

Pexip Infinity v30

Release Notes

Software Version 30

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Contents

Introduction	3
Upgrading to version 30	4
Upgrading from version 27 or later to version 30	4
Upgrading from versions 22-26 to version 30	5
New features and improvements in this release	6
Pexip Infinity platform	6
Changes in functionality in this release	9
Pexip Infinity platform	9
Planned changes in future releases	10
Issues fixed in version 30	11
Pexip Infinity	11
VMR Scheduling for Exchange	11
Known limitations	12
Pexip Infinity	12
Cisco	12
Poly/Polycom	13
Microsoft	13
Microsoft Skype for Business and Lync	13
VMR Scheduling for Exchange	13

Pexip Infinity v30 Release Notes Introduction

Introduction

This document contains the release notes for Pexip Infinity version 30.

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 administer and use the Connect app client suite; how to configure Pexip Infinity features such as One-Touch Join, VMR Scheduling for Exchange and Pexip Service; and how to integrate Pexip Infinity with other third-party systems and call control solutions including Google Meet, Microsoft Teams, Microsoft Skype for Business and Lync, Cisco Unified Communications Manager, Cisco VCS and Polycom DMA.

Management Node host server sizing information

- For typical deployments of **up to 30** Conferencing Nodes, you must ensure that the Management Node host server has at least 4 cores and 4 GB of RAM.
- For deployments with **more than 30** Conferencing Nodes, you will need to increase the number of cores and the amount of RAM on the Management Node. Please contact your Pexip authorized support representative or your Pexip Solution Architect for guidance on Management Node sizing specific to your environment.

Upgrading to version 30

Please note, if you are running a software version between v22 and v26 inclusive, you must first upgrade to version 27 and then upgrade again to version 30, see Upgrading from versions 22-26 to version 30.

Upgrading from version 27 or later to version 30

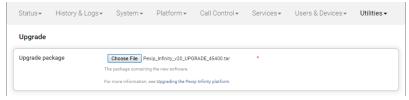
When the upgrade process starts, the Management Node is upgraded first. Then up to 10 Conferencing Nodes are selected and are automatically placed into maintenance mode. When all calls have finished on a node that is in maintenance mode, that node is upgraded and then put back into active service. Another 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 10 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.

To upgrade Pexip Infinity software from v27 or later to v30:

- 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 (after it has been rolled back) in the unlikely event that this is required.
 - Before upgrading a cloud-based deployment (Azure, AWS, GCP or Oracle), you should backup the Management Node via Pexip Infinity's inbuilt mechanism (Utilities > Backup/Restore).
- 2. Download the Pexip Infinity upgrade package for v30 from the Pexip download page.
- 3. Before upgrading, ensure that all "always-on" Conferencing Nodes are powered on and are reachable (i.e. no Connectivity Loss errors), and are all running the same version from which you are upgrading. You do not need to power on any cloud bursting nodes.
- 4. From the Pexip Infinity Administrator interface, go to Utilities > Upgrade.
- 5. Select Choose File and browse to the location of the upgrade package.



6. 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.

7. 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.

- 8. 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 the upgrade process completes and there are some nodes that have failed to upgrade, you can restart the upgrade process by uploading the upgrade package to the Management Node again via Utilities > Upgrade. This will skip over any nodes that have already been upgraded.
- o If you are using these instructions to first upgrade from v25.0 or v25.1 to version 27 before upgrading to version 30, due to a known issue it is possible that the upgrade will complete on the Management Node but not automatically proceed to the Conferencing Nodes. To resolve this issue, simply upload the upgrade package again via Utilities > Upgrade.
- 9. If you have Pexip CVI for Microsoft Teams you must also upgrade your associated Teams Connector deployment in Azure to the same version as your Pexip Infinity deployment (including minor/"dot" releases).
 - When upgrading your Teams Connector to version 30:

New upgrade steps for version 30

- You must be using Az module version 7.0.0 or later (previously the minimum was 5.1.0).
 - To check your installed version you can run:

Get-InstalledModule -Name Az -AllVersions

To install the latest appropriate Az version you can run: Install-Module -Name Az -MinimumVersion 7.0.0 -AllowClobber -Scope AllUsers

Standard upgrade steps

- You must use the latest version of the redeploy script as contained within the v30 documentation.
- o If you have deployed multiple Teams Connectors, you must follow the same redeploy process (with the appropriate variable initialization script) for each Teams Connector.
- As with all upgrades, you can continue to use the Pexip CVI app from your existing deployment.

Full instructions are available at https://docs.pexip.com/admin/teams_managing.htm#upgrading.

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 versions 22-26 to version 30

If you are running a software version between v22 and v26 inclusive, you must first upgrade to version 27 and then upgrade again to version 30. To do this:

- 1. Before upgrading, ensure that all "always-on" Conferencing Nodes are powered on and are reachable (i.e. no Connectivity Loss errors), and are all running the same version from which you are upgrading. You do not need to power on any cloud bursting nodes.
- 2. Download the Pexip Infinity v27 upgrade file.
- 3. Follow the steps outlined in Upgrading from version 27 or later to version 30, but when asked to Choose File browse to the location of the v27 upgrade file.
- 4. Verify that the upgrade has completed successfully.
- 5. Download the Pexip Infinity v30 upgrade file.
- 6. Follow the steps outlined in Upgrading from version 27 or later to version 30, and when asked to Choose File browse to the location of the v30 upgrade file.

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.

This topic covers the Pexip Infinity platform; for new features in the latest release of the Connect web app see the web app release notes.

Pexip Infinity platform

Feature

Description

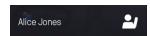
Teams Connector enhancements: improved certificate management, and new Teams-like layout* Pexip's Cloud Video Interop (CVI) integration with Microsoft Teams has been enhanced:

- Management of the Teams Connector certificate has been improved:
 - The certificate is now stored in the Azure key vault and can be updated without having to redeploy the Teams Connector.
 - New alarms are raised on Pexip Infinity when the Teams Connector certificate is due to expire within the next 30 days, and if it has expired.
- There is a new Teams-like layout for VTC systems that looks and operates in a similar manner to the
 meeting experience seen by native Teams clients. In this layout, spotlighting, use of avatars for audioonly participants, active speaker indication and raised hand indicators all have a similar look and feel to
 the native Teams layout. Note that:
 - As with other alternative layouts for Teams interoperability, you have to use policy to apply the layout by setting a "teams" view and enabling the relevant speaker indicators.
 - The layout cannot be customized via themes.
 - It has the same hardware resource usage requirements as the Adaptive Composition layout.
 - This layout is a technology preview feature, and is only recommended for use with Teams gateway calls
- Content presentation is now stopped if a CVI participant's role is changed to Attendee while it is currently presenting to the conference.
- Other administrative changes are:
 - You must be using Az module version 7.0.0 or later (previously the minimum was 5.1.0).
 - The procedure for uploading Teams Connector logs to Pexportal has changed.

Note that version 30 of the Teams Connector contains updates that necessitate an upgrade to your Pexip platform to ensure compatibility with the latest updates to the Microsoft Teams APIs and to the Teams Connector's latest features. We strongly recommend that you upgrade your Pexip deployment — both the Pexip Infinity platform and the Pexip Teams Connector — to version 30 as soon as practicable.

Raised hand indicator in classic layouts

When a participant raises their hand, an indicator slides out on the left side of the layout, and remains in view while the hand is raised. This applies to classic layouts only (i.e. not supported in Adaptive Composition layouts), and is typically only used by default in Virtual Auditoriums.



There is an associated, new themes graphic icon_raise_hand.svg.

