



**Vidyo**<sup>®</sup>  
Personal Telepresence

## TECHNICAL NOTE

# Vidyo Server Security Update 9

Document Version B

# Vidyo Server Security Update 9

Vidyo Server Security Update 9 provides existing Vidyo servers (VidyoPortals™, VidyoRouters™, VidyoGateways™, and VidyoReplays™) with updated packages and package configurations to address most known and current vulnerabilities (CVEs) at the time of the release of this Update, as noted in common OS and package security bulletins.

The updates and configuration changes applied by SU9 are outlined in [System Changes Performed by Security Update 9](#).

## Important Notices

- In accordance with the *Vidyo End of Life Process Announcement for Vidyo Server Components Based on ASUS and Supermicro Platforms*, these platforms are no longer under software maintenance. Therefore, if you have these platforms, upgrading to Security Update 9 will be blocked.
- Before applying SU9 on a VidyoPortal, Vidyo highly recommends that you back up your database and then download the backup to your local machine.
- This update is applicable to all maintained Vidyo servers. For more information, please refer to the Vidyo [Software Maintenance Policy](#).

# Security Update 9 Files

This SU9 file...	Is for...
Security_Update_9_Rev17-G2signed.vidyo	■ VidyoPortal version 3.4.x
Security_Update_9_Rev17-G2signed.vidyo	■ VidyoRouter version 3.4.x
Security_Update_9_Rev17-signed.vidyo	■ VidyoPortal version 3.3.x with SU7 or SU8
Security_Update_9_Rev17-signed.vidyo	■ 64-bit VidyoRouter version 3.3.x with SU7 or SU8
Security_Update_9_Rev17-signed.vidyo	■ VidyoGateway version 3.2.x with SU7 or SU8 ■ VidyoReplay version 3.0.x or 3.1.x with SU7 or SU8

**Note** This is **not** intended for the latest VidyoGateway or 3.3.x, and will be rejected if the install is attempted.

**Note** Do not install SU9 on a version earlier than the versions listed in the preceding table.

If SU9 is run on an unsupported version, the updater will exit and post a message in the updater log.

# Updater Log

All updater messages are logged in an updater log file created during the update. This log file is used for any subsequent updates, and each updater will append its log messages to this file. At the end of the update process, this log file is then copied to a location that users can access and download for review via each product's respective Web UI:

- **VidyoPortal:** The updater log file is copied and available for download at *Super Admin Pages > Settings > Maintenance > Database* as follows:  
**updat\_{date}\_{time}\_{timezone}.log**. The file can be downloaded or deleted as needed.
- **VidyoRouter (Standalone):** The updater log file is copied and available for download at */vr2conf/pages/Logs* as follows: **vr2.log.updates{date}\_{time}\_{timezone}**. The file can only be downloaded; it cannot be deleted.
- **VidyoGateway and VidyoReplay:** The updater log file is included in the archive. It is created and downloaded using the **Download Logs** button under the *Status* tab for VidyoGateway, and in the VidyoReplay/recorder Pages. The updater log filename in the archive is **updates{date}\_{time}\_{timezone}.log**.

# System Changes Performed by Security Update 9

Specific security-related package updates:

- Apache Web Server

Product	Original Version	SU9 Version
VidyoPortal	2.4.16 with OpenSSL 1.0.1p	2.4.20 with OpenSSL 1.0.1u
VidyoRouter	2.4.16 with OpenSSL 1.0.1p	2.4.20 with OpenSSL 1.0.1u
VidyoGateway	2.4.16 with OpenSSL 1.0.1p	2.4.20 with OpenSSL 1.0.1u
VidyoReplay	2.4.16 with OpenSSL 1.0.1p	2.4.20 with OpenSSL 1.0.1u

Among other CVEs, this update addresses:

- Multiple memory leaks in t1\_lib.c in OpenSSL before 1.0.1u, 1.0.2 before 1.0.2i, and 1.1.0 before 1.1.0a allow remote attackers to cause a denial of service (memory consumption) via large OCSP Status Request extensions.

For more information, please see visit <https://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2016-6304>.

- OpenSSL Padding Oracle Vulnerability CVE-2016-2107

For more information, visit <https://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2016-2107>.

- MySQL

Product	Original Version	SU9 Version
VidyoPortal 3.4.x	5.6.23	5.6.32

- Java

Product	Original Version	SU9 Version
VidyoPortal	1.7.0_80	1.8.0_101
VidyoRouter	1.7.0_80	1.8.0_101
VidyoGateway	1.7.0_80	1.8.0_101
VidyoReplay	1.7.0_80	1.8.0_101

■ Apache Tomcat

Product	Original Version	SU9 Version
VidyoPortal 3.3x VidyoRouter	6.0.44	6.0.45
VidyoPortal 3.4x VidyoRouter	8.0.26	8.0.36
VidyoGateway 3.2x	6.0.44	6.0.45
VidyoReplay 3.0x 3.1.x	6.0.44	6.0.45

■ OpenSSL Dynamic Library

Product	Original Version	SU9 Version
VidyoPortal	OpenSSL 1.0.1p	OpenSSL 1.0.1u
VidyoRouter	OpenSSL 1.0.1p	OpenSSL 1.0.1u
VidyoGateway	OpenSSL 1.0.1p	OpenSSL 1.0.1u
VidyoReplay	OpenSSL 1.0.1p	OpenSSL 1.0.1u

■ OpenSSH

Product	Original Version	SU9 Version
VidyoPortal	7.1 (OpenSSL 1.0.1p)	7.1 (OpenSSL 1.0.1u)
VidyoRouter	7.1 (OpenSSL 1.0.1p)	7.1 (OpenSSL 1.0.1u)
VidyoGateway	7.1 (OpenSSL 1.0.1p)	7.1 (OpenSSL 1.0.1u)
VidyoReplay	7.1 (OpenSSL 1.0.1p)	7.1 (OpenSSL 1.0.1u)

## OpenSSH Security Improvements

- Addresses security scan issue “Diffie-Hellman group smaller than 2048 bits (tls-dh-prime-under-2048-bits)” by removing support for DH primes under 2048 bits.
- Enforces support for only the following strong ciphers: *aes128-ctr,aes192-ctr,aes256-ctr*
- Enforces support for only the following HMACs: *hmac-sha2-256,hmac-sha2-512*

- Enforces support for only the following key exchange algorithms:  
*curve25519-sha256@libssh.org,ecdh-sha2-nistp521,ecdh-sha2-nistp384,ecdh-sha2-nistp256,diffie-hellman-group-exchange-sha256*

These improvements require an SSH client that supports the above listed ciphers, HMACs, and key exchange algorithms. SSH clients that do not support these mechanisms will not be able to connect. Most modern updated SSH clients usually support these mechanisms.

# Known Issues after Successfully Applying Security Update 9

- Some vulnerability scanners may report a low to moderate level vulnerability of “TCP timestamp response (generic-tcp-timestamp)” and/or “ICMP timestamp response”, even after Security Update 9 is successfully applied.

Description: The remote host responded with a TCP timestamp. The TCP timestamp response can be used to approximate the remote host's uptime, potentially aiding in further attacks. Additionally, some operating systems can be fingerprinted based on the behavior of their TCP timestamps. At this time, Vidyo is reluctant to disable `tcp_timestamps`, as this could disrupt the packet communication needs of the protocols used for Vidyo Conferencing. Vidyo considers this vulnerability to be low, and this issue does not really affect the security of the Linux TCP stack in any meaningful way. ICMP may be blocked via a firewall to mitigate the ICMP specific `tcp_timestamp` issue.

- After upgrading to Security Update 9 and rebooting the system, the wrong alert message displays stating “Applied” instead of “Applied system rebooting.”

# Applying Security Update 9

## VidyoPortal without Hot Standby

For VidyoPortals configured with Hot Standby, see [VidyoPortal with Hot Standby](#).

1. Navigate and log in to the VidyoPortal Super Admin pages:  
**http://{Portal IP or FQDN}/super.**
2. Navigate to *Settings > Maintenance > Database*.
3. Click **Backup** to make a backup copy of the VidyoPortal database.
4. Select the checkbox for the newly created database backup file.
5. Click **Download** to download and save a copy of the database file.
6. Navigate to *Settings > Maintenance > Upgrade*.
7. Click **Browse...**
8. Locate and select the appropriate **.vidyo** (as noted in the table on page 3) file from the file selection dialog box.
9. Click **Open**.
10. Click **Upload**.

The system will reboot after uploading the update package.

