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# Our Asterisk Installation

# Migration Factors

Call Manager vs. Asterisk

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# Call Manager

- Pros
  - Lower initial cost
  - Faster installation
  - More official support
- Cons
  - Higher Long-term Cost
    - Licensing fees
    - Service contracts
  - Closed system
  - Security Issues

# Asterisk

- Pros
  - Lower Cost
    - No licensing fees
    - No service contracts
    - Re-use of equipment
  - Open system
  - More Security Capabilities
  - Large community
- Cons
  - Longer “incubation”
  - Less official support

# Architecture and Implementation

Infrastructure, