Troubleshooting

Polycom Admin Password

Regular default Polycom password	`456`
Our version of the admin password	`147456`
Admin menu for Polycom 330	`Menu => Settings => Advanced => <password>`
Accessing the Polycom web admin	**What is the standard way to access? Use the Admin / Polycom password**

Reset To Factory

Menu Steps	1. Go to Menu > Settings > Advanced 2. Enter the password 147456 3. Go to Admin Settings 4. Reset To Defaults 5. Reset To Factory

Phone not connecting / Not initializing / constantly rebooting

Plug the phone directly into the switch in the closet. If the phone boots up correctly, then this is an issue with any of the following:

cable	Try replacing cable
jack	Possibly need to network-test the jack
switch config	Not allowing the phone on the voice VLAN or having the wrong VLAN. • Boiling Springs uses Vlan 90 • Bergen uses VLAN 55 See custom notes on the system: /etc/network/interfaces Example to set to VLAN to our default of 50: `menu => settings => advanced => pw: 147456 => Ethernet => vlan => vlan 50`
check connected IPs	`asterisk -rvvv` `sip show peers`

Transfer Log aka Provisioning Log

What	When a phone gets its configuration, it downloads it from the provisioning server.
Location	/var/log/pure-ftpd/transfer.log
	Any other locations on other systems?
Search	IP or compressed lowercase MAC
Example	grep 50.51 /var/log/pure-ftpd/transfer.log Can search for just the last two octets
Example	grep 588d /var/log/pure-ftpd/transfer.log Can search for just the last few characters of a MAC
Tip	If a phone downloads sip.ld twice then it's probably doing a firmware update
Tip	The last thing the phone downloads is the ringtones, but only if there are ringtones to be downloaded

```
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:26 -0400] "GET /var/tftpboot/0004f248588d.cfg" 200 336
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:26 -0400] "GET /var/tftpboot/2345-12375-001.sip.ld" 200 0
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:26 -0400] "GET /var/tftpboot/phone6322.cfg" 200 2656
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:27 -0400] "GET /var/tftpboot/site.cfg" 200 7880
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:27 -0400] "GET /var/tftpboot/sip.cfg" 200 21622
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:32 -0400] "PUT /var/tftpboot/Logs/0004f248588d-boot.log" 200 5907
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:32 -0400] "PUT /var/tftpboot/Logs/0004f248588d-app.log" 200 26614
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:55 -0400] "GET /var/tftpboot/0004f248588d.cfg" 200 336
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:55:58 -0400] "GET /var/tftpboot/2345-12375-001.sip.ld" 200 4970628
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:56:32 -0400] "GET /var/tftpboot/0004f248588d.cfg" 200 336
192.168.50.51 - PlcmSpIp [28/Aug/2017:09:56:35 -0400] "GET /var/tftpboot/2345-12375-001.sip.ld" 200 3932160
```

CLI aka Command Line Interface

Finding the MAC / IP via Caller ID	`show extension status filter_by callerid_name like dave`
| | ```
--------------------------------------------------------------------------------------------------------------------------
| Exten | Phonegroup | CallerID    | MAC          | Type    | Agent | IP           | Port | Status    |
--------------------------------------------------------------------------------------------------------------------------
| 6239  | internal   | Dave Plaza    | 0004f2a669ad | Polycom | yes   | 192.168.51.99 | 5060 | OK (18 ms) |
| 6280  | internal   | Dave Scalfani | 0004f22c9fa3 | Polycom | no    | 192.168.51.51 | 5060 | OK (16 ms) |
--------------------------------------------------------------------------------------------------------------------------
``` |
| **Finding the MAC / IP via Extension** | `show extensions status filter_by extension like 239` |
| | ```
--------------------------------------------------------------------------------------------------------------------------
| Exten | Phonegroup | CallerID   | MAC          | Type    | Agent | IP           | Port | Status    |
--------------------------------------------------------------------------------------------------------------------------
| 6239  | internal   | Dave Plaza | 0004f2a669ad | Polycom | yes   | 192.168.51.99 | 5060 | OK (19 ms) |
--------------------------------------------------------------------------------------------------------------------------
``` |
Other search terms	`phonegroup_name`
	`mac`
	`ip_address`

