



# Pexip Infinity v13

## Release Notes

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### Introduction

This document contains the release notes for Pexip Infinity version 13.

Complete information about how to install and operate Pexip Infinity is available from the Pexip technical documentation website at [docs.pexip.com](http://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.

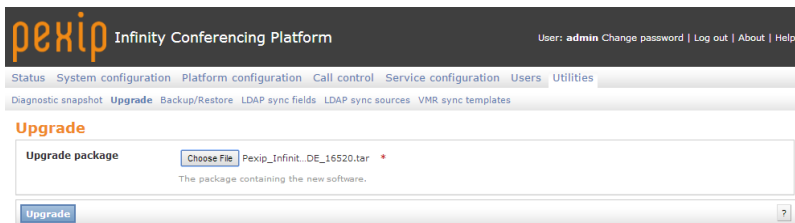
## Upgrading to version 13

### Upgrading from version 8 or later to version 13

- i** During an upgrade from version 11 or earlier to version 12 or later you will not be able to host any conferences on those Conferencing Nodes that are still running the earlier software version. You will experience "No valid license available" errors should anybody try to join a conference on those nodes. Those nodes will be able to host conferences again as soon as they have been upgraded to the new software. If you need to upgrade your platform during active business hours we recommend that you put all of your Conferencing Nodes into maintenance mode prior to starting the upgrade. As each node is upgraded it will automatically come out of maintenance mode and be able to host new conferences.

To upgrade Pexip Infinity software from v8 or later to v13:

1. Before upgrading an on-prem deployment, we recommend that you use your hypervisor's snapshot functionality to take a full VMware/Hyper-V snapshot of the Management Node. If upgrading from v8, due to incompatibilities resolved in v8.1, ensure that you take a non-quiesscing snapshot. This snapshot will be required should you later need to downgrade, or if the upgrade fails. 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 (AWS or Azure), you should backup the Management Node via Pexip Infinity's inbuilt mechanism (**Utilities > Backup/Restore**).
2. Download the Pexip Infinity upgrade package for v13 from [www.pexip.com/software-download](http://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 **Upgrade**. 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 **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 systems 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 the [Upgrading the Pexip Infinity platform](#).

### Upgrading from versions 3-7 to version 13

If you are running a Pexip Infinity software version between v3 and v7 inclusive, to upgrade to the latest version, you must first upgrade to version 8. To do this:

1. Download the Pexip Infinity v8 upgrade file (contact your Pexip authorized support representative for the link to this file).
2. Follow the steps outlined above, but when asked to **Choose File** browse to the location of the **v8** upgrade file.

3. Verify that the upgrade has completed successfully.
4. Download the Pexip Infinity **v13** upgrade file.
5. Follow the steps outlined above, and when asked to **Choose File** browse to the location of the **v13** upgrade file.

## New features and improvements in this release

You can go to [https://docs.pexip.com/admin/whats\\_new.htm](https://docs.pexip.com/admin/whats_new.htm) and follow the relevant links for more information about all of these features.

