

PureApplication System
Version 2.0.0.1
(Last updated: May 2015)

Interim fix upgrade guide



Note

Safety information and Notices

Before using this information and the product it supports, read the information in the Safety and precautions section and the Notices section.

Last updated: May 2015

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Contents

1 Safety and precautions 1-1

Safety notices	1-2
Electrostatic Discharge (ESD) standards	1-8
Rack stabilization and safety	1-9
Safety Notices - Reference document	1-10

2 Installing system maintenance 2-1

Planning for maintenance installation	2-2
Downloading system maintenance	2-3
Preparing to install system maintenance	2-4

Uploading system maintenance	2-5
Installing system maintenance	2-6
Contacting IBM Support	2-8

Notices A-1

Programming interface information	A-4
Trademarks	A-5
Terms and conditions for product documentation	A-6
IBM Online Privacy Statement	A-7

1 Safety and precautions

Safety notices

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

DANGER: When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the IBM provided power cord. Do not use the IBM provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices

To Connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005)

World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, a safety information booklet is included in the publications package shipped with the product. The booklet contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information in the booklet. You should also refer to the booklet any time you do not clearly understand any safety information in the U.S. English publications.

German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

Laser safety information

IBM® servers can use I/O cards or features that are fiber-optic based and that use lasers or LEDs.

Laser compliance

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION:

This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

(C026)

CAUTION:

Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. (C027)

CAUTION:

This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

CAUTION:

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information: laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

DANGER

Observe the following precautions when working on or around your IT rack system:

- Heavy equipment--personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.



- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

CAUTION

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

(R001)

CAUTION:

Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building:

- Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:
 - Remove all devices in the 32U position and above.
 - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.
 - Ensure that there are no empty U-levels between devices installed in the rack cabinet below the 32U level.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- Inspect the route that you plan to take to eliminate potential hazards.
- Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.
- Verify that all door openings are at least 760 x 230 mm (30 x 80 in.).
- Ensure that all devices, shelves, drawers, doors, and cables are secure.
- Ensure that the four leveling pads are raised to their highest position.
- Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.
- Do not use a ramp inclined at more than 10 degrees.
- When the rack cabinet is in the new location, complete the following steps:
 - Lower the four leveling pads.
 - Install stabilizer brackets on the rack cabinet.
 - If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.
- If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.

(R002)

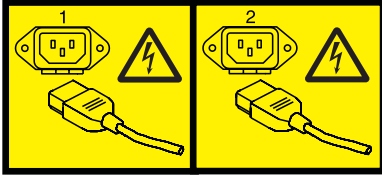
Warning labels

The following labels are attached to components where hazardous voltage or energy levels are present. Do not open any cover or barrier that contains these labels.

(L001)



(L003)



or



CAUTION:

The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

Do Not:

- ___ Throw or immerse into water
- ___ Heat to more than 100°C (212°F)
- ___ Repair or disassemble

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE

The following comments apply to IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment must not be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use

as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metalically to OSP wiring.

Note: All Ethernet cables must be shielded and grounded at both ends.

The AC-powered system does not require the use of an external surge protection device (SPD).

The DC-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal must not be connected to the chassis or frame ground.

Electrostatic Discharge (ESD) standards

Follow standard electrostatic discharge (ESD) procedures when working on any part of system. Use an ESD wrist strap or ensure that you touch the frame of the system before handling any component of this system.

Rack stabilization and safety

Ensure that any equipment rack where you will be working is properly stabilized, at the appropriate point in the procedure.

DANGER

Observe the following precautions when working on or around your IT rack system:

- Heavy equipment—personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.



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CAUTION

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

(R001)

Safety Notices - Reference document

The G229-9054 -- Systems Safety Notices document at the following link contains safety notices and text translations from IBM Systems documentation. The safety notices include danger and caution notices. Anyone who plans, installs, operates, or services the system must be familiar with and understand the safety notices. Read the related safety information before beginning work.

http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/index.jsp?topic=/p7hdx/abstract_safety_notices_guide.htm

2 Installing system maintenance

Planning for maintenance installation

Before you install maintenance to the system, perform these checks to ensure the health of the system and prepare for the installation. These steps should be performed **at least a week before** the planned upgrade to allow time to resolve any issues that are found.

Perform a system health check

You must log in with a user that is assigned Hardware administration (Full permission) and hardware resource level administration permission to complete these steps.

Follow the steps in this technote to perform a Lite Health Check and Full Health Check on the system: [Health Checks and Introduction to Troubleshooting on a PureApplication System](#).

Ensure that there are no critical problems with the hardware on the system. Make sure that there are no failed disk drives, no failed devices, and no amber LEDs.

Troubleshooting issues that are discovered during a system health check

For more information about troubleshooting issues that are discovered during a system health check, see the "Introduction to Troubleshooting" section of the technote that is referenced in the preceding section.

Obtain the necessary approvals

- As part of the install process, you will disable Service and Support Manager to prevent PMRs from being automatically opened during the system maintenance process. Obtain any necessary approvals to disable Service and Support Manager before you begin the upgrade.
- Ensure that all interested parties are aware of the planned maintenance installation, and obtain any approvals that are necessary for the change.

Downloading system maintenance

System maintenance contains updates and fixes for various hardware and software components in the system.

Before you begin

Avoid trouble: Be sure that you download the correct files for the version of your system. To verify your system's version, click the question mark in the top right corner, and then click **About**.

About this task

The exact details of this procedure depend on your network environment and how you transfer the binary files from the download site to the system.

Procedure

1. Find a network share or a server that has adequate space and an HTTP or SCP server. If no network share is available, download the files locally to your workstation and SCP the files to the server at the data center.
2. Download the system maintenance files from IBM Fix Central. For a detailed list of system maintenance files for each product version, see: System maintenance and integrated components in PureApplication System.

Avoid trouble: Be sure that you download the correct files for the version of your system. See the "Before you begin" section for steps to verify your system's version.

What to do next

Prepare the system for the installation of the system maintenance IFP file.

Preparing to install system maintenance

Before you install system maintenance, disable Service and Support Manager, obtain the IP addresses of the PureSystems® Managers, and check the status of system components.

Before you begin

You must be assigned Hardware administration (Full permission) and hardware resource level administration permission.

Procedure

1. Log in to the system with a user account that has Hardware administration (Full permission) and hardware resource level administration permission.
2. Disable Service and Support Manager to prevent PMRs from being automatically opened during the system maintenance process. Select the **Do not collect troubleshooting information and do not open a service request.** option from the **Service and Support Manager** section on the **System > Settings** page. For more information, see *Enabling and disabling Service and Support Manager*.
3. Identify the leader PureSystems Manager and collect the IP address of each management node.
 - a. Log in to the console, and click **Hardware > Management Nodes**.
 - b. Identify the leader PureSystems Manager. Look for the management node with the green icon.
 - c. Record the IP addresses of the leader and non-leader PureSystems Managers. Click the name of each management node to open the details page.
4. Follow the steps in this technote to perform a Lite Health Check and Full Health Check on the system: *Health Checks and Introduction to Troubleshooting on a PureApplication® System*.
Resolve any major issues before you proceed.
5. Ask the Workload resources administrator to log in to the console and check the status of the virtual images, virtual patterns, and deployed instances. Ensure that no deployment errors or blank pages are displayed.
 - Use the **Catalog** menu to check the status of your virtual images and verify the content to confirm that the expected images are there.
 - Use the **Patterns** menu to check the status of your virtual patterns and virtual machines and verify the content to confirm that the expected virtual patterns and virtual machines are there.

What to do next

Upload the system maintenance IFP file.

Uploading system maintenance

Upload the system maintenance IFP file to begin installing updates on the system.

Before you begin

Complete the steps described in “Preparing to install system maintenance” on page 2-4. You must be assigned Hardware administration (Full permission) and hardware resource level administration permission.

Procedure

1. Connect to the console of the floating IP address and domain name of the system.
2. Click **System > System Maintenance** to access the System Maintenance page in the console.
3. Delete any existing IFP file listed on the page. Verify the system updates delete jobs completed successfully by viewing the Job Queue page.
4. Click **Add Fix Pack**, and choose one of the following options to access the connection information for the system maintenance IFP file:
 - **HTTP/HTTPS**
 - URL** The URL to the computer that hosts the system maintenance IFP file. If you are using HTTPS, specify the HTTP address that was used when you downloaded the file. (Required)
 - User name**
The user ID that is used for authentication with the host computer. (Optional)
 - Password**
The user password that is used for authentication with the host computer. (Optional)
 - **SCP**
 - IP address**
The IP address of the host computer. (Required)
 - Port** The port used for SCP. The default is 22. (Required)
 - User name**
The user ID that is used for authentication with the SCP. (Optional)
 - Password**
The user password that is used for authentication with the SCP. (Optional)
 - Path** The path to the system maintenance IFP file. (Required)
5. Click **OK** and verify that the upload process starts. You can upload and apply the same version of a file more than once, but you must first delete the existing file. Wait for the delete job to complete before you attempt to upload the file again. After the file is uploaded, the following message is displayed on the System Maintenance page:

The selected fix pack is available for updates.

What to do next

Install the system maintenance IFP file.

Installing system maintenance

Install system maintenance to ensure the PureSystems Managers are updated with the latest fixes. Instances created on the system remain in their original state and available without requiring user interaction during the installation process.

Before you begin

You must be assigned Hardware administration (Full permission) and hardware resource level administration permission.

Upload the system maintenance IFP file. See “Uploading system maintenance” on page 2-5.

Put the system in maintenance mode to prevent operations from continuing to run even if the system maintenance process fails. To put the system in maintenance mode:

1. Click **System > Settings**.
2. Expand **Maintenance Mode**.
3. Fill in a start and end time.
4. Click **Submit**.

About this task

When you install an interim fix, updates are automatically applied to the PureSystems Manager.

Procedure

1. Click **System > System Maintenance** to access the System Maintenance page in the console.
2. Confirm the system is ready for the updates to be installed. Click **Check**. After the operation runs, you can click the **Detailed status** icon to view more information about the results. You can also click the **Download logs** icon.
Attention: If the check fails, do not proceed with the update. Contact IBM Support for assistance and provide `ValidateRack.log`. IBM Support must resolve the issue that caused the check to fail before you proceed with the update.
3. Click **Update System**. Updates to the RHEV on the leader PureSystems Manager are installed.
4. During the system outage, monitor the status of the PureSystems Manager update by clicking the **Access the Upgrade Status page** link.
5. After the leader PureSystems Manager is updated, click the **console** link to return to the console.

Results

After the automated updates are installed, a system diagnostics task automatically runs to verify the system is updated. You can view the details in the job queue by looking at the job named "Post-SGEN System Diagnostics Full Verification" (with type VGENTask).

If the job is successful, the diagnostics task passed. If the job failed, download the log from the job queue, contact IBM Support, and provide the log file.

If the job is not displayed in the job queue, it might have been deleted already. The job is only deleted if it successfully completed.

What to do next

- Follow the steps in this technote to perform a Lite Health Check and Full Health Check on the system: [Health Checks and Introduction to Troubleshooting on a PureApplication System](#).

- If you disabled the Service and Support Manager, enable Service and Support Manager from the **System > Settings** page. For more information, see [Enabling and disabling Service and Support Manager](#).

Contacting IBM Support

If the update fails, contact IBM Support for further assistance.

Gather the necessary information

Follow the steps in this IBM Support blog entry: [Save time reporting problems to IBM using our "MustGather" documents to gather the necessary information.](#)

Be sure that you use the templates that are described in the [MustGather: Organizing your problem information when reporting PureApplication System problems technote](#) that is referenced by the IBM Support blog entry.

For more information about contacting IBM Support, see this technote: [Contacting IBM PureApplication System, PureApplication Software, and PureApplication Service Technical Support.](#)

Additional resources

- [Contacting IBM PureApplication System, PureApplication Software, and PureApplication Service Technical Support](#)
- [PureApplication System Customer Support Plan](#)
- [Enhanced Customer Data Repository \(ECuRep\)](#)
- [Exchanging information with IBM PureApplication System and PureApplication Service Technical Support for problem determination](#)
- [MustGather: Read first for PureApplication System](#)
- [MustGather: Organizing your problem information when reporting PureApplication System problems](#)

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