

Gear up your PBX

Cut Costs, Boost Profits

Version 20160711

Basic Troubleshooting



Self Help

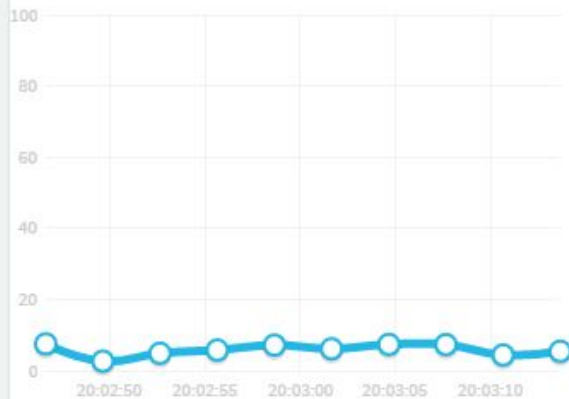
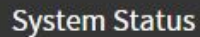
- Dashboard
- **Verbose** Logging
- Server Activity Log
- Phone System Event Log
- Configure Email Notifications
- WireShark



Self Help - Dashboard

- Gives a quick overview over current activity and status of PBX

Dashboard



Disk Usage

Memory Usage

CPU Usage



PBX Status

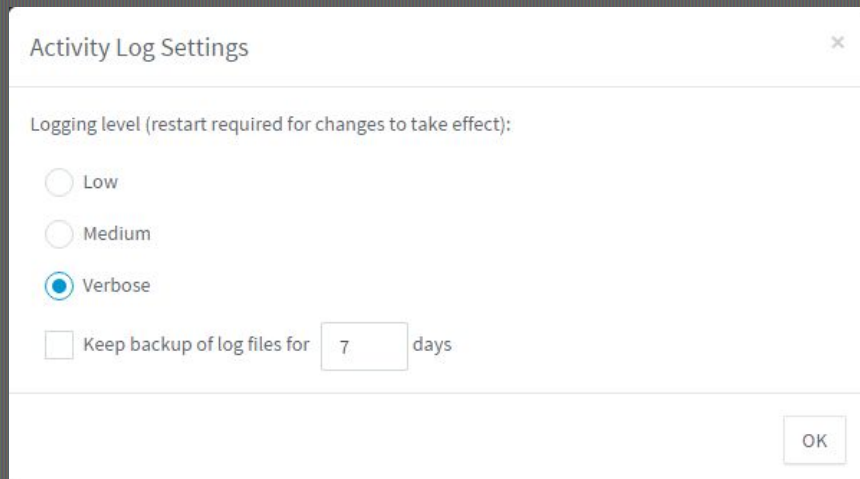
Trunks Up	3/5
Extensions Up	6/10
Number of calls in use	0/8
Blacklisted IPs	1
Event log	Purge
Call history	Purge 223 calls
Chat logs	Disabled
Automatic Backups	OFF
Firewall Check	Firewall test failed
Services	System Extensions

Information

FQDN	<div><div></div><div>.3cx.com.au</div></div>
IP	<div><div></div><div>Static</div></div>
PUSH Account	<div><div></div><div>Own Account</div></div>
Webmeeting FQDN	<div><div></div><div>.3cx.net</div></div>
Webmeeting MCU	<div><div></div><div>eu006-rbx.3cx.eu</div></div>
License	<div><div></div><div>Activated PRO 15.0.57336.0</div></div>
Maintenance	08/18/2017 10:00:00 PM <div><div></div><div>OK</div></div>
Sim Calls	8
Sim Meeting Participants	25
Outbound Rules	4

Self Help - Verbose Logging

- Default is Low Logging
- Log files use a cycle logging
- Call History (Web Reports) does not cycle
- ALL Log Files will be **CLEANED** after restarting services or PBX
- For debugging logging must be set to Verbose (change requires services to be restarted)
- Log files Path: C:\ProgramData\3CX\Data\InstanceX\Logs



The screenshot shows a dialog box titled "Activity Log Settings" with a close button (X) in the top right corner. The main content area is titled "Logging level (restart required for changes to take effect):". Below this title, there are three radio button options: "Low", "Medium", and "Verbose". The "Verbose" option is selected, indicated by a blue dot. Below the radio buttons, there is a checkbox labeled "Keep backup of log files for" followed by a text input field containing the number "7" and the word "days". At the bottom right of the dialog box, there is an "OK" button.

Activity Log Settings

Logging level (restart required for changes to take effect):

☐ Low

☐ Medium

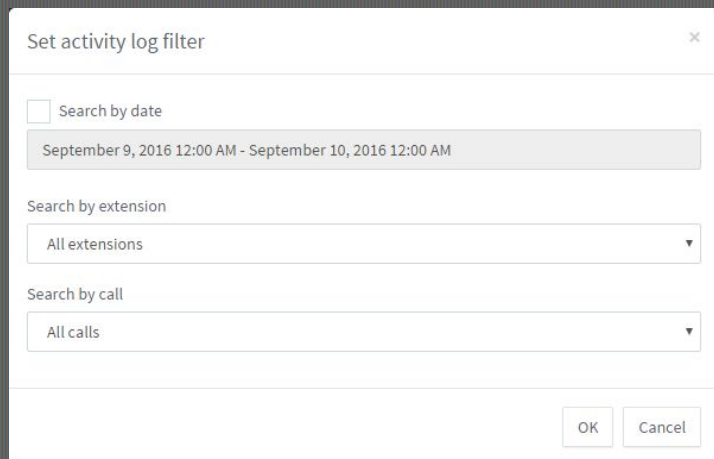
☒ Verbose

☐ Keep backup of log files for days

OK

Self Help - Server Activity Log

- **Basic** SIP Flow Messages
- Provides information on
 - All Phone registrations
 - Interaction with PSTN Gateways & SIP Trunks
 - All calls
- Use Filter for Extension and Call or by Date
- More filter and external analytics can be performed via BinLogViewer



The screenshot shows a 'Set activity log filter' dialog box with a close button (X) in the top right corner. It contains three filter options: 'Search by date' with a date range of 'September 9, 2016 12:00 AM - September 10, 2016 12:00 AM'; 'Search by extension' with a dropdown menu set to 'All extensions'; and 'Search by call' with a dropdown menu set to 'All calls'. At the bottom right are 'OK' and 'Cancel' buttons.

Set activity log filter

☐ Search by date

September 9, 2016 12:00 AM - September 10, 2016 12:00 AM

Search by extension

All extensions

Search by call




All calls

OK Cancel

Self Help - Event Log

- Summarized Event
- Monitoring via
 - 3rd Party Tools
 - E-mail Notifications

Event Log

 Warnings  Errors  Informational

Purge

SIP Server/Call Manager ID: 4101

Extension 100 is registered, contact: sip:100@192.168.9.21:60863;line=8u3st326

09/09/2016 9:16:28 PM

SIP Server/Call Manager ID: 4101

Extension 004 is registered, contact: sip:004@192.168.9.7:39926;line=9zco4pl

09/09/2016 9:15:50 PM

SIP Server/Call Manager ID: 4101

Extension 005 is registered, contact: sip:005@192.168.9.33:40981;rinstance=0-5b6e17ee4f4b49bba989f6a05e6f6d88;ob

09/09/2016 9:12:15 PM

Self Help - Configure Notifications

- Email Notifications
- Settings > Email
- Multiple addresses possible with “,” separation

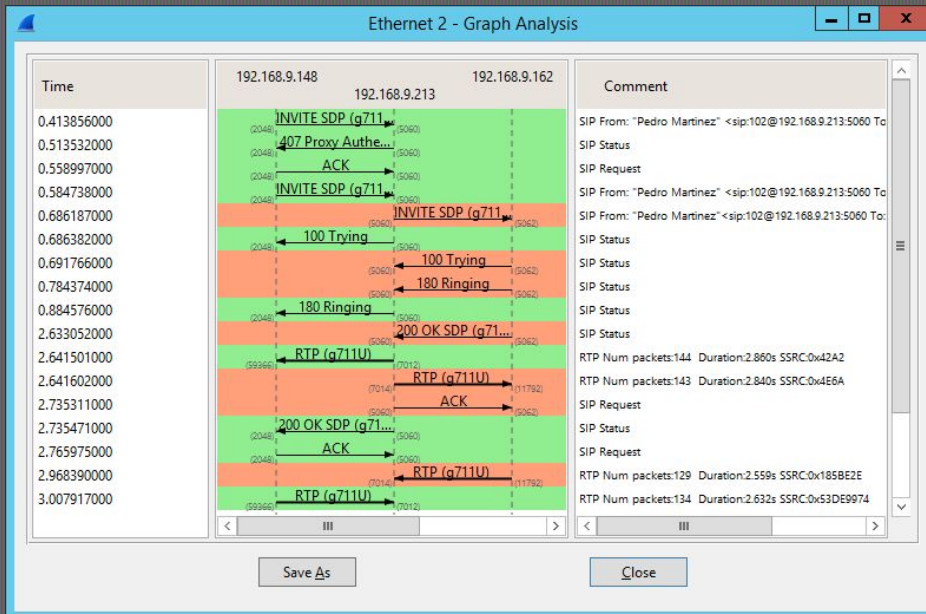
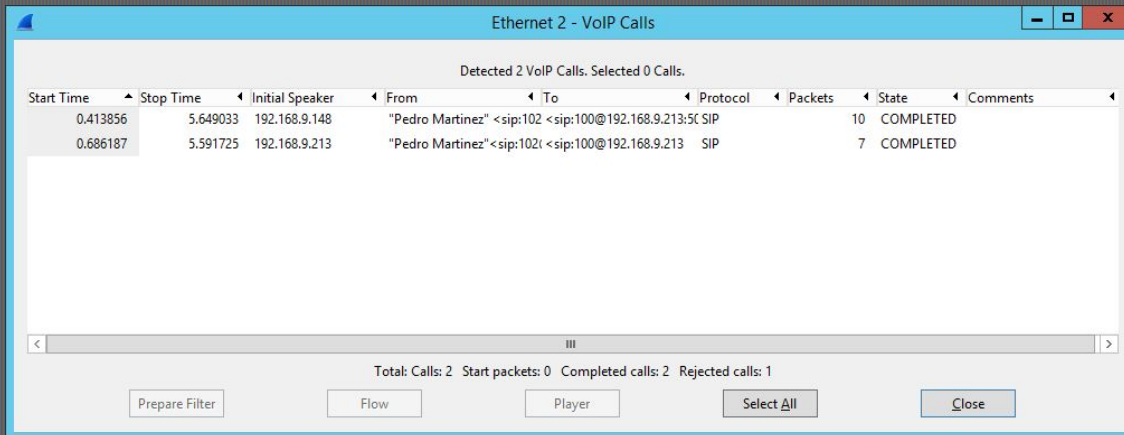
Events

Send an Email Alert when the following events occur:

- ☐ Someone dials an Emergency Number
- ☐ The status of trunk changes
- ☐ A trunk failover occurs or max amount of calls available through trunk has been exceeded
- ☐ Trunk/Provider responds to Request with an Error code
- ☐ The registration status of an extension changes
- ☐ The license limit is reached
- ☐ An IP has been blacklisted

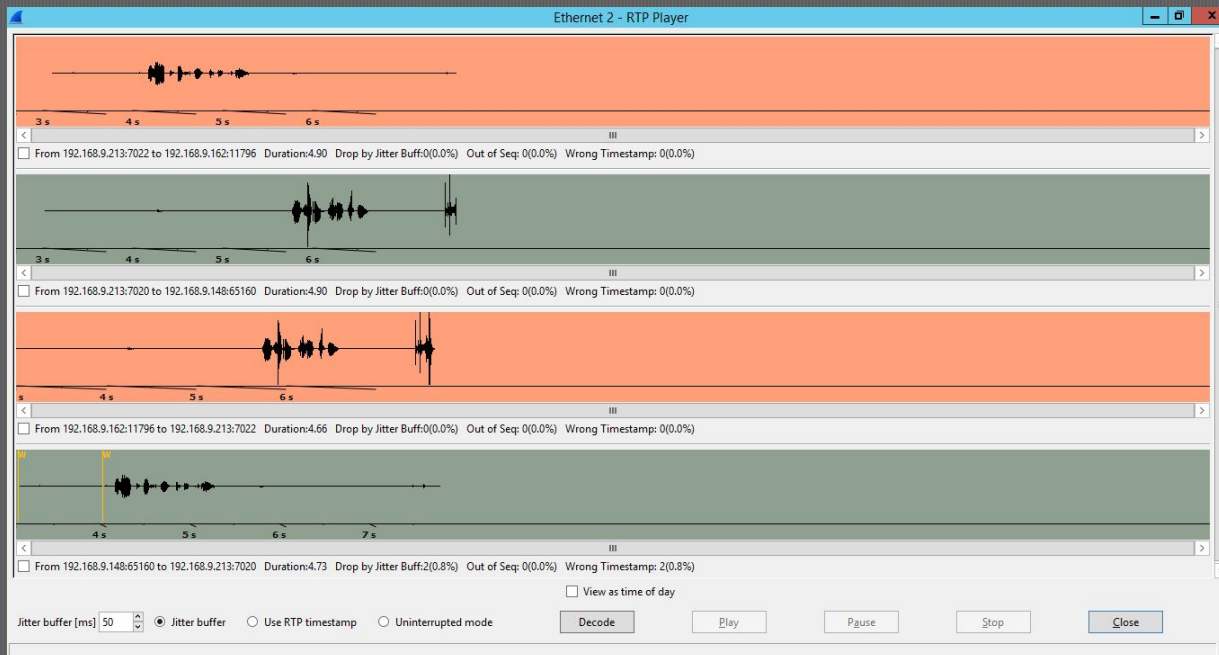
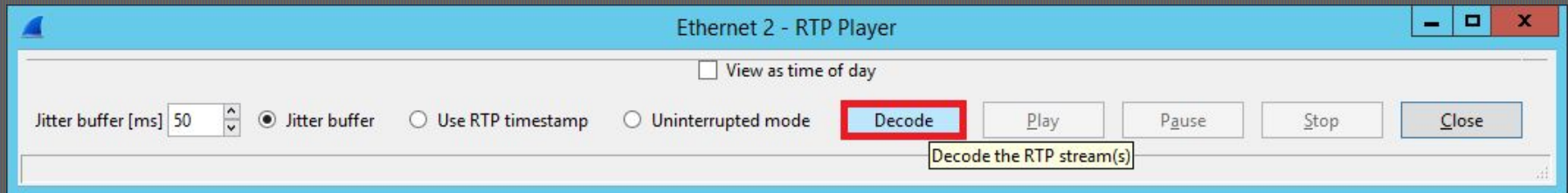
Self Help - WireShark

