



## MKS Toolkit for Enterprise Developers UNIX Runtime Options

The UNIX runtime options provide essential services for applications; utilities and scripts migrated from UNIX or Linux to Windows with MKS Toolkit for Enterprise Developers.

### Core Runtime Components

Each application or utility ported to Windows with MKS Toolkit for Enterprise Developers will require the NuTCRACKER Platform in order to run. The NuTCRACKER Platform is included in all MKS Toolkit products and is also available for runtime distribution in two forms:

- **NuTCRACKER Workstation** — a full UNIX runtime compatibility environment for workstation platforms that provides services to any application migrated from UNIX with MKS Toolkit for Enterprise Developers.
- **NuTCRACKER Server** — the server counterpart of NuTCRACKER Workstation, for servers (per processor) and all machines with more than two processors.

### Additional Runtime Components

- **Power User Utilities** — a set of utilities for runtime support of automation and scripting capabilities, such as text search and retrieval, moving files and data, and automating repetitive tasks.
- **Developer Utilities** — a set of utilities for runtime support of software, script, and Web development tasks, including all the utilities in the Power User Utilities add-on as well as advanced development

tools like `make`, `tar`, `mailx` and more.

- **Connectivity Suite** — a complete suite of connectivity tools providing runtime support for access to/from remote UNIX, Linux, and Windows systems.

This package includes:

- Secure Shell utilities (`secsh/secshd`, `scp`, `sftp`)
- Remote Shell utilities (`rsh/rshd`, `rexec/rexecd`, `rlogin/rlogind`, `rcp`)
- Telnet service (`telnetd`)
- `xterm`

The Connectivity Suite add-on is available in both single and unlimited connect versions.

- **MKS X/Server** — is a true plug-and-play X Server, with a powerful application wizard. It is designed to make it easy to manage X user desktops from a single point.

This server comes in both local and full versions, and in English and Japanese versions. The local versions are used when the client and the server reside on the same Windows machine, while the

full versions are for displaying X clients from anywhere on the network on the Windows machine.

Features include:

- Full X11R6.3 server
- Centralized management using SuperVision (now included as standard)
- Zones, a powerful desktop manager for Windows
- Cut and paste between UNIX and Microsoft Windows applications
- Support for XDMCP in Direct, Indirect and Broadcast modes
- Powerful PseudoColor emulation on TrueColor displays
- Intelligent color matching between X and Windows applications
- Support for 32-bit color
- Access X applications over the Internet using Broadway technology in X11R6.3
- Integral serial line support via XRemote
- VT420 terminal emulation
- WYSE 60 terminal emulation
- ANSI terminal emulation
- Support for XIE, SHAPE, XTEST, VISION RESUME extensions
- Plane Mask support
- X11R3 bug compatibility

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*The initial port [using MKS Toolkit for Enterprise Developers] took only about 6 weeks... which is comparable to the time it takes us to do a port to another UNIX platform.*

**Doug Wall**  
Manager of Systems Integration  
ABB

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# MKS Toolkit

- Graphics Resource Cache
  - X Keyboard Mapper
  - X Font Compiler
  - Multi-monitor support
  - Powerful font substitution (interactive or automatic) with font preview facility
  - MIT 75dpi, 100dpi, HP, Andrew, Oriental, Hangul and Siemens fonts supplied
  - Host access control
  - User access control
  - Graphics Optimizer -- exploits the power of your hardware
  - Net Audio support
  - State-of-the-art X protocol and network diagnostic tools
  - OpenGL 1.1 and GLX 1.2 support
  - **Hummingbird OpenGL** — a bundle of the Hummingbird Exceed X server, Hummingbird Exceed 3D OpenGL, and MKS Toolkit OpenGL libraries.
- Exceed 3D OpenGL adds the advanced graphical computing power of OpenGL®, the industry standard three dimensional visual interface to Exceed for Windows systems. This add-on enables high-end engineering and finite analysis OpenGL-based applications to be distributed to lower cost desktops, reducing cost per seat and ownership by leveraging the accelerating power of windows-based PCs.

