



# Branch Repeater 6.0

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# Branch Repeater 6.0

This release is compatible with partner appliances running Branch Repeater releases 5.0 and later. It can be used in a mixed environment that includes units running these older releases.

- [Release Notes 6.0.x](#)
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# Release Notes 6.0.x

These topics describe the changes, bug fixes, and known issues in the Branch Repeater 6.0.x releases.

- [Changes](#)
- [Bug Fixes](#)
- [Known Issues](#)

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# Release Notes 6.0.x

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- [Changes](#)
- [Bug Fixes](#)
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# Changes

The following topics describe the new features and enhancements in Citrix Branch Repeater 6.0.x releases.

- [Release 6.0.8](#)
- [Release 6.0.7](#)
- [Release 6.0.6](#)
- [Release 6.0.4](#)
- [Release 6.0.3](#)
- [Release 6.0.2](#)
- [Release 6.0.1](#)
- [Release 6.0.0](#)

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# Release 6.0.8

The following changes are available in this release.

- Traffic blocking issues have been addressed in this release. (See section "Issues Resolved in Release 6.0.8")

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# Release 6.0.7

The following new features and enhancements are available in this release.

- Stability improvements.
- Improved Diagnostic Data collection. PDF reports are added as part of the collection.



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# Release 6.0.6

The following new features and enhancements are available in this release.

- Branch Repeater support for NetScaler SDX 500/1000/1500/2000 Appliances.
- Changes to the color scheme and other elements of the UI, which do not change functionality.

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# Release 6.0.4

The following new features and enhancements are available in this release.

- Mac XenApp client traffic can now be accelerated by Branch Repeater.
- Improved high-availability support.
- Improved diagnostic data collection.

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# Release 6.0.3

The following new features and enhancements are available in this release.

- Improved “One-button data collection.” Additional options have been added to the feature to allow new areas of interest to be included and others to be excluded. Application definitions now support arbitrarily large port ranges.
- Configuration changes involving link definitions, application definitions, service classes, and traffic shaping are now completed more quickly.
- Enabling and disabling Traffic Processing on the Features menu now takes place more quickly. (With Traffic Processing enabled, acceleration and traffic shaping are available; otherwise, the unit is in pass-through mode and no traffic processing is done.)

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# Release 6.0.2

The following new features and enhancements are available in this release.

- Improved “One-button data collection.” The data files from the one-button data collection feature can now be downloaded through the user interface from the Diagnostic Data tab on the System Maintenance: Diagnostics page.

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# Release 6.0.1

The following new features and enhancements are available in this release.

- *Multi-Stream ICA Support.* This release supports the new XenApp 6.5/XenDesktop 5.5 Multi-Stream ICA feature, which uses up to four connections per user, one for each ICA priority level. By de-multiplexing the ICA stream, traffic-shaping policies can be applied independently to streams with different priorities, allowing bulk traffic to be held back and interactive traffic passed through with greater precision. The result is greater responsiveness and thus a better user experience.
- *Diagnostics: One-Button Data Collection.* This feature is a new tab on the System Maintenance: Diagnostics page. It gathers diagnostic data for Citrix Support and packages it into a single compressed archive that Support can analyze. The process can take as long as 20 minutes. It gathers data from older versions of the software as well as the current one. Do not use this feature unless requested to by Support.

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# Release 6.0.0

The following new features and enhancements are available in this release.

- Traffic shaping that expedites WAN traffic according to user-selectable policies. Both accelerated and non-accelerated traffic are shaped to give full control over the link. Traffic shaping replaces the Repeater QoS feature.
- Traffic classification and reporting provide greater visibility into WAN traffic.
- Multi-stream ICA support provides a better user experience for XenApp and XenDesktop by combining acceleration with enhanced traffic shaping.
- Vista/Windows 7/Windows Server 2008 Filesystem acceleration. New SMB2 acceleration features increase remote file-system performance.
- Windows file system acceleration. Signed SMB can now be accelerated.
- Enhanced MAPI Acceleration. Encrypted connections between Outlook and Exchange Server can now be accelerated.
- Support for multiple links. In previous releases, Branch Repeater had a single-link model. Release 6.0 supports up to ten independent links, each with its own link speed, so traffic can be shaped precisely on every link.
- Remote license server support. Release 6.0 allows a remote network license server to supply the Branch Repeater licenses, simplifying deployment.
- Quick installation page condenses the configuration of a typical appliance onto a single user-interface page.
- Dashboard page provides a quick view of current system status.
- Features page. The product's enable/disable toggles have been combined on a single page.
- Simplified menu structure. The number of top-level menu categories has been reduced. Entries within a category are now alphabetized. Similar functions have been combined onto a single page. For example, the Advanced Deployments page contains the functionality of the old high-availability, WCCP, group-mode, and proxy-mode pages.