- SIP Flow Debugging



Self Help - Wireshark

- Debug of **Audio** issue
- Debug of timing



Self Help - Wireshark

The image displays the Wireshark 1.12.1 interface with a packet capture of SIP traffic on the Ethernet 2 interface. The main packet list shows various protocols including SIP, RTP, and TCP. The packet details pane for the selected packet (Frame 1) shows the Ethernet II, Internet Protocol Version 4, and User Datagram Protocol (SIP) layers. The packet bytes pane shows the raw data.

Ethernet 2 - Graph Analysis

The graph analysis pane shows a timeline of the captured traffic. The x-axis represents time, and the y-axis represents the sequence of packets. The graph shows the following sequence of events:

- INVITE SDP (g711) (SIP)
- 407 Proxy Authentication Required (SIP)
- ACK (SIP)
- INVITE SDP (g711) (SIP)
- 100 Trying (SIP)
- 100 Trying (SIP)
- 180 Ringing (SIP)
- 180 Ringing (SIP)
- 200 OK SDP (g711) (SIP)
- 200 OK SDP (g711) (SIP)
- ACK (SIP)
- RTP (g711) (RTP)
- RTP (g711) (RTP)
- RTP (g711) (RTP)
- RTP (g711) (RTP)

Ethernet 2 - VoIP Calls

The VoIP Calls pane shows a summary of the detected calls. The table below lists the detected calls:

Start Time	Stop Time	Initial Speaker	From	To	Protocol	Packets	State	Comment
0.989020	7.757081	192.168.9.148	"Pedro Martinez" <sip:102@192.168.9.213>	<sip:100@192.168.9.213>	SIP	10	COMPLETED	
1.383532	7.693548	192.168.9.213	"Pedro Martinez" <sip:102@192.168.9.213>	<sip:100@192.168.9.213>	SIP	7	COMPLETED	

Total Calls: 2 Start packets: 0 Completed calls: 2 Rejected calls: 1

Buttons: Prepare Filter, Flow, Player, Select All, Close


- How to: www.3cx.com/blog/voip-howto/sip-traffic-capture

Ask for Help

- When?
 - After Reading Config Guides
www.3cx.com/support
 - After Reading Admin Guide
www.3cx.com/docs/manual
 - After Reading Tech Docs
www.3cx.com/blog/category/docs

Help Requests

- Who?
 - Active NFR Partners
 - Customers with Support Agreement
- About?
 - Supported IP Phones (using default templates)
 - Supported VoIP Providers
 - 3CX products
- How?
 - Via Phone
 - Via Ticket System <http://helpdesk.3cx.com>



Gear up your PBX

Cut Costs, Boost Profits

More Training Material at:
www.3CX.com/3CXAcademy