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**Note** The update process can take several minutes (allow 5 to 15 minutes for the process to complete once the server has stated it is restarting). Do not attempt to refresh the browser and access the server until the process is complete. You will not be able to access the system via the browser during the update process. Once the update process is completed, your browser should refresh and you will be able to browse and log in to the system again. If your browser does not refresh to the login screen automatically after 30 minutes, then manually refresh your browser.

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A copy of the updater log will be available for review. For more information, see [Updater Log](#).

11. Review the log to ensure the update completed successfully.

A completed message will be noted near the end of the log file. If the log states the update did not complete or logged errors, review the log for the reason and address it as needed.

See [Contacting Technical Support](#) for more information about getting assistance.

12. Test the VidyoPortal to ensure that it is functional.

# VidyoPortal with Hot Standby

If you have a VidyoPortal configured with Hot Standby, you have two options for applying SU9:

- Option 1 provides the least amount of down time, but may cause some Call Detail Records (CDR) records to be lost. This may occur because the VidyoPortal that is Active and the VidyoPortal that is Standby are switched, causing all database and CDR changes to be lost since the last successful synchronization.
- Option 2 takes more time because you must take the system completely offline for full maintenance, but no CDR records will be lost.

## Option 1

With this option, you upgrade the Standby VidyoPortal first, sync the two VidyoPortals, and then switch VidyoPortals.

**If using VidyoPortal 3.4.3 or earlier versions, do the following:**

1. Place the VidyoPortal that is currently the Standby VidyoPortal (i.e., VidyoPortal 2) into Maintenance mode.
2. Apply SU9 to the VidyoPortal that is in Maintenance mode.
3. Return the VidyoPortal to Standby mode by disabling Maintenance mode after the upgrade is complete and the server is restarted.
4. Access the Super Admin pages on the Active VidyoPortal to ensure that the databases have been synchronized successfully:
  - a. Navigate to *Settings > Hot Standby > Database Synchronization*.
  - b. Click **Sync Now**.
  - c. Navigate to *Settings > Hot Standby > Status*.
  - d. Verify that the sync has completed by ensuring the **Sync** field displays that the databases are "In Sync."
5. Switch the VidyoPortals:
  - a. Navigate to *Settings > Hot Standby > Operation*.
  - b. Click **Force Standby**.
  - c. Click **Yes** in the *Confirmation* dialog box to force the Active VidyoPortal into Standby mode.
6. Place the previous Active VidyoPortal that is now the Standby VidyoPortal (i.e., VidyoPortal 1) into Maintenance mode after the VidyoPortals have been switched.
7. Apply SU9 to the VidyoPortal that is in Maintenance mode.

8. Return the VidyoPortal to Standby mode by disabling Maintenance mode after the upgrade is complete and the server is restarted.

**If using VidyoPortal 3.4.4, do the following:**

1. Place the VidyoPortal that is currently the Standby VidyoPortal (i.e., VidyoPortal 2) into Maintenance mode.
2. Apply SU9 to the VidyoPortal that is in Maintenance mode.
3. Return the VidyoPortal to Standby mode by disabling Maintenance mode after the upgrade is complete and the server is restarted.
4. Access the Super Admin pages on the Active VidyoPortal to ensure that the databases have been synchronized successfully:
  - a. Navigate to *Settings > Hot Standby > Status*.
  - b. Verify that the sync has completed by ensuring the **Database Synchronization** field displays that the databases are "In Sync."
5. Switch the VidyoPortals:
  - a. Navigate to *Settings > Hot Standby > Status*.
  - b. Click **Force Standby**.
  - c. Click **Yes** in the *Confirmation* dialog box to force the Active VidyoPortal into Standby mode.
6. Place the previous Active VidyoPortal that is now the Standby VidyoPortal (i.e., VidyoPortal 1) into Maintenance mode after the VidyoPortals have been switched.
7. Apply SU9 to the VidyoPortal that is in Maintenance mode.
8. Return the VidyoPortal to Standby mode by disabling Maintenance mode after the upgrade is complete and the server is restarted.

## Option 2

With this option, you place both servers into Maintenance mode, upgrade both, and then return them to their original Active and Standby modes.

1. Place the VidyoPortal that is currently the Standby VidyoPortal (i.e., VidyoPortal 2) into Maintenance mode.
2. Place the VidyoPortal that is currently the Active VidyoPortal (i.e., VidyoPortal 1) into Maintenance mode.
3. Return the VidyoPortal that was originally the Active VidyoPortal (i.e., VidyoPortal 1) to Active mode first after the upgrades are complete and the servers have restarted.
4. Return the VidyoPortal that was originally the Standby VidyoPortal (i.e., VidyoPortal 2) to Standby mode.

## Standalone VidyoRouter

1. Navigate and log in to the Standalone VidyoRouter configuration pages:  
**http://{Router IP or FQDN}/vr2conf.**
2. Click the *Upload* tab.
3. Click **Upload and Upgrade**.
4. Locate and select the appropriate **.vidyo** file (as noted in the table on page 3) for 64-bit VidyoRouters (64-bit VidyoRouters will have "(64-bit)" in the Ver: name as displayed on the *Upload* page).
5. Click **OK** in the pop-up.

The system will reboot after uploading the update package.

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**Note** The update process can take several minutes (allow 5 to 10 minutes for the process to complete once the server has stated it is restarting). You will not be able to access the system via the browser during the update process. After 15 minutes, you may manually refresh your browser to gain access to the VidyoRouter.

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A copy of the Updater log will be available for review. For more information, see [Updater Log](#).

6. Review the log to ensure the update completed successfully.

A completed message will be noted near the end of the log file. If the log states the update did not complete or logged errors, review the log for the reason and address it as needed.

See [Contacting Technical Support](#) for more information about getting assistance.

7. Repeat steps 1 through 6 for each Standalone VidyoRouter in the system.
8. Test that the VidyoPortal and each VidyoRouter is functional.

## VidyoGateway

1. Navigate and log in to the VidyoGateway Configuration Page:  
**http://{Gateway IP or FQDN}.**
2. Navigate to the **Upgrade Gateway** link.
3. Click **Browse**.
4. Select and open the **Security\_Update\_9\_Rev17-signed.vidyo** file.
5. Click **Upload and Install** on the *Upgrade Gateway* page.

The system will reboot after uploading the update package.

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**Note** The update process can take several minutes (allow 5 to 10 minutes for the process to complete once the server has stated it is restarting). You will not be able to access the system via the browser during the update process. After 15 minutes, you may manually refresh your browser to again access to the VidyoGateway.

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A copy of the Updater log will be available for review. For more information, see [Updater Log](#).

6. Review the log to ensure the update completed successfully.

A completed message will be noted near the end of the log file. If the log states the update did not complete or logged errors, review the log for the reason and address it as needed.

See [Contacting Technical Support](#) for more information about getting assistance.

7. Repeat steps 1 through 6 for each VidyoGateway with the system.
8. Test that each VidyoGateway is functional.

## VidyoReplay

1. Navigate and log in to the VidyoReplay Configuration Page.
2. Click the *Settings* tab.
3. Click the *Recorder* tab.
4. Click **Recorder Management Panel**.

This opens a new browser window or tab that displays the VidyoRecorder Configuration Page.

5. Click the *Upgrade VidyoReplay* tab.
6. Click **Choose File**.
7. Select and open the **Security\_Update\_9\_Rev17-signed.vidyo** file.
8. Click **Upload & Install** on the *Upgrade VidyoReplay* page.

The system will reboot after uploading the update package.

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**Note** The update process can take several minutes (allow 5 to 10 minutes for the process to complete once the server has stated it is restarting). You will not be able to access the system via the browser during the update process. After 15 minutes, you may manually refresh your browser to gain access to the VidyoReplay.

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A copy of the Updater log will be available for review. For more information, see [Updater Log](#).

9. Review the log to ensure the update completed successfully.

A completed message will be noted near the end of the log file. If the log states the update did not complete or logged errors, review the log for the reason and address it as needed.

See the [Contacting Technical Support](#) for more information about getting assistance.

10. Repeat steps 1 through 9 for each VidyoReplay with the system.
11. Test that each VidyoReplay is functional.

# Contacting Technical Support

If you are a Vidyo Reseller or Vidyo End User with “Plus” coverage, please feel free to contact the Vidyo Customer Support team via email with any questions or if you need assistance.

- Phone: +1-866-99-VIDYO / +1-201-289-8597
- Email: [support@vidyo.com](mailto:support@vidyo.com)

If you are a Vidyo End User without “Plus” coverage, please contact your Vidyo Reseller for further details.