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# Bug Fixes

The following topics describe the bugs fixed in Citrix Branch Repeater 6.0.x releases.

- [Issues Resolved in Release 6.0.9](#)
- [Issues Resolved in Release 6.0.8](#)
- [Issues Resolved in Release 6.0.7](#)
- [Issues Resolved in Release 6.0.6](#)
- [Issues Resolved in Release 6.0.5](#)

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# Issues Resolved in Release 6.0.9

The following bug fixes are available in this release.

- Issue ID 0273591: When a connection is migrated from one acceleration pair to another in a 4-port HSRP configuration, the connection resets.
- Issue ID 0309316: CIFS module generates excessive logs, making it difficult to extract valuable log messages from the log file.
- Issue ID 0313683: Accessing the Branch Repeater configuration utility's Configuration > Network Adapters > Ethernet tab > apA.2/apA.1 Links page on a highly loaded Branch Repeater might cause the appliance to restart.
- Issue ID 0319151: The Show Tech Support feature hangs when you select the Reports option.
- Issue ID 0327412: WCCP service group priority field is not propagated to the high-availability secondary appliance.
- Issue ID 0327708: When you upgrade the Branch Repeater software from 5.x to a higher version, it becomes unresponsive because of an invalid application ID.
- Issue ID 0328766: Upgrading the Repeater from 5.x to 6.x with service classes containing large port ranges causes classification issues.

Workaround: Before upgrading the Repeater from 5.x to 6.x, make sure the service classes do not contain large port ranges.

- Issue ID 0330699: Direction flag in service class rules is interpreted differently by the acceleration engine and the QOS engine, because of inconsistent result reports. Filtering is done per flow in the acceleration engine and per packet in the QOS engine.
- Issue ID 0331439: Printing on remote servers causes the appliance to restart.
- Issue ID 0332261: MAPI connections go to the inactive state even when connections are active and processing pending requests, causing the appliance to restart.
- Issue ID 0332662: Insufficient memory in the MAPI module causes the Branch Repeater to restart.
- Issue ID 0333207: If the Branch Repeater appliance has been added to a domain, resetting the appliance causes it to leave the domain.
- Issue ID 0334234: The high-availability secondary appliance becomes unresponsive because of insufficient memory due to frequent parameter synchronization from the high availability primary appliance.
- Issue ID 0335362: The CLI is not properly assigning values based on the user-specified "classification type" for adding an application.



The problem is sometimes seen when Command Center is used to restore or deploy any user-created applications, because Command Center relies upon the CLI to 'add' these applications, and consequently even good entries made previously via the GUI can become corrupted.

- Issue ID 0339184: On the GUI Configuration > Logging/Monitoring > SNMP page, the MIB files are reordered in the order by which users must load them into SNMP manager tools.

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# Issues Resolved in Release 6.0.8

The following bug fixes are available in this release.

- Issue IDs 0298542, 0298964, 0302785, 0305881, 0308730, 0310166, 0311278, 0327645, and 0328095: Traffic blocking issues have been resolved.

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# Issues Resolved in Release 6.0.7

The following bug fixes are available in this release.

- Issue ID 0283284: A Linux based License Server Virtual Appliance running on version 1.01 cannot obtain a Branch Repeater license.
- Issue ID 0302502, 0313614, and 0310535: A BR VPX hosted on the ESXi platform becomes unresponsive, because of the WCCP/GRE fragmentation issue.
- Issue ID 0317673: An issue with HA parameter synchronization under load has been resolved.

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# Issues Resolved in Release 6.0.6

The following bug fixes are available in this release.

- Issue IDs 0304793, 0304497, 0268633, 0257026, and 0257019: A bug that caused reduced group-mode performance and “Group mode heart beat timer overrun” alerts has been fixed.
- Issue ID 0303844: A bug that sometimes prevented Microsoft Exchange email attachments from transferring has been fixed.
- Issue ID 0300810: A bug prevented Citrix Command Center’s Replicate Configuration feature from working, because of duplicate port numbers in Repeater appliance’s application classifier, has been fixed.
- Issue ID 0292467 (Repeater SDX): Previously, installing the NetScaler instance on Repeater SDX sometimes failed. This has been fixed.
- Issue IDs 0290198 and 0275414: A bug that sometimes caused system restarts while handling in SSL split-proxy traffic has been fixed.

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# Issues Resolved in Release 6.0.5

The following bug fixes are available in this release.

- Issue ID 0274265: A bug that could cause performance and connectivity issues with packets with extremely small TCP data segments (5 bytes or less) has been fixed.
- Issue ID 0273305: In earlier releases, the accelerated bridge did not forward bridge protocol data unit (BPDU) frames. That prevented the spanning-tree protocol from functioning. This has been fixed.
- Issue IDs 0269313 and 256974: Bugs that sometimes caused compression-related restarts have been fixed.
- Issue ID 0259478: A bug that sometimes caused ICA-related restarts under continuous high traffic has been fixed.
- Issue ID 0259050: In earlier releases, the heartbeat between members of an HA pair was sometimes lost when configuration changes were applied. This has been fixed.
- Issue ID 0174552: A bug that sometimes caused ICA-related restarts has been fixed.

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# Known Issues

The following topics describe the known issues in Citrix Branch Repeater 6.0.x releases.

- [Release 6.0.9](#)
- [Release 6.0.8](#)
- [Release 6.0.7](#)

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# Release 6.0.9

The following known issues have been identified in this release.

- Issue ID 0329023: H.323 cannot be prioritized using default settings.

Workaround: To prioritize H323 VoIP traffic, create a service class with the IP addresses of the VoIP gateway or server.

- Issue ID 0329026: H.323 based VoIP (UDP) traffic gets classified under "Other UDP" application.
- Issue ID 0304388: In the configuration utility, the detailed statistics for a service class under Reports > Service Class do not show the average duration of all instances for that particular service class, as they should. Instead, they display the cumulative duration of all instances.
- Issue ID 0309528: Uploading SSL Certificates in the Repeater UI by using File Upload fails.

Workaround: Upload the certificates through the GUI of the individual BR instance.

- Issue ID 0313248: PCAP file names generated on Branch Repeater VPX instances on an SDX appliance are wrongly labeled. They do not reflect the actual interfaces used to capture or intercept the packets.
- Issue ID 0320077: Synchronization between appliances might fail if the WAN link is less than 45 Mbps and VRRP is on the same link. For VRRP communication between appliances, primary or auxiliary interfaces are recommended.
- Issue ID 0321496: The operational status of the SVM is displayed as active even after traffic processing in the Repeater UI has been disabled on an SDX appliance.

- Issue ID 0304440 (Repeater SDX): The Repeater instances and the Repeater UI use a CA certificate and certificate/key pairs for mutual authentication. When any of these expire or become mismatched between a Repeater instance and the Repeater Instance UI, the communication between the Repeater UI and the affected instances fails.

Workaround: Re-provision the Repeater UI and manually reset the certificates to the factory default on all Repeater instances, using the "Repeater Configuration" menu.

- Issue ID 0304287 (Repeater SDX): FTP transfers fail after a while because of short timeouts in the NetScaler instance.

For more information, contact Citrix Support.

- Issue ID 0304213 (Repeater SDX): When deleting multiple Repeater instances, the Service VM might display a spurious error message: "c is undefined."

Workaround: Ignore this message.

- Issue ID 0302498 (Repeater SDX): If SDX provisioning is done when some Repeater instances use a nondefault admin profile, Repeater software upgrades can fail.

Workaround: Use the default admin profile exclusively, or switch back to it temporarily before doing Repeater software upgrades.

- Issue ID 0300740 (Repeater SDX): The Service GUI does not identify the location of a failed SSD, which is shown as “Unknown.”

Workaround: As with any hardware failure, contact Support.

- Issue ID 0304388 (Repeater SDX): On the Reports: Service Classes page of the Repeater UI, the service-class statistics give the cumulative time of all the instances, which is incorrect.

- Issue ID 0299970: On a Windows-based Citrix license server, Repeater licenses might be checked out but not delivered to the Repeater.

Workaround: Add exceptions to Windows Firewall for the applications lmadm.exe, CITRIX.exe, and CtxLSPortSvc.exe to allow successful licensing connections with the Repeater.

- Issue ID 0287023 (Repeater SDX): On the Monitoring: Active Repeater Partners page of the Repeater UI, some Repeater instances might not be listed:

Workaround: Use the Service GUI to see the active Repeater instances.



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# Release 6.0.8

The following known issues have been identified in this release.

- Issue ID 0329023: H.323 cannot be prioritized using default settings.

Workaround: To prioritize H323 VoIP traffic, create a service class with the IP addresses of the VoIP gateway or server.

- Issue ID 0329026: H.323 based VoIP (UDP) traffic gets classified under "Other UDP" application.
- Issue ID 0304388: In the configuration utility, the detailed statistics for a service class under Reports > Service Class do not show the average duration of all instances for that particular service class, as they should. Instead, they display the cumulative duration of all instances.
- Issue ID 0309528: Uploading SSL Certificates in the Repeater UI by using File Upload fails.

Workaround: Upload the certificates through the GUI of the individual BR instance.

- Issue ID 0313248: PCAP file names generated on Branch Repeater VPX instances on an SDX appliance are wrongly labeled. They do not reflect the actual interfaces used to capture or intercept the packets.
- Issue ID 0320077: Synchronization between appliances might fail if the WAN link is less than 45 Mbps and VRRP is on the same link. For VRRP communication between appliances, primary or auxiliary interfaces are recommended.
- Issue ID 0321496: The operational status of the SVM is displayed as active even after traffic processing in the Repeater UI has been disabled on an SDX appliance.
- Issue ID 0304440 (Repeater SDX): The Repeater instances and the Repeater UI use a CA certificate and certificate/key pairs for mutual authentication. When any of these expire or become mismatched between a Repeater instance and the Repeater Instance UI, the communication between the Repeater UI and the affected instances fails.

Workaround: Re provision the Repeater UI and manually reset the certificates to the factory default on all Repeater instances, using the "Repeater Configuration" menu.

- Issue ID 0304287 (Repeater SDX): FTP transfers fail after a while because of short timeouts in the NetScaler instance.

For more information, contact Citrix Support.

- Issue ID 0304213 (Repeater SDX): When deleting multiple Repeater instances, the Service VM might display a spurious error message: "c is undefined."

Workaround: Ignore this message.

- Issue ID 0302498 (Repeater SDX): If SDX provisioning is done when some Repeater instances use a nondefault admin profile, Repeater software upgrades can fail.

Workaround: Use the default admin profile exclusively, or switch back to it temporarily before doing Repeater software upgrades.

- Issue ID 0300740 (Repeater SDX): The Service GUI does not identify the location of a failed SSD, which is shown as “Unknown.”

Workaround: As with any hardware failure, contact Support.

- Issue ID 0304388 (Repeater SDX): On the Reports: Service Classes page of the Repeater UI, the service-class statistics give the cumulative time of all the instances, which is incorrect.

- Issue ID 0299970: On a Windows-based Citrix license server, Repeater licenses might be checked out but not delivered to the Repeater.

Workaround: Add exceptions to Windows Firewall for the applications lmadm.exe, CITRIX.exe, and CtxLSPortSvc.exe to allow successful licensing connections with the Repeater.

- Issue ID 0287023 (Repeater SDX): On the Monitoring: Active Repeater Partners page of the Repeater UI, some Repeater instances might not be listed:

Workaround: Use the Service GUI to see the active Repeater instances.

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# Release 6.0.7

The following known issues have been identified in this release.

- Issue ID 0304388: In the configuration utility, the detailed statistics for a service class under Reports > Service Class do not show the average duration of all instances for that particular service class, as they should. Instead, they display the cumulative duration of all instances.
- Issue ID 0309528: Uploading SSL Certificates in the Repeater UI by using File Upload fails.

Workaround: Upload the certificates through the GUI of the individual BR instance.

- Issue ID 0313248: PCAP file names generated on Branch Repeater VPX instances on an SDX appliance are wrongly labeled. They do not reflect the actual interfaces used to capture or intercept the packets.
- Issue ID 0320077: Synchronization between appliances might fail if the WAN link is less than 45 Mbps and VRRP is on the same link. For VRRP communication between appliances, primary or auxiliary interfaces are recommended.
- Issue ID 0321496: The operational status of the SVM is displayed as active even after traffic processing in the Repeater UI has been disabled on an SDX appliance.
- Issue ID 0304440 (Repeater SDX): The Repeater instances and the Repeater UI use a CA certificate and certificate/key pairs for mutual authentication. When any of these expire or become mismatched between a Repeater instance and the Repeater Instance UI, the communication between the Repeater UI and the affected instances fails.

Workaround: Re-provision the Repeater UI and manually reset the certificates to the factory default on all Repeater instances, using the “Repeater Configuration” menu.

- Issue ID 0304287 (Repeater SDX): FTP transfers fail after a while because of short timeouts in the NetScaler instance.

For more information, contact Citrix Support.

- Issue ID 0304213 (Repeater SDX): When deleting multiple Repeater instances, the Service VM may display a spurious error message: “c is undefined.”

Workaround: Ignore this message.

- Issue ID 0302498 (Repeater SDX): If SDX provisioning is done when some Repeaters instances use a nondefault admin profile, Repeater software upgrades can fail.

Workaround: Use the default admin profile exclusively, or switch back to it temporarily before doing Repeater software upgrades.

- Issue ID 0300740 (Repeater SDX): The Service GUI does not identify the location of a failed SSD, which is shown as “Unknown.”

Workaround: As with any hardware failure, contact Support.

- Issue ID 0304388 (Repeater SDX): On the Reports: Service Classes page of the Repeater UI, the service-class statistics give the cumulative time of all the instances, which is incorrect.
- Issue ID 0299970: On a Windows-based Citrix license server, Repeater licenses might be checked out but not delivered to Repeater.

Workaround: Add exceptions to Windows Firewall for the applications lmadm.exe, CITRIX.exe, and CtxLSPortSvc.exe to allow successful licensing connections with Repeater.

- Issue ID 0287023 (Repeater SDX): On the Monitoring: Active Repeater Partners page of the Repeater UI, some Repeater instances might not be listed:

Workaround: Use the Service GUI to see the active Repeater instances.

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# Compatibility

Repeater Plug-in for 6.0 is not available. However, the release 5.5.x, 5.7.x, and 6.1 versions of the Repeater Plug-in are compatible with release 6.0 Appliances.

Branch Repeater with Windows Server is not included in release 6.0. However, appliances running release 6.0 interoperate with Branch Repeater with Windows Server appliances running releases 1.5 and later.

## Supported Products

Table 1. Supported products and platforms

Appliance Type (From “System Hardware” on the System Status page)	Supported?
Repeater for NetScaler SDX Models 500, 1000, 1500, and 2000	Yes
Branch Repeater VPX (all models)	Yes
Branch Repeater Models 100, 200, and 300	Yes
Branch Repeater with Windows Server Models 100, 200, and 300	No
Repeater Plug-in	No (use 5.5.x or 5.7.x or 6.1 Plug-in. 6.1 is the preferred version)
Repeater 8000 Series (Newer Units): Units that list “SM85 Series 3” or “SM88 Series 3” on the System Hardware line of the System Status page	Yes
Repeater 8000 Series (Older Units): Units that list “SM85 Series 2” or “SM88 Series 2” on the System Hardware line of the System Status page	No
Older Models	No

## Supported Branch Repeater VPX Configurations

Release 6.0.x is supported on Branch Repeater VPX running on either XenServer (5.5 and 5.6, but not 5.6 FP1) or VMware vSphere ESX/ESXi 4.1 hypervisors.

RAM and vCPU requirements have increased with this release. See the following tables.

Table 2. Production configurations, XenServer and VMware vSphere.

Type	vCPUs	RAM	Disk
2 GB production config.	2	2 GB	100 GB

## Compatibility

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4 GB production config.	2	4 GB	250 GB
4 GB production config.	2	4 GB	250 GB
8 GB production config.	4	8 GB	500 GB

Table 3. Other configurations (not for production networks).

Type	vCPUs	RAM	Disk
VPX Express	2	1 GB	60 GB

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# Licensing, Upgrading, and Downgrading

## Licensing

Release 6.0.x supports both remote license servers and locally installed licenses. If you upgrade an existing system with a local license, it continues to work.

## Upgrading Existing Installations

**Note:** If you are using a standard evaluation license, you cannot upgrade to software versions that are newer than your license.

### Branch Repeater VPX

Since the resource requirements have changed, it is best to install a new 6.0.0 virtual machine rather than updating an existing one. Acquire the virtual machine from MyCitrix and follow the instructions in the *User's Guide*.

### Repeater and Branch Repeater

Acquire the software from MyCitrix.

### Installing the Update

**Note:** If you are upgrading from a pre-5.0 release (such as release 4.3), you must update to release 5.x first, then release 6.x. Also, if you are upgrading from a pre-5.0 release, acceleration will not take place until you install the new license from Citrix.

From the browser based user interface ([http://appliance\\_ip\\_address](http://appliance_ip_address)), go to the “System Tools: Update Software” link. In the “Upgrade System Software” table, use the Browse button to select the patch file (the file you downloaded with ftp), and then press the Upload Patch button. (See the following figure.)

The screenshot shows a web interface for updating software. On the left is a sidebar menu with the following items: Command Menu (Dashboard, Features, Quick Installation), Monitoring, Configuration, Reports, System Maintenance (Backup / Restore, Clear Statistics, Date/Time, Diagnostics, Restart System, Update Software). The main content area is titled 'Update Software' and contains three sections: 1. 'Upgrade System Software' with a 'Patch File:' field containing a 'Choose File' button and the text 'No file chosen', and an 'Upload Patch' button. 2. 'Downgrade Release' with 'Currently Running Version: 6.2.2.45' and a 'Releases:' dropdown menu set to '6.2.2.45' with a 'Change' button. 3. 'Change Version Type' with a 'Type:' dropdown menu set to 'Default' and a 'Change' button.

Figure 1. Update Software page

The patch file is then copied to your appliance and tested for integrity. If you have downloaded a valid file, a “Restart Unit?” prompt appears. Click Yes.

The settings from your current release are copied to the new one, so your configuration is retained in the new release.

The process of installing the patch file continues during the restart, which might take several minutes longer than usual. This is normal.

The new release is now running on your Appliance.

**Note:** If your appliance still uses the old default password, it is changed when you install this upgrade. The default password is now “password”.

### Installation Troubleshooting

The clockface showing the estimated update time is not always 100% accurate. If the installation ends with an error page displaying some kind of HTTP timeout error, wait a few minutes, then attempt to connect to the unit’s browser based management interface normally. Doing so usually shows that the newly installed version is up and running.

Sometimes an update fails if it spans a large number of releases, such as a jump from release 4.x to 6.0. If this happens, installing an intermediate release first (for example, release 5.5) and upgrading in two steps usually works.

Contact Citrix Support with any installation issues.

### Repeater for NetScaler SDX

To upgrade Repeater for NetScaler SDX, see the *Repeater for NetScaler SDX Administrator’s Guide*, release 6.0.

## Downgrading to an Earlier Release

Upgrading creates a new software installation; it does not remove the previous version of the software or the previous configuration settings. Therefore, an Appliance can be returned to any release that it has previously used.

You can revert to a previous version of the software by using the Downgrade Release feature, which is available on the System Maintenance: Update Software page. The downgrade returns the configuration to what it was for the older release at the time the upgrade was applied. Any configuration changes you made with the newer release are lost. If you upgrade again, the upgrade copies the older release’s settings into the newer release.

The software can be downgraded to previously installed versions only. Neither the Upgrade Software nor the Downgrade Release feature supports the installation of patch files with a lower version number than the current one, except for versions already resident on the unit.



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# Contacting Customer Support

To contact Citrix Support, call 1-800-4CITRIX or log on to MyCitrix at <http://www.citrix.com>.

You will be asked for your hardware serial number as part of the support process.

Detailed instructions for contacting support can be found at: [http://citrix.com/site/resources/dynamic/sup2nd/Citrix\\_HWS\\_SerialNO.pdf](http://citrix.com/site/resources/dynamic/sup2nd/Citrix_HWS_SerialNO.pdf).