Feature Description Updated Connect web app A new release of the Connect web app, "Pexip Connect for Web", is now available. This release includes: · an updated user interface revised join flows — one for regular users, and one for less experienced or "guest" users that guides them through their pre-call setup · background replacement native support for over 20 languages; additional languages can be added by an Administrator simplified branding noise suppression improved troubleshooting WCAG 2.0 compliance (for accessibility) • integrated support for upcoming new Pexip Infinity features. Administrators can choose which version of the Connect web app is offered to users by default via the Global Settings page. Note that this has resulted in a change in functionality around the how the default web app is determined, and the preconfigured URLs used to access the web app. Additionally, users themselves can elect to use a specific web app version by appending /webapp1/, /webapp2/ or /webapp3/ to the IP address or domain name of a Conferencing Node (or reverse proxy), for example: https://meet.pexample.com/webapp3/ Presentation audio support The Connect web apps now support sharing audio when you share your screen in a conference. When you select Share my screen, there is a new option to Share system audio (if you share your entire screen), or Share tab audio (if you share a browser tab). Supported on Chrome and Edge browsers only. On Mac and Linux, you can only share audio from a browser tab. On Windows you can share either system audio or browser tab audio. Google Meet interoperability Pexip's Google Meet integration has been enhanced: improvements: denoising, · Background noise is now removed from the audio streams. This feature is enabled by default but can transcribing prompts, and be configured via a new Denoise audio setting when configuring the Call Routing Rule for Google Meet DTMF layout controls integrations. There is also an associated new built in denoising object in the vendordata.json theme customization file where you can identify any endpoints that perform their own built-in denoising. • If a Google Meet conference is transcribed, relevant audio prompts indicating that transcribing has been started/stopped are played to callers who are gatewayed via Pexip Infinity into the conference, and a transcribing indicator is displayed. VTC participants can now use DTMF/keypad controls to control the meeting layout during an ongoing conference. Support for Korean and The Pexip Infinity Administrator interface now supports Korean and Traditional Chinese language. Traditional Chinese language OpenID Connect support for The participant authentication SSO process now supports the OpenID Connect security protocol (in addition to SAML). Additional variable supported When configuring the use of personal VMRs within the VMR Scheduling for Exchange feature, the email in VMR Scheduling for address of the VMR's owner can now be used as a variable within the jinja2 templates. Exchange

Feature Description End-to-end encrypted call End-to-end encrypted calls between two WebRTC participants now supports the following additional enhancements * features: · A conference can now be escalated beyond the two WebRTC participants (using any call protocol such as WebRTC or SIP for the additional participants, including via dial-out from the conference) but this means the call is no longer a Direct Media call and instead is a standard, transcoded call with media sent via Conferencing Nodes. In conference history, the original participants are shown as being transferred to a new call. If the call de-escalates back to two WebRTC participants then it becomes a Direct Media call again. · Support is now provided for chat, Connect app clients that are registered to Pexip Infinity, and joining as audio-only, and presentation and control-only connections. When defining (in a system location) the Client TURN servers that will be provisioned to Connect app WebRTC clients, there is a new Enforce media routing via a client TURN server option that, when selected, forces the WebRTC client to route its media through one of the specified client TURN servers. Media stream details and a Direct Media status flag are available when viewing participant status/history via the Administrator interface, and calls can now be monitored via Live View. This is still a technology preview feature and can be enabled via Platform > Global Settings > Tech Preview Features > Enable Direct Media, and then by enabling Direct Media on each required VMR (in the Advanced options section). Softmute* Softmute is advanced speech-aware audio gating which helps to minimize noise coming from a participant who has their microphone turned on in a conference, but is not speaking. If non-voice noise is detected, this feature softens the gain from that participant. It does not entirely suppress noise from an audio signal. This is a technology preview feature and can be enabled via Platform > Global Settings > Tech Preview Features > Enable Softmute. Live captions* Live captions are now supported on VMRs. Participants using the web app can now enable live captions where the live meeting audio is converted to a readable text (live transcription). Live Captions will be offered as an optional feature at an additional cost. Pexip is considering additional language support in the future (for instance: Spanish, Mandarin, Hindi, German, and French). Contact your your Pexip authorized support representative to record your interest. There are also two associated, new theme audio files: conf-live_captions_started_48kHz_mono.wav and conf-live captions started 48kHz mono.wav. This is a technology preview feature and can be enabled via Platform > Global Settings > Tech Preview Features > Enable Live Captions. Please contact your Pexip authorized support representative or your Pexip Solution Architect for guidance on enabling this feature specific to your environment. * Technology preview only

