

Release Notes for Dominion® KX II Software Version 2.0.21

Version: DKX II 2.0.21 Release Notes, Revision 1.3

Date: September 2, 2008

Effective: Immediately.

Applicability:

New Dominion KX II models:

- DKX2-108, DKX2-116, DKX2-132, DKX2-216, DKX2-232, DKX2-416, DKX2-432, DKX2-464.

Note: the previous Dominion KX models will be referred to as Dominion KX I.

KX II Release 2.0.21 is **not** applicable to the existing Dominion KX I models:

- DKX101, DKX116, DKX132, DKX216, DKX232, DKX416, DKX432 and DKX464

Release Status: General Availability.

Dominion KX II Overview:

Dominion KX II is Raritan's new family of next-generation, digital KVM switches with dual power supplies and dual gigabit Ethernet ports. KX II has a new user interface supporting advanced features such as virtual media, absolute mouse synchronization and 1600x1200 remote video resolution.

Release 2.0.21 Overview:

Built on Release 2.0.20, Release 2.0.21 is a small maintenance release. Release 2.0.20 features include IPv6 "dual stack" networking, software support for external modem, CC-SG integration improvements and minor fixes and improvements.

Dominion KX II Documentation:

The following user documentation is available for the Dominion KX II:

- **Dominion KX II User Guide** – user guide to the KX II's local and remote browser based user interfaces and general KX II usage.
- **Client User Guide** – see this user guide for MPC and VKC usage for KX II.
- **Dominion KX II Quick Setup Guide** –reference for the initial setup of the KX II.

The Dominion KX II documentation is contained on the CDROM included in the Dominion KX II package, available from the KX II web based user interface and on the Raritan.com website.

The most current version of the User Guide is available from the KX II web-based user interface. Click on **Help – User Guide** in the left hand information panel.

The latest documentation is on the Raritan website: www.raritan.com. Please go to the **Support** section, go to the **Firmware and Documentation** section and then select **Dominion KX II**. The documentation is shown by release, so scroll to the appropriate release.

Computer Interface Module (CIM) Overview:

Dominion KX II can use the following CIMs:

- **New D2CIM-DVUSB:** *dual* USB virtual media CIM, required for the virtual media and absolute mouse synchronization features. This CIM is recommended for customers planning to access virtual media drives at the OS and BIOS levels. This CIM requires KX II Release 2.0.10 or later.
- **D2CIM-VUSB:** *single* USB virtual media CIM, required for the virtual media and absolute mouse synchronization features. This CIM is recommended for customers planning to access virtual media drives only at the OS level.
- **KX I DCIMs:** DCIM-PS2, DCIM-USBG2, and DCIM-SUN. The DCIM-USB and DCIM-SUSB are end-of-life, so the DCIM-USBG2 is now recommended.
- **DCIM-USBG2:** the DCIM-USBG2 is the recommended basic USB CIM for KX II. The DCIM-USBG2 has a new architecture with increased reliability and performance. There is a small switch on the DCIM-USBG2, which should be set to the “S” position for use with SUN servers with USB ports.
- **D2CIM-PWR:** required to connect a remote power strip to the KX II.
- **Select Paragon CIMS:** P2CIM-AUSB, P2CIM-PS2, P2CIM-USB, P2CIM-SUSB, P2CIM-SUN, UKVMPD, UUSBPD, UKVMC and USKVMPD.
- **P2CIM-SER,** which can be connected to serial devices. When loaded with firmware V2.63, it is certified for use with KX II switches.

Release 2.0.21 Compatibility Information:

1. The above Dominion KX II models and Release 2.0.21 have been certified for use with CommandCenter® Secure Gateway (CC-SG) 3.2, 3.2.1, and 4.0. Customers running previous CC-SG Releases must upgrade to this release or subsequent release (when available).
2. KX II devices can be remotely accessed by two Java-based remote clients:

| REMOTE CLIENT | DESCRIPTION | VERSION |
|------------------------------------|--------------------------------------------------------------------------------------------------------|----------------|
| Virtual KVM Client (VKC) | Java-based client invoked from the browser-based remote user interface. KX II switches only. | Version 2.0.21 |
| Multi-Platform Client (MPC) | Java-based MPC with traditional Raritan user interface. KX I and KX II switches. | Version 5.0.6 |
| Raritan Remote Client (RRC) | RRC does not support KX II devices. | N/A |

