



Pexip Infinity v18

Release Notes

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Introduction

This document contains the release notes for Pexip Infinity version 18.

Complete information about how to install and operate Pexip Infinity is available from the Pexip technical documentation website at docs.pexip.com.

The website also contains comprehensive documentation on all aspects of deploying the Pexip Infinity platform. This includes how to use the Infinity Connect client suite, and how to integrate Pexip Infinity with other third-party systems and call control solutions including Microsoft Lync, Cisco Unified Communications Manager, Cisco VCS and Polycom DMA.

Management Node host server sizing information

You must ensure that the Management Node host server has 2 cores and 4 GB of RAM for any deployments with more than 10 Conferencing Nodes. We recommend 4 cores and 6 GB of RAM for any deployments with more than 30 Conferencing Nodes.

Upgrading to version 18

Upgrading from version 13 or later to version 18

When the upgrade process starts, the Management Node is upgraded first. Then up to 5 Conferencing Nodes are selected and are automatically placed into maintenance mode. When all calls have finished on a node that is in maintenance mode, that node is upgraded and then put back into active service. Another Conferencing Node is then selected, placed into maintenance mode and upgraded, and so on until all Conferencing Nodes have been upgraded.

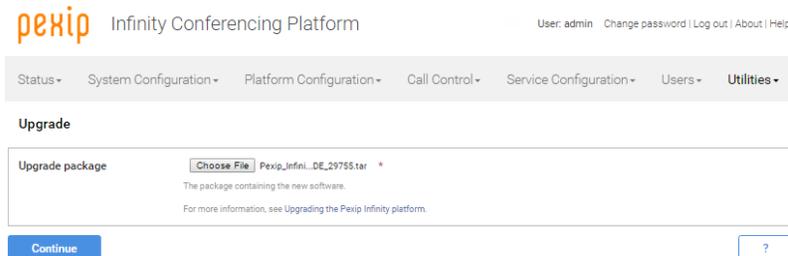
If all of the calls on a Conferencing Node that is in maintenance mode have not cleared after 1 hour, the node is taken out of maintenance mode and put at the back of the queue of nodes to be upgraded. A further attempt to upgrade that node will be made after all other nodes have been upgraded (or had upgrade attempts made). Up to 5 Conferencing Nodes may simultaneously be in maintenance mode or in the process of being upgraded at any one time.

Alternatively, to avoid unpredictable system behavior due to Conferencing Nodes running conflicting software versions, you may want to manually put **all** of your Conferencing Nodes into maintenance mode before initiating the upgrade process. This will allow all existing calls to finish, but will not admit **any** new calls. You should then actively monitor your Conferencing Nodes' status and manually take each node out of maintenance mode after it has been upgraded to the new software version, so that the system can start taking new calls again on those upgraded nodes.

i Upgrades to v18 from versions prior to v16 may take slightly longer than previous upgrades that spanned multiple versions.

To upgrade Pexip Infinity software from v13 or later to v18:

1. Before upgrading an on-premises deployment, we recommend that you use your hypervisor's snapshot functionality to take a full VMware/Hyper-V snapshot of the Management Node. You may also want to take a snapshot of each Conferencing Node, although depending on the size and complexity of your deployment it may be easier to simply redeploy these from the Management Node in the unlikely event that this is required.
Before upgrading a cloud-based deployment (Azure, AWS or GCP), you should backup the Management Node via Pexip Infinity's inbuilt mechanism (**Utilities > Backup/Restore**).
2. Download the Pexip Infinity upgrade package for v18 from www.pexip.com/software-download.
3. From the Pexip Infinity Administrator interface, go to **Utilities > Upgrade**.
4. Select **Choose File** and browse to the location of the upgrade package.



5. Select **Continue**. There will be a short delay while the upgrade package is uploaded.
After the upgrade package has been uploaded, you are presented with a confirmation page showing details of the existing software version and the upgrade version.
6. To proceed, select **Start upgrade**.
You are taken to the **Upgrade Status** page, showing the current upgrade status of the Management Node and all Conferencing Nodes. This page automatically refreshes every 5 seconds.
7. When the upgrade completes, all nodes will show a status of **No upgrade in progress** and have the new **Installed version**.
If a Conferencing Node fails to upgrade, for example if it remains on a **Waiting for calls to clear** status, it should be rebooted. The upgrade process will then continue as expected.

