BigFix Patch

# PowerVM VIOS - User's Guide

# Special notice

Before using this information and the product it supports, read the information in Notices *(on page xxix)*.

# Edition notice

This edition applies to BigFix version 11 and to all subsequent releases and modifications until otherwise indicated in new editions.

# Contents

# Chapter 1. Overview

BigFix Patch for VIOS provides unified, real-time visibility, and enforcement to deploy and manage patches to all endpoints from a single console. BigFix Patch keeps your PowerVM VIOS clients current with the latest packages, Fix Packs, and fixes.

The BigFix Patch solution, which includes deploying a multi-purpose, lightweight agent to all endpoint devices, supports a wide variety of device types ranging from workstations and servers to mobile and point-of-sale (POS) devices.

## Supported platforms and updates

BigFix supports multiple versions or releases of PowerVM VIOS and updates that contain fixes for defects or software enhancements.

BigFix Patch supports the latest maintenance or Fix Packs.

All BigFix PowerVM VIOS related contents are available on the **Patches for VIOS** site. It contains Fixlets for Fix Packs and Interim Fixes (Security Advisories and High Impact/Highly Pervasive Fixes) for various IBM PowerVM VIOS versions based on the IBM PowerVM VIOS support lifecycle.

For more details, refer to the PowerVM VIOS support lifecycle information at PowerVM VIOS Lifecycle Information. The available Fixlets provide actions to install the upgrade or fix on the endpoints.

The **Patches for VIOS** site also contains content for third-party applications such as OpenSSH, OpenSSL, and IBM Java.

Apart from these types of content, BigFix also provides inventory-only Fixlets, also known as *"Audit Fixlets"* that have been released since the last Fix Packs update. These Audit Fixlets are for the following content:

- Security Advisories
- Critical Fixes
- High Impact/Highly Pervasive Fixes
- Program Temporary Fixes (PTFs)

In addition, the **Patches for VIOS** site contains tasks and analyses that you can use to perform common system administration tasks such as comparing the patch level of a computer with the most currently available fixes. You can view your results in the BigFix console after you activate all analyses.

**PeerNest feature on PowerVM VIOS clients**

Starting from BigFix Platform Version 11.0.4, if you are using the PeerNest feature on PowerVM VIOS clients, ensure that you increase the disk storage space on non-passive PeerNest peers. For more information about this feature, see Peer to peer mode.

# Chapter 2. Using the download plug-in

The download plug-ins, AIX Plug-in, and AIX Plug-in R2 are executable programs that download relevant patches directly from the patch vendor. Fixlets use an internal protocol to communicate with the download plug-in to download files. These Fixlets are based on updates made by the vendor.

For the Fixlet to be able to use the protocol, the related download plug-in must be registered on the BigFix server. Use the Manage Download Plug-ins dashboard to register the appropriate download plug-in.

**Note:** Download plug-ins support basic authentication only.

**Table 1. Download Plug-ins for AIX Patching**

| Download Plug-in Name | Applicable Sites | Content Support |
|---|---|---|
| AIX Plug-in | Patches for VIOS | Fix Packs |
| AIX Plug-in R2 | Patches for VIOS | Third-party applications (OpenSSH and OpenSSL) |

**Note:** The following URLs should be included in the proxy whitelist to download third-party packages using AIX Plug-in R2:

- https://www.ibm.com
- https://www-01.ibm.com
- https://mrs-ux.mrs-prod-7d4bdc08e7ddc90fa89b373d95c240eb-0000.us-south.containers.appdomain.cloud
- https://mrs-sd-prod-api.c8f8f055.public.multi-containers.ibm.com/*
- https://softwaredownloads-prod.mrs-prod-7d4bdc08e7ddc90fa89b373d95c240eb-0000.us-south.containers.appdomain.cloud
- https://sd-prod-api.c8f8f055.public.multi-containers.ibm.com/*
- https://sd-prod-api.06f18550.public.multi-containers.ibm.com/initiateDownload

The AIX Plug-in utilizes the Electronic Customer Care (ECC) service to retrieve AIX updates. ECC replaces the fixget tool to provide a centralized access point to access code updates for IBM systems. Using ECC instead of fixget has a significant impact on the supported protocols utilized for fix server communication and to download updates.

The BigFix caching mechanism is utilized to download and cache filesets in the BigFix server, allowing them to be reused for later deployment. This approach tremendously saves time from having to download the same set of filesets every time an action is taken against a Fixlet.

**Note:** You are advised to register the download plug-in services only on the BigFix server and not on the BigFix® relay computers.

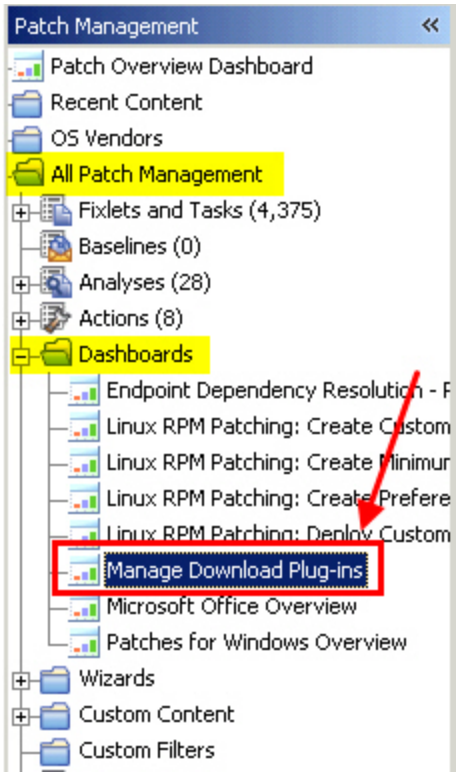
## Manage Download Plug-ins dashboard overview

Use the Manage Download Plug-ins dashboard to oversee and manage download plug-ins in your deployment.

You can use the Manage Download Plug-ins dashboard to register, unregister, configure, and upgrade the download plug-ins for different patch vendors.

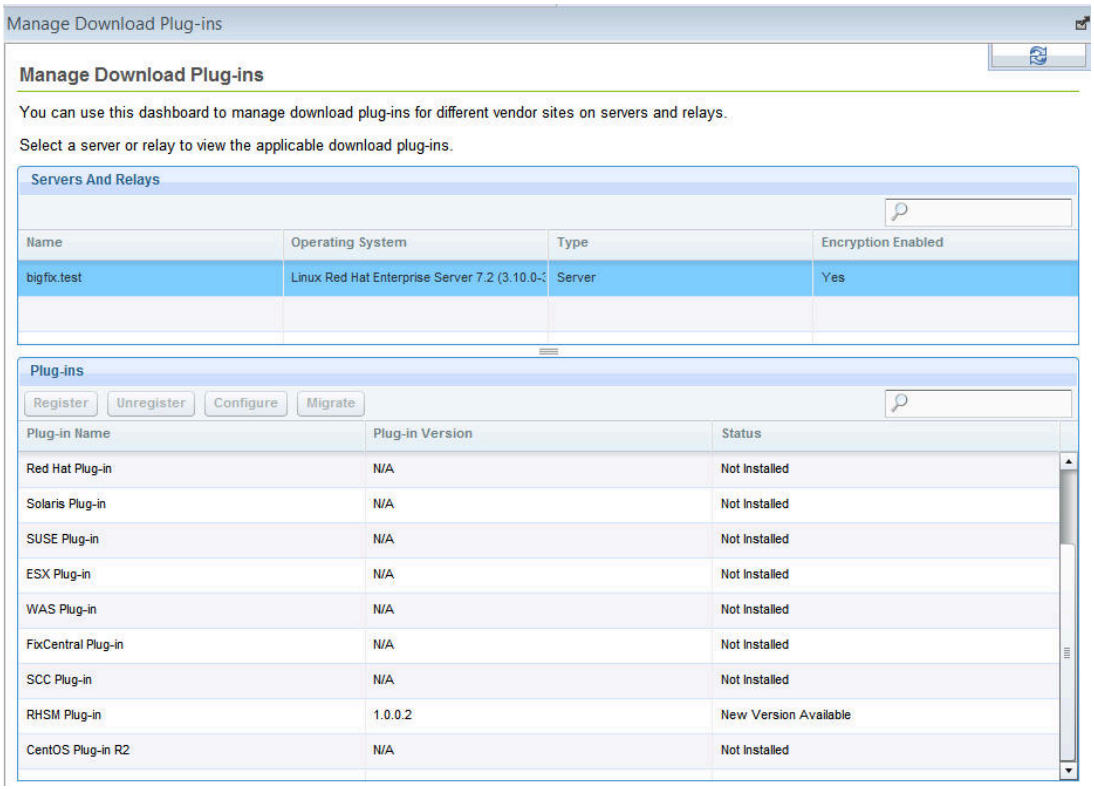
You must subscribe to the Patching Support site to gain access to this dashboard. To view the Manage Download Plug-ins dashboard, go to **Patch Management domain > All Patch Management > Dashboards > Manage Download Plug-ins**.

Figure 1. Patch Management




The dashboard displays all the servers and windows-only relays in your deployment. Select a server or relay to view all the plug-ins for that computer. The dashboard shows you also the version and status for each plug-in in one consolidated view.

Figure 2. Manage Download Plug-ins dashboard




A plug-in can be in one of the following states:

- Not Installed
- New Version Available
- Up-To-Date
- Not Supported

The dashboard has a live keyword search capability. You can search based on the naming convention of the servers, relays, and plug-ins.

**Note:** If you install the download plug-in on BigFix relays, you must also install it on the BigFix server to avoid download issues.

# Registering the AIX download plug-in for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to register the download plug-in for PowerVM VIOS.

You must complete the following tasks:

- Subscribe to the **Patching Support** site to gain access to the Manage Download Plug-ins dashboard.
- Activate the **Encryption Analysis for Clients** analysis, which is available from the **BES Support** site.

- Activate the **Download Plug-in Versions** analysis, which is available from the **Patching Support** site.
- If you want to encrypt endpoints, deploy the **Enable Encryption for Clients** Fixlet, which is available from the **BES Support** site.

When you register the download plug-in on a computer without the plug-in, the plug-in is automatically installed and the configuration file is created.

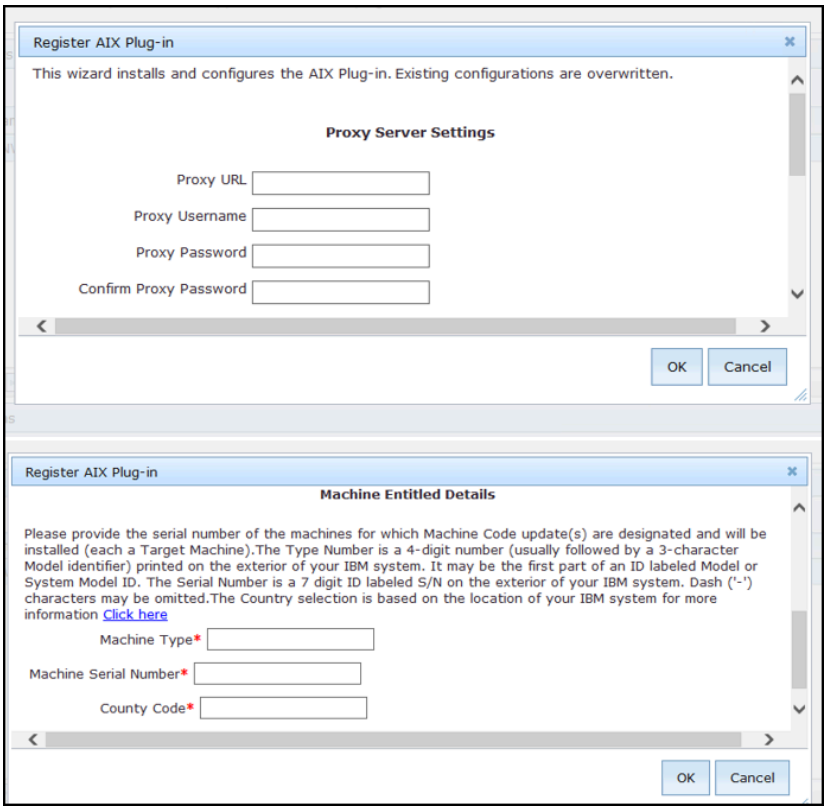
If a download plug-in is already installed on the computer, the configuration file is overwritten.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be registered.

