

Sam Tingleff
Novell*

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what we will not discuss



flickr: pfish

what we will discuss



- **goals of a home * implementation**
- **6 steps to leave ma bell**
- **click to call**
- **notification hacks**
- **reminders**
- **phone home**

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why asterisk

- vonage, packet 8, comcast, etc. are for sissies
- open standards are good (see vonage)
- hackable

*goals for a home * implementation*

- **consider the WAF (or SAF or DAF or ...) factor**
- minimal downtime
- when someone calls, the phone should ring
- we would like to call other people
- we would like to talk on a phone
 - ... not necessarily at a desk
- keep existing phone number
- lower costs
- add functionality
- not spend two weeks reading documentation

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1: choose a provider

- providers come in many flavors
 - pay as you go
 - unlimited incoming + X outgoing minutes
 - all you can eat (until you eat too much)
 - free
- everything costs \$\$\$\$
 - e911
 - second phone number
 - additional inbound channels
 - toll free number
- choose carefully

2: choose your devices



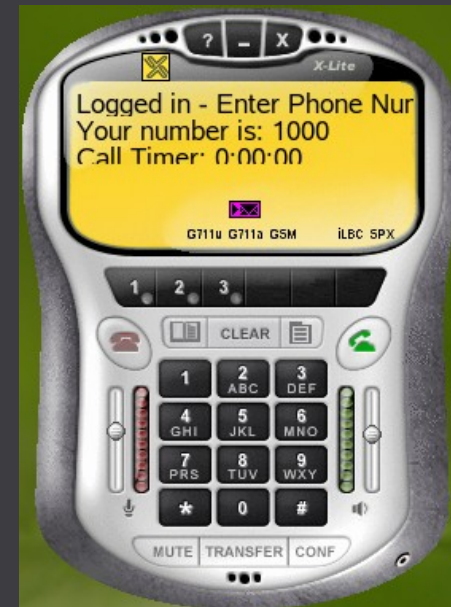
2: choose your devices



+



2: choose your devices



3. installation


- `wget http://ftp.digium.com/pub/asterisk/releases/asterisk-1.2.18.tar.gz`
- `tar xzf asterisk-1.2.18.tar.gz`
- `cd asterisk-1.2.18`
- `make`
- `sudo make install`

4: *choose a web frontend*

- remember our goals
 - “not spend two weeks reading documentation”



5: firewall



DD-WRT CONTROL PANEL

Firmware: DD-WRT v23 SP2 (09/15/06) vpn
Time: 22:57:29 up 19 days, 21:35, load average: 0.00, 0.00, 0.00
WAN IP: 24.19.38.221

Setup

Wireless

Security

Access Restrictions

Applications & Gaming

Administration

Status

Port Range Forwarding

Port Forwarding

Port Triggering

UPnP

DMZ

QoS

Port Range Forward

Helpmore...

Forwards

Application	Start	End	Protocol	IP Address	Enable
sip	10000	20000	UDP ▾	192.168.1.123	<input checked="" type="checkbox"/>

Add

Remove

Save Settings

Cancel Changes

Port Range Forward:

Certain applications may require to open specific ports in order for it to function correctly. Examples of these applications include servers and certain online games. When a request for a certain port comes in from the Internet, the router will route the data to the computer you specify. Due to security concerns, you may want to limit port forwarding to only those ports you are using, and uncheck the *Enable* checkbox after you are finished.

5: firewall



Firmware: DD-WRT v23 SP2 (09/15/06) vpn
Time: 22:59:45 up 19 days, 21:37, load average: 0.00, 0.00, 0.00
WAN IP: 24.19.38.221

Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Port Range Forwarding Port Forwarding Port Triggering UPnP DMZ QoS

Port Forward

Help more...

Forwards

Port Forward:

Certain applications may require to open specific ports in order for it to function correctly. Examples of these applications include servers and certain online games. When a request for a certain port comes in from the Internet, the router will route the data to the computer you specify. Due to security concerns, you may want to limit port forwarding to only those ports you are using, and uncheck the *Enable* checkbox after you are finished.

Application	Port from	Protocol	IP Address	Port to	Enable
ssh	22222	TCP	192.168.1.120	22222	<input checked="" type="checkbox"/>
http	81	TCP	192.168.1.115	81	<input type="checkbox"/>
http	8060	TCP	192.168.1.129	8060	<input checked="" type="checkbox"/>
sip	5060	UDP	192.168.1.123	5060	<input checked="" type="checkbox"/>
vpn	1194	UDP	192.168.1.120	1194	<input checked="" type="checkbox"/>
iax2	4569	UDP	192.168.1.123	4569	<input checked="" type="checkbox"/>
https	8061	TCP	192.168.1.129	8061	<input checked="" type="checkbox"/>
ssh	22223	TCP	192.168.1.101	22	<input checked="" type="checkbox"/>
ssh	22	TCP	192.168.1.101	22	<input checked="" type="checkbox"/>

Add Remove

Save Settings

Cancel Changes

6: success!

sip1*CLI> sip show peers

Name/username	Host	Dyn	Nat	ACL	Port	Status
voicepulse02/xxxxxxxxxx	64.61.93.90			N	5060	OK (73 ms)
voicepulse01/xxxxxxxxxx	64.61.93.87			N	5060	OK (78 ms)
gw-telasip/xxxxxxxxxx	4.79.19.56			N	5060	OK (78 ms)
200	(Unspecified)	D	N	0		UNKNOWN
1000/1000	(Unspecified)	D	N	0		UNKNOWN
100/100	192.168.1.179	D	N	5060		OK (12 ms)

6 sip peers [4 online , 2 offline]

sip1*CLI> sip show channels

Peer	User/ANR	Call ID	Seq (Tx/Rx)	Form	Hold	Last Message
64.61.93.87	xxxxxxxxxxx	1792843c254	00245/00000	unkn	No	
64.61.93.90	xxxxxxxxxxx	51d89ddd622	00245/00000	unkn	No	
4.79.19.56	xxxxxxxxxxx	62fa2c48298	00197/00000	unkn	No	

3 active SIP channels

sip1*CLI>

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click-to-call

- Download from VoipJots.com

Enter your phone number (1XXXXXXXXXX), and
we will call you a few seconds later!

Call Us!

click-to-call

```
$oSocket = fsockopen($strHost, 5038, $errnum, $errdesc)
    or die("Connection to host failed");
fputs($oSocket, "Action: login\r\n");
fputs($oSocket, "Events: off\r\n");
fputs($oSocket, "Username: $strUser\r\n");
fputs($oSocket, "Secret: $strSecret\r\n\r\n");
fputs($oSocket, "Action: originate\r\n");
fputs($oSocket, "Channel: $strChannel\r\n");
fputs($oSocket, "WaitTime: $strWaitTime\r\n");
fputs($oSocket, "CallerId: $strCallerId\r\n");
fputs($oSocket, "Exten: $strExten\r\n");
fputs($oSocket, "Context: $strContext\r\n");
fputs($oSocket, "Priority: $strPriority\r\n\r\n");
fputs($oSocket, "Action: Logoff\r\n\r\n");
fclose($oSocket);
```

greasemonkey

- Install greasemonkey
 - <http://www.greasespot.net/>
- c2c greasemonkey script at Asterisk Extras
 - <http://asteriskextras.com/cc.user.txt>

click-to-call + greasemonkey

1. [Mad Pizza](#) 📍

[\(206\) 322-7447](#) 1314 Madison St, Seattle, WA 0.31 mi

[Map](#) | [Directions](#) | [Send to Phone](#) | [+ Save to Collection](#)

“...! I had heard only good things about Mad **Pizza**, so I decided to try it, and now I am one... [more](#)

See all: [Pizza - Restaurants](#)

[madpizza.com/](#)

2. [Post Alley Pizza](#) 📍

[\(206\) 382-8475](#) 1123 Post Ave, Seattle, WA 0.37 mi

[Map](#) | [Directions](#) | [Send to Phone](#) | [+ Save to Collection](#)