If you are using VMware snapshots for backup purposes, we recommend that you delete those snapshots after approximately two weeks, providing your upgraded system is operating as expected. This is because Virtual Machines, in general, should not run with snapshots over time.

For full details on upgrading Pexip Infinity, see [Upgrading the Pexip Infinity platform](#).

Upgrading from version 12 or earlier to version 18

Upgrading from versions 8-12 to version 18

If you are running a Pexip Infinity software version between v8 and v12 inclusive, you must first upgrade to version 13 and then upgrade again to version 18. To do this:

1. Download the Pexip Infinity **v13** [upgrade file](#).
2. Follow the steps outlined in [Upgrading to version 18](#), but when asked to **Choose File** browse to the location of the **v13** upgrade file.
3. Verify that the upgrade has completed successfully.
4. Download the Pexip Infinity **v18** upgrade file.
5. Follow the steps outlined in [Upgrading to version 18](#), and when asked to **Choose File** browse to the location of the **v18** upgrade file.

Note that if you are upgrading from v8, due to incompatibilities resolved in v8.1, ensure that you take a non-quiescing snapshot when backing up your Management Node prior to upgrade.

Upgrading from versions 3-7 to version 18

If you are running a Pexip Infinity software version between v3 and v7 inclusive, you must first upgrade to version 8 (contact your Pexip authorized support representative for the link to the v8 upgrade file), then upgrade to v13, and then finally upgrade again to v18 as described above.

New features and improvements in this release

You can go to https://docs.pexip.com/admin/whats_new.htm and follow the relevant links for more information about all of these features.

Version 18

Pexip Infinity platform

Feature	Description
Simplified network routing requirements for Proxying Edge Nodes	<p>As of version 18, Proxying Edge Nodes may no longer need full mesh connectivity to all other Conferencing Nodes.</p> <p>If a location only contains Proxying Edge Nodes, then those proxying nodes in that location only require IPsec connectivity with:</p> <ul style="list-style-type: none">any other proxying nodes in that locationall nodes in the transcoding location, and the primary and secondary overflow locations that are associated with that locationthe Management Node. <p>This means that the proxying nodes in one location do not need to have a direct network connection to other proxying nodes in other locations.</p>
New style themes with more flexible customization options	<p>Version 18 of Pexip Infinity introduces a new way to specify the contents and layout of your own customized themes. The new style themes are more efficient than the previous style themes, and offer more flexibility when customizing them for your own requirements. Any previous legacy-style themes that you have customized in earlier versions of Pexip Infinity can still be used and changed, and continue to work exactly as before if you have set them as the default theme or applied them to specific services.</p> <p>The new style base theme, which is used by default if you have not applied any customized themes to your services, behaves in exactly the same manner as the previous legacy-style base theme, and looks almost the same (some of the PIN-entry splash screen graphics used when joining a conference have been updated). The audio prompts are the same in new and legacy style themes.</p>
Microsoft Skype for Business and Lync integration improvements	<p>Pexip Infinity now supports send and receive video FEC (X-ULPFECUC) with Lync 2013 / Skype for Business clients and Skype for Business meetings.</p>
Conference and participant status improvements	<p>This release contains the following administrative improvements when viewing conference and participant status:</p> <ul style="list-style-type: none">The participant status "perceived call quality" calculation now takes jitter into account for the time window being assessed.Call protocol and, when applicable, the media proxying node and proxy location are displayed on the current and historic participant status summary pages.The conference graph now displays current and total packet loss when viewing a backplane connection.You can search by disconnect reason when viewing participant history.

Feature	Description
Administrative improvements	<p>This release contains the following administrative improvements:</p> <ul style="list-style-type: none"> • There is a new Log summary option that generates a condensed view of the messages in the support log, showing a summary of the call signaling for the current search/filtered log messages, such as a filter on a specific call ID. • You can upload the automatic daily backup file to an external FTP server. • A "Hardware IO (input/output) instability detected" alarm is raised if a high level of hard disk read/write latency is detected. • Ability to perform a packet capture to and from Conferencing Nodes in one or more locations, and the Management Node. • If you are using LDAP authentication, there are two new sets of permissions: "May create/delete packet capture" and "May download packet capture", and "May create/delete system backup" and "May download system backup" that must be assigned to the account role to enable the administrator to run and download a packet capture, and to perform backup and restore tasks respectively.

Infinity Connect web app

The Infinity Connect web app is embedded in the Infinity Connect software, so its features are updated with each release of Infinity Connect.