Changes in functionality in this release

This topic covers the Pexip Infinity platform; for changes in the latest release of the Connect web app see the web app release notes.

Pexip Infinity platform

Feature	Description
New top-level Certificates menu in Administrator interface	In the Pexip Infinity Administrator interface, all of the certificate management options have been moved to a new top-level Certificates menu, including separate options for viewing and managing root trust and intermediate CA certificates.
Trusted CA certificate management	For CA certificates uploaded by the Administrator, only root CA certificates are now included in Pexip Infinity's list of trusted CA certificates used for verification purposes (previously, uploaded intermediate certificates were also included). This means that when Pexip Infinity needs to verify a far end connection, that far end system must present an entire chain of intermediate certificates in addition to its own leaf certificate. This means that: • By default, Pexip Infinity will not use any intermediate CA certificates that have been uploaded to the Management Node for the purposes of verifying certificates for external services. • Under normal circumstances this should not require any changes as those far end systems should already be presenting their entire certificate chain. • If required, you can override this behavior for specific intermediate certificates by using a new Certificates > Intermediate CA Certificates > Advanced > Trusted Intermediate option which instructs Pexip Infinity to use that certificate in the TLS verification chain.
Resource allocation changes for Adaptive Composition layout in gateway calls, and Media Playback Service usage	 Hardware resource allocation rules have been updated to improve the accuracy of the Conferencing Node media load statistics: Gateway calls that use the Adaptive Composition layout now consume additional Conferencing Node resources (the actual amount depends on many factors, but as a guide, it uses an additional 0.5 HD of resource for each video participant that is on stage). This brings it into line with existing resource usage counting for VMRs that use Adaptive Composition. Connections to a Media Playback Service now use 1.2 times as much hardware resource as a
RTVideo codec, Lync Server 2010 and Lync 2010 clients no	connection to a VMR. Support for the RTVideo codec has been removed. This disables interoperability with Lync Server 2010 and Lync 2010 clients.
Setting the default web app	The previous Do not default to the legacy Web App option (Platform > Global Settings > Connectivity) has been replaced with a new Default web app option. • For new v30 installations, Default web app will be set to Always use latest at upgrade which will
	 result in Pexip Connect for Web being offered to users by default. For existing installations, after upgrading to v30: if Do not default to the legacy Web App was previously enabled (the default), the new Default web app option will be set to Webapp2. if Do not default to the legacy Web App was previously disabled, the new Default web app option will be set to Webapp1.
Preconfigured URLs for conferences	Preconfigured URLs used to access the previous web app are supported by the new web app, "Pexip Connect for Web", with the following exceptions: • role=guest will result in the participant being offered an alternative join flow that takes them through the setup of their camera, microphone and speakers before they are able to Join the meeting. • callType is no longer supported as the new join flow does not require it.

Planned changes in future releases

Feature	Description	More information
Infinity Connect legacy webapp	The original "legacy" version of the infinity Connect web app, "Webapp1", is no longer actively developed or maintained and will soon be removed from the default installation of Pexip Infinity.	

] pexip [Pexip Infinity v30 Release Notes Issues fixed in version 30

Issues fixed in version 30

For a list of resolved issues in the current version of the Connect web app see the web app release notes.

