



Welcome to Video over IP Services on CalREN-DC!

This box contains a Cisco gatekeeper provided and managed by the Corporation for Education Network Initiatives in California (CENIC). This equipment will enable your campus to engage in IP-based videoconferencing with other California educational institutions over the high-bandwidth optical fiber network called CalREN-DC.

We have preconfigured the gatekeeper in keeping with CENIC's standard configuration requirements.

The IP address which your campus supplied is: _____ Your CENIC ticket number is: _____

Please contact us to **let us know that you have received the gatekeeper**, by phoning Kelly Stack at 562-346-2276, or emailing kstack@cenic.org.

There are some steps required to migrate videoconferencing services from your current network to CalREN-DC.

1. Please **rack and power on** the gatekeeper.
2. If it is behind a firewall, you will need to configure the firewall to allow CENIC engineers access to the gatekeeper for remote management and to allow H.323 traffic through. **Please see the enclosed Firewall Configuration instruction sheet.**
3. When your gatekeeper has been racked and powered on, and your firewall has been configured as described in the Firewall Configuration instruction sheet, please **contact us** so that we can complete the gatekeeper configuration remotely.
4. At this point, we need to involve the person at your campus responsible for **administering and supporting videoconferencing**. After we complete remote configuration, we will ask you to test the connectivity by configuring an H.323 videoconferencing device and attempting to connect to our 24/7 test site. **Please see the enclosed CODEC Configuration instruction sheet.**
5. Once we have established that your gatekeeper and firewall are configured appropriately to support H.323 videoconferencing, we will assist your campus in **preparing for migration** when your campus's network switches to CalREN-DC. This will include:
 - Assigning dialing plan numbers to each H.323 videoconferencing unit
 - Identifying potential time periods for scheduling cutover
 - Testing each H.323 videoconferencing unit at your site
6. In the Spring we will offer training in the use of our **new scheduling software** for the person or persons at your campus responsible for scheduling videoconferences. After training your campus will be able to resume self-scheduling of videoconferences.



CalREN-DC Gatekeeper Firewall Configuration

The CalREN-DC Gatekeeper also functions as a proxy server. This means that if your firewall allows H.323 traffic from that IP address, anyone on your campus who registers a codec with your gatekeeper should be able to use that codec for H.323 videoconferences.

In order to provide the access required by CENIC engineers **to configure and manage** your campus gatekeeper remotely, we need you to:

- Permit all traffic from the gatekeeper destined for the outside world.
- Permit all traffic to the gatekeeper from the following networks:

205.154.240.0/22 (/22 = 255.255.252.0)

137.164.80.0/21 (/21 = 255.255.248.0)

The applications CENIC will use to manage your gatekeeper from these addresses include:

tftp	UDP port 69
telnet	TCP port 23
SSH	TCP port 22
SNMP	UDP and TCP port 161
ICMP	all ICMP

You may open all the ports for your gatekeeper on your firewall to that address range, or, if you prefer, open just the management ports listed above.

Although the settings listed above will enable us to configure and manage your campus gatekeeper, **for actual H.323 videoconferencing, you will need to enable greater access.** If your gatekeeper and videoconferencing systems are behind a non-H.323-aware firewall, you may experience difficulty in videoconferencing. The media streams between H.323 endpoints travel on randomly-selected ports in the 49152-65535 range. That means that there must be two-way traffic on those ports permitted between the outside world and all campus H.323 endpoints.

For more information on setting up your network for H.323 videoconferencing and on CalREN-DC Video over IP services, please visit our web site: <http://www.cenic.net/calvip/>

Kelly Stack
CalREN Video over IP Services
CENIC
562-346-2276
kstack@cenic.org



CalREN-DC CODEC Configuration

Your campus's CalREN-DC gatekeeper will authenticate and manage videoconferencing traffic between H.323 devices on your campus and the regional CalREN-DC gatekeepers, which will in turn provide high-speed, reliable videoconferencing access to any H.323 device on the state-wide CalREN-DC network.

In order to implement this, each CODEC must be identified with a "dialing plan number," a unique numeric string, which functions in a way similar to a phone number.

Your campus has been assigned an address space within the CalREN-DC Video over IP Dialing Plan. For a copy of this plan, please visit:

<http://www.cenic.net/calvip/cenicdialplan.pdf>

Different H.323 manufacturers use different terminology to refer to the dialing plan number, and have implemented different procedures for assigning one to their equipment. There is a web site developed by Pete Woodworth (California Polytechnic State University, San Luis Obispo) which contains detailed instructions for setting up a variety of H.323 endpoints to work with the dialing plan. His web site is available at:

<http://mds.calpoly.edu/network/gatekeeper/>

Once you have a CODEC configured with a dial string, please test it using our 24/7 test site. The dialing string for that test site is:

1009001000

You may also wish to test your CODEC's ability to initiate a point-to-point videoconference using an IP address instead of a dialing plan number. The IP address for our test site is:

205.154.241.135

For more information, please visit our web site: <http://www.cenic.net/calvip/>

Kelly Stack
CalREN Video over IP Services
CENIC
562-346-2276
kstack@cenic.org