

TANDBERG

Border Controller

Software Release Notes

Software Version Q6

D50528 revision 2

October 2008

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DOCUMENT REVISION HISTORY

Revision 2	Release of Q6.1, Minor Release
Revision 1	Release of Q6.0, Initial Version

SOFTWARE RELEASE NOTES FOR TANDBERG BORDER CONTROLLER VERSION Q6.1

Introduction

These release notes describe the features and capabilities included in the TANDBERG Border Controller software version Q6.1 released on 1 September 2008.

New Features

N6.1 is a maintenance only release. No new features or functionality are included within this version over the previous release, N6.0.

Changes and Improvements since Previous Version

Security

The timer that records the Border Controller's "Up Time" will now continue to increment beyond 49.7 days without wrapping [Ref. # 50796].

The TANDBERG Border Controller will now ensure all call identifiers ids are unique which will eliminate intermittent call setup failures [Ref. # 49500].

The TANDBERG Border Controller has been updated to prevent exposure to web based cross-site scripting vulnerabilities [Ref. # 49160].

Multiway (Beta)

During the setup of a Multiway (beta) call through the TANDBERG Border Controller, the setup messages will now include the requested bandwidth of the original call, even if the call has been down speed [Ref. # 54542].

RAS Messaging

The TANDBERG Border Controller will now accept an LCF from a configured alternate if it is running a version of software prior to Q6.1 [Ref. # 54469].

If the TANDBERG Border Controller received a RRQ message which had been malformed, the box would unexpectedly restart; this issue was resolved [Ref. # 53276].

If the TANDBERG Border Controller received an unexpected facility message while in a specific call scenario this would cause the Border Controller to become unstable and subsequently restart, this issue was resolved [Ref. # 53228].

Registration Control

The TANDBERG Border Controller will no longer allow an additive registration to be accepted without first checking if there is a matching entity in the Allow and/or Deny List Policy [Ref. # 52560].

When using the web interface of the TANDBERG Border Controller, an administrator can now enter a registration restriction pattern with a maximum of 60 characters [Ref. # 51892].

Call Control

An issue has been resolved where the TANDBERG Border Controller became unstable and subsequently restart if the 'xcommand checkbandwidth' command was issued on the Traversal Subzone while it is was being used [Ref. # 52746].

An issue has been resolved with the CPL Policy on the TANDBERERG Border Controller that will enforce the authenticated user field to be included when the policy is evoked [Ref. # 50832].

IP

An issue has been resolved with SSH while the TANDBERG Border Controller is running in IPv6 mode [Ref. # 49416].

Known Limitations

TANDBERG

<i>Ref. ID</i>	<i>Equipment</i>	<i>Limitations</i>
N/A	TANDBERG Border Controller ver Q6.1	If the Border Controller is ever set back to default values using the 'xCommand DefaultValuesSet Level(r): <1..3>' command, the system will not automatically add the default links back into the configuration. In order to add the default links, issue the command 'xCommand DefaultLinksAdd'.
N/A	TANDBERG Border Controller ver Q6.1	Within the registration status, the Border Controller will always report the connection in which the RAS traffic uses for communication within the 'rasAddress' field, rather than the address specified within the RAS messages themselves. This is normal operation as the Border Controller will always use the established RAS connection for communication with the endpoint.
N/A	TANDBERG Border Controller ver Q6.1	If an IP gateway is not available for the IP network in which the system is installed, the Border Controller must be configured with a non-occupied, valid IP address on the subnet.
N/A	TANDBERG Border Controller ver Q6.1	Due to a limitation within RAS messaging, an endpoint that supports an IPv4/IPv6 hybrid configuration will not be able to register to the TANDBERG Border Controller with both an IPv4 and IPv6 call signaling address. This is due to the fact that only one call signaling address can be transmitted within the 'callSignalingAddress' field of any RAS message, thereby limiting the endpoint to only specifying either the IPv4 or IPv6 address when registering to the Border Controller.
N/A	TANDBERG Border Controller ver Q6.1	If connecting to the Border Controller web interface using the DNS host name of the box and both HTTPS and session timeouts are enabled, the Border Controller will not permit full login to the administrative interface. It is recommended that the IP address is used when the box is installed with this configuration as the issue is not present when using IP addressing.
N/A	TANDBERG Border Controller ver Q6.1	The TANDBERG Border Controller will always report TCP port 1720 for the destination call signaling port, regardless of what port is actually used. This report is sent over XML to an external management system (e.g. TANDBERG Management Suite)
N/A	TANDBERG Border Controller ver Q6.1	If an incoming registration is received on port 65535, the Border Controller will reject the registration as 'invalidRasAddress'. This will be improved in a later version.
N/A	TANDBERG Border Controller ver Q6.1	If a Multiway conference is running in conjunction with the TANDBERG Border Controller and host participant attempts to add a telephony site, video will no be displayed on the dialing endpoint.
N/A	TANDBERG Management Suite ver 11.6	If 'Session time out' is enabled, TMS 11.6 will not be able to control the Border Controller.

Cisco

<i>Equipment</i>	<i>Limitations</i>
Cisco Call Manager	Registering multiple trunks from a single Call Manager Server is not supported. When trying to register multiple trunks, one of them may be rejected as 'Insufficient Resources'.

RADVISION

<i>Equipment</i>	<i>Limitations</i>
RADVISION L2W Gateway ver 2.2.3.2.5	Due to the signaling coming from the RADVISION L2W GW, calls will disconnect if it is not registered into its own subzone and the GK is set to indirect mode and registered to a BC. The reason behind this error is because the GW tries to connect a call to itself on a random port it has not registered with. In order to resolve this issue, either place the Border Controller into 'Direct' mode for 'Calls to Unknown IP Addresses' or create a subzone for the GW.

Linksys

<i>Equipment</i>	<i>Limitations</i>
Linksys WRT54G hardware version 5	Linksys Router WRT54G hardware version 5 appears to change the source ports of outbound connections opened for a prolonged period of time. As such, H.323 calls that are made from or to systems registered to either a gatekeeper or Border Controller behind this router will disconnect at random times. This issue has been presented to Linksys.

SOFTWARE RELEASE NOTES FOR TANDBERG BORDER CONTROLLER VERSION Q6.0

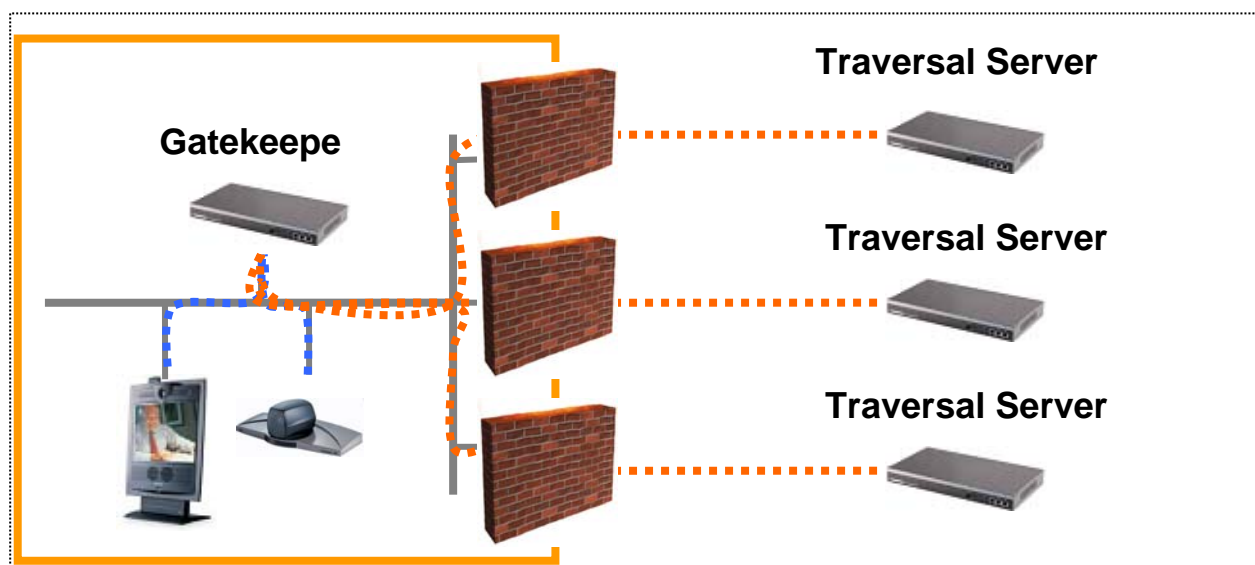
Introduction

These release notes describe the features and capabilities included in the TANDBERG Border Controller software version Q6.0 released on 27 March 2008.

New Features

Multiple Traversal Server Support

The TANDBERG Gatekeeper now supports the ability to be simultaneously configured as a traversal client to multiple TANDBERG Border Controllers and/or multiple TANDBERG VCS Expressway systems. The Gatekeeper now supports up to 50 concurrent traversal zones which can be configured through the web interface or the CLI.

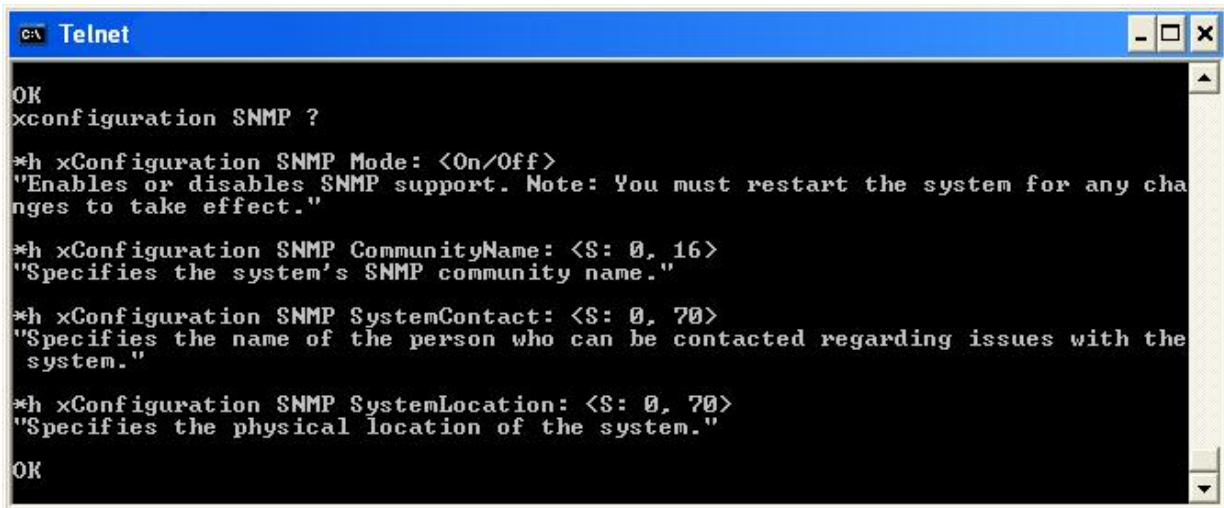


3rd Party API Support

TANDBERG Border Controller administrators can now retrieve the WSDL (Web Services Description Language) file from the TANDBERG Border Controller web interface. This file will detail the functionality available through the API of the TANDBERG Border Controller system [Ref. 24503].

Command Line Help

Descriptions have been added to the CLI of the TANDBERG Border Controller. When a question mark (?) is entered after an 'xcommand' or 'xconfiguration' parameter, a brief explanation of that command or parameter is displayed. In the example below the question mark '?' was entered after the 'xconfiguration SNMP' parameter which displayed a brief description of the available parameters [Ref. 17110].



Command Line Completion

When typing an 'xcommand' or 'xconfiguration' parameter, the 'TAB' key can now be used to complete the command word or offer possible completion words. If the 'TAB' key is pressed twice it will display a list of possible commands that are available. In the example below the 'TAB' key was pressed twice after 'xconfiguration' which displayed the list of available commands [Ref. 46877].



Web Server Certificate

It is now possible to upload a HTTPS Certificate and a Private Key through the web interface of the TANDBERG Border Controller. A restart of the Border Controller is required for the new certificate to take effect.



Changes and Improvements since Previous Version

Security

An issue has been resolved that caused a software upgrade prior to Q6.0 to fail if the 'System Name' of the TANDBERG Border Controller included 3 dashes [Ref. 47527].

If a registration expires and the endpoint fails to respond to an IRQ, the TANDBERG Border Controller will terminate all calls associated with that registration. The terminated calls will now be logged in the Event log of the Border Controller as Detail="Endpoint not responding to IRQ" [Ref. 50198].

Multiway (Beta)

The TANDBERG Multiway functionality will now support the use of a Codian MCU in addition to the TANDBERG MPS as was supported previously [Ref. 48783].

RAS Messaging

The output of syslog 3 has been improved to include a summary statement of the None Standard Messaging (NSM) in H.323 RAS Messaging [Ref. 36783].

The TANDBERG Border Controller will no longer send an ARJ message in response to an ARQ message it receives which does not contain a 'srcCallSignalAddress' as this is an optional field. The address that the ARQ originates from will now be used in the absence of a 'srcCallSignalAddress' [Ref. 44418].

The TANDBERG Border Controller will successfully accept a call when attempting to dial an IP + Extension dial string from an unregistered Polycom endpoints [Ref. 47707].

The ability to troubleshoot a Multiway call has been improved through the use of the 'syslog' command. If a point-to-point call deploys Multiway to add another participant, the output of 'syslog 1' can be captured to view the RAS messaging used in the setup of the Multiway call [Ref. 49238].

If a TANDBERG Border Controller has an alternate configured, the alternate Border Controller will no longer return an LCF for a dialled IP address if the alternate is set to 'Direct' [Ref. 49645].

Registration Control

Non-ASCII characters can be used as part of an E.164 alias within a registration request and case sensitivity is no longer taken into account during an endpoint lookup [Ref. 46600].

Within the TANDBERG Border Controller, an administrator can successfully rename any configured subzones, links, or pipes without affecting their functionality after the unit has been reboot [Ref. 50337].

The TANDBERG Border Controller no longer requires a LWRRQ request to contain a H.323 ID which was previously a requirement if it was configured to restrict registrations based on an 'Allow' or 'Deny' List [Ref. 50399].

Call Control

If multiple MCUs and/or gateways are registered with the identical prefix to either a single TANDBERG Border Controller or any of its alternates, the Border Controller will now deploy a form of load-balancing between the multiple devices. The statistical round robin technique distributes the calls between the devices on a balanced basis provided none of the devices return an 'Out of Resources' RAI message. The alternate search mechanism has also be improved to load-balance the calls across all available

MCUs and/or gateways regardless if they are registered to the primary Border Controller or one of its alternates [Ref. 42796].

Usability

A reboot is no longer required if the 'Logging Level' of the 'Remote Syslog Server' has been changed [Ref. 44517].

An issue has been resolved where it was not possible to re-enter options keys through the CLI after the 'xcommand DefaultValuesSet 3' command had been issued [Ref. 44785].

Through the CLI of the TANDBERG Border Controller it is possible to view the 'Alias ID' of a particular alias entered in the 'Allow' or 'Deny' Lists. An administrator can now delete an Alias by its ID # in conjunction with 'xcommand AllowListDelete' or 'xcommand DenyListDelete' [Ref. 45321].

IP

If the NTP address field is left 'blank', the 'Status' of the NTP Server will no longer so as *initializing* [Ref. 30997].

Known Limitations

TANDBERG

<i>Ref. ID</i>	<i>Equipment</i>	<i>Limitations</i>
N/A	TANDBERG Border Controller ver Q6.0	If the Border Controller is ever set back to default values using the 'xCommand DefaultValuesSet Level(r): <1..3>' command, the system will not automatically add the default links back into the configuration. In order to add the default links, issue the command 'xCommand DefaultLinksAdd'.
N/A	TANDBERG Border Controller ver Q6.0	Within the registration status, the Border Controller will always report the connection in which the RAS traffic uses for communication within the 'rasAddress' field, rather than the address specified within the RAS messages themselves. This is normal operation as the Border Controller will always use the established RAS connection for communication with the endpoint.
N/A	TANDBERG Border Controller ver Q6.0	If an IP gateway is not available for the IP network in which the system is installed, the Border Controller must be configured with a non-occupied, valid IP address on the subnet.
N/A	TANDBERG Border Controller ver Q6.0	Due to a limitation within RAS messaging, an endpoint that supports an IPv4/IPv6 hybrid configuration will not be able to register to the TANDBERG Border Controller with both an IPv4 and IPv6 call signaling address. This is due to the fact that only one call signaling address can be transmitted within the 'callSignalingAddress' field of any RAS message, thereby limiting the endpoint to only specifying either the IPv4 or IPv6 address when registering to the Border Controller.
N/A	TANDBERG Border Controller ver Q6.0	If connecting to the Border Controller web interface using the DNS host name of the box and both HTTPS and session timeouts are enabled, the Border Controller will not permit full login to the administrative interface. It is recommended that the IP address is used when the box is installed with this configuration as the issue is not present when using IP addressing.
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N/A	TANDBERG Border Controller ver Q6.0	If an incoming registration is received on port 65535, the Border Controller will reject the registration as 'invalidRasAddress'. This will be improved in a later version.
N/A	TANDBERG Border Controller ver Q6.0	If a Multiway conference is running in conjunction with the TANDBERG Border Controller and host participant attempts to add a telephony site, video will no be displayed on the dialing endpoint.
N/A	TANDBERG Management Suite ver 11.6	If 'Session time out' is enabled, TMS 11.6 will not be able to control the Border Controller.

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Linksys

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Supplemental Notes to Manuals

Software Versions

The base version of the TANDBERG Border Controller will include an option of 5 concurrent Traversal Calls and 25 Registrations.

These options can be expanded by adding traversal calls and registrations in increments of either of 5 Traversal Calls/25 Registrations or 10 Traversal Calls/50 Registrations. The system options can be increased up to 100 concurrent traversal calls and 500 concurrent registrations with this software release.

The TANDBERG Border Controller uses one of the following software files for Q6.0 or later software, where q<xx> represents the software version (e.g. q60 represents Q6.0).

<i>Software</i>	<i>Software File Properties</i>
s42100q<xx>	Supports AES
s42101q<xx>	Does not support AES

References/Related Documents

TANDBERG Website – <http://www.tandberg.com>

For all documentation, please see the TANDBERG Support Website at <http://www.tandberg.com/support/documentation.php>

See the following documents for more information on the TANDBERG Border Controller:

- D13691 TANDBERG Border Controller User Manual
- D13380 TANDBERG Border Controller Installation Sheet

Network Support

The TANDBERG Border Controller is an H.323 device and is intended to be connected to an 802.3 IP network. Only the first 802.3 Ethernet port is used, the other two are for future development. The Ethernet interface on the TANDBERG Border Controller supports auto speed and duplex detection as well as manually setting 100Mbit Full/Half Duplex or 10Mbit Full/Half Duplex. If at all possible, Full Duplex should be used.

Layer 4 Ports Used

<i>Function</i>	<i>Port</i>	<i>Type</i>	<i>Direction</i>
Gatekeeper RAS	1719	UDP	↔
Gatekeeper Discovery	1718	UDP	Host → BC
SSH (Includes SCP)	22	TCP	Host → BC
Telnet	23	TCP	Host → BC
HTTP / XML	80	TCP	Host → BC
HTTPS / XML	443	TCP	Host → BC
SNMP (Queries)	161	UDP	Host → BC
NTP	123	UDP	↔
LDAP Communication	389	TCP	↔
LDAPS Communication	636	TCP	↔
Incoming H.323 Call	1720	TCP	Host → BC
H.225/Q.931 Call Setup (Non-Traversal)	15000:16800	TCP	↔
H.225/Q.931 Call Setup (Assent)	2776	TCP	Host → BC
H.225/Q.931 Call Setup (H.460.18)	1720	TCP	Host → BC
H.245 Call Control (Non-Traversal)	19000:20800	TCP	↔
H.245 Call Control (Assent)	2776	TCP	Host → BC
H.245 Call Control (H.460.18)	2777	TCP	Host → BC
Media (RTP, RTCP) (Non-Traversal)	50000:52400	UDP	↔
Media (Assent/H.460.19 Multiplexed Media)	2776:2777	UDP	Host → BC
Media (H.460.19 Non-Multiplexed Media)	50000:52400	UDP	Host → BC

Interoperability Testing¹

The following systems have been tested and verified compatible with this software release.

Gatekeepers/Traversal Servers

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/.19</i>	<i>Comments</i>
TANDBERG Gatekeeper	N1.0, N2.1, N3.2, N4.1	No	
	N5.2, N6.1	Yes	
TANDBERG Border Controller	Q1.0, Q2.1	No	
	Q3.1, Q5.2, Q6.1	Yes	Q3.x does not support multiplexed media.
TANDBERG VCS	X3.0, X2.1 X1.2	Yes	
Cisco MCM	12.3(10), 12.3(13a)	No	
Polycom PathNavigator	7.00.03	No	
Polycom V2IU	6.1.6	Yes	The V2IU does not support an H.460.18/.19 client proxy. As such, the proxy functionality within the TANDBERG Gatekeeper could not be tested with this system.
RADVISION ECS	4.1.0.0	No	

Gateway Interoperability

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/.19</i>	<i>Comments</i>
TANDBERG Gateway	G1.0, G2.1, G3.2	No	
TANDBERG 3G Gateway	R1.0, R2.0, R3.0	No	
TANDBERG Video Portal	V2.0, V3.0	No	
Cisco CallManager	4.1, 5.1	No	
Ezenia Encounter 3000	2.0	No	
Polycom MGC 25/50/100	8.0.0.27, 7.5.1.7	No	
RADVISION gw-P20	4.0	No	

¹ All interop testing performed on systems that do not natively support either Assent or H.460.18/.19 were performed in conjunction with the TANDBERG Gatekeeper as the traversal client.