   **Important:** You must always register the download plug-in on the BigFix server.

3. From the Plug-ins table, select **AIX Plug-in**.
4. Click **Register**.
   The Register AIX Plug-in wizard displays.

   Figure 3. Register AIX download plug-in wizard




5. Enter the proxy parameters and the machine entitled details if the downloads must go through a proxy server.

**Note:** Only basic authentication is supported.

**Proxy URL**

The URL of your proxy server. It must be a well-formed URL, which contains a protocol and a host name. The URL is usually the IP address or DNS name of your proxy server and its port, which is separated by a colon. For example: `http://192.168.100.10:8080`.

**Proxy Username**

Your proxy user name if your proxy server requires authentication. It is usually in the form of `domain\username`.

**Proxy Password**

Your proxy password if your proxy server requires authentication.

**Confirm Proxy Password**

Your proxy password for confirmation.

**Required Parameters:**

**Country Code**

The Country code selection is based on the location of your IBM system.

**Machine Serial Number**

The Serial number is a 7-digit ID labeled "S/N" on the exterior of your IBM system. Dash ("-") characters may be omitted.

**Machine Type**

The Type number is a 4-digit number (usually followed by a 3-character Model identifier) printed on the exterior of your IBM system. It may be the first part of an ID labeled "Model" or "System Model" ID.

6. Click **OK**.
   The Take Action dialog displays.
7. Select the target computer.
8. Click **OK**.

You successfully registered the download plug-in for PowerVM VIOS.

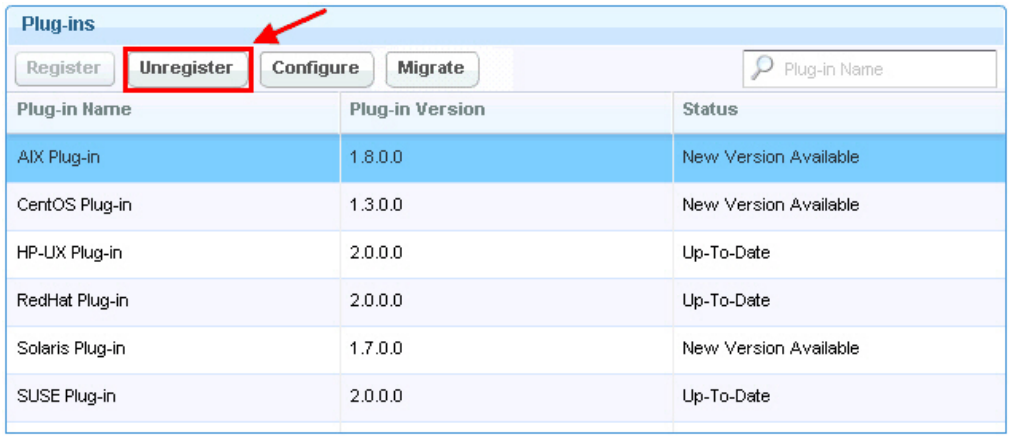
# Unregistering the AIX download plug-in for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to unregister the download plug-in for PowerVM VIOS.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be unregistered.

3. From the Plug-ins table, select **AIX Plug-in**.
4. Click **Unregister**.

Figure 4. Unregister the AIX download plug-in




   The Take Action dialog displays.
5. Select the target computer.
6. Click **OK**.

You successfully unregistered the download plug-in for PowerVM VIOS.

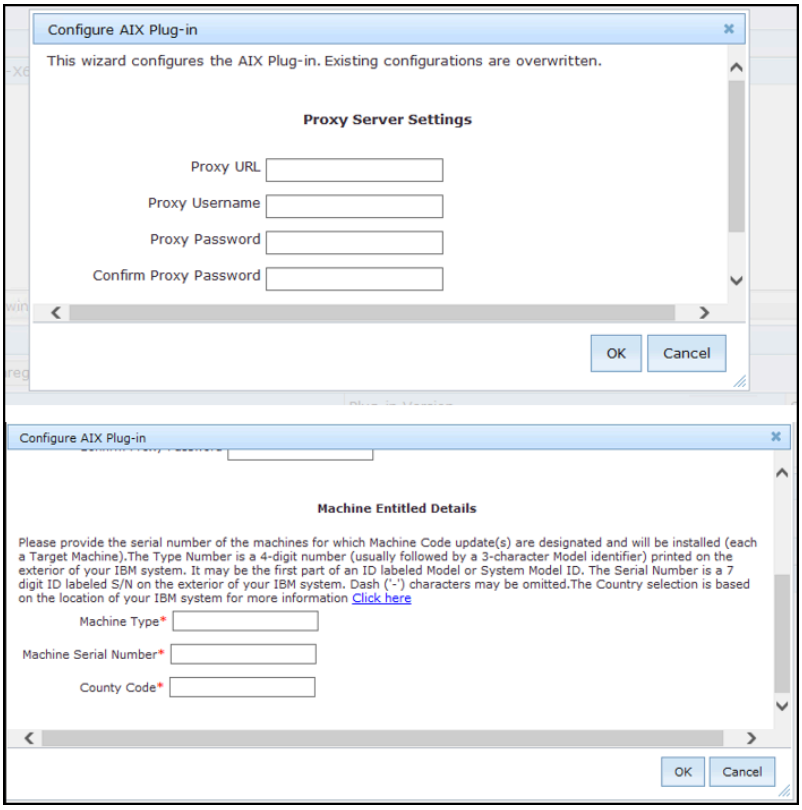
## Configuring the AIX download plug-in for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to configure the download plug-in for PowerVM VIOS.

