

# VoIP – What is it?

- VoIP - Voice-over-Internet protocol - protocol optimized for the transmission of voice through the Internet or other packet-switched networks
  - VoIP is often used abstractly to refer to the actual transmission of voice (rather than the protocol implementing it). This latter concept is also referred to as IP telephony, Internet telephony, voice over broadband, broadband telephony, and broadband phone.
  - There are several different kinds of VoIP protocols. Most widely used is SIP – Session Initiation Protocol. IAX has several advantages – efficient trunking, firewall traversal

# Asterisk

- Asterisk – open source implementation of a telephone private branch exchange (PBX)
- Features: voice mail, conference calling, IVR (interactive voice response), automatic call distribution, etc
- Hardware can be used to attach to PSTN trunk lines
- Dial plan – controls it all

# Asterisk – Infinitely extensible

- Can extend by writing dial plan scripts, custom modules in C, or Asterisk Gateway Interface (AGI) scripts in Perl or any other language
- You can do anything you can imagine – call external applications on event, lookup databases, do a Google search, a "telemarketer runaround" application, etc.
- A number of ready-made applications exist

# Asterisk distros

- **What hardware do you need?**
- **Some distros**
  - **Trixbbox, PBX-in-a-Flash**
    - both using FreePBX
  - **AsteriskNOW**
  - **Druid**
  - **AstLinux on Soekris or WRAP boards**
    - I am still running Asterisk@ Home v0.6 (Nov 2004)

# VoIP devices



- "Hardware" phones
- Software phones
  - Skype is completely proprietary
- Analog phone adapters (FXS/FXO)
  - Digium and Rhino
- Channel banks and T1 PCI cards
- Routers, switches and firewalls with QoS and SIP traversal

# VoIP Providers

- Providers can attach you to the PSTN and give you an incoming phone number
- You can have a phone number in practically any area code you wish. Even overseas.
- A short list of providers:
  - Vitelity, Nufone, Teliax, BroadSoft
    - Why you should not be using Vonage and others providers using proprietary networks
  - Gizmo, Google Talk
  - T-Mobile

# Links

- Asterisk and VoIP in general
  - <http://www.voip-info.org>
  -
- Distros
  - <http://www.trixbox.org/>
  - <http://pbxinaflash.net/>
  -
- Phones
  - <http://www.voip-info.org/wiki/view/VOIP+Phones>
  -