

# 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	<b>What is the standard way to access? Use the Admin / Polycom password</b>

## Reset To Factory

Menu Steps	<ol style="list-style-type: none"><li>1. Go to Menu &gt; Settings &gt; Advanced</li><li>2. Enter the password 147456</li><li>3. Go to Admin Settings</li><li>4. Reset To Defaults</li><li>5. Reset To Factory</li></ol>
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## 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	<p>Not allowing the phone on the voice VLAN or having the wrong VLAN.</p> <ul style="list-style-type: none"><li>• Boiling Springs uses Vlan 90</li><li>• Bergen uses VLAN 55</li></ul> <p>See custom notes on the system: /etc/network/interfaces Example to set to VLAN to our default of 50:</p> <pre>menu =&gt; settings =&gt; advanced =&gt; pw: 147456 =&gt; Ethernet =&gt; vlan =&gt; vlan 50</pre>
check connected IPs	<pre>asterisk -rvvv sip show peers</pre>

## Transfer Log aka Provisioning Log

<b>What</b>	When a phone gets its configuration, it downloads it from the provisioning server.
<b>Location</b>	<pre>/var/log/pure-ftpd/transfer.log</pre>
	<b>Any other locations on other systems?</b>
<b>Search</b>	IP or compressed lowercase MAC
<b>Example</b>	<pre>grep 50.51 /var/log/pure-ftpd/transfer.log</pre> <p>Can search for just the last two octets</p>
<b>Example</b>	<pre>grep 588d /var/log/pure-ftpd/transfer.log</pre> <p>Can search for just the last few characters of a MAC</p>
<b>Tip</b>	If a phone downloads sip.ld twice then it's probably doing a firmware update
<b>Tip</b>	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
```

```
-----  
-----  
-----  
| Exten  | Phonenumber | 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 lik
```