You might want to take note of your existing configuration for the download plug-in. Existing configurations are overwritten when you configure the download plug-in.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be configured.
3. From the Plug-ins table, select **AIX Plug-in**.
4. Click **Configure**.
   The Configure AIX Plug-in wizard displays.

Figure 5. Configure AIX download plug-in wizard




5. Enter the proxy parameters and the machine entitled details if the downloads must go through a proxy server.

**Proxy URL**

The URL of your proxy server. It must be a well-formed URL, which contains a protocol and a host name. The URL is usually the IP address or DNS name of your proxy server and its port, which is separated by a colon. For example: `http://192.168.100.10:8080`.

**Proxy Username**

Your proxy user name if your proxy server requires authentication. It is usually in the form of `domain\username`.

**Proxy Password**

Your proxy password if your proxy server requires authentication.

**Confirm Proxy Password**

Your proxy password for confirmation.

**Required Parameters:**

**Country Code**

The Country code selection is based on the location of your IBM system.

**Machine Serial Number**

The Serial number is a 7 digit ID labeled "S/N" on the exterior of your IBM system. Dash ("-") characters may be omitted.

**Machine Type**

The Type number is a 4-digit number (usually followed by a 3-character Model identifier) printed on the exterior of your IBM system. It may be the first part of an ID labeled "Model" or "System Model" ID.

6. Click **OK**.
   The Take Action dialog displays.
7. Select the target computer.
8. Click **OK**.

You successfully configured the download plug-in for PowerVM VIOS.

# Upgrading the AIX download plug-in for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to upgrade the download plug-in for PowerVM VIOS.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be upgraded.
3. From the Plug-ins table, select **AIX Plug-in**.
4. Click **Upgrade**.
   The Take Action dialog displays.
5. Select the target computer.
6. Click **OK**.

**Note:** It is mandatory to reconfigure the Download Plug-ins.

**Note:** The latest versions of Download Plug-ins are enhanced to strengthen the security of storing Proxy Password and Vendor Password.

You now have the latest version of the download plug-in for PowerVM VIOS installed.

# Registering the AIX Download Plug-in R2 for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to register the PowerVM VIOS Download Plug-in R2 to install patches for third-party applications such as NTP, OpenSSH, and OpenSSL.

You must complete the following tasks:

- Link your IBM ID to an IBM Customer Number (ICN) that is assigned to a valid contract. You can link multiple ICNs to your IBM ID. For linking instructions, see the steps that described in the announcement at IBM Support Account Setup Instructions for New Clients.

  **Note:** To determine the ICNs associated with your current agreements with IBM, contact your IBM Business Partner or IBM Sales Representative. If you do not have an existing IBM ID or if you require further assistance, see the IBM Support Portal.

- Subscribe to the **Patching Support** site to gain access to the Manage Download Plug-ins dashboard.
- Activate the **Encryption Analysis for Clients** analysis, which is available from the **BES Support** site.
- Activate the **Download Plug-in Versions** analysis, which is available from the **Patching Support** site.
- If you want to encrypt endpoints, deploy the **Enable Encryption for Clients** Fixlet, which is available from the **BES Support** site.

When you register the download plug-in on a computer without the plug-in, the plug-in is automatically installed and the configuration file is created.

If a download plug-in is already installed on the computer, the configuration file is overwritten.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be registered.

   **Important:** You must always register the download plug-in on the BigFix server.

3. From the Plug-ins table, select **AIX Plug-in R2**.
4. Click **Register**.
   The Register AIX Plug-in wizard displays.
5. Enter your IBM ID and password to download the available updates that you are entitled under an applicable warranty or support agreement.
6. Enter the proxy parameters if the downloads must go through a proxy server.

   **Note:** Only basic authentication is supported.

   **Proxy URL**

   The URL of your proxy server. It must be a well-formed URL, which contains a protocol and a host name. The URL is usually the IP address or DNS name of your proxy server and its port, which is separated by a colon. For example: `http://192.168.100.10:8080`.

   **Proxy Username**

   Your proxy user name if your proxy server requires authentication. It is usually in the form of `domain\username`.

**Proxy Password**

Your proxy password if your proxy server requires authentication.

**Confirm Proxy Password**

Your proxy password for confirmation.

7. Click **OK**.
   The Take Action dialog displays.
8. Select the target computer.
9. Click **OK**.

You successfully registered the PowerVM VIOS Download Plug-in R2.

# Configuring the AIX Download Plug-in R2 for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to configure the PowerVM VIOS Download Plug-in R2.

You might want to take note of your existing configuration for the download plug-in. Existing configurations are overwritten when you configure the download plug-in.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be configured.
3. From the Plug-ins table, select **AIX Plug-in R2**.
4. Click **Configure**.
   The Configure AIX Plug-in wizard displays.
5. Enter your IBM ID and password to download the available updates that you are entitled under an applicable warranty or support agreement.

   **Note:** Ensure that you linked your IBM ID to an IBM Customer Number (ICN) that is assigned to a valid contract. You can link multiple ICNs to your IBM ID. For linking instructions, see the steps that are described in the announcement at IBM Support Account Setup Instructions for New Clients.

