

Obelisk

Michael Will

Natalie Helmer

Obelisk

by Michael Will and Natalie Helmer

Published 2010

Copyright © 2007, 2008, 2009, 2010

Table of Contents

1. Installation	1
1.1. system requirements.....	1
1.2. Package installation.....	1
1.2.1. Debian based unix systems.....	1
1.3. Database installation	1
1.3.1. MySQL	2
1.3.2. PostgreSQL.....	2
1.4. Setup the Server	2
1.5. Plugin installation	2
2. Upgrade	3
2.1. Standard Upgrade.....	3
2.1.1. Debian based unix systems.....	3
2.2. Manual Upgrade.....	3
2.2.1. Debian based unix systems.....	3
3. Configuration	4
3.1. Configure DHCP Server.....	4
3.1.1. Configure DHCP3 Server	4
3.1.2. Configure DNSMASQ Server	6
3.2. Configure DECT Station.....	6
3.2.1. Configure Snom M3 DECT Station	7
3.3. Configure Media Gateways.....	7
3.3.1. Patton Smartnode.....	7
3.4. Configure Obelisk SSL	7
3.5. Configure Custom Text	8
3.6. Obelisk PBX Properties	8
4. User	10
4.1. Phone.....	10
4.1.1. Snom 3XX Serie.....	10
4.1.2. Snom 8XX Serie.....	10
5. Developer	11
5.1. Building the Source.....	11
5.1.1. Get the Obelisk Source	11
5.1.2. Build Obelisk.....	11
5.1.3. Ant Build Tasks	11
5.2. Plugin Development.....	11
5.2.1. Introduction	12
5.2.2. Structure of a Plugin.....	12
6. End device	14
6.1. Feature matix.....	14

List of Tables

6-1. Stationphone 14

Chapter 1. Installation

1.1. system requirements

Asterisk

in version 1.6.x or newer

Java

in version 1.6.0 update 4 or newer

optional PostgreSQL

in version 7.4 or newer

optional MySQL

in version 4 or newer

1.2. Package installation

1.2.1. Debian based unix systems

Debian and other Debian-based distributions utilize a special tool for managing packages known as APT.

Add the repository to your system's list of APT sources:

```
# For Ubuntu Hardy 8.04
deb http://packages.willwebhosting.de/hardy/ hardy main
```

Then update APT's package information by running **apt-get update**.

You can now install the Obelisk by typing **apt-get install asterisk obelisk**.

1.3. Database installation

1.3.1. MySQL

Create a database for the Obelisk tables:

```
mysqladmin create asterisk
```

1.3.2. PostgreSQL

Create a database for the Obelisk tables. For example, using the PostgreSQL "createdb" utility:

```
createdb -E UNICODE asterisk
```

1.4. Setup the Server

A web-based, "wizard" driven setup and configuration tool ist built into Obelisk. The default port for the web-based console ist 80. If you are on the same machine as Obelisk, the following URL will usually work: <http://127.0.0.1:80/>

1.5. Plugin installation

If you download a plugin from inside the Obelisk Webconsole, it will be automaticall be installed after a restart. If you manually download the plugin (packaged as a .jar file), you can deploy it by copying the plugin file to the plugins/ directory of your Obelisk installation and restart your Obelisk Server.

Chapter 2. Upgrade

2.1. Standard Upgrade

2.1.1. Debian based unix systems

1. Execute the following commands to upgrade you system:

```
apt-get update apt-get dist-upgrade
```

2.2. Manual Upgrade

2.2.1. Debian based unix systems

1. Install the new DEB. Execute the following cmmand to update your current install

```
dpkg -i obelisk_X.X.X_all.deb
```