3. MPC version 5.0.6 is the common version for both Release 2.0.20 and 2.0.21. CC-SG customers with KX I switches may want to upgrade CC-SG with MPC version 5.0.6 for the new MPC features and improvements. See the “Dominion KX Release Enhancements” section below for more details.
4. If using CC-SG in Proxy mode, change the default in the Default Application tab in Application manager to Virtual KVM Client. MPC is not supported in Proxy mode. Please note that Virtual Media is not supported in proxy mode.
5. SUN Java™ Runtime Environment (JRE) versions 1.5 and 1.6 are supported. **SUN Java Runtime Environment (JRE) 1.4.x is no longer supported.** JRE version 1.5.0_02 is explicitly not supported. The certified JRE 1.6 builds at this time are JRE 1.6.0_01 through 1.6.0_06. **JRE version 1.6.0_05 (update 5) for non-English environments is not recommended due to an issue with the login window.** For best results, we recommend that Java Plug-in Caching is not enabled.
6. If the client does not have a JRE associated with the Browser or if the JRE version is below 1.5, then a message will be displayed, and the user will be directed to install the latest version from the SUN Java website.
7. The JRE installation requires the multi language option to be enabled for Korean and other non-English language support. For a "Custom" JRE installation, must ensure that "Support for Additional Languages" is included during the installation process.
8. An SNMP v2 MIB is available for KX 2.0.x releases, including KX 2.0.21 on the Raritan website in the firmware upgrade section. This should be loaded into your SNMP management system if you are enabling SNMP traps from your KX II switch.

Dominion KX Release 2.0.21 Improvements:

Dominion KX II Release 2.0.21 includes the following improvements:

1. External Radius and LDAP authentication can fail for certain customers after upgrading to Release 2.0.20 – this is resolved when upgrading to Release 2.0.21.
2. With Japanese and Korean keyboards, the Virtual KVM Client (VKC) will now work with CC-SG.
3. Additional security hardening.

Dominion KX Release 2.0.20 Enhancements:

Dominion KX II Release 2.0.20 includes the following enhancements and improvements:

1. **Dual stack IPv6 and IPv4 networking.** The Dominion KX II provides “dual stack” IP networking with simultaneous support of IPv4 and IPv6. Relevant KX II features enhanced to support IPv6. Support for IPv6 network settings and IPv6 addressable external servers, i.e. SNMP, LDAP, etc. Discovery of IPv6 devices. See User Guide for more info.
2. **External Modem.** Software support for external modem connected to the modem port on the back panel of the KX II. Please note that the MPC Standalone Client must be used for modem connections. See below for important information on modem usage and consult the User Guide.
3. **Enhanced Command Center Secure Gateway connectivity management.** Should a Dominion KX II under CC-SG management lose connectivity with the CC-SG due to loss of network connectivity, then the device will automatically and temporarily become available for standalone access. (Admin users will also have the option to remove the device from CC-SG management). When connectivity is restored, then CC-SG management of the device will be automatically re-established.
4. **256 Bit Advanced Encryption Standard (AES).** The Dominion KX II now supports 256 bit AES encryption for SSL connections. This option can be enabled on the “Security Settings” page. Please note that your browser must support 256 AES encryption and not all browser versions do.
5. Additional European keyboards: Italian and Slovenian.
6. Additional minor improvements and fixes.
7. The KX II User Guide and the Raritan Client Guide have been updated. The Release 2.0.20/2.0.21 version of the User Guide is available from the “Help – User Guide” link in the left panel of the KX II web based user interface.

Consult the Dominion KX II Documentation for more information on the KX II features.