   To determine the ICNs associated with your current agreements with IBM, contact your IBM Business Partner or IBM Sales Representative. If you do not have an existing IBM ID or if you require further assistance, see the IBM Support Portal.

6. Enter the proxy parameters if the downloads must go through a proxy server.

   **Proxy URL**

   The URL of your proxy server. It must be a well-formed URL, which contains a protocol and a host name. The URL is usually the IP address or DNS name of your proxy server and its port, which is separated by a colon. For example: `http://192.168.100.10:8080`.

   **Proxy Username**

Your proxy username if your proxy server requires authentication. It is usually in the form of `domain\username`.

**Proxy Password**

Your proxy password if your proxy server requires authentication.

**Confirm Proxy Password**

Your proxy password for confirmation.

7. Click **OK**.
   The Take Action dialog displays.
8. Select the target computer.
9. Click **OK**.

You successfully configured the PowerVM VIOS Download Plug-in R2.

# Unregistering the AIX Download Plug-in R2 for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to unregister the PowerVM VIOS Download Plug-in R2.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be unregistered.
3. From the Plug-ins table, select **AIX Plug-in R2**.
4. Click **Unregister**.
5. Select the target computer.
6. Click **OK**.

You successfully unregistered the PowerVM VIOS Download Plug-in R2.

# Upgrading the AIX Download Plug-in R2 for PowerVM VIOS

Use the Manage Download Plug-ins dashboard to upgrade the PowerVM VIOS Download Plug-in R2.

1. From the Patch Management domain, click **All Patch Management > Dashboards > Manage Download Plug-ins dashboard**.
2. From the Servers and Relays table, select the server on which the download plug-in is to be upgraded.
3. From the Plug-ins table, select **AIX Plug-in R2**.
4. Click **Upgrade**.
   The Take Action dialog displays.
5. Select the target computer.
6. Click **OK**.

**Note:** It is mandatory to reconfigure the Download Plug-ins.

**Note:** The latest versions of Download Plug-ins are enhanced to strengthen the security of storing Proxy Password and Vendor Password.

You now have the latest version of the PowerVM VIOS Download Plug-in R2 installed.

# Chapter 3. Using the AIX download cacher for PowerVM VIOS

You can use the AIX download cacher for PowerVM VIOS to deploy Fix Packs fixes. The download cacher uses HTTP to download specific fix packs. Ensure that HTTP network traffic is not blocked in your environment.

The AIX download cacher tool is a Python executable that automatically downloads and caches PowerVM VIOS Fix Packs on the Windows BigFix server to facilitate deployment of PowerVM VIOS Fixlets.

**Note:** The AIX download cacher tool only supports basic HTTP authentication proxy.

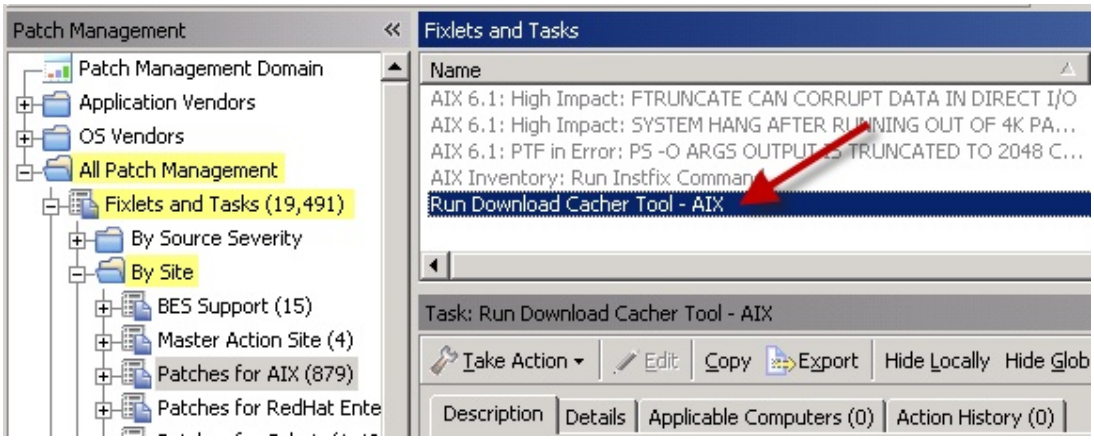
To access the tool from the BigFix console, complete the following steps:

1. Click **All Patch Management > Fixlets and Tasks > By Site > Patches for VIOS > Run Download Cacher Tool - AIX**.

   **Note:** The Windows BigFix server and relays must be subscribed to the Patches for VIOS site for the task to be relevant.

2. Select the appropriate link in the Actions box to start the download.

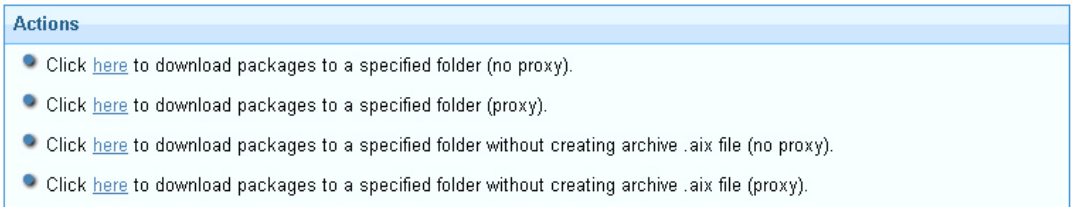
   Figure 6. Run Download Cacher Tool - AIX task




To build a directory of filesets that can be used as an NFS source for a fix pack update, use either of these actions:

- **download packages to a specified folder without creating archive .PowerVM VIOS file (no proxy)**
- **download packages to a specified folder without creating archive .PowerVM VIOS file (proxy)**

Figure 7. Action box of the AIX Download Cacher task




## Running the download cacher tool manually

The **Run Download Cacher Tool - AIX** task might require you to enter your proxy server user name and password. If you deploy the action, any action parameter you enter will be accessible in plain text on all client endpoints. Do not deploy the actions unless this behavior is acceptable in your environment. If this presents a security issue, run the Download Cacher tool manually.

To run the AIX Download Cacher manually, do the following steps:

1. Download the BFArchive tool from the BigFix software website at IBM Support.

   This tool uses HTTP to download specified fix packs, ensure such behavior is acceptable in your environment.

2. Download the AIX Download Cacher Package Tool for PowerVM VIOS from the BigFix software website at IBM Support, and store it in the same directory as the BFArchive tool.

   This package consists of the Python executable, JRE, and the Electronic Customer Care (ECC) client.

3. Use the BFArchive Tool to extract the download cacher package tool. Use the following command:

   ```
   <name of the BFArchive tool executable file> -x <source archive> <target directory>
   ```

   For example:

   ```
   BFArchive-win-x86-9.3.1.0.exe -x AIX DownloadCacher.bfarchive c:/PowerVM VIOS DownloadCacher
   ```

4. To run the AIX Download Cacher tool for PowerVM VIOS, you can create a batch file with the listed parameters. If you run the tool without specifying any parameters, you are prompted to enter the parameters at the command line.

   A sample `.bat` file:

   ```
   AIX DownloadCacher.exe --dir "C:\SavedFiles" --logdir "C:\logs" --repo "C:\MyAIXRepo"
   --proxyserver http://proxy.server.com:8080 --proxyuser myuser --proxypass secretpass
   --fixid VIOS_FP_4.1.0.30
   ```

   Usage:

   ```
   AIX DownloadCacher.exe --dir <directory> --fixid <Fix Pack ID> [optional parameters]
   ```

**Required Parameters:**

**--dir <path to output directory>**

Directory where downloaded files will be saved. This directory is also used for temporary storage of downloaded files before being compressed into a single archived file.

**--fixid <Fix Pack ID>**

PowerVM VIOS Fix Pack ID or Interim Fix APAR ID to be downloaded. For example, PowerVM VIOS_FP_4.1.0.30 or IZ93611.

**Note:** You must specify the operating system level, Fix Packs, and build number in the Fix Pack ID.

**--CountryCode <COUNTRY CODE>**

The Country code selection is based on the location of your IBM system.

**--MachineSerialNumber <MACHINE SERIAL NUMBER >**

The Serial Number is a 7 digit ID labeled "S/N" on the exterior of your IBM system. Dash ("-") characters may be omitted.

**--MachineType <MACHINE TYPE>**

The Type Number is a 4-digit number (usually followed by a 3-character Model identifier) printed on the exterior of your IBM system. It may be the first part of an ID labeled "Model" or "System Model" ID.

**Optional Parameters:**

**--proxyserver <servername:port>**

Name and port of proxy server (for example, `http://myproxy.company.com:8080`).

**--proxyuser <username>**

Proxy username if required by server.

**--proxypass <password>**

Proxy password if required by server.

**--logdir <path to log directory>**

Specify the directory to write the log file to. Defaults to the current working directory.

**--repo <path to local repository of .bff files>**

Specify the location of the local cache to check before attempting to download files from the Internet. Missing files are added to the cache directory if write access is enabled.

**--no-archive**

Skip creation of `PowerVM VIOS` archive file. The output directory will contain the individual filesets.

**--clean**

Remove temporary files after each run. Enabling this option disables the ability to resume failed and incomplete downloads. Default behavior is to remove temporary files only after all files for the fileset have been downloaded and a complete archive has been created.

**--sha1**

Renames the archived `PowerVM VIOS` file to its SHA1 value.

**--version**

Display version information.

**--help**

Displays usage information.

**Examples:**

Download Fix Pack VIOS_FP_4.1.0.30 through a proxy server using a local repository.

```
AIX DownloadCacher --dir "C:\temp" --fixid  VIOS_FP_4.1.0.30
--proxyserver http://proxy.server.com:8080 --proxyuser myuser
--proxypass secretpass --repo "D:\cachefolder"
```

Download Fix Pack VIOS_FP_4.1.0.30, force removal of temp files on failures and rename `.PowerVM VIOS` archive file to its SHA1 value.

```
AIX DownloadCacher --dir "C:\temp" --fixid VIOS_FP_4.1.0.30
```

Download Fix Pack VIOS_FP_4.1.0.30 without compressing filesets into `.PowerVM VIOS` archive file.

```
 AIX DownloadCacher --dir "C:\temp" --fixid VIOS_FP_4.1.0.30
```

**Notes:**

- If you run the tool without specifying any parameters, you are prompted to enter the parameters at the command line.
- The `--sha1` parameter works only with created archive files and is ignored if it used with the `--no-archive` parameter.

# Chapter 4. Using BigFix Patch for VIOS

Use the Fixlets on the Patches for VIOS Fixlet site to apply PowerVM VIOS patches to your deployment.

## Fix pack download configuration

Configure the target PowerVM VIOS systems and the BigFix server to download filesets from the internet.

Before you deploy any updates using the internet download option, register the PowerVM VIOS Download Plug-in from the Manage Download Plug-ins dashboard. See Manage Download Plug-ins dashboard overview.

The download plug-in gathers a list of filesets that are included in the specified fix pack and downloads them one at a time. The download plug-in gathers the fix packs at run time.

**Note:** The download plug-in is not required when you deploy updates through NFS mount.

You can also use the AIX Download Cacher for PowerVM VIOS to download fix packs. To enable the AIX Download Cacher for PowerVM VIOS to download filesets, deploy the **Run Download Cacher Tool - AIX** task. For more information about the download cacher, see Using the AIX download cacher for PowerVM VIOS *(on page 18)*.