Chapter 3. Configuration

3.1. Configure DHCP Server

3.1.1. Configure DHCP3 Server

```
#
# DHCP configuration
#

ddns-update-style none;
authoritative;

default-lease-time 2764800; # 32 days
max-lease-time 3024000; # 35 days

#####
# Siemens Definition
#####
option space OptiIpPhone;
option OptiIpPhone.magic code 1 = string;
option OptiIpPhone.vlanid code 2 = unsigned integer 32;
option OptiIpPhone.dls code 3 = string;

#####
# Subnetwork
#####
subnet 10.0.0.0 netmask 255.255.255.0 {
option subnet-mask 255.255.255.0;
range 10.0.0.100 10.0.0.254;
option domain-name "miwix.com";
option domain-name-servers 10.0.0.50;
option broadcast-address 10.0.0.255;
option subnet-mask 255.255.255.0;
option routers 10.0.0.10;

#####
# SNOM 3XX Serie
#####
class "Snom" {
match if (
(substring(hardware, 1, 3) = 00:04:13)
and not (substring(pick-first-value(option vendor-class-identifier, ""), 0, 8) = "snom-m3-");
);
```

```

option tftp-server-name "http://10.0.0.50:80";
option bootfile-name "provisioning/settings/?mac={mac}";
}

#####
# Linksys SPA9X2
#####
class "Linksys" {
match if (
(substring(hardware, 1, 3) = 00:0E:08)
);

option tftp-server-name "10.0.0.50";
}

#####
# Aastra
#####
class "Aastra" {
match if (
(substring(hardware, 1, 3) = 00:08:5D)
);

option tftp-server-name "http://10.0.0.50/provisioning/settings/";
}

#####
# Polycom
#####
class "PolycomSoundPoint" {
match if (
(substring(hardware, 1, 3) = 00:04:F2)
);

option tftp-server-name "http://10.0.0.50/provisioning/settings/";
}

#####
# Siemens
#####
class "SiemensPhone" {
match if (
(substring(hardware, 1, 3) = 00:01:E3) or
(substring(hardware, 1, 3) = 00:1A:E8)
);

vendor-option-space      OptiIpPhone;
option OptiIpPhone.magic  53:69:65:6D:65:6E:73:00:00:00; # "SIEMENS\0\0\0"
option OptiIpPhone.dls    "sdlp://10.0.0.50:18443";
}

}

```

3.1.2. Configure DNSMASQ Server

```
no-hosts
```

```
dhcp-range=10.0.0.100,10.0.0.254,255.255.255.0,24h
```

```
dhcp-host=00:04:13:***,net:snom
```

```
dhcp-option=net:snom,option:tftp-server,"http://10.0.0.50:80"
```

```
dhcp-option=net:snom,option:bootfile-name,"provisioning/settings/?mac={mac}"
```

```
dhcp-option=net:snom,vendor:snom-m3,option:tftp-server,
```

```
dhcp-option=net:snom,vendor:snom-m3,option:bootfile-name,
```

```
dhcp-host=00:0E:08:***,net:linksys
```

```
dhcp-option=net:linksys,option:tftp-server,"http://10.0.0.50/provisioning/settings/"
```

```
dhcp-host=00:04:f2:***,net:PolycomSoundPoint
```

```
dhcp-option=net:PolycomSoundPoint,option:tftp-server,"http://10.0.0.50/provisioning/setting"
```

```
dhcp-host=00:01:E3:***,00:1A:E8:***,net:OpenStage
```

```
dhcp-option=OpenStage,vendor:OptiIpPhone.magic,1,"53:69:65:6D:65:6E:73:00:00:00"
```

```
dhcp-option=OpenStage,vendor:OptiIpPhone.dls,3,"sdlp://10.0.0.50:18443"
```

```
dhcp-host=00:08:5d:***,net:AASTRA
```

```
#dhcp-option=net:AASTRA,option:tftp-server,"http://10.0.0.50/provisioning/settings/"
```

```
dhcp-option=option:domain-name,miwix.com
```

```
dhcp-option=option:router,10.0.0.10
```

```
#enable-tftp
```

```
# Set the root directory for files availble via FTP.
```

```
#tftp-root=/var/ftpd
```

```
# Make the TFTP server more secure: with this set, only files owned by
```

```
# the user dnsmasq is running as will be send over the net.
```

```
#tftp-secure
```

3.2. Configure DECT Station

3.2.1. Configure Snom M3 DECT Station

First time set the Static IP Address with Gateway and Netmask for SNOM M3. After that set the configuraton address to "[Server IP]/prov/settings". Now Reboot the Snom M3 DECT Station.The Snom M3 DECT station register automatically at the obelisk.

3.3. Configure Media Gateways

3.3.1. Patton Smartnode

For the first init for Patton SmartNode 46XX execute the follow commands

```
telnet [Patton IP]

login: administrator
password:

PATTON>enable
PATTON#

PATTON# copy tftp://[SERVER IP]/patton2/[PATTON IP] startup-config
PATTON# reload

Running configuration has been changed.
Do you want to copy the 'running-config' to the 'startup-config'?
Press 'yes' to store, 'no' to drop changes : no
Press 'yes' to restart, 'no' to cancel : yes
The system is going down
```

3.4. Configure Obelisk SSL

Execute the following commands in the "/etc/obelisk" directory to create an ssl key for the HTTPS:

Important: Set all passwords to "obelisk"

```
openssl genrsa -des3 -out server.key
```

```
openssl req -new -x509 -key server.key -out server.crt
openssl req -new -key server.key -out server.csr
openssl pkcs12 -inkey server.key -in server.crt -export -out server.pkcs12
```

3.5. Configure Custom Text

The Custom Text can you configure in the WebConsole under Administration -> Custom Text

- voicemail.mail.body and voicemail.mail.subject

variables	description
{0}	CallerID Name
{1}	CallerID Number
{2}	Duration
{3}	Date and Time