Pexip Infinity

Ref#	Resolution
30870	When attempting to deploy a new OVA image for a Pexip Management Node in vCenter 7.0.2 or later, the publisher field shows Pexip AS as an invalid certificate. From v30 onwards, the OVA signing process has been amended and Pexip now provides an appropriate certificate bundle.
29550	Resolved an issue where Conferencing Nodes with TURN 443 enabled were not able to proxy requests from a Reverse Proxy using default configuration.
29387	Calls placed from a VMR to an H.323 endpoint now respect any bandwidth restrictions configured on the endpoint.
28918	Bursting nodes that are powered off are no longer reported as having lost connectivity.

VMR Scheduling for Exchange

Ref#	Resolution
30213	Resolved an issue where existing meetings scheduled via the Outlook plugin could not be joined using the new version of the Connect web app ("Pexip Connect for Web").

] pexip [Pexip Infinity v30 Release Notes Known limitations

Known limitations

Pexip Infinity

Ref#	Limitation
30834	Changes to the HTTP Content Security Policy setting (via Platform > Global Settings > Security) will not take effect without the Conferencing Nodes being rebooted.
30756	Under certain circumstances, when a Conferencing Node is handling WebRTC calls that include presentation, the observed media load may exceed 100%.
27534	A Connect app that is paired to another video device (such as a SIP endpoint) cannot be used to connect to a Media Playback Service.
24424	Only 3 of the assigned DNS servers will be used by the Management Node or by a Conferencing Node (as configured in its associated system location).
19176	Changing the IP address of the Management Node and then manually rebooting before completing the installation wizard may result in failed connectivity to Conferencing Nodes. To work around this, you must ensure that you re-run and fully complete the installation wizard after changing the Management Node configuration.
16232	The Call-id is not logged on an administrative event when a Guest joins a conference and all Guests are muted.
16119	"License limit reached" alarms are not lowered as expected, even though an appropriate "Alarm lowered" message is logged.
15943	"Connectivity lost between nodes" alarms are not recorded in the alarm history (History & Logs > Alarm History).
13305	The G.719 codec is not currently supported for SIP.
12218	In some call scenarios that take a long time for the call setup to complete (for example calls that involve ICE, a Conferencing Node behind static NAT, and where the client is also behind a NAT) any audio prompts (such as requests to enter a PIN) may be played too early and the client may not hear all of the message.
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.

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.

Poly/Polycom

Ref#	Limitation
13541	When a Polycom Trio is registered to Skype for Business, and has dialed in to Pexip Infinity, it will receive presentation as main video from Pexip Infinity. However, when the same endpoint is dialed out to from Pexip Infinity, it will receive presentation as RDP.

Microsoft

Microsoft Skype for Business and Lync

Ref#	Limitation
17210	RDP presentation content from a Skype for Business meeting may sometimes take several seconds to render on VTC devices that are gatewayed into that meeting. One workaround is to use Video-based Screen Sharing (VbSS) instead of RDP for content sharing. If you must use RDP then you can configure your system to adjust the bandwidth used for RDP presentation which will reduce the delay in rendering the RDP content for the VTC device — contact your Pexip authorized support representative for configuration details.
13201	When a Skype for Business client is presenting PowerPoint slides in a Skype for Business meeting, sometimes only the first slide is sent to standards-based endpoints that are gatewayed into that meeting.
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 Infinity 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 Infinity 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.

VMR Scheduling for Exchange

Ref#	Limitation
19530	When using Microsoft's OWA with Office 365 account, join instructions that use the <style> element will not be added, even though the "Success" message is displayed to the user.</td></tr><tr><td>16602</td><td>In some circumstances, users are not able to obtain a VMR for a meeting if an existing meeting invitation is being edited and has previously had a VMR assigned. This may happen if a user has previously activated the add-in when editing an invitation but then discarded their changes, or if the user has removed the information added to the invitation when the add-in was previously activated. By default, users will see a message "VMR already assigned".</td></tr></tbody></table></style>

Page 13 of 13