Switch to Configuring Extension from Polycom => **reg 1**	sip_extension
Switch to Configuring Polycom from Extension	polycom
Take Out Override **Provisioning Server**	polycom <mac>
	reg 1
	no override_server
Idle Screen URL	polycom <mac>
	idle_screen_url "https://65.51.69.82/pbx/polycom/Polyc
	External HTTPS
	idle_screen_url "http://192.168.50.1/pbx/polycom/Polyc
	Internal HTTP
Setting or changing the extension of a polycom	configure
	polycom <mac>
	reg 1
	sip_extension <exten>
Getting rid of an extension	Same as above except for the last line
	no sip_extension
Renaming an extension	configure rename extension <existingExten> <newExten>
Switching the extension to a different phone	First need to get rid of the extension (within the polycom config) just like above "no sip_extension" Then configure the new extension for the polycom just like above

Setting a DID	configure
	extension <exten>
	did <10-digit-number>

Check Class Of Service for international dialing on an extension	Configure the extension and then show. The cos is set to international
	
	 ``extension 373
	  always_autoanswer no
	  call_screening no
	  callerid_name "Bob Smith"
	  callerid_number 373
	  cos kwi_internal+local+ld+intl```

If a phone is not hitting the provisioning server - especially for like-new or grade-b phones - could have harcoded provisioning programmed into the phone itself	Get ip address from the menu on the polycom simpleproxy -L 9000 -R 192.168.50.208:80 http://kwi-a.client:9000 Default polycom pass is 456 Our password is 147456 Settings → provisioning → clear server address Set username and password to PlcmSpIp Set server type to FTP Utilities->reboot phone

Polycom Directory Files

What	Contact files for presence and monitoring extensions
Location	/var/tftpboot-files/Contacts/<mac>-directory.xml **Single tenant system** /var/tftpboot-files/secure/Contacts/<mac>-directory.xn **Multi-tenant hosted uses "secure"**
Search	find /var/tftpboot-files/	grep <mac>

What	Site file - contains digit map

Location	/var/tftpboot-files/site.cfg
	Single tenant system
	/var/tftpboot-files/secure/site.cfg
	Multi-tenant hosted uses "secure"
Hack way to force a reboot	<digitmap dialplan.digitmap="***x.T|**x.T|*x.T|x.T|+x
	Add an extra "|3" to the timeOut
	Save
	asterisk -rvvv
	sip notify polycomReboot <device>
	Undo the extra |3 in the timeOut
	Save

Apache Access Log

What	
Location	/var/log/apache2/secure-access.log
Tip	

Get Phones Script

What	Search for phones
Location	/apps/bin/getPhones.pl
Usage	/apps/bin/getPhones.pl | grep <device>

DHCP Log

What	
Location	/etc/dhcpd.conf

Search	

Daemon Log

What	
Location	/var/log/daemon.log
Search	

Customer AEL

What	
Location	/etc/asterisk/ael/custom/customer.ael
Usage	asterisk -rvvv
	ael reload

Packet Sniffing

What	Debugging provisioning server
Tip	Search DHCP log for mac address to find the IP
Usage	tcpdump -i eth1 host 192.168.50.226 -A -s0

Using external provisioning server and maybe should be local	09:01:53.150684 IP 192.168.50.226.sip > 41334552.cst.lightpath.net.sip: SIP, length: 532 E..0....@.....2.A3ER........REGISTER sip:65.51.69.82:5060 SIP/2.0 Via: SIP/2.0/UDP 192.168.50.226;branch=z9hG4bKc695b930AE8872 ED From: "Miguel Yanez" <sip:653@65.51.69.82>;tag=37A25335-380B2AAC To: <sip:653@65.51.69.82>
Accidentally using HTTPS for provisioning	09:01:56.656688 IP 192.168.50.226.63288 > 41334552.cst.lightpath.net.https: Flags [S], seq 2152593281, win 8192, options [mss 1460], length 0 E..,..@.@.....2.A3ER.8...M......`. ..S........ 09:01:57.150117 IP 192.168.50.226.sip > 41334552.cst.lightpath.net.sip: SIP, length: 532 E..0....@.....2.A3ER........REGISTER sip:65.51.69.82:5060 SIP/2.0 Via: SIP/2.0/UDP 192.168.50.226;branch=z9hG4bKc695b930AE8872 ED From: "Miguel Yanez" <sip:653@65.51.69.82>;tag=37A25335-380B2AAC To: <sip:653@65.51.69.82>