Following are the changes to the Infinity Connect web app in Pexip Infinity version 18:

Feature	Description
New Infinity Connect web app now default	The next-generation version of the Infinity Connect web app is now default for new deployments.

Changes in functionality in this release

Feature	Description
Routing for calls from registered next-generation Infinity Connect desktop client	Administrators can specify whether calls made from registered next-generation Infinity Connect desktop clients are placed via the registrar or via DNS. The default setting is to route via the registrar.

Feature	Description
Administrative modifications	<p>This release contains the following administrative modifications:</p> <ul style="list-style-type: none"> When configuring a Virtual Reception, you now explicitly specify the type of Virtual Reception: either <i>Regular</i> (the default) or <i>Lync / Skype for Business</i> (when using Pexip Infinity as a gateway into SfB/Lync meetings). This has also introduced a new <code>two_stage_dial_type</code> field to the set of Virtual Reception service type response fields when using external or local policy. The "Call capacity limit reached" alarm now clears either when an existing call is disconnected or the next time a new call is successfully placed (previously it would only clear when a new call is successfully placed). When viewing LDAP sync template results, more information is included in any "Last sync error" messages for conference or alias clashes, such as the names of the VMRs or aliases causing the clash. When using jinja2 scripts, you can now use the new <code>pex_now</code> custom Pexip filter to obtain the current date and time, and the jinja2 <code>range</code> filter. There is also a new <code>pex_url_encode</code> filter that creates URL parameters that are safely URL-encoded. Two new parameters/variables are available when using external or local policy to assign the media location: <code>proxy_node_address</code> and <code>proxy_node_location</code>. "Participant has disconnected" messages in the administrator log now include a <code>License-type</code> parameter. "Configuration changed" messages in the administrator log now include a <code>Fields</code> parameter which lists the fields that have been modified. When using the management API you can filter on a participant ID when using the participant status and participant history resources.
Security improvements: only TLS1.2 is enabled by default for inbound HTTPS connections and ability to enable HTTP Content Security Policy on Conferencing Nodes	<p>On upgrade to v18, the only version of TLS enabled by default for HTTPS inbound connections is TLS1.2. This means that client API and management API users can no longer connect with TLS1.0 or TLS1.1; they must use a higher TLS protocol version. Support for old TLS versions may be re-enabled by running the security wizard and answering the TLS prompts appropriately.</p> <p>Administrators also have the ability to enable HTTP Content Security Policy on Conferencing Nodes by running the security wizard.</p> <p>The Management Node security wizard contains two new settings:</p> <ul style="list-style-type: none"> Permit TLS <1.2 for inbound HTTPS (default is No) Enable HTTP Content-Security-Policy for Conferencing Nodes (default is No) <p>If you are using version 3 of the Pexip Reverse Proxy you will not be able to connect to Conferencing Nodes. You should either:</p> <ul style="list-style-type: none"> Upgrade to v5 of the Pexip Reverse Proxy, or If continuing to use v3, connect over SSH to the reverse proxy and run the following command: <pre>sudo apt-get update && sudo apt-get -y dist-upgrade</pre> <p>In either case we recommend you first take a VM snapshot of the reverse proxy.</p>

Issues fixed in version 18

Pexip

Ref #	Limitation
12512	Fixed an issue where conference participants sometimes heard audio "crackles" and "pops" from other clients using the G.722 audio codec.
12179	Guest participants that are added via an API to a non-hosted conference now get disconnected as expected by the Guests-only timeout configuration when a conference ends.
11891	Resolved an issue where Pexip Infinity is handling main video and presentation on different nodes for a WebRTC gateway call, and a second dial-out may sometimes have occurred when the WebRTC client starts presenting.
11845	Resolved an issue where a Conferencing Node that had been running for more than 1 year without restart/reboot could cause calls to be rejected due to insufficient call licenses.
11548	Pexip Infinity will now send DTMF tones to Guest ADPs (Automatically Dialed Participants) who are connected to the "waiting for host" screen.

Microsoft

Microsoft Exchange

Ref #	Limitation
12763	Resolved an issue where users were unable to join a scheduled meeting, if that meeting was a single occurrence in an existing (but non-Pexip scheduled) recurring series that was converted into a Pexip scheduled meeting.

