LifeSize® UVC Access™ Deployment Guide

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LifeSize UVC Access

LifeSize UVC Access is a standalone H.323 gatekeeper that provides services such as address translation and network access control, bandwidth management and routing management for H.323 calls to gateways, video communications systems and MCUs. LifeSize recommends using LifeSize UVC Access in deployments of LifeSize UVC Transit.

The guide is divided into these sections:

Planning	Presents deployment considerations.	Planning LifeSize UVC Access Deployment
Deploying	Describes tasks to configure the service for H.323 calls.	Deploying LifeSize UVC Access
Maintaining	Describes how to back up, restore, and reset the system and how to troubleshoot issues.	Maintaining LifeSize UVC Access

Related documentation is available from lifesize.com/support.

Section 1: Planning LifeSize UVC Access Deployment

LifeSize UVC Access is most commonly deployed in the LAN with the H.323 video communications devices registered to it. When deployed with LifeSize UVC Transit Client, LifeSize UVC Access must be deployed in the same LAN as LifeSize UVC Transit Client.

When deployed with LifeSize UVC Transit Server alone, LifeSize UVC Access must be deployed in the DMZ.

If the external firewall uses 1:1 static NAT, callers outside of your network must use the public IP address of both the LifeSize UVC Transit Server signaling server and LifeSize UVC Access to place calls to your video systems. Additionally, the two servers must use each other's public IP address.

For more information about deploying LifeSize UVC Access with a new or existing deployment of LifeSize UVC Transit, including network diagrams for the various options, refer to the planning section of the *LifeSize UVC Transit Deployment Guide*.

Deploying LifeSize UVC Access in the DMZ with NAT

If you use 1:1 static NAT for LifeSize UVC Access, ensure **Use public address** is selected in **Configuration : H323** on LifeSize UVC Access. Configure the private IP address for static NAT during the initial configuration or in console mode. When static NAT is configured, the public and private addresses appear on the LifeSize UVC Access dashboard.

Configuring Ports

The following firewall ports must be open to incoming traffic through the LAN:

- H.225 TCP port 1720
- H.225 UDP port 1719
- H.225 UDP port 1718
- H.245 TCP ports 37000 to 41105
- DNS port 53
- SYSLOG port 514
- SNMP port 162
- NTP port 123

For a complete description of firewall configuration details refer to the firewall section of the *LifeSize UVC Transit Deployment Guide*. Settings are identical to those for LifeSize UVC Transit Server deployed in the DMZ alone, without LifeSize UVC Transit Client.

Configuring H.460 Support

If your devices need H.460 support, deploy LifeSize UVC Transit with LifeSize UVC Access as an external gatekeeper. H.460 clients must connect directly to LifeSize UVC Transit Server, which forwards call signalling to LifeSize UVC Access.

For more information about deploying LifeSize UVC Access with LifeSize UVC Transit, refer to the planning section of the *LifeSize UVC Transit Deployment Guide*.

Section 2: Deploying LifeSize UVC Access

Deploying LifeSize UVC Access includes the following tasks:

Complete installation and initial configuration.	Initial Configuration
Check for software updates and upgrade to the latest versions to ensure they are compatible.	*LifeSize UVC Platform Deployment Guide*
Optional: To receive calls in the Annex O format (username@domain), create H.323 local domains and DNS SRV RR records.	Annex O Dialing
If you intend to use authentication, create a user account in LifeSize UVC Access for each video system and MCU in your private network.	Creating User Accounts
Name the gatekeeper and configure authentication options.	Using Authentication
Configure zones to control per call and total bandwidth usage between registered devices	Configuring Zones
Configure call routing between devices.	Configuring Call Routing

Initial Configuration

1. Install the LifeSize UVC Platform hardware or virtual machine according to the instructions in the *LifeSize UVC Platform Installation Guide*.
2. Log in to the LifeSize UVC Platform interface and activate LifeSize UVC Access. Refer to the *LifeSize UVC Platform Deployment Guide*.
3. Complete the initial configuration for LifeSize UVC Access. Read more at Enabling LifeSize UVC Access.
4. *Optional*: To use Annex O dialing, create DNS entries.

   If your organization does not manage its domain names, ask your Internet Service Provider (ISP) to do so. Refer to Annex O Dialing for more information.
5. Ensure that you can access the LifeSize UVC Access interface from your private network.

   In a browser, enter the IP address or fully qualified domain name of LifeSize UVC Access on HTTPS.

   `https://`*lifesize_UVC_access_IP_address/uvcaccess/*

   `https://`*access.example.com*
6. Log in to LifeSize UVC Access. The default administrator credentials for LifeSize UVC Platform and all enabled services are:

   Username: *administrator*

   Password: *admin123*

Enabling LifeSize UVC Access

1. Open a browser and log in to the LifeSize UVC Platform. The default administrator credentials are:

   Username: *administrator*

   Password: *admin123*

   NOTE You can create other administrator accounts. Refer to step 4 in this procedure.

2. Ensure an IP address is available for configuring LifeSize UVC Access.
   a. Navigate to **System Settings : IP Addresses : Edit**.
   b. Click **Add address**.
   c. Enter the new IP address.

   NOTE Press the Tab key to instruct the server to enter the remaining values, or enter each remaining value. Review any values entered by the server.

   d. Click **Apply Changes**.
3. Enable LifeSize UVC Access:

   NOTE You must activate a license for LifeSize UVC Access before performing these steps. Refer to the *LifeSize UVC Platform Deployment Guide*.

   a. Navigate to **Operations and Maintenance : Applications enabled - Edit**.
   b. In **Enable new applications**, select **Access**.
   c. Select the IP address.
   d. Click **Enable Application**.

   NOTE If LifeSize UVC Access is deployed in the DMZ or internet, alone or with LifeSize UVC Transit Server, callers outside of your network must use the public IP address of LifeSize UVC Access to place calls to your video communications systems.

4. *Optional*: Create an administrator account for LifeSize UVC Access.
   a. Navigate to **User Management : Users - Add**.
   b. Enter a username and password.
   c. Click **Save**.

d. In **Access Server Permissions**, select **Access Administrator**.

e. Click **Save**.

Annex O Dialing

LifeSize UVC Access handles Annex O dialing (username@domain) to other gatekeepers and video communications devices automatically by looking up the H.323 DNS SRV records for the external systems with fallback to DNS records.

To enable video systems to receive H.323 calls in Annex O format, complete the following steps:

1. Configure an H.323 local domain on LifeSize UVC Access in **Configuration : H.323 : Local Domains**.
2. Create an H.323 DNS SRV record for each domain you would like accessible from external devices. For example:

_Service._Proto.Name	TTL	Class	Priority	Weight	Port	Target
_h323ls._udp.example.com		IN	0	0	1719	*<Access IP address>*
_h323cs._tcp.example.com		IN	0	0	1720	*<Access IP address>*

If all calls go through LifeSize UVC Access or LifeSize systems, your H.323 domain does not have to resolve through DNS. LifeSize UVC Access acts as the gatekeeper for the domains. Use its IP address as the target in H.323 SRV records.

Using Authentication

H.225 call control signaling establishes connections between video communications devices. You can configure authentication for Q.931 signaling messages (including SETUP messages) and for H.225 RAS messages.

Enter the authentication settings for LifeSize UVC Access in **Configuration : H.323 : Configuration**.

Label	Description
Gatekeeper ID	Name of the gatekeeper. The default is *LifeSize UVC Access*.
Q.931 authentication **RAS authentication**	Default is *None*. Select from the following: • *Alias* - Caller must have a user account on the gatekeeper. • *Prefix* - Calls from devices with caller ID starting with the prefix are accepted. • *H.235* - Caller must have a user account with the correct H.235 password.
Authentication prefix	Enter the prefix to use for prefix authentication. Multiple prefixes must be separated by the | character.
Use Public Address	Check this to use a public IP address for communication with devices outside the network when you deploy LifeSize UVC Access behind a static NAT in the DMZ. Refer to Deploying LifeSize UVC Access in the DMZ with NAT for more information.

Creating User Accounts

If UVC Access is configured with alias or H.235 authentication, create a user account in LifeSize UVC Access for each video communications device, MCU, or instance of LifeSize Desktop that makes or receives calls. At a minimum, a registered device must have a numeric extension.

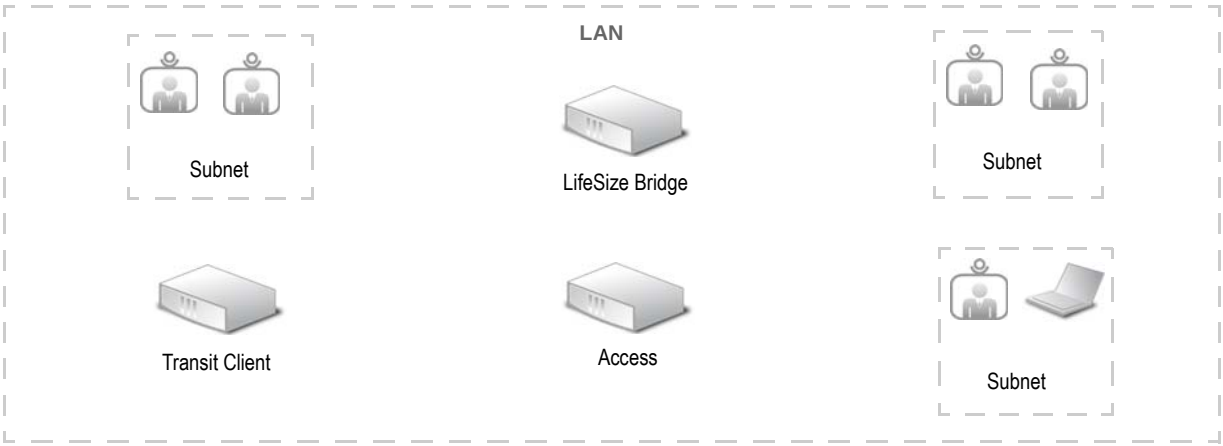
Create user accounts for LifeSize UVC Access in **Configuration : Users**. Enter the following information for each new user account.

Label	Description
H.323 extension	Required for H.323 calls. 50 numeric characters maximum.
H.323 name	An optional alphanumeric alias for the H.323 user. 50 characters maximum.
Password	50 alphanumeric characters maximum. This is required for H.235 authentication.
Disabled	Use this option to temporarily prevent this device from registering to LifeSize UVC Access, rather than removing the device registration completely. **Note:** If you disable LifeSize Bridge when H.235 authentication is enabled, the device and all its conferences are disabled.

Except where noted, you can use alphanumeric characters, the period, the underscore, the tilde, and the dash. Click **Show Advanced Settings** for more optional fields. The new account appears in **Configuration : Users**.

Configuring Zones

You can partition your network into different zones and then apply per call and total bandwidth rules to calls within those zones and between zones.



Define a zone with an IP address and an IP mask. A zone can be a single IP address or a subnet. Any device with an IP address in the defined subnet is treated as a member of that zone.

For example, the IP address of LifeSize UVC Transit Client can be defined as a zone. All outbound calls to the Internet that pass through the client are bound by the zone bandwidth rules.

Likewise, a neighboring gatekeeper can be defined as a zone, such that all calls to that gatekeeper are bound by a specific bandwidth rule. This only applies to calls directly between the two gatekeepers. If the call passes through LifeSize UVC Transit, the rule for LifeSize UVC Transit applies.

NOTE LifeSize UVC Access can only manage zones in the network in which it is deployed. When deployed in the DMZ with LifeSize UVC Transit Server, it cannot manage zones in the LAN.

Create zones for LifeSize UVC Access in **Configuration : H.323 : Gatekeeper Zones**. Enter the following information for each zone:

Label	Description
Zone name	Identifier for the zone.
IP address	Enter the IP address of a subnet or a single device.
IP mask	Enter a legal IP mask to identify a subnet or a single device. IP masks must end in 0, 128, 192, 224, 240, 248, 252, or 255. The mask for a single IP address is 255.255.255.255.
Intrazone call bandwidth	Enter a bandwidth limit for individual calls within a zone.
Intrazone total bandwidth	Enter a bandwidth limit for all calls within a zone.
Interzone call bandwidth	Enter a bandwidth limit for individual calls to another zone.
Interzone total bandwidth	Enter a bandwidth limit for all calls to another zone.
Authentication	Choose whether to use the device's configured authentication for the call, or to disable the authentication for the zone.

Configuring Call Routing

You can configure prefixes for neighboring gatekeepers, prefixes for gateways and MCUs, and rules for rewriting extension numbers for registered devices (Direct Inward Dialing).

NOTE LifeSize UVC Transit Servers, gateways, MCUs and neighboring gatekeepers can register multiple video communications devices in a bulk registration. If the license limit for registered clients is reached during a bulk registration, those registrations are accepted, but no new bulks registrations are accepted, and LifeSize UVC Access raises an event stating that the license must be updated to accommodate more license seats.

Configuring Prefixes for Neighboring Gatekeepers

Create prefixes for neighboring gatekeepers in LifeSize UVC Access in **Configuration : H.323 : Routing**. The prefix can be numeric for number dialed calls, or alphanumeric for email address style (user@host) calls. Number dialed calls starting with the prefix are routed to the configured gatekeeper. Email address style calls with the domain that matches the prefix are routed to the configured gatekeeper. Enter the following information for each neighboring gatekeeper:

Label	Description
H.323 prefix	Enter a numeric prefix or domain to identify the gatekeeper.
H.323 gatekeeper	Enter the name of the neighboring gatekeeper.
Username	If the gatekeeper requires authentication, enter the username.
Password	If the gatekeeper requires authentication, enter the password.

Configuring Routing to Gateways and MCUs

Route calls with known prefixes to gateways and MCUs that are not registered to LifeSize UVC Access in **Configuration : H.323 : Gateway routing**. Enter the following information for the gateway or MCU.

Label	Description
Prefix	Enter a numeric prefix to identify the gateway or MCU.
Address	Enter the IP address of the gateway or MCU.

Configuring H.323 Phone Routing

LifeSize UVC Access can modify the incoming E.164 numbers (standard telephone numbers) to correspond to the extension of registered devices or dial plans of external gatekeepers (Direct Inward Dialing). Configure the translation rules in LifeSize UVC Access in **Configuration : H.323 : Phone routing**.

Label	Description
Matching expression	This is the formula for converting the expression you expect to receive from the calling device. The matching expression can contain digits, '+', '?', and '*'. ? is a wildcard and is not included in the result expression. * matches one or more digits and the matching digits are placed in the result expression. Any character after the * (including more *s) is ignored. * can be anywhere in the result expression. Dashes (-) are removed from numbers AND expression. '+' is a matching digit (+44* won't match 44*), but can only be present first in a number or result expression.
Result expression	This defines the output of the expression modification. Use '*' anywhere in the expression. All characters the * character matched from the input dial string are inserted.

DID (PBX mode) Example

External calls use a prefix or exchange with an extension, where internal devices use just the extension. Remove the prefix or exchange.

External dial string	Internal extension	Matching Expression	Result Expression
22181801	1801	2218*	*
555-1209	1209	555*	*

Breakout Prefix example

Recognize 9 as a breakout prefix to international calls over a gateway at IP address 1.2.3.4. Remove the prefix 9, add the prefix 00 and route to 1.2.3.4.

Original Dial String	Resultant Dial String	Matching Expression	Result Expression
991555	0091555@1.2.3.4	9*	00*@1.2.3.4

Section 3: Maintaining LifeSize UVC Access

Maintenance Mode

To perform maintenance and configuration, you must first enter maintenance mode in **Maintenance : Maintenance Mode : Enter maintenance mode**. Maintenance mode puts the service into a suspended state and prevents new calls from connecting and new devices from registering. **Enter maintenance mode** waits until the last current call ends and then enters maintenance mode. The **Force maintenance mode** option immediately disconnects all current calls, deregisters all devices, and enters maintenance mode.

Back Up, Restore, Reset

From maintenance mode in LifeSize UVC Access, navigate to **Maintenance : System** and select *Back Up*, *Restore*, or *Reset* to create a backup file, restore from a backup file, or reset the service to factory defaults, respectively.

Troubleshooting and Diagnostics

Following are common issues that you may encounter with LifeSize UVC Access.

Issue	Workaround
Previous version of the interface persists after upgrade	Clear the browser cache to load the new interface.
Invalid DNS configuration	LifeSize UVC Access may fail to function properly if it is not configured to use a valid, available DNS server. Ensure that you have properly configured the DNS settings on LifeSize UVC Platform and that the DNS server is available.
Calls and registrations fail with H.235 authentication.	Check that your NTP server setting is valid.

Call Status Page

In LifeSize UVC Access, navigate to **Status : Calls : All calls** to view active and ended calls. Click **Ended calls** to view ended and failed calls. You can download call detail records (CDRs) for all calls. The following details are available for a call**:**

Order	Call number.
Caller ID	Name of the caller.
Caller IP address	Public address of the device or the address of a remote gatekeeper if the internal address is hidden.
Recipient ID	Name of the called device.
Recipient IP address	IP address of the called device. This may also be the address of a remote gatekeeper.
Duration	Length of the call.
Status	Active or inactive.
Details	Includes additional information about the call, including the originating and terminating user IDs, IP addresses, and client types, and details about the originating and terminating media.

Events

LifeSize UVC Access can send email or SNMP traps when certain events occur. To configure these notification options, navigate to **Configuration : Events**.

Email Event Notification

SMTP server	The outgoing SMTP server address.
Username	Authenticates at the SMTP server.
Password	Authenticates at the SMTP server.
Recipients	The mail address of the recipients (separated by a comma).
Trap receiver address	The IP address of the SNMP trap receiver.

SNMP Trapping Events

Trap receiver address	The IP address of the SNMP trap receiver.

Viewing Events on LifeSize UVC Access

To view events on the server, navigate to **Status : Events**.

Field	Description
Order	Event number.
Event name	Logical name of the event.
Severity	Severity of the event (corresponds to the log level for each event). Refer to Log Files.
Information	Textual explanation of the event.
Time of event	Timestamp when the event was raised.
Customer ID	ID of the customer.
Clear	Clears the event.

Log Files

LifeSize UVC Access logs events to a file for download.

Navigate to **Configuration : Logs** for controls to set the log levels and indicate the system log host.

Navigate to **Status : Logs** for a list of available log files.

LifeSize Technical Services may instruct you to download and send these files to LifeSize for analysis.

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