Downloading large files from the internet requires large amounts of available disk space on the `/var` partition, where the BES Data directory is located. To accommodate large files from the internet, deploy the following tasks:

**AIX: Set Disk Space - BES Data Folder task (ID #57)**

PowerVM VIOS sets partition sizes to a predetermined minimum that allows the unused disk space to be dynamically provisioned to various partitions as needed.

This task expands the partition that contains the BigFix client data directory to make enough room for a fix pack to be transferred and extracted.

**AIX: Change BES Client Download Limits task (ID #59)**

This task extends the default BigFix client limitation for file transfers of 2 GB to allow large file transfers.

**AIX: Remove File Size Limit for Root User task (ID #60)**

This task removes the default PowerVM VIOS limitation of 1 GB for the allowed file size.

**Note:** These configuration changes are unnecessary if you are installing over an NFS mount.

## Fileset installation states

Fileset installations can be in either an Applied or a Committed state.

The two fileset installation states have the following properties:

**Applied**

Applied installations create backups of the filesets that are being replaced. These backups can be used to revert updates.

All installation actions, either through released content or custom content that is generated by the PowerVM VIOS, are done in the applied state.

**Note:** Reverting Fix Packs updates is not supported by PowerVM VIOS and might have unexpected results.

**Committed**

Committed installations have no backups and cannot be reverted.

Commit applied installations after confirmation to free up the disk space that is used by the installation backups.

The **Commit Applied Filesets** Fixlet can be used to facilitate the process for the committed state.

# Deploying Fix Packs

You can deploy Fix Packs updates through the BigFix released content or the custom content that is generated by the PowerVM VIOS.

Complete the following tasks:

- If you want to deploy fix packs through the internet download option, register the AIX Download Plug-in for PowerVM VIOS. For more information, see Registering the AIX download plug-in for PowerVM VIOS *(on page 8)*.
- Ensure that you have a sufficient amount of disk space on the /var partition to accommodate large files. Use the available tasks to set any size or space limitations. For more information, see Fix pack download configuration *(on page 22)*.

PowerVM VIOS determines the operating system level by comparing the installed filesets to a list of known Authorized Program Analysis Reports (APARs).

Use the NFS method to use a local repository as the source of the filesets for the fix pack to be installed. This method enables faster installations and uses less bandwidth.

- To deploy fix packs through the released content, either through the internet download option or through an NFS mount, complete the following steps:

  1. From the BigFix console, click **All Patch Management > Fixlets and Tasks > By Site > Patches for PowerVM VIOS**.

     A list of Fixlets is displayed.

  2. Select a Fixlet to deploy a Fix Packs update from the list.

3. Fix packs can be deployed by clicking on the 'Deploy Fix Pack' option.
4. Review the text in the **Description** tab.
5. Click the appropriate link in the Actions box to start the deployment.
6. **Optional:** If you decide to deploy the fix packs on NFS mount, you must enter the full path to the NFS repository (for example, "`myServer:/PowerVM VIOS/fileset repo" myServer:/Local/Repo`).

   **Note:** If you used the PowerVM VIOS to download the fix packs, you can copy the exact NFS Path to the location of a fix pack from the **Manage Cached Fix Packs on a Registered PowerVM VIOS NFS Repository** tab.

- To deploy patches through custom content, you must create the Fixlet or a custom action by using the **PowerVM VIOS**.

## Deploying interim fixes

BigFix provides Fixlets for interim fixes that are released through an PowerVM VIOS vulnerability advisory or subscription notification. You can deploy these Fixlets to install interim fixes to endpoints. For customized interim fixes, you can use the PowerVM VIOS to create custom Fixlets for deployment.

Ensure the systems have internet access. Otherwise, the interim fix download will fail.

To install an interim fix through the BigFix released content, complete the following steps:

1. From the BigFix console, click **All Patch Management > Fixlets and Tasks > By Site > Patches for VIOS**.

   A list of Fixlets is displayed.

2. Select a Fixlet to deploy an interim fix installation from the list.
   You can filter the Fixlet and Task list by using any of these categories: *Interim Fix - HIPER* or *Interim Fix - Security Advisory*.

   The Fixlet title for all interim fixes is formatted as follows (in one line):

   ```
   PowerVM VIOS<version number for OS specific ifix>: Interim Fix -
   <HIPER or Security Advisory>: <Vulnerability name>
   (<interim fix file name in .epkg.Z>)
   ```

   For example, AIX VIOS: Interim Fix - Security Advisory: Security Bulletin: Multiple vulnerabilities in libxml2 affect AIX/VIOS (IJ55268m3a.250716.epkg.Z)

3. Review the text in the **Description** tab.
4. Click the appropriate link in the Actions box to start the deployment.

To view the results of the deployment, activate the **PowerVM VIOS Interim Fixes** analysis (ID #43). This analysis displays the installed interim fixes on a per-system basis.

## Uninstalling all interim fixes

Interim fixes lock their target filesets to prevent any changes to the filesets while the interim fix is installed.

- To uninstall all interim fixes by using the **Uninstall All Interim Fixes** Fixlet, complete the following steps:
    1. From the BigFix console, click **Patch Management > OS Vendors > IBM AIX VIOS > Maintenance**.
    2. Click **Uninstall All Interim Fixes** (ID #63).
    3. Deploy the action.
- To uninstall all interim fixes by using the **PowerVM VIOS**, complete the following steps:
    1. From the BigFix console, click **Patch Management > OS Vendors > IBM AIX VIOS > AIX VIOS**.
    2. Click **Uninstall**.
    3. Click **Uninstall all interim fixes**.
    4. Click **Finish**.
    5. Deploy the action.

**Note:** You can use the **PowerVM VIOS** also to remove individual interim fixes.

## Creating Fixlets for firmware updates

You can use the PowerVM VIOS deploy packages for firmware updates, which are also known as microcode updates, on endpoints that are not managed by IBM Hardware Management Console (HMC). These updates can be in either `.rpm` or `.iso` format.