Supported features include:

- 3D Overlays and Stereo

- Concurrent OpenGL 1.0 and 1.1 (GLX 1.2)
- Simultaneous multiple server visuals
- Direct rendering
- Overloaded X visuals to support GLX extended attributes (e.g. single/double buffering)
- RGBA color mode, Color Index color mode
- Viewing and modeling transformations
- Lighting and shading
- Anti-aliasing
- Texture mapping
- Hidden surface removal (Depth Buffer)
- Atmospheric effects (fog, smoke, haze)
- Includes GLX, GLU, NURBS, AUX, GLUT libraries
- **XRT PDS Widgets** — allows Motif developers to include the XRT family of widgets — XRT/3d, XRT/field, XRT/gear, XRT/gauge, XRT/graph and XRT/table — in their Windows applications. The XRT family of widgets are used by thousands of professional developers around the world to build informative, attractive and functional user-interfaces.

The XRT PDS add-on includes:

- XRT/graph - The latest version of the world's most awarded, most popular 2D charting and graphing widget, now comes with property pages, more chart types and many enhancements.

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*MKS Toolkit for Enterprise Developers met our expectations fully. Our ported Windows application demonstrates the same, full-scale performance as our UNIX installations*

**Erich Sartori**  
Project Head Manager  
ABAS Software AG

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- XRT/table - The handy, multi-purpose, high performance widget that allows you to display and edit tabular information.
- XRT/3d - Easily build stunning, informative and dynamic 3D charts and graphs.
- XRT/gear - The basic component collection (tab, outliner/tree, progress, tips, printing, icons and much more) that Unix Review Magazine calls "the right choice".
- XRT/field - Quickly build data-entry fields - no more tedious XmText validation code to write.
- XRT/gauge - includes 7 highly customizable dial and gauge Motif widgets that measure and display the value of a property or attribute.
- XRT/pageformatter - output to PostScript, PCL, or PDF for printed and Web-based reporting.

Application developers can now bring together disparate groups of users, enabling PC users to interact with central UNIX® applications without having to learn any new skills.



### **In a Nutshell**

The Application Deployment Wizard within MKS Toolkit for Enterprise Developers, along with the wide array of UNIX runtime options, provides the ability to rapidly deploy your ported application to Windows.

Request an evaluation copy of MKS Toolkit for Enterprise Developers and learn more about the rest of the MKS Toolkit line of products and services by pointing your browser to [www.mksoftware.com](http://www.mksoftware.com).

### **Additional Resources**

Power User Utilities:  
<http://www.mksoftware.com/products/tk/commands.asp?product=puu>

Developer Utilities:  
<http://www.mksoftware.com/products/tk/commands.asp?product=du>

More Information on X Servers:  
<http://www.tarantella.com/products/vison/ds/xveds.html>

More Information on OpenGL:  
[http://www.hcl.com/collateral/ds/exced3dv9\\_ds.html](http://www.hcl.com/collateral/ds/exced3dv9_ds.html)

More Information on XRT:  
<http://java.quest.com/xrt/xrt.shtml>

Wintif Technical Note:  
<http://www.mksoftware.com/support/tn-motif.asp>



### **Corporate Headquarters**

410 Albert Street  
Waterloo, ON  
Canada N2L 3V3  
tel: 519 884 2251  
fax: 519 884 8861  
sales: 800 265 2797

### **Worldwide Offices**

12701 Fair Lakes Circle  
Suite 350  
Fairfax, VA  
22033 USA  
tel: 703 803 3343  
fax: 703 803 3344  
sales: 800 637 8034

1815 South Meyers Road  
Suite 220  
Oakbrook Terrace, IL  
60181 USA  
tel: 630 827 4900  
fax: 630 629 9167  
sales: 800 633 1235

Martinstraße 42-44  
73728 Esslingen  
Deutschland  
Germany  
tel: +49 711 351775 7522  
fax: +49 711 351775 7555

Third Floor, Duke's Court  
Duke Street, Woking  
Surrey GU21 5BH  
United Kingdom  
tel: +44 (0) 1483 733900  
fax: +44 (0) 1483 733901  
sales: +44 1483 733919