



Pexip Infinity v14.2

Release Notes

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Introduction

This document contains the release notes for Pexip Infinity version 14.2.

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 14.2

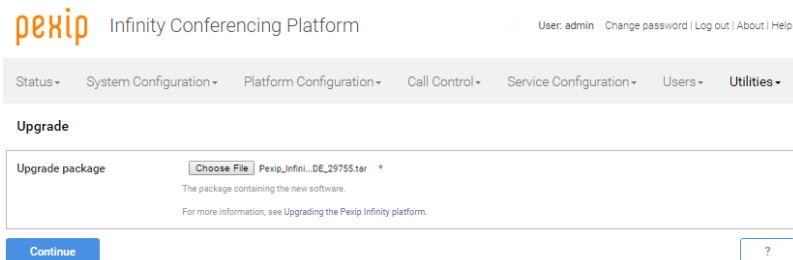
Upgrading from version 8 or later to version 14.2

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.

- 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.

To upgrade Pexip Infinity software from v8 or later to v14.2:

- 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-quiescing 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**).
- Download the Pexip Infinity upgrade package for v14.2 from www.pexip.com/software-download.
- From the Pexip Infinity Administrator interface, go to **Utilities > Upgrade**.
- Select **Choose File** and browse to the location of the upgrade package.



- 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.
- 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.
- 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 14.2

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 **v14.2** upgrade file.
5. Follow the steps outlined above, and when asked to **Choose File** browse to the location of the **v14.2** 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.

Version 14

Pexip Infinity platform

| Feature | Description |
|---|---|
| Layout improvements | <ul style="list-style-type: none"> We have increased the relative size of video images and reduced the amount of black space. Thumbnails of participants entering the stage will now fade into place (previously they slid in from the side). |
| Show main speakers' names | You can now configure Virtual Meeting Rooms and Virtual Auditoriums to show the name(s) of the participant(s) who are being shown in the main video. Names will be displayed at the bottom of the participant's video. |
| Live platform status overview | <p>Pexip Live View (Status > Live View) is a new interactive graphical report that shows the current status of your deployment, including load on Conferencing Nodes and conferences taking place.</p> <p>Minor changes have been made to the conference graph to align it with the new Live View.</p> |
| Test call service | <p>Pexip Infinity now includes a new Test Call Service. This provides a test loop that allows users to check the quality of their video and audio, and verifies that they can connect to the Conferencing Node.</p> <p>On upgrade to version 14, a single default test service with the name "Test Call Service" and the alias "test_call" is automatically added to your system configuration. (If an existing conference or alias exists with those names, they will not be reassigned to the new service.) You can add further test services and aliases as necessary, and configure them via themes if required.</p> |
| Certificate Signing Requests (CSRs) | You can generate a Certificate Signing Request (CSR) from within Pexip Infinity, and then upload the returned certificate associated with that request. |
| Allow only registered devices to make Pexip Distributed Gateway calls | You can configure Call Routing Rules to only allow devices that are registered to Pexip Infinity to be able to make calls via the Pexip Distributed Gateway. This provides greater security and control over the devices that can use gateway resources. |
| Local policy scripts | <p>Local policy allows you to manipulate service configuration and media location data (that has been provided either via the external policy API, or has been retrieved from Pexip Infinity's own database) by running a jinja2 script against that data.</p> <p>Local policy and external policy are configured via policy profiles (Call Control > Policy Profiles) and a policy profile is then assigned to a system location.</p> <p>On upgrade to version 14, any existing external policy servers are converted into policy profiles.</p> |
| Dual network interfaces (NICs) for Conferencing Nodes | You can configure a secondary network address on a Conferencing Node. If configured, this secondary address is used for signaling and media, and the primary address is used for inter-node communication. |
| Improved CSV import/export | The existing CSV import/export utility for Virtual Meeting Rooms has been expanded to include all configuration options. Additional CSV import/export is now available for Virtual Auditoriums, Virtual Receptions, Automatically Dialed Participants, and device aliases. |

| Feature | Description |
|---|--|
| H.264 High Profile codec support | <p>Pexip Infinity now supports the H.264 High Profile codec. The H.264 High Profile codec can provide HD video quality with reduced bandwidth requirements on H.264 connections.</p> <p>This codec is disabled by default. To enable the codec, go to Platform Configuration > Global Settings and, in the Codecs section, move <i>H.264 High (mode 1)</i> into the list of Chosen Codecs. For optimal interoperability results, only enable <i>H.264 High (mode 1)</i> — leave <i>H.264 High (mode 0)</i> in the Available Codecs list.</p> |
| RTMP dual stream support for Automatically Dialed Participants (ADPs) | Automatically Dialed Participants (ADPs) can be configured with RTMP dual streams. |
| Skype for Business Video-based Screen Sharing (VbSS) * | <p>Pexip Infinity now supports sending and receiving content to and from Skype for Business clients using VbSS.</p> <p>This is a "tech preview" feature and is currently only supported when the Skype for Business client is either calling another endpoint via the Pexip Distributed Gateway, or calling into a Virtual Meeting Room or Virtual Auditorium.</p> <p>Default: disabled.</p> |
| New alarm | Pexip Infinity will raise an alarm if it detects that the underlying hardware appears to be over-committed. |
| * Technology preview only | |

