

VoIP for n00bs...by a n00b



[hacintosh.org](http://hacintosh.org)

# Hardware



- ✓ Spare server or Vmware
  - ✓ This will host VoIP server / VoIP Distro
- ✓ Ethernet
- ✓ ~256 RAM
  - ✓ really depends on how many lines you want and if you are running under Vmware
- ✓ ~ 1Ghz Processor

# Software



## ✓ Asterisk

✓ <http://Asterisk.org>

✓ <http://Trixbox.org>

✓ <http://Astlinux.org>

## ✓ OpenSER

✓ <http://Openser.org>

## ✓ YATE

✓ <http://yate.null.ro/pmwiki/>

# Asterisk



- ✓ Most Popular Open Source VoIP Server
- ✓ Funded by Digium
- ✓ Asterisk Distros:
  - ✓ AsteriskNOW (Digium)
  - ✓ Trixbox (formly Asterisk @ Home)
  - ✓ AstLinux (minimal/embedded Asterisk)

# Trixbox



- ✓ Formerly Asterisk @ Home
- ✓ Was purchased by Fonality
- ✓ Releases a Asterisk Distro
  - ✓ Think Ubuntu or Fedora for VoIP
- ✓ CentOS 4 based distro
  - ✓ yum repo for updates

# Trixbox Features



- ✓ trixbox dashboard
- ✓ Asterisk(tm) Open Source PBX
- ✓ FreePBX web management tool
- ✓ SugarCRM
- ✓ Munin (via package manager)
- ✓ HUDLite server/admin (via package manager)
- ✓ IVRGraph (via package manager)
- ✓ phpMyAdmin? (via package manager)
- ✓ Webmin (via package manager)

# Trixbox Call Features

- ✓ Automated Attendant
- ✓ Blacklists
- ✓ Blind Transfer
- ✓ Call Detail Records
- ✓ Call Forward on Busy
- ✓ Call Forward on No Answer
- ✓ Call Forward Variable
- ✓ Call Monitoring
- ✓ Call Parking
- ✓ Call Queuing
- ✓ Call Recording
- ✓ ENUM
- ✓ Call Routing (DID & ANI)
- ✓ Call Snooping
- ✓ Call Transfer
- ✓ Call Waiting
- ✓ Caller ID
- ✓ Caller ID Blocking
- ✓ Caller ID on Call Waiting
- ✓ Calling Cards
- ✓ Conference Bridging
- ✓ Dial by Name
- ✓ Direct Inward System Access
- ✓ Do Not Disturb

# Trixbox Call Features - cont.



- ✓ Interactive Directory Listing
- ✓ Interactive Voice Response (IVR)
- ✓ Local and Remote Call Agents
- ✓ Music On Hold
- ✓ Overhead Paging
- ✓ Remote Call Pickup
- ✓ Remote Office Support
- ✓ Roaming Extensions
- ✓ Route by Caller ID
- ✓ Supervised Transfer
- ✓ Talk Detection
- ✓ Text-to-Speech (via Festival)
- ✓ Three-way Calling
- ✓ Transcoding
- ✓ Trunking
- ✓ Visual Indicator for Message Waiting
- ✓ Stutter Dialtone for Message Waiting
- ✓ Voicemail to email
- ✓ Web Voicemail Interface
- ✓ AGI (Asterisk Gateway Interface)
- ✓ Graphical Call Manager
- ✓ Outbound Call Spooling

# Trixbox Appliance



<http://store.trixbox.com>

# VoIP Providers



- ✓ There are TONS of VoIP Providers
- ✓ Vitelity
- ✓ BroadVoice
- ✓ VoicePulse
- ✓ Need one that is BYOD
- ✓ Vonage and Packet8 will NOT work

# Vitelity



- ✓ Price was right
  - ✓ \$0.01 - \$0.0139 a call in and outbound
  - ✓ \$1.49 DID
  - ✓ \$0.50 1-800 DID
- ✓ Support has been really really good
- ✓ Have a pretty good portal for accounting

# My Bill



- ✓ 04-07-2007 to 05-08-2007
  - ✓ 413 minutes in and outbound
  - ✓ Grand total is.....

# HOLY \$|-|i+!!!!



✓ \$9.18


✓ \$4.70 for minutes

✓ \$1.49 x 2 DIDs

✓ Columbia, MD DID

✓ Mobile, AL DID

# Demo

- 
- ✓ Now I will show you how to setup Trixbox in under 10 Minutes...
  - ✓ now a prayer to the Demo Gods.....

# VoIP Problems



## ✓ Security

- ✓ No encryption built into Asterisk
  - ✓ You could use IPsec or OpenVPN
  - ✓ SRTP and ZRTP are on the horizon
- ✓ OpenSER has SRTP but Asterisk doesn't
- ✓ Register passwords are in the clear...WTF??
  - ✓ Most providers don't even support lame MD5
- ✓ CallerID is totally BROKZORED!!!!

# VoIP Problems



✓ 911

✓ e911 is here but does it work??!!?!!

✓ does anyone know how it works???

✓ CallerID

✓ CallerID

✓ CallerID

# Questions?



<http://hacintosh.org/assets/2007/5/9/VoIPN00b.pdf>

yes those are zeros...how else is n00b spelled??