Known limitations

Pexip

Ref #	Limitation
13025	The version of the Pexip Infinity Administrator Guide that is available from the v18 Administrator interface does not include the list of events that are reported by the next-generation Infinity Connect clients when usage reporting is enabled. To view this information, see Infinity Connect next-generation clients .
12619	When using RTMP dual streaming, the second presentation stream/camera incorrectly sends a broken camera image (instead of an image of an easel) if there is no current presentation.
11351	When a cloud bursting Conferencing Node starts or stops, the other nodes might temporarily show a warning that they cannot communicate to the node that is starting/stopping. This will be addressed in a future release.
10337	Pexip Infinity will only latch for incoming media once, unless there has been a re-INVITE. This means that in some cases, when the NAT binding at the client has timed out and the source port has changed, Pexip Infinity will continue to send presentation media to the old port.
7906	If a caller dials into a Virtual Reception and enters the number of the conference they want to join, but there are insufficient hardware resources available to join the caller to that conference, the caller is disconnected from the Virtual Reception.
6739	Any changes made to VMR configuration — such as updating the participant limit — while the conference is ongoing do not take immediate effect, and may result in conference separation (i.e. new participants will join a separate VMR from those that are currently connected). All participants must disconnect from the conference for the change to take effect.
5601	When changing the certificates in a chain, a reboot of the associated Conferencing Nodes may be required if the changes do not produce the desired effect.
4312	Occasionally, group chat messages may not be displayed to Infinity Connect web app participants who are using Internet Explorer.

Cisco

Ref #	Limitation
4142	If the presentation channel already active from an MXP is taken by another connected participant, the MXP may not properly receive presentation content.

Microsoft

Microsoft Exchange

Ref #	Limitation
8825	With Microsoft's OWA for Android, when the Add-ins option is activated, any text already entered in the Notes section is deleted. To resolve this, VMR Scheduling for Exchange users should activate the Pexip scheduling add-in prior to adding any additional text.
8288	When Microsoft's OWA is used to connect to an Office 365 account and an add-in is activated, the absence of a horizontal scroll bar in the add-in panel may mean that not all text is visible. To view all text, VMR Scheduling for Exchange users should either widen the window or pop-out the meeting request.

Microsoft Skype for Business and Lync

Ref #	Limitation
13026	At certain window sizes the video shown by a Skype for Business / Lync client may appear to pulse. Changing the size of the window resolves the issue.
12882	When a Skype for Business client is presenting PowerPoint slides in a Skype for Business meeting, slide transitions are sometimes not sent to standards-based endpoints that are gatewayed into that meeting.
11817 7709	A mobile Skype For Business client (iOS and Android), or Skype for Business Mac client that is dialed into a Pexip Infinity VMR will never request anything higher than 360p. This means that although Pexip Infinity may receive a higher resolution video from the SfB client, it will only send up to a maximum of 640x360 to the SfB client (and limited to 180p to mobile and 360p to tablet devices).
9390	If a Skype for Business client running on Windows 7 attempts to record a Skype for Business / Lync meeting, the recording will not include any content from Pexip participants calling into the meeting through the Pexip Distributed Gateway.
8171	If a Lync 2010 client in a call with Pexip Infinity puts the call on hold, video does not properly resume when the call is resumed.
5100	If a Conferencing Node being used as a gateway into a SfB/Lync meeting is near processor capacity and another endpoint in the SfB/Lync meeting starts sending content, a participant may be inadvertently disconnected from the conference. To resolve this, the endpoint can dial back into the conference.
4926	Participants calling into Skype for Business / Lync through the Pexip Distributed Gateway may experience inconsistent call rejection messages if a Conferencing Node is placed into maintenance mode.
4812	In some instances, one of two messages sent to a VMR from two SfB/Lync clients not previously connected may not be properly retained by the VMR. To resolve, re-send the message.
4195	Participants connected via the Pexip Distributed Gateway into a SfB/Lync meeting may not receive presentation content from SfB/Lync participants. This occurs if the SfB/Lync user has a screen resolution where the width is an odd number of pixels, such as a resolution of 1437x758. If this occurs, one workaround is for the user to share an application rather than their full desktop.

Microsoft Edge browsers

Ref #	Limitation
6411	Microsoft Edge browsers (which are WebRTC-compatible) cannot currently use STUN and thus cannot send media to Pexip Infinity via a TURN server. This means that Microsoft Edge users connecting to a conference from outside your network (via a reverse proxy) will not be able to send or receive audio/video.

Chrome browsers

Ref #	Limitation
10545	Network connection interruptions of longer than 10 seconds may require Chrome participants to manually reconnect to a conference.