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 14:

| Feature | Description |
|-------------------------------|--|
| Screensharing quality setting | Prior to joining a conference, you can set the frame rate to use when sharing your screen (supported in Chrome only). A lower frame rate will result in <i>sharper</i> images and is best for static presentations; a higher frame rate will be less sharp and is best for content where there is more <i>motion</i> . |
| Screensharing tabs | When sharing your screen (supported in Chrome only), the available desktops and apps now appear in separate tabs. |

Changes in functionality in this release

| Feature | Description |
|--|--|
| Less verbose support.sip messages in the support log | Some support.sip messages in the support log are less verbose than previously. Log messages for SUBSCRIBE, NOTIFY, OPTIONS, INFO and UPDATE requests now generate summary output. |
| Keep alive pings from SIP proxies no longer trigger external policy requests | Pexip Infinity now immediately responds with 200 OK to OPTIONS keep alive pings from remote SIP proxies, and does not perform any additional processing — such as sending outbound external policy requests — on receipt of such messages. |

| Feature | Description |
|---|---|
| Lync and Skype for Business terminology updates | <p>References to "Lync" on the Pexip Infinity Administrator interface have been updated to also refer to "Skype for Business", specifically:</p> <ul style="list-style-type: none"> "Lync servers" are now called "Lync / Skype for Business servers". The "Lync (MS-SIP)" protocol (used in Call Routing Rules and when dialing out) is now called "Lync / Skype for Business (MS-SIP)". In Call Routing Rules the "Lync AVMCU conference direct (not via Virtual Reception)" call target is now called "Lync / Skype for Business meeting direct (not via Virtual Reception)", and the "Lync clients or Lync AVMCU conferences via a Virtual Reception" call target is now called "Lync / Skype for Business clients, or meetings via a Virtual Reception". The "Lync MSSIP domain" (used in global settings and system location configuration) is now called "Pexip Infinity domain (for Lync / Skype for Business integration)". Global setting "Enable Lync auto-escalation" is now called "Enable Lync / Skype for Business auto-escalation". "Lync conference lookup location" on a Virtual Reception is now called "Lync / Skype for Business meeting lookup location". <p>(Note that all API parameter/field names are unchanged.)</p> |
| Management API improvements | <p>There have been minor updates to the management API:</p> <ul style="list-style-type: none"> It now allows filtering of devices ('device' resource) by the owner email address ('primary_owner_email_address' field). |
| Improvements to the conference status graph | <p>There have been minor updates to the conference status graph, including changes to the icons representing Conferencing Nodes, and the inclusion of control-only participants in the graph.</p> |
| More historical media load data | <p>The Conferencing Node media load graph now shows 4 weeks of history (rather than one week as previously).</p> |
| Relationship between services and themes | <p>You can now:</p> <ul style="list-style-type: none"> from each of the Service configuration pages, view which themes are associated with the services, and sort the list by theme view the number of services to which a particular theme has been applied. |
| Service creation time | <p>You can now view the time at which a particular service was created. This information is shown via the Administrator interface on the edit page for each service. This applies to:</p> <ul style="list-style-type: none"> Virtual Meeting Rooms Virtual Auditoriums Virtual Reception Automatically Dialed Participants Device aliases |
| Maintenance mode status | <p>The Conferencing Node status page now includes a sortable column regarding whether each node is in maintenance mode.</p> |
| Conference history | <p>The maximum number of conferences show in the Conference History page has increased from 5,000 to 10,000.</p> |
| Security-related updates | <p>This release includes several security-related modifications:</p> <ul style="list-style-type: none"> TLS connections no longer use Triple DES or MD5. The security wizard (used when deploying Pexip Infinity in secure mode): <ul style="list-style-type: none"> allows you to disable TLS 1.0 allows you to disable Anonymous Diffie Hellmann key exchange for outbound SIP/TLS no longer allows you to enable SSL 3.0. |

| Feature | Description |
|---|---|
| Infinity Connect Web App support for Microsoft Internet Explorer on Windows 10 has been deprecated. | Support for the Infinity Connect Web App via Microsoft Internet Explorer on Windows 10 systems has been deprecated. Windows 10 users should use Microsoft Edge (or another browser such as Chrome, Firefox or Opera) instead. |
| API participants and backplane reservation | If an API participant is the first participant to join a conference, it will now reserve a backplane for the conference. Previously an API participant would not have reserved a backplane. |

Issues fixed in version 14.2

Pexip

| Ref # | Limitation |
|-------|--|
| 8808 | Resolves CVE-2017-6551. See Security Bulletin: CVE-2017-6551 for more information. |