Blocking Incoming Numbers

What	If for example a fax machine keeps calling and you want to block it
File	/etc/asterisk/ael/custom/trunks_in.ael

Example on BSSB-A	
| | ```
context trunkhandler_pbx-sip-t1 {
  _X. => {
    // Stupid fax machine keeps calling (2014)
    if (("${CALLERID(num)}" == "7023660961") ||
("${CALLERID(num)}" == "7023894930")) {
      Zapateller();
      Hangup();
    }

    if (("${CALLERID(num)}" == "3152854391")) {
Zapateller(); Hangup(); } // Block requested Jeff
2016-07-22
    if (("${CALLERID(num)}" == "8885994209")) {
Zapateller(); Hangup(); } // Block requested Jeff
2017-09-06
    ...
  }
}
``` |

Channel Tracing

What	Figuring out what the heck happened to a call-detail style
File	/var/log/asterisk/full
	/var/log/asterisk/full.1
	/var/log/asterisk/full.2.gz
	and many more .gz files
Example	[2017-09-05 14:51:29.716] VERBOSE[1477] chan_sip.c

Search	
	• Can search for a date/time with maybe an hour if known "**2017-09-05 14**". For busy systems this is not ideal.
	• Can search for "**New Call**" just to find new calls, there may be thousands of calls to find
	• Can search for callerid name like "**Stann Gravesande**", much more specific
	• Can seach for "**<317>**" as the incoming callerid number
	• Can seach for "**Destiation: 671**" which is the number or extension being called
Secondary Search	Once the **New Call** is found, grab the channel **<SIP/317-0000130f>**
Tracing By Channel	`/apps/bin/asterisk_trace_call -c 'SIP/317-0000130f' -d 2` That parses through the `full.*` files and displays the detailed call trace
Tracing By Call Log	`/apps/bin/asterisk_trace_call -l 3624783` That parses through a few `full.*` files based on the information it finds in the log_asterisk.call_log table

`/apps/bin/asterisk_trace_call -lc | grep 7175588105`

List all calls and then grep for a certain phone number

https://i.thinq.com => Origination (inbound calls to our call center - routing into a phone number)

=> Uncompleted

ANI - Prefix with a 1 to a 10 digit number

Updating Polycom Firmware

Still TODO

so with the provisioning server there's a few things to do
in /var/tftpboot-files i already uploaded the 5.6 firmware
so, i make a backup directory with the current firmware
i do like sip-5.4 or whatever the old one is
if you cat sip.ver
it'll tell you the current version
i copy sip.cfg and sip.ver into the backup path
and *.sip.ld as well
and then i mkdir sip-5.6
cd sip-5.6
unzip ../Polycom-UC...etc.etc5-6.zip
and then copy the sip.ver ..
and then cp Configs/sip-interop.cfg ../sip.cfg
and then cp *.ld ..
and then once you have everything in /var/tftpboot-files
then you need to copy all those to public and secure as well
sip.cfg, sip.ver, and *.sip.ld

Adding Permission To A Mailbox For Office 365

https://portal.office.com/adminportal/home#/homepage
Users => active users => select user => mail settings => mailbox permissions => edit
Then can Add which displays the users and can search for "Global Administrator"

https://outlook.office365.com
Right click "Global Administrator" name and then click "Add Shared Folder"
Type in the name to search for and add it
It takes quite a while for the new permissions to take effect

Setting up a "Like New" Phone

Always check on the "Provisioning Server" configuration section of the phone.
Phones of this type were often configured to be provisioned somewhere else, and need to have:

- **"Server" setting cleared entirely**
- **User and password set to PlcmSclp (that's lower case L 1st, capital i 2nd)**