To deploy firmware updates from the PowerVM VIOS, you must first obtain the updates that you want from Fix Central.

**Note:** Currently, BigFix does not provide any tools to help download firmware updates.

**CAUTION:** Do not rename any of the downloaded files. The PowerVM VIOS uses the file name when it attempts to parse the new firmware version information.

Firmware updates are applied to the hardware firmware. The resulting one-time action or Fixlet from this task can be used to deploy firmware updates only on endpoints that are not managed by HMC. If a system is managed by HMC, you must apply the firmware through the management console.

1. From the BigFix console, click **Patch Management > OS Vendors > IBM AIX VIOS > AIX VIOS**.
2. Click **Firmware**.
3. Enter the location of the PowerVM VIOS package that you want to deploy.

4. Select the check box if you want to create a one-time action rather than a reusable Fixlet.
5. After you set the necessary parameters, click **Finish**.

After completion, the generated one-time action or Fixlet displays in the BigFix console. You can use it to deploy the PowerVM VIOS firmware update to the relevant computers.

Activate the **PowerVM VIOS Firmware Level** analysis, which reports the permanent and temporary firmware versions and the system version that it is running on (temporary or permanent).

## Creating Fixlets for PowerVM VIOS fileset updates

You can use the PowerVM VIOS to deploy fileset updates and program temporary fixes (PTFs).

Before you deploy fileset updates, obtain the filesets that you want from the IBM website.

**Note:** The fileset names must be unique and not contain mixed cases. If the files contain the same name with mixed cases, you must rename these files before importing them.

You can access the PowerVM VIOS fixes from the following link: IBM Support Fix Central

For detailed instructions about using the IBM software support website, see the following technote: IBM Support.

To deploy PTFs, you must identify the Fix Packs for which you are downloading the PTF to reduce the size of your download.

PowerVM VIOS Fix Packs updates are developed, tested, and released as fix pack bundles. They are intended to be installed as full bundles rather than as individual filesets.

You can use `.bff` files to create Fixlets for fileset updates or PTFs. Some PowerVM VIOS fixes might have a different format. For example, the fix packs for IBM SDK, Java Technology Edition uses the `.sdk` format. To allow the PowerVM VIOS to use the fix, rename its extension to `.bff` file. For example, rename `Java6.sdk` to `Java6.sdk.6.0.0.495.bff`.

1. From the BigFix console, click **Patch Management > OS Vendors > IBM AIX VIOS > AIX VIOS** .
2. Click **Fileset** to deploy PowerVM VIOS fileset updates.
3. Enter the location of the filesets.
   You can provide this information by using the following options:
   - Download from URL

     **Note:** Ensure that you have a sufficient amount of disk space on the /var partition to accommodate large files. Use the available tasks to set any size or space limitations. For more information, see Fix pack download configuration *(on page 22)*.

   - File (for a single fileset)
   - Folder (for multiple filesets)
   - Network File System (NFS) path

4. Click **Next**.
5. Select the relevant platforms and customize the text fields as necessary.
6. Select the appropriate check box to update only the filesets that are already installed on the endpoint, which are available in the source media.

   The `install_all_updates` command is used to perform the update.

   Filesets that are present on the media source, but are not installed on the endpoint will not be considered for the update except in the following situations:
   - The new filesets are installed as requisites of other filesets.
   - The `/var/adm/ras/bosinst.data` filesets ALL_DEVICES_KERNELS to `yes`.

   **Note:** If the check box is not selected, all the latest filesets that are included in the media source with the `geninstall` command.

7. Select the appropriate check box to remove all the interim fixes that are installed on the endpoint before deploying the fileset updates.
8. Select the appropriate check box to create a one-time action rather than a reusable Fixlet.
9. **Optional:** Select the appropriate check box to create a preview-only action.
   This preview runs the pre-installed verification checks. The results of those checks are available in the **PowerVM VIOS Pre-Install Verification Results** analysis.
10. After you set the necessary parameters, click **Finish**.

After completion, the generated one-time action or Fixlet displays in the BigFix console. You can use it to deploy the PowerVM VIOS update to the relevant computers.

To view detailed information about the results of deploying your PowerVM VIOS fileset update, activate the **PowerVM VIOS Custom Fileset Deployment Results** analysis (ID #22).

Click **All Patch Management > Analyses > By Site > Patches for VIOS > PowerVM VIOS Custom Fileset Deployment Results > Activate**.

## Creating Fixlets for PowerVM VIOS package updates

You can use the PowerVM VIOS to deploy packages for Fix Packs.

Before you deploy package updates, obtain the updates that you want from the IBM website by using the download cacher. For more information, see Using the AIX download cacher for PowerVM VIOS *(on page 18)*.

1. From the BigFix console, click **Patch Management > OS Vendors > IBM AIX VIOS > AIX VIOS**.
2. Click **Package**.
3. Enter the location of the PowerVM VIOS package that you want to deploy.
4. Select the check the box if you want to create a one-time action rather than a reusable Fixlet.
5. **Optional:** You can also select the other check box to create a preview-only action.

This preview runs the pre-installed verification checks. The results of those checks are available in the **PowerVM VIOS Pre-Install Verification Results** analysis.

6. After you set the necessary parameters, click **Finish**.

After completion, the generated one-time action or Fixlet displays in the BigFix console. You can use it to deploy the PowerVM VIOS update to the relevant computers.

**Note:** Ensure that you have a sufficient amount of disk space on the /var partition to accommodate large files. Use the available tasks to set any size or space limitations. For more information, see Fix pack download configuration *(on page 22)*.

To view the detailed information about the results of deploying your PowerVM VIOS package update, activate the **PowerVM VIOS Package Deployment Results - TL/SP/CSP** analysis.

Click **All Patch Management > Analyses > By Site > Patches for VIOS > PowerVM VIOS Package Deployment Results - TL/SP/CSP > Activate**.

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