Issues fixed in version 14.1

Pexip

| Ref # | Limitation |
|-------|---|
| 8250 | Outbound calls that do not accept all offered media streams from Pexip Infinity no longer fail if a subsequent empty re-INVITE causes a mix of encrypted and non-encrypted streams to be offered. |
| 8267 | The Infinity Connect Web App now operates correctly on Android phones. |
| 8247 | Very occasional issues where backplanes between nodes would temporarily lose connectivity when the IPsec connection is rekeyed have been resolved. |
| 8211 | If an endpoint does not signal specific H.264 packetization mode support when setting up an H.323 call, Pexip Infinity will no longer ignore all H.264 capabilities. |
| 8001 | Occasional upgrade issues where a Conferencing Node would not automatically reboot at the end of its upgrade process have been resolved. |

Microsoft

| Ref # | Limitation |
|-------|---|
| 8419 | When a standards-based video system is gatewayed into a Lync/SfB meeting, that video system no longer receives low resolution video from a Lync / Skype for Business client when the video system is the active speaker. |
| 8295 | Calls are no longer dropped when a Skype for Business 2016 client joins a conference as audio-only and is then automatically escalated to video (because Pexip Infinity's "Lync / Skype for Business auto-escalation" global setting is enabled). |
| 8240 | Conferencing Nodes deployed in Microsoft Azure which are upgraded to v14 now always boot successfully after upgrade. |
| 8237 | Participants hosted on Pexip are no longer dropped if a participant connecting to a Lync/SfB meeting through Pexip starts presenting before their video to/from the meeting is active. |
| 5951 | Calls may no longer be dropped if a Virtual Auditorium is configured with different layouts for Guest view and Host view, and that Virtual Auditorium is then gatewayed into a Lync / Skype for Business meeting, the Virtual Auditorium. |

Issues fixed in version 14

Pexip

| Ref # | Limitation |
|-------|--|
| 8032 | Resolved an occasional issue where a sequence of a number of video frames which cannot be decoded would cause the conference to fail. |
| 7876 | Calls to a Virtual Reception are no longer dropped when a video endpoint connects a Virtual Reception that is configured as audio only. |
| 7646 | During periods of heavy network congestion, audio packet-loss concealment for AAC-LD, Opus and G.722.1 codecs no longer causes occasional audio drop outs. |
| 7608 | Recent versions of Skype for Business 2016 clients that are connected to a Pexip VMR no longer lose audio after approximately 10 minutes. |
| 7447 | When using the external policy API for a Virtual Reception ("two_stage_dialing") service type, the response from the policy server can now include the match_string and replace_string fields. (These fields allow the Virtual Reception service to limit the aliases which may be entered.) |
| 7274 | The zoom/pan function when viewing the media connections graph of an active conference via the Pexip Infinity Administrator interface now works correctly in Firefox browsers. |
| 7273 | Version 14 contains improved handling of bursting RDP streams that previously would very occasionally cause participants to drop from a conference. |

Microsoft

| Ref # | Limitation |
|-------|--|
| 8128 | Intermittent issues with connecting to a large Skype for Business meeting via the Pexip Distributed Gateway have been resolved. |
| 8168 | Intermittent issues with dropped calls when connected to a large Skype for Business meeting via the Pexip Distributed Gateway have been resolved. |
| 7815 | An occasional issue where merging a Pexip VMR or a gateway participant into a Lync / Skype for Business meeting would cause some participants hosted on Pexip to be dropped has been resolved. |

Lifesize

| Ref # | Limitation |
|-------|--|
| 7737 | Resolved an issue introduced in Pexip Infinity version 13, where Lifesize endpoints might no longer receive audio (when using the AAC-LD codec) when connected to a VMR. |

Polycom

| Ref # | Limitation |
|-------|---|
| 7760 | Resolved an issue where Pexip Infinity does not receive audio from Polycom Group Real Presence devices running v6 of their software when using the G.719 audio codec. |

Chrome browsers

| Ref # | Limitation |
|-------|--|
| 7672 | Chrome browsers no longer display an "Aw, snap!" error page when using the Play Test Sound option in the Infinity Connect Web App. |

Known limitations

Pexip

| Ref # | Limitation |
|-------|---|
| 7906 | If a caller dials into a Virtual Reception and enters the number of the conference they want to join, but there are insufficient 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. |
| 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. |
| 6001 | An Infinity Connect Host participant who has joined a Host-PIN-protected conference as control-only (and there are no other Host participants) cannot use the green telephone icon next to a participant's name in the roster to let a Guest participant (who is waiting to join) into the conference. The workaround is to use the Start conference option, which will let in all Guest participants. |
| 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 meeting is near processor capacity and another endpoint in the 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 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. |

Microsoft Edge browsers

| Ref # | Limitation |
|-------|--|
| 8133 | When viewing the live platform status and conference status graphs in a Microsoft Edge browser, if there are any labels that contain a hyphen or dash the graph will not render correctly, and zooming or panning within the graph will leave traces of the label. |
