

Interoperability

VideoCentric's Guide to Connecting Video Conferencing Platforms



Microsoft Teams



Google Meet



“ISLANDS” OF INTEROPERABILITY

Traditional Video Conferencing platforms, e.g. Polycom, Tandberg, Cisco, Lifesize, have for 20 years or more adhered to international standards set by the ITU, namely H.323 and SIP.

More recently, new cloud services have appeared on the market which are proprietary, meaning that users on the same platform can call each other directly, but users wishing to cross between platforms need to bridge between the islands, through what is commonly known as a “gateway”.

Whether you’re talking Teams, Zoom, Google Meet, WebEx or other islands of communication, you need a gateway. No longer a physical device, this is now a licence you subscribe to, or a set of licences if you expect more than one call to/from your island at the same time. The more licences you subscribe to, the more concurrency you have before your callers receive an “all lines busy” indication.

Gateway licences go by different names and have multiple pricing models applied to them, but essentially, they are all similar.

CVI LICENCES

Teams desktop, Teams mobile users and natively registered Teams Room systems can all call each other and be invited to a conference in advance through scheduling from a calendaring system such as MS Exchange. It is easy to create a multipoint conference in this way and invite extra users as you go.

But what about the rest of the world out there, those that are not on Teams? Can they simply dial in to your Teams conference? No, not without a Gateway to provide them access. Also, is it possible for a Teams user to dial out from Teams to customers or suppliers using other platforms such as Zoom, Lifesize, BlueJeans, Pexip, Polycom, Tandberg or Cisco? No, not unless they have installed a bot to be able to branch out of Teams into Zoom (for example), but then they are no longer in Teams so cannot invite more of their own colleagues.

The answer is to apply a set of gateway licences, known generically as **Conference Video Interconnect (CVI)** licences, to your MS Teams account. These allow standards-based SIP or H.323 systems to be invited into Teams conferences by any of your Teams desktop users.

So, how many licences will I need? That relies on you forecasting how many non-Teams systems will be calling in concurrently. The more licences you have, the more access incoming callers will have before they receive “all lines busy”.

CVI licences for Teams are hosted by Microsoft on their cloud-based Azure platform. These can only be resold by one of three MS-certified channels, namely Poly (ex Polycom), Pexip or Verizon (ex BlueJeans) and each has their own brand name and go-to-market approach. In all cases, licence subscriptions are attached to your Office 365 tenant account and behave fundamentally in the same way. Let’s run through the three options, all available through VideoCentric, as well as mentioning environments such as Google Meet, WebEx and Zoom.



Poly's RealConnect licences operate on a "concurrent port" basis. One licence means that your entire organisation of Teams desktop users can only admit one SIP/H.323 system/user at any one time. If more than one concurrent caller is to be expected, then more licences must be set up in advance.

CVI port licences are annually recurring and there is no refund for unused capacity and so forecasting usage is important so that important VIPs aren't rejected but at the same time, you don't pay for unnecessary capacity. Ports are consumed at the time they are actually used by an incoming caller, not at the time they are scheduled through user invitation.

Once a subscription is in place of any capacity, every one of your Teams users will have extra dialling information appended to the bottom of their Teams invites, encouraging even greater usage when inviting external guests.

Poly operates with a hard-ceiling for 1-5 CVI licences and a 50% soft-ceiling for 6 or more. This means that "all lines busy" can be expected as soon as the threshold is exceeded if subscribing to fewer than 6 licences but will allow a 50% excess on 6 or more CVIs pooled across an organisation.

For example, if you subscribe to 6, you get an actual capacity of 9, and so only the 10th caller is actually rejected. Subscribe to 10 and get 15, and so on. The soft ceiling is not designed for frequent abuse but for occasional flexibility and discussion will take place regarding threshold increase if it becomes regular.

Direct Dial-in - The format of dial string sent out to invited SIP/H.323 systems is:

<GatewayID>.<MeetingID>@teams.plcm.vc

Indirect Dial-in – As an alternative to dialling the whole string directly with Meeting ID's that usually change per meeting, it is common for <GatewayID>@teams.plcm.vc to be set in a system's phonebook, or home screen speed dial. This way it remains constant and the caller will wait for a welcome announcement, then input the Meeting ID followed by a # when prompted.

One Touch Join (OTJ) can be set up for traditional VC systems you administer on your network. By installing freely downloadable OTJ management software on to a server on the same network as your SIP/H.323 endpoints, Teams invitations to the system (e.g. to PolyRPG500@company.co.uk) will be intercepted by the software, replied to on behalf of the VC endpoint and scheduled in its calendar for OTJ. Assuming that the system in question is controlled by a touch panel, it will be displaying "Join" just before the conference start time and a user simply presses this button to enter the Teams conference with no dial strings to remember or pre-set.



BlueJeans CVI licences are completely unrelated to the BlueJeans MultiPoint Cloud Service. They are standalone CVI licences that allow any SIP/H.323 VC system to be invited into Teams with no requirement to subscribe to other service offerings. The difference from the CVI licences outlined above is not in the way that they work; but the way in which they are packaged and marketed for subscription. In addition to the “concurrent port” model applied above, BlueJeans offer other subscription models which are listed below to provide more flexibility for buyers.

- **Named User Model** – You define which of your Teams users will have special privileges to invite SIP/H.323 systems into conferences. Only those named individuals (e.g. firstname.lastname@company.co.uk) are licenced and it is a breach of licence to use generic names or share identities. The cost per user per annum is much less than the port model, but minimum quantities apply to various cost bands.
- **Enterprise Model** – Every Teams member in your organisation is assigned a licence. If you have 200 employees, then you get 200 licences, with 200 port concurrency although in practice far fewer would ever be used. The cost per employee is significantly lower than for named users and there is virtually no chance of all lines being busy.
- **Ports model** - The same as described for Poly above but with a permanent hard ceiling based on your actual subscription level.

Like Poly above, dialling can be **direct, indirect** or via **OTJ**, the only difference being the domain suffix that represents BlueJeans (BJN) rather than Poly:

<GatewayID>.<MeetingID>@teams.**bjn**.vc

PEXIP GATEWAY CVI FOR TEAMS



Pexip CVI licences operate in the same way as Poly and BlueJeans, but again there are differences in the way they are marketed, particularly when considering larger enterprises and those with significant investment in Cisco systems owing to their Norwegian pedigree and corporate/public sector focus.

- **Ports model** -The same as Poly but with a permanent soft-ceiling. No hard ceiling means that incoming callers will never receive “all lines busy” indication. Overuse of ports traditionally came at a cost, with an overage charge for excess usage, but that was dropped due to the conflict it caused through post usage billing of unauthorised usage. Instead, today, Pexip will monitor over-usage and enter into licence upgrade discussions if they feel that extra port subscription is justified on your account’s annual subscription.
- **Enterprise Model** – The same as described for BlueJeans above where every Teams member in your organisation is assigned a licence and there is virtually no chance of all lines being busy.
- **Enterprise Connect Model** – This is unique to Pexip and ties in with another service they also supply, namely their SIP Endpoint Registration Service, AKA Videxio or VideoCloud VC365. Here the focus is on allowing meeting room endpoints, sitting on private/local IP addresses, to securely access the internet via the organisation’s firewall, without punching holes through it. Because they “own” the endpoint registration, they can (optionally) assign a VMR to it and also a dedicated CVI licence. So, under Enterprise Connect, a Polycom RPG500 for example, gets registration, firewall traversal, a 50-seat SIP multipoint virtual meeting room

and invitation access into MS Teams. 20 endpoints subscribed will result in 20 CVIs for concurrent usage by an organisation, not exclusively for use by those 20 endpoints but as a pool shared across an entire organisation.

Pexip provides for the same **direct, indirect** or **OTJ** dialling capabilities as the other two, but this time it looks like this:

<GatewayID>.<MeetingID>@teams.pexip.vc

Pexip perhaps appeals more to larger organisations with a mix of on-premise and cloud infrastructures through their hybrid handling and multi-domain management capabilities which are too detailed to discuss here. VideoCentric provides on-premise and cloud licencing as a Pexip partner of over 7 years.

PEXIP GATEWAY CVI FOR GOOGLE MEET



Pexip CVI licences can be applied to a Google Meet (Hangouts) collaborative environment in exactly the same way as for MS Teams. “Ports” and “Enterprise” models apply, but operationally, the licences function in the same way as described above, i.e. by invite-in from a Google desktop user to a SIP-based VC system. VideoCentric is certified to provide subscriptions to such licences and has partnered with Pexip since 2013.

WEBEX CVI FOR MICROSOFT TEAMS



Webex Teams

COMING SOON – A new CVI licence to enable Microsoft interoperability from WebEx registered Cisco devices. Although Cisco/Tandberg VC systems registered as SIP devices have been able to enjoy connectivity through the three main CVI licence providers as described above, those Cisco Room systems and users registered into WebEx had no such connectivity available to them. As of September 2020, the new CVI licences have been announced, are available, but VideoCentric hasn’t yet had the opportunity to test. It is scheduled for mid Q4 2020 unless a customer urgency raises its priority in the meantime. Watch this space.

LIFESIZE MICROSOFT INTEGRATION



TEAMS-TO-LIFESIZE - Lifesize Cloud account holders who wish to maintain their investment in Icon Meeting Room systems, but have deployed Microsoft Teams at their desktops, can purchase an optional add-on to their Lifesize Cloud subscription (called Microsoft Integration) so that selected MS users with a free “bot” installed, can call directly out of Teams to meet in a Lifesize Cloud hosted conference. This feature is outbound from Teams desktop, inbound to Lifesize Cloud. It is not available to MS Teams Room (MTR) users.



LIFESIZE-TO-TEAMS - A Lifesize Icon meeting room system registered to Lifesize Cloud (or SIP-registered in some other way), can be invited into a Teams-hosted conference by an MS user. This requires a CVI licence applying to the host’s Office 365 Teams account in the way described above. VideoCentric recommends the **BlueJeans** variant for Lifesize Cloud integration. This feature is outbound from Lifesize Icon, inbound to MS Teams. It is available to Lifesize Icon Room Systems, Lifesize Desktop users who can join with MS Teams Room and MS Desktop users in Teams.

ZOOM CONFERENCE ROOM CONNECTOR (CRC)



Like many other cloud services, Zoom is proprietary, and “island” surrounded by lots of standards-based systems and users on other platforms such as Teams, WebEx, GoTo Meeting, GoogleMeet, Lifesize Cloud and BlueJeans. By remaining totally within Zoom, desktop and room users will find they have no need for interoperability licences, but if they find it necessary to call out from Zoom, or invite a non-Zoom user in, then the Zoom account must have one or more CRC licences applied which are shared as a pool by the whole organisation on a concurrent usage basis.

Zoom CRCs are more flexible than those of MS Teams (CVI) in that they support 2-way calling whereas with Teams, CVI is for inbound callers only.

Zoom users may dial directly OUT to standards-based (H.323/SIP) systems or multipoint cloud services including Polycom, Cisco, Lifesize, BlueJeans, Pexip and others, as well as allowing non-Zoom callers INTO Zoom.

CRC licences operate exclusively on a ports model basis. I.e. subscribe to 5 CRC licences to enable your whole organisation to share 5 concurrent inbound/outbound accesses. CRCs can only be applied to Pro, Business and Enterprise Zoom Cloud accounts, not the free one, which must be upgraded first.

ZOOM TO TEAMS INTERCONNECTIVITY



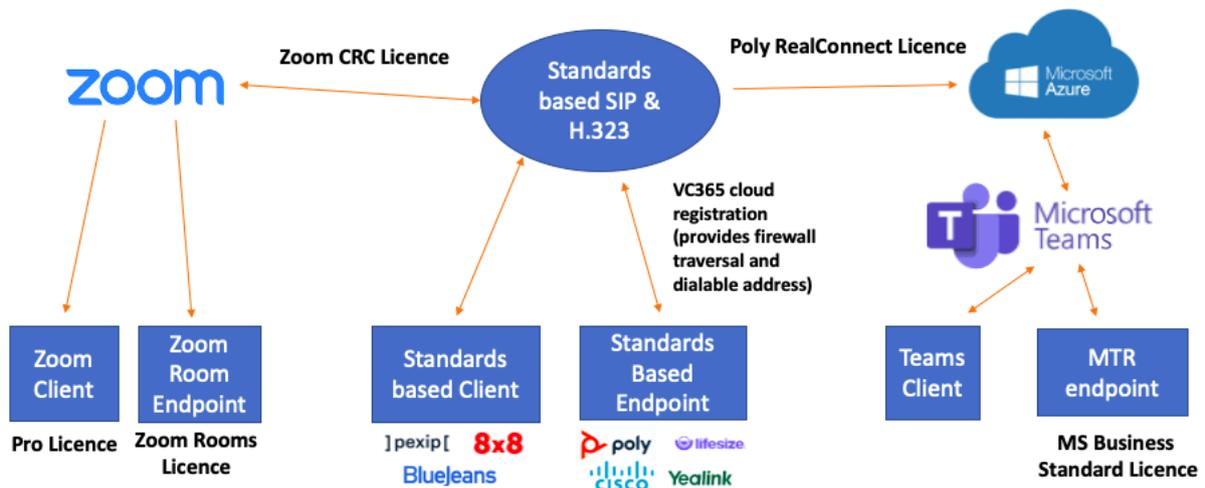
Companies wishing to have interoperability between Zoom and MS Teams can do so by:

Cascading CRC and CVI licences - A Zoom user with outbound access via CRC dials the identity of a Teams CVI Gateway followed by the Teams meeting ID. Because CRC is SIP-compatible on its outward side and CVI is SIP-compatible on its inward side, connection is achieved with very little degradation in performance.

“Bot” connectivity – MS Teams desktop users have the ability to branch out of Teams and join a Zoom conference directly from their Teams desktop interface. This same feature however is not offered on MS Teams Room Systems (MTRs) or Collaboration bars designed for meeting room use. Room systems natively registered to Teams are therefore locked into their island of Teams unless CVI invitation allows non-Teams users to join them in a Teams hosted conference.

IN SUMMARY - SIP IS “THE GLUE”

Bridging between the islands of Zoom and Teams is not direct. It is via the standards world of SIP. With the right gateways in place, CRC on your Zoom account, or CVI on your Teams account, you will achieve interoperability with SIP devices (e.g. Cisco, Polycom, Lifesize), or with SIP services (e.g. BlueJeans, Pexip, 8x8). By having both CRC and CVI, you can achieve indirect Zoom to Teams connectivity.



GET IN TOUCH

VideoCentric supplies and installs the full integrations outlined here, and more. Ask us for a live remote demonstration. Our devices, clouds and gateways are set up ready for instant access and of course that also means that our technical support team are ready to support you when things don't quite go to plan.

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Online Booking: <http://www.videocentric.co.uk/go/arrange-a-demonstration/>