Important Notes and Information:

1. Both power supplies are monitored by default. If only one power input is plugged in, then the front panel LED will light red. Configure it for a single power input using the “Power Supply Setup” function on the “Device Settings” menu.
2. For reliable network communication, configure the KX II and LAN Switch to the same LAN Interface Speed and Duplex. For example, configure both the KX II and LAN Switch to Autodetect (recommended) or set both to a fixed speed/duplex such as 100Mbps/Full.
3. There are several prerequisites for Virtual Media: (1) a D2CIM-VUSB or D2CIM-DVUSB must be connected to the server’s USB port, (2) the operating system (OS) or BIOS must support USB connected devices, and (3) the user must have the required administrator permissions on the client, target and the KX II.
4. Not all servers and operating systems support all virtual media options. In general, modern Windows® OS’ do, including Windows Vista™, 2003 Server, XP and Windows 2000 with the latest patches. Target Servers running Linux and Mac OS’, when accessed from a Windows client, will generally mount CD/DVD drives, USB drives and ISO images. Mac®, Linux and Solaris™ clients can only mount ISO images from a local or remote drive. Other UNIX based OS’ generally do not support virtual media.
5. In general, due to varying BIOS implementations of the USB 2.0 standard regarding virtual media, it is not always possible to boot from a virtual media drive at the BIOS level. **The D2CIM-DVUSB CIM is recommended for customers who plan to use virtual media at the OS and BIOS levels.** Use D2CIM-VUSB for virtual media at the OS level and for the BIOS level when supported by the particular BIOS or with an applicable BIOS USB profile. Please note that some BIOS do not support USB devices as boot devices and hence virtual media is not possible.
6. For Windows OS’, do not use the “Safely Remove Hardware” function in the system tray on the target server to disconnect a mounted virtual media drive. Disconnect using the “Disconnect” command on the virtual media menu.
7. Please note that the user at the local port can not change the active USB profile. If required, change from one of the remote clients.
8. Absolute Mouse Synchronization requires support from the OS. Windows and Mac OS’ generally support it. Linux and Unix based OS’ (AIX, HP-UX, Solaris) generally do not.
9. When a panel is opened in the Virtual KVM Client (VKC), the client, as well as related browser tabs and windows, will wait for user input until the panel is closed.
10. Be careful of the web browser refresh or reload function/button, which has the side-effect of closing VKC sessions.
11. D2CIM-PWR must be separately ordered. It is not included with the powerstrip.

12. To use AES encryption, first ensure that your web browser supports this stronger encryption – not all browsers do. For AES, set the “Encryption mode” on the “Security Settings” panel to “AES,” not “Auto” which generally results in RC4 encryption. 128 bit and 256 bit AES encryption are supported.
13. For the best possible video quality, adhere to these distance guidelines from the CIM to the KX II:

| Server Video Resolution | Distance |
|-------------------------|----------|
| 1024x768 (and below) | 150 feet |
| 1280x1024 | 100 feet |
| 1600x1200 | 50 feet |

14. To further minimize network bandwidth for lower bandwidth situations, set the “Noise Filter” on the “Video Settings” panel in the remote clients above the default value of 2 - values of 3 or 4 are recommended.
15. In general, most administrative functions are available on the remote and local consoles. But some functions, by their nature, are only available on one console. For example, “Factory Reset” and the “Local Port Settings” are available on the local port. Firmware Update, Backup and Restore, and the KX Diagnostics are available from the remote client.
16. IPv6 usage notes. IPv4 networking is the factory default. Enable IPv6 on the Network Settings panel for IPv6/IPv4 “dual stack” operation. IPv6 is available in standalone configuration. Access of remote ISO images in a virtual media connection via IPv6 is not supported due to third party software limitations. IPv6 with Apple MAC OS Leopard is not supported.
17. External modem usage. The Standalone Multi-Platform Client, available in the firmware section of raritan.com, must be used for modem connections. In order to enhance performance, modem connections are established with 4 bit grey and 33 KBPS connection parameters. Firmware upgrade over a modem connection is not supported.

Recommended modems include: US Robotics (USR) 56K 5686E, Sportster 56K and Courier 56K; and ZOOM v90 & v92. Modem sessions not currently supported from Apple MAC and Linux clients. For best results, when connecting remotely via an external modem to a KX II connected to a USR modem, the remote modem should be the same type of USR modem. Consult the User Guide for more information.
18. When changing the various user management, device and security settings, please remember to click the “OK” button at the end of the page to save and activate your changes.
19. A subset of the KX II administration functions is available from CC-SG. To access all functions, use the Pause Management feature in CC-SG to remove the

KX II device temporarily from CC-SG management. Then you can access the additional administrative functions via the KX II local or remote consoles.