### Version 13

#### Pexip Infinity platform

Feature	Description
Dynamic bursting to the AWS cloud	<p>Pexip Infinity deployments have the ability to burst into the Amazon Web Services (AWS) cloud when primary conferencing capabilities are reaching their capacity limits, thus providing additional temporary Conferencing Node resources.</p> <p>This provides the ability to dynamically expand conferencing capacity whenever scheduled or unplanned usage requires it. The AWS cloud Conferencing Nodes instances are only started up when required and are automatically stopped again when capacity demand normalizes, ensuring that AWS costs are minimized.</p>
Video watermarking via themes	<p>Video watermarking overlays a small transparent image onto the main speaker video during a conference. This enables you to add your own imagery, logos or information to the video stream.</p> <p>Video watermarking is enabled by default, and applies a Pexip logo to all conferences (VMRs and Virtual Auditoriums) running on new installations and on upgrades of existing installations. Watermarks are not added to calls placed via the Pexip Distributed Gateway.</p> <p>The watermark image can be disabled or customized via the theme applied to the conference, allowing you to have a different watermark per VMR, if required.</p>
Device provisioning via LDAP	<p>Pexip Infinity can bulk provision devices from directory information contained in an AD/LDAP server. This complements existing functionality to provision VMRs via LDAP. As a consequence, "VMR sync templates" are now referred to more generically as "LDAP sync templates".</p>
Ability to send a provisioning email to a VMR or device owner	<p>When bulk-provisioning VMRs or device aliases from Active Directory via LDAP, an email can be sent out to the VMR owner telling them the properties of their VMR, such as its aliases and security PINs, or to the device owner telling them the device alias properties, such as its associated username and password for registration purposes.</p>
Directory (phone book) of devices and VMRs for registered Infinity Connect clients	<p>Pexip Infinity now provides a search facility to its registered Infinity Connect clients that enables them to look up the contact details of other devices and VMRs, making it easier for the Infinity Connect client to call those devices or VMRs.</p>
External policy API enhancements including directory and registration requests	<p>The external policy API has been enhanced to include:</p> <ul style="list-style-type: none"> <li>• New directory information request to obtain a list of phonebook aliases. The directory information can be used by Infinity Connect desktop clients and Infinity Connect Mobile clients that are registered to a Pexip Infinity Conferencing Node.</li> <li>• New registration alias request to enquire if an alias is allowed to register to a Pexip Infinity Conferencing Node.</li> <li>• Ability to administratively enable or disable support for individual API request types.</li> </ul>
Audio-only call licenses	<p>Pexip Infinity's call licensing model can support audio-only call licenses, port (video call) licenses, or a combination of the two.</p> <p>On upgrade to version 13, all existing call licenses are treated as port (video call) licenses.</p>
Ability to disable individual codecs	<p>You can choose, on a global basis, which codecs to offer in audio/video negotiation.</p>

Feature	Description
Support for presenting PowerPoint files from Lync / Skype for Business clients	Participants connected to the Pexip VMR in a Lync / Skype for Business Fusion or gateway call can now see shared content if a Lync / Skype for Business user presents PowerPoint files.
New alarms	<p>New alarms have been added on the Management Node for when nodes are not correctly synchronized for NTP, and when there are connectivity or configuration synchronization issues between nodes.</p> <p>The alarm icon displayed on the Pexip Infinity Administrator interface is now a red triangle.</p>
Historical backplane statistics	Historical conference backplane data, including media streams, is available via the Pexip Infinity Administrator interface and the management API.
Improved resilience and retransmission for Chrome-based clients	<p>Significantly improved media transport robustness for Chrome-based WebRTC clients (Infinity Connect desktop client and Infinity Connect Web App on Chrome browsers).</p> <p>Negative acknowledgements and RTP retransmission have been implemented for video sent between Chrome-based clients and Pexip Infinity.</p>
Administrative usability improvements	<p>The following administrative usability improvements have been made:</p> <ul style="list-style-type: none"> <li>You can use the Pexip Infinity Administrator interface to transfer a participant to another conference.</li> <li>Improved conference media graph — when viewing the status of an ongoing conference the media graph now highlights the nodes and endpoints within each system location. You can also view the current media load for each Conferencing Node, see real-time packet loss data for each connection, and use your mouse to pan and zoom the graph.</li> <li>You can view the current and historical (last 7 days) capacity and media load of a system location.</li> <li>You can view the historical (last 7 days) media load of a Conferencing Node.</li> <li>The Pexip Infinity Administrator interface now uses drop-down menus and has a lighter color scheme. (The submenu groupings and order are unchanged.)</li> <li>Tables now allow multi-level sorting.</li> <li>The status of a self-signed TLS certificate on the Management Node or on a Conferencing Node is shown as <i>Temporary</i>.</li> <li>You can specify a free-format description when configuring NTP, DNS and syslog servers.</li> </ul>
Additional layout	A new 2 + 21 layout is now available.

## 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 version 13:

Feature	Description
DTMF controls in floating window	The DTMF keypad (used to send DTMF tones to another participant in the conference) now opens in a draggable, semi-transparent window.
Transfer participant	Hosts can now transfer participants to another conference.
New default background image	The default background image is a picture of clouds.