MCU Interoperability

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/19</i>	<i>Comments</i>
TANDBERG MCU	D2.3, D3.9, D3.10	No	
TANDBERG MPS	J1.2, J2.4, J3.1, J3.2	No	
	J.40, J4.2, J4.3	Yes	
Cisco IPVC 3540	4.2.10	No	
Codian MCU 4210	2.3(1.8), 2.4(1)	No	
Codian MCU 4505	2.3(1.8), 2.4(1)		
Polycom MGC 25/50/100	8.0.0.27, 7.5.1.7	No	

Streaming Servers

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/19</i>	<i>Comments</i>
TANDBERG Content Server	S1.0, S1.1	No	
	S2.3, S3.0, S3.1	Yes	

Endpoint Interoperability

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/19</i>	<i>Comments</i>
TANDBERG MXP	F1.7, F2.5, F3.4	No	
	F4.1, F5.0, F6.3, F7.0	Yes	F4.x does not support multiplexed media.
TANDBERG 150 MXP	L1.2, L2.2, L3.1	No	
	L4.2, L5.0, L5.1	Yes	L4.x does not support multiplexed media.
TANDBERG Classic	B1.3, B2.4, B3.4, B4.4, B5.1/B5.11, B6.3/E1.3, B7.4/E2.4, B8.4/E3.4, B9.2/E4.2, B10.3/E5.3	No	
Aethra VegaStar	6.0.49	No	
Cisco VT Advantage	1.0(2)	No	The endpoint was tested in conjunction with an H.225 trunk from Cisco CallManager to a TANDBERG Gatekeeper.
LifeSize Room	2.6.5(6)	No	

Microsoft NetMeeting	3.01	No	
Polycom EX	6.0.5	No	
Polycom FX	6.0.5	No	
Polycom iPower 680	6.2.0.1208	No	
Polycom iPower 9000/970	6.2.0.1208	No	
Polycom PVX	8.0.2	No	
Polycom ViaVideo	5.1.1.1009	No	
Polycom ViewStation, MP512, SP384	7.5.4	No	
Polycom VSX	8.0.3	No	
	8.7	Yes	Version 8.5 does not support multiplexed media.
Polycom HDX	2.0.1	Yes	Version 8.5.x does not support multiplexed media. Both SIP and H.323 support were tested.
Polycom V-series	8.0.3	No	
	8.7	Yes	Version 8.5 does not support multiplexed media.
Sony PCS-1	3.41	No	
Sony PCS-TL50	2.31	No	
VCON VPoint	6.50.0064	No	
VTEL Galaxy	2.2.0.070	No	

Firewall Interoperability

<i>Equipment</i>	<i>Software Revision</i>	<i>H.460.18/19</i>	<i>Comments</i>
Check Point NGX	R60	No	Due to some of the new signaling required by the H.460.18/19 standard, H.323 awareness on the Check Point firewall can cause calls to fail. It is recommended that all H.323 awareness is disabled.
Cisco PIX	6.3(3), 6.3(4), 7.0(1), 7.0(4)	No	Due to some of the new signaling required by the H.460.18/19 standard, H.323 fixup/inspect on the PIX firewall can cause calls to fail. It is recommended that all H.323 awareness is disabled.
DLink DI-514	1.03	No	
DLink DI-604	1.07DDM	No	
Linksys BEFW11S4	1.50.14	No	
Linksys WRT54G (v1)	4.02.7	No	
Linksys WRT54G (v4)	DD-WRT v23	No	
Linksys WRT54GL (v3)	4.30.5	No	
Linksys WRT54GR	1.01	No	
Linksys WRT54GS	4.70.6	No	
NetGear N314	V3.29(CF.0)b1	No	
Juniper NetScreen SSG 550	5.4.0r1.0	No	Due to some of the new signaling required by the H.460.18/19 standard, H.323 fixup/inspect on the Juniper firewall can cause calls to fail. It is recommended that all H.323 awareness is disabled.