
Xorg-x11-server-7.4
```

RPMs Required

Gnome Desktop Mgr – RPM gdm-2.24 or higher

X Windows – RPM xorg-x11-server

32-bit Compat C++ Libraries (for 64-bit SLES11) – RPM libstdc++33-32bit

Compat C++ Libraries – RPM libstdc__33-3

Open Motif – RPM openmotif22

Libexpat0 Library – RPM libexpat0

NOTE: The OpenMotif and libexpat0 RPMs are not delivered with SLES11, and must be separately downloaded from SUSE directly, or can be also be downloaded from opensuse.org.

Individual files required – These are provided by the above RPMs

32 bit libXm.so - /usr/lib/libXm.so

32 bit libexpat.so.0 - /usr/lib/libexpat.so.0

Minimum Required OS Patches: None

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 8 GB Recommended (This amount is adequate for most single user workstations, however if service based products are installed that require an xDM Server, this amount may not be. Consult the xDM Server documentation for details)

Swap Space: 2X the amount of RAM

Kernel Parameters: No changes required.

Microsoft Windows 7 SP1

Microsoft Windows 7 (32 and 64 bit versions), Professional Edition, Ultimate Edition, and Enterprise Edition are supported with SP1.

While there is no known issue with running Microsoft Windows 7 Starter Edition and Microsoft Windows 7 Home Premium Edition, the product has not been tested with these editions, and therefore is not supported.

Kernel Configuration: N/A

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 4GB Minimum, 8GB recommended

Swap Space: 2x the amount of RAM

Microsoft Windows 8.1

Microsoft Windows 8.1 (32 and 64 bit versions), Professional Edition, Ultimate Edition, and Enterprise Edition are supported.

Kernel Configuration: N/A

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 8GB recommended

Swap Space: 2x the amount of RAM

Microsoft Windows 10

Microsoft Windows 10 (32 and 64 bit versions), Enterprise Edition and Pro Edition are supported.

While there is no known issue with running Microsoft Windows 10.0 Home Edition or Educational Edition, the product has not been tested with these editions, and therefore is not supported.

Warning: The Microsoft Edge Browser delivered with Windows 10 is not supported with HyperLynx. Users should continue to use the default browser Internet Explorer delivered with Windows 10, or download and install Firefox or Chrome Browsers.

Kernel Configuration: N/A

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Minimum RAM: 8GB recommended

Swap Space: 2x the amount of RAM

Windows Server 2008 R2

Additional OS Patches (the following configurations are supported):

- Microsoft Windows Server 2008 R2, Standard Edition with all current updates via Windows Update, on 64-bit versions.
- While we expect no issues unique to Microsoft Windows Server 2008 R2, Enterprise Edition or Datacenter Edition, they have not been tested and therefore are unsupported.

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Minimum RAM: 8GB (per simultaneously logged in user)

Swap Space: 2X the amount of RAM

Windows Server 2012 & 2012 R2

Additional OS Patches (the following 64-bit configurations are supported):

-
- Microsoft Windows Server 2012, with all current updates via Windows Update
 - Microsoft Windows Server 2012 R2, with all current updates via Windows Update

Processor Minimum: Dual-core Intel or AMD processor minimum. See Processor Note for Intel/AMD Processors above.

Minimum RAM: 8GB (per simultaneously logged in user)

Virtual Memory: 2X the amount of RAM

Windows Server 2016

Additional OS Patches (the following 64-bit configurations are supported):

- Microsoft Windows Server 2016, with all current updates via Windows Update

Processor Minimum: Dual-core Intel or AMD processor minimum. See Processor Note for Intel/AMD Processors above.

Minimum RAM: 8GB (per simultaneously logged in user)

Virtual Memory: 2X the amount of RAM