## Changes in functionality in this release

Feature	Description
Video watermarking is enabled by default in the base theme and in all preconfigured themes	<p>Video watermarking, which overlays a small transparent image onto the main speaker video during a conference, is enabled by default in version 13 in the base theme and in all preconfigured themes.</p> <p>After upgrading to version 13, the default Pexip watermark will be applied to all conferences, even if an existing custom theme has been applied to that VMR.</p> <p>If you want to remove watermarking or use a different watermark image, you need to create a customized theme with either watermarking disabled (by changing the <code>themeconfig.json</code> file to state <code>"disable_watermark_icon" : true,</code>) or with a different image (by replacing the <code>watermark_icon.png</code> file), and then apply that customized theme as either the new default theme for your system, or apply it to individual services (VMRs, Call Routing Rules etc).</p> <p>If you have an existing custom theme, you can update that theme either to disable watermarking (by adding <code>"disable_watermark_icon" : true,</code> to the <code>themeconfig.json</code> file) or to use a different watermark image (by adding your own <code>watermark_icon.png</code> file).</p> <p>Note that you cannot modify the base theme — you must upload your own customized theme and set it as the new default theme, or apply your custom theme to individual services.</p>
Changed images in the Base Pexip theme	The Base Pexip theme contains different images for the PIN entry screens and other information screens such as "Capacity exceeded", "Insufficient licenses", "Connecting", and so on. You can change any of these images, if required, by uploading your own customized theme.
HSTS (HTTP Strict Transport Security) has been enabled	Pexip Infinity nodes now enable HSTS to ensure greater security. This means that if your deployment moves from using a valid TLS certificate to using an invalid certificate (e.g. you redeploy a Conferencing Node, or your certificate expires or is invalidated for some reason) then certain web browsers will stop you from accessing that node via the web when using the DNS name of that node, until you correct the certificate issue. You may browse directly to the IP address of the node in the meantime. This applies to the Management Node and Conferencing Nodes.
Registered aliases returned in status queries are lower case	All registered aliases in status information shown on the Pexip Infinity Administrator interface or returned via the management API are always in lower case, regardless of the capitalization of the alias that was actually registered.

## Issues fixed in version 13

### Pexip

Ref #	Limitation
7538	Pexip Infinity no longer generates incident reports on receiving unexpected RDP traffic.
7512	Occasional and intermittent issues where some endpoints fail to receive presentation content while in a VMR have been resolved.
7376	The participant's display name can now be overridden when dialing out to registered Infinity Connect clients.
7058	An occasional issue where calls may not disappear from the status list of conferences currently in progress after the call has completed has been resolved.
5832	An audio-only conference participant who is using the Infinity Connect Web App via Internet Explorer, Microsoft Edge or Apple Safari browsers can now present content (share images or PDFs) to the conference.

## Microsoft

Ref #	Limitation
6638	When calling out to a Lync / Skype for Business client, Pexip Infinity will no longer time out if the Lync / Skype for Business client answers with video, switches to audio-only, and then re-escalates to video.
6471	A Fusion call (where a Pexip VMR is added to a Lync / Skype for Business AVMCU conference) can now be initiated via a mobile Lync / Skype for Business client.

## Known limitations

### Pexip

Ref #	Limitation
7646	During periods of heavy network congestion, audio packet-loss concealment for AAC-LD, Opus and G.722.1 codecs may result in audio drop outs.
7530	When chat is disabled globally, the Infinity Connect Mobile clients still show the chat window and allow users to type a message and press send, giving the impression that chat is working.
7447	When using the external policy API for a Virtual Reception ("two_stage_dialing") service type, the response from the policy server cannot include the match_string or replace_string fields. (These fields allow the Virtual Reception service to limit the aliases which may be entered.)
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.
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.
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

Ref #	Limitation
5100	If a Conferencing Node being used as a gateway into a Lync AV-MCU conference is near processor capacity and another endpoint in the AV-MCU conference 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 Lync/Skype for Business 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 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 the AV-MCU may not receive presentation content from Lync participants. This occurs if the 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.



## Firefox browsers

Ref #	Limitation
7274	The zoom/pan function when viewing the media connections graph of an active conference via the Pexip Infinity Administrator interface is not supported in Firefox browsers. However, you can still use Firefox's built in zoom in/out function to see more/less of the graph.

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