- fax.mail.subject and fax.mail.body

variables	description
{0}	CallerID

3.6. Obelisk PBX Properties

Obelisk PBX XML Properties

variables	description	Default
webConsole.port	The port number the web console listens on (not encrypted).	80
webConsole.securePort	The port number the admin console listens on (encrypted).	443
syslog.port	The port number for the obelisk syslog server.	
database.type	database type e.g. postgresql for PostgreSQL	
database.host	database host	

variables	description	Default
database.name	database name	
database.user	database user	
database.pass	database password	
setup	True if Obelisk has been configured. False only after an initial install before configuring.	false

Obelisk PBX Database Properties

variables	description	Default
name	This will set the IP address for the management server.	
proxy.host	Proxy hostname or ip address	
proxy.port	Proxy port	
proxy.type	Proxy type	

Chapter 4. User

4.1. Phone

4.1.1. Snom 3XX Serie

4.1.1.1. Login / Logout

Please press the Snom-Button to login on a Snom 3XX (> 300-serie) and choose the 1st Menu point "Login". After that, please enter your userid and confirm it with pressing the hitch-button. Then enter your pin and confirm it with the hitch-button, too.

Please press the Snom-Button to logout from a Snom 3XX (> 300-serie) and choose the 2nd Menu point "Logout". Now, you can see a screen with all userer, which are actually loggedin on the phone. Please choose the user, you want to logout and confirm it with pressing the hitch-button.

4.1.2. Snom 8XX Serie

4.1.2.1. Login / Logout

Please press the Menu to login on a Snom 8XX (> 800-serie) and choose the 1st Menu point "Login/Logout" and then "Login". After that, please enter your userid and confirm it with pressing the hitch-button. Then enter your pin and confirm it with the hitch-button, too.

Please press the Snom-Button to logout from a Snom 8XX (> 800-serie) and choose the Menu point "Login/Logout" and then "Logout". Now, you can see a screen with all userer, which are actually loggedin on the phone. Please choose the user, you want to logout and confirm it with pressing the hitch-button.

Chapter 5. Developer

5.1. Building the Source

This chapter provides detailed information for developers that wish to compile and make changes to the Obelisk source code.

5.1.1. Get the Obelisk Source

You can get the Obelisk source code by downloading a source distribution or by checking out the source code from SVN

5.1.2. Build Obelisk

The Obelisk build process uses Ant, so that tool must be installed and configured on your computer

Run the Build Tool to compile the Source Code

```
ant
```

5.1.3. Ant Build Tasks

To execute a build task, type **ant [options] targetname** where "targetname" is one of the targets listed below:

```
build.plugins    => Builds all plugins
build.tools      => Cleans up all tools build-generated output
clean            => remove intermediate files
clean.plugins    => Cleans up all plugin build-generated output
clean.tools      => Builds all tools
dist             => Create a Jar file for Obelisk
installer.debian => installer for debian
```

5.2. Plugin Development

5.2.1. Introduction

Plugins enhance the functionality of Obelisk. This section is a developer's guide for creating plugins.

5.2.2. Structure of a Plugin

Example 5-1. Structure of a Plugin

```
myplugin/
|- plugin.xml  <- Plugin definition file
|- lib/        <- Libraries (JAR files) your plugin needs
|- database/   <- Optional database schema files that your plugin needs
|- web/        <- Resources for Web integration
|- phone/      <- Resources for Phone integration
```

Example 5-2. plugin.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<plugin>
<class>de.will.obelisk.plugin.example.ExamplePlugin</class>
<name>Example Plugin</name>
<description>Example Plugin</description>
<author>Michael Will</author>
<version>0.0.1</version>
<minServerVersion>0.0.1</minServerVersion>
<WebApplication>
</WebApplication>
</plugin>
```

The meta-data fields that can be set in the plugin.xml file:

- class -- the main class of the plugin.
- name -- the name of the plugin.
- description -- the description of the plugin.
- author -- the author of the plugin.
- version -- the version of the plugin.

Your plugin class must implement the "de.will.obelisk.plugin.Plugin" interface from the Obelisk. The

Plugin interface has methods for initializing and destroying the plugin.

```
package de.will.obelisk.plugin.example;

import de.will.obelisk.plugin.Plugin;

public class ExamplePlugin implements Plugin
{

    @Override
    public void destroyPlugin()
    {

    }

    @Override
    public void initializePlugin()
    {

    }

}
```

Chapter 6. End device

6.1. Feature matix

Table 6-1. Stationphone

Type	Login	UI-Login	Phoneboook
Aastra 6753i	X		
Aastra 6757i	X		
Aastra 6739i	X		
Linksys 942	X		
OpenStage 60/80	X		
Snom 3XX	X	X	X
Snom 8XX	X	X	X