“...and Philadelphia, I've had some bad **pizza** here in the Northwest. Post Alley's... [more](#)

See all: [Carry Out & Take Out - Delicatessens - Pizza - Restaurants - Italian Restaurants](#)

3. [New York Pizza Place II](#) 📍

[\(206\) 587-0381](#) 701 5th Ave Ste 108, Seattle, WA 0.12 mi

[Map](#) | [Directions](#) | [Send to Phone](#) | [+ Save to Collection](#)

See all: [Carry Out & Take Out - Pizza - Restaurants](#)

4. [Hugos Pizza](#) 📍

[\(206\) 328-5525](#) 526 Broadway, Seattle, WA 0.25 mi

[Map](#) | [Directions](#) | [Send to Phone](#) | [+ Save to Collection](#)

“...BEST Calzone's in Seattle! Great price! Great ingredients! A MUST for any **pizza** lover!... [more](#)

See all: [Pizza - Restaurants - American Restaurants - Italian Restaurants](#)

5. [Pizza Pro](#) 📍

[\(206\) 623-5057](#) 104 Occidental Ave S, Seattle, WA 0.31 mi

sugarcrm + greasemonkey

Contacts: Home

[Print](#) [?](#) [Help](#)

Basic Search

Advanced Search

Saved Search & Layout

First Name:

Last Name:

Account Name:

Only my items: ☐

Search

Clear

Contact List

[Export](#) | [Merge Duplicates](#) | Selected: 0

Start

Previous (1 - 1 of 1)

Next

End

<input type="checkbox"/>	Name	Title	Email	Office Phone	Home	Mobile	Other Phone
<input type="checkbox"/>	Sam Tingleff		sam@tingleff.com	+1 (206) 706-3986	+1 (206) 203-5908	+1 (206) 321-4267	+1 (206) 508-1397

[Export](#) | [Merge Duplicates](#) | Selected: 0

Start

Previous (1 - 1 of 1)

Next

End

sugarcrm + ajax

[all contacts](#) search: [GO](#)

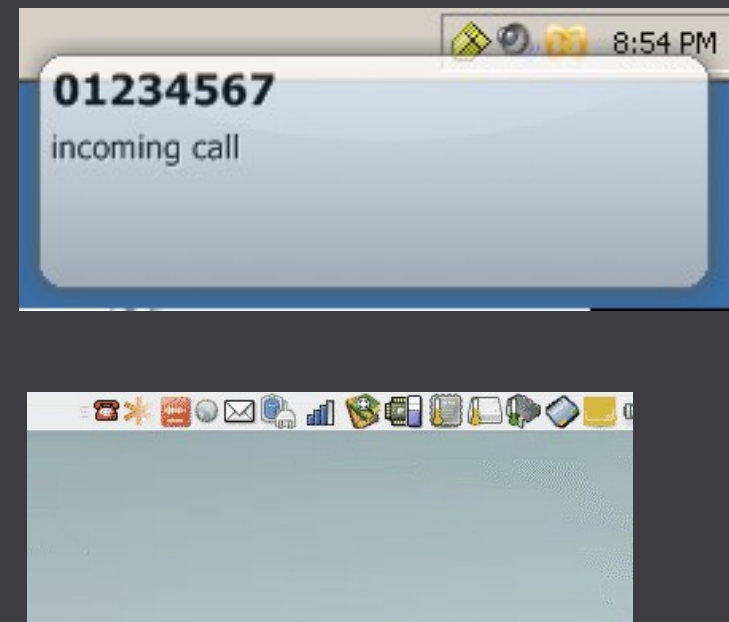
Showing page 1 of 1

name	title	home	office	mobile
Brandon Williams	Linux Impact Team, Novell		+1 (281) 710-7496	+1 (713) 471-3808
Brian Fisher	Client Manager, Novell			+1 (503) 880-1829
Cameron Seader	Primary Support Engineer, Novell		+1 (801) 349-2661	+1 (801) 369-8720
Channing Quist	Partner Development Manager, Novell		+1 (360) 210-7501	+1 (360) 713-4263
Ed Moore	Novell Guy, Capital City Tech		+1 (360) 438-0649	
Jim Wiles	Account Executive, Novell		+1 (503) 763-8581	+1 (503) 383-8903
Joe Gerkman	Linux Impact Team, Novell			+1 (503) 880-1120
Rick Barr	Novell, Inc.		+1 (408) 961-1036	+1 (650) 269-0357
Tom Veite	Sr. Systems Engineer, Novell		+1 (480) 812-4583	+1 (480) 296-5246