20. SUN Backgrounds: Some of the SUN background screens may not center precisely on certain SUN servers, i.e. those backgrounds with dark borders (e.g. NoBackDrop). Use another background or place a light colored icon in the upper left hand corner.
21. An apostrophe (') is no longer an allowed character for port (CIM) names.
22. For Mac OS, the Safari™ browser is certified for use in KX Release 2.0.21. Absolute Mouse Synchronization is required for Mac servers. The “Mac OS-X (10.4.9 and later)” USB profile should be enabled for the specific port on the Port Configurations page.

Release Package Details:

The Release 2.0.21 package for the Dominion KX series has the following components:

“DominionKXIIReleaseNotes2.0.21.pdf” – this file

“DominionKXIIFirmware2.0.21.rfp” – Raritan firmware distribution file for this upgrade

Firmware Upgrade Prerequisites:

If you have any questions, or do not meet the pre-requisites listed below, please STOP and contact Raritan Technical Support for further instructions. Please read the entire instructions (this document) before proceeding.

General Upgrade Instructions (standalone upgrade from the browser based user interface):

1. **Note: for best results, the KX II device should be re-booted before the firmware upgrade is applied.** This will ensure no users are logged in or sessions active.
2. The user upgrading the KX II device must be a member of the default Admin Group to have sufficient administrator-level privileges to update the Dominion KX II unit.
3. Twenty minutes or more are required for the complete update procedure. The update and subsequent reboot time will vary according to the number and type of CIMs connected to the KX II.

4. The system provides an estimated time for the firmware upgrade to complete. It may possibly take more time to do the update based on networking conditions and other factors.
5. We recommend backing up the KX II using the “Backup / Restore” function on the Maintenance menu on the Remote Console before starting the upgrade..
6. Close any remote or local KX II sessions to all devices connected to the Dominion KX II unit – servers, power strips, and serial devices.
7. If doing the firmware upgrade over a VPN, ensure that the connection is stable and that no inactivity timeouts have been set.
8. The detailed, step-by-step instructions to perform the upgrade are given below.
9. The software upgrades are written to flash memory, and this takes time to complete. Please do not power-off the unit, or disconnect the Ethernet connection while the upgrade is going on.
10. The KX II firmware can be upgraded by CC-SG; consult the CC-SG documentation for more information.
11. Should you experience any difficulties with the upgrade, call Raritan Technical Support for assistance.

Step-by-Step Upgrade Instructions:

1. **Note: for best results, the KX II device should be re-booted before the firmware upgrade is applied.** This will ensure no users are logged in or sessions active.
2. In Internet Explorer (or other supported web browser), type in the IP Address of your Dominion KX II unit, and wait as the web based interface loads.
3. Logon as an administrative user “admin” (or other member of the Admin Group).
4. Click on the “Firmware Upgrade” command on the “Maintenance” menu.
5. Browse to locate the .rfp file containing the update: “DominionKXIIFirmware2.0.21.rfp”. Click the “Upload” button.

The current and future versions will be displayed. Click the “Upgrade” button to start the upgrade.

6. The firmware upgrade will then proceed:
 - a. You cannot operate the KX II during the upgrade.
 - b. The upgrade panel will inform you of the progress of the upgrade. This upgrade step will take up to 15 minutes or more.
DO NOT REBOOT OR POWER CYCLE THE KX II DURING THE UPGRADE OR THE REBOOT!
 - c. You will see a completion message when the upgrade completes.
7. The device will now reboot and reset, which may take up to 5 minutes.
8. Close your web browser session and log back in after the reboot completes.
9. The KX II will beep when the upgrade is complete and the login screen will appear on the local console port.
10. Log back in via web browser or the local port. Use the “Upgrade Report” on the “Maintenance” menu to check the upgrade status.

11. Any KX II CIMs (D2CIM-VUSB, D2CIM-DVUSB and D2CIM-PWR) connected to the KX II at the time of the upgrade will be upgraded also.

12. To support the USB Profile feature, the D2CIM-VUSB must be updated to the Release 2.0.21 CIM firmware. Use the “CIM Firmware Upgrade” menu on the “Maintenance” menu to check the CIM version(s) and to upgrade any additional D2CIM-VUSB connected to the KX II after the upgrade.

13. Due to improvements made in subsequent releases, you cannot downgrade from Release 2.0.21 to Release 2.0.

15. If you have any questions or issues during the update, call Raritan Technical Support for assistance.

DKX 2.0.21 Release Notes, Revision 1.3

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