```
-----  
-----  
-----  
| Exten  | Phonenumber | CallerID |  
MAC      | Type       | Agent  |  
IP       | Port      | Status |  
-----  
-----  
-----  
| 6239   | internal   | Dave Plaza |  
0004f2a669ad | Polycom | yes  |  
192.168.51.99 | 5060 | OK (19 ms) |  
-----  
-----  
-----
```

<b>Other search terms</b>	<input type="text" value="phonegroup_name"/> <input type="text" value="mac"/> <input type="text" value="ip_address"/>
<b>Switch to Configuring Extension from Polycom =&gt; reg 1</b>	<input type="text" value="sip_extension"/>
<b>Switch to Configuring Polycom from Extension</b>	<input type="text" value="polycom"/>
<b>Take Out Override Provisioning Server</b>	<input type="text" value="polycom &lt;mac&gt;"/> <input type="text" value="reg 1"/> <input type="text" value="no override_server"/>
<b>Idle Screen URL</b>	<input type="text" value="polycom &lt;mac&gt;"/> <input 65.51.69.82="" https:="" pbx="" polycom\""="" type="text" value="idle_screen_url \"/> <b>External HTTPS</b> <input 192.168.50.1="" http:="" pbx="" polycom\""="" type="text" value="idle_screen_url \"/> <b>Internal HTTP</b>
<b>Setting or changing the extension of a polycom</b>	<input type="text" value="configure"/> <input type="text" value="polycom &lt;mac&gt;"/> <input type="text" value="reg 1"/> <input type="text" value="sip_extension &lt;exten&gt;"/>
<b>Getting rid of an extension</b>	<p>Same as above except for the last line</p> <input type="text" value="no sip_extension"/>
<b>Renaming an extension</b>	<pre>configure rename extension &lt;existingExten&gt; &lt;newExten&gt;</pre>

<b>Switching the extension to a different phone</b>	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
<b>Setting a DID</b>	<pre>configure extension &lt;exten&gt; did &lt;10-digit-number&gt;</pre>
<b>Check Class Of Service for international dialing on an extension</b>	Configure the extension and then show. The cos is set to international <pre>extension 373 always_autoanswer no call_screening no callerid_name "Bob Smith" callerid_number 373 cos kwi_internal+local+ld+intl</pre>
<b>If a phone is not hitting the provisioning server - especially for like-new or grade-b phones - could have hardcoded provisioning programmed into the phone itself</b>	Get ip address from the menu on the polycom simpleproxy -L 9000 -R 192.168.50.208:80 <a href="http://kwi-a.client:9000">http://kwi-a.client:9000</a> Default polycom pass is 456 Our password is 147456 Settings → provisioning → clear server address Set username and password to PlcmSplp Set server type to FTP Utilities->reboot phone

## Polycom Directory Files

<b>What</b>	Contact files for presence and monitoring extensions
<b>Location</b>	<pre>/var/tftpboot-files/Contacts/&lt;mac&gt;-directory.x</pre> <p><b>Single tenant system</b></p> <pre>/var/tftpboot-files/secure/Contacts/&lt;mac&gt;-dire</pre> <p><b>Multi-tenant hosted uses "secure"</b></p>
<b>Search</b>	<pre>find /var/tftpboot-files/   grep &lt;mac&gt;</pre>

<b>What</b>	Site file - contains digit map
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<b>Location</b>	/var/tftpboot-files/site.cfg <b>Single tenant system</b> /var/tftpboot-files/secure/site.cfg <b>Multi-tenant hosted uses "secure"</b>
<b>Hack way to force a reboot</b>	<pre>&lt;digitmap dialplan.digitmap="***x.T **x.T *x.T</pre> <p>Add an extra " 3" to the timeOut Save</p> <pre>asterisk -rvvv</pre> <pre>sip notify polycomReboot &lt;device&gt;</pre> <p>Undo the extra  3 in the timeOut Save</p>

## Apache Access Log

<b>What</b>	
<b>Location</b>	<pre>/var/log/apache2/secure-access.log</pre>
<b>Tip</b>	

## Get Phones Script

<b>What</b>	Search for phones
<b>Location</b>	<pre>/apps/bin/getPhones.pl</pre>
<b>Usage</b>	<pre>/apps/bin/<a href="#">getPhones.pl</a>   grep &lt;device&gt;</pre>

## DHCP Log

<b>What</b>	
<b>Location</b>	<pre>/etc/dhcpd.conf</pre>
<b>Search</b>	

# Daemon Log

<b>What</b>	
<b>Location</b>	<code>/var/log/daemon.log</code>
<b>Search</b>	

# Customer AEL

<b>What</b>	
<b>Location</b>	<code>/etc/asterisk/ael/custom/customer.ael</code>
<b>Usage</b>	<code>asterisk -rvvv</code> <code>ael reload</code>

# Packet Sniffing

<b>What</b>	Debugging provisioning server
<b>Tip</b>	Search DHCP log for mac address to find the IP
<b>Usage</b>	<code>tcpdump -i eth1 host 192.168.50.226 -A -s0</code>
<b>Using external provisioning server and maybe should be local</b>	<pre>09:01:53.150684 IP 192.168.50.226.sip &gt; 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" &lt;sip:653@65.51.69.82&gt;;tag=37A25335-380B2AAC To: &lt;sip:653@65.51.69.82&gt;</pre>

## 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

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

### 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

<b>What</b>	Figuring out what the heck happened to a call-detail style
<b>File</b>	<input type="text" value="/var/log/asterisk/full"/> <input type="text" value="/var/log/asterisk/full.1"/> <input type="text" value="/var/log/asterisk/full.2.gz"/> and many more .gz files
<b>Example</b>	<input type="text" value="[2017-09-05 14:51:29.716] VERBOSE[1477] chan_s"/>

<p><b>Search</b></p>	<ul style="list-style-type: none"> <li>• Can search for a date/time with maybe an hour if known "<b>2017-09-05 14</b>". For busy systems this is not ideal.</li> <li>• Can search for "<b>New Call</b>" just to find new calls, there may be thousands of calls to find</li> <li>• Can search for callerid name like "<b>Stann Gravesande</b>", much more specific</li> <li>• Can search for "&lt;<b>317</b>&gt;" as the incoming callerid number</li> <li>• Can search for "<b>Destiation: 671</b>" which is the number or extension being called</li> </ul>
<p><b>Secondary Search</b></p>	<p>Once the <b>New Call</b> is found, grab the channel &lt;<b>SIP/317-0000130f</b>&gt;</p>
<p><b>Tracing By Channel</b></p>	<pre style="border: 1px solid #ccc; padding: 5px;">/apps/bin/asterisk_trace_call -c 'SIP/317-0000130f'</pre> <p>That parses through the <code>full.*</code> files and displays the detailed call trace</p>
<p><b>Tracing By Call Log</b></p>	<pre style="border: 1px solid #ccc; padding: 5px;">/apps/bin/asterisk_trace_call -l 3624783</pre> <p>That parses through a few <code>full.*</code> files based on the information it finds in the <code>log_asterisk.call_log</code> table</p>

```
/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 - rounting 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 PlcmScIp (that's lower case L 1st, capital i 2nd)

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