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app_notify

- remember our goals
 - “consider the WAF”
 - “add functionality”
- http://mezzo.net/asterisk/app_notify.html



app_jabber

- “add functionality”
- requires loudmouth and loudmouth-devel
- http://fuhrmannek.de/projects/asterisk/app_jabber.bef

[custom-ext-2067063986]

exten => 100,1,Set(jid=myjabber.net/sam.tingleff@gmail.com)

exten => 100,2,JabberSend(\${jid},Incoming call from \${CALLERIDNUM}.)

exten => 100,3,Notify(\${CALLERIDNUM},\${CALLERIDNAME},\${EXTEN}/whitey)

exten => 100,4,Goto(ext-local,100,1)

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we have a lot of house guests



some of them are slow to wake up

if they treat your house like a hotel, give them a hotel

<http://nerdvittles.com/index.php?p=117>

```
exten => *95,1,Answer
```

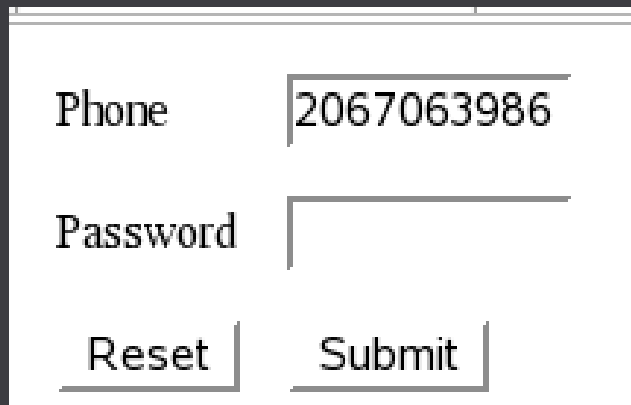
```
exten => *95,2,Wait(1)
```

```
exten => *95,3,Goto(reminder,s,1)
```

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phone home

- Also from Nerd Vittles
 - <http://nerdvittles.com/index.php?p=73>



A screenshot of a web form with a white background and a thin black border. The form contains two input fields and two buttons. The first field is labeled 'Phone' and contains the number '2067063986'. The second field is labeled 'Password' and is empty. Below the fields are two buttons: 'Reset' and 'Submit'.

Phone	<input type="text" value="2067063986"/>
Password	<input type="password"/>
<input type="button" value="Reset"/>	<input type="button" value="Submit"/>

call to action

call to action: zero cost trial

- Zero cost testing
- VMWare/Xen/Virtual Server
- VoicePulse \$2 free trial
 - <http://connect.voicepulse.com/Trial.aspx>
- Free inbound calling from ipkall (206 area code!)
 - <http://www.ipkall.com/>
- PC-based sip phone
 - X-Lite
 - <http://www.counterpath.com/>
 - Ekiga
 - check your distribution

resources

- asterisk
 - <http://www.asterisk.org>
- freepbx
 - <http://www.freepbx.org>
- nerd vittles roundup of voip providers
 - <http://nerdvittles.com/index.php?p=163>
- ip phones and ata adapters (and more)
 - <http://www.voxilla.com/>
- click-to-call
 - <http://www.voipjots.com/2006/02/click-to-call-with-your-asteriskhome.html>
- sugar crm ajax dialer
 - <http://sam.tingleff.com/blog/2007/04/27/sugar-dialer.tar.gz>
- this presentation
 - <http://sam.tingleff.com/blog/2007/04/27/linuxfestnw-asterisk.pdf>
- <http://del.icio.us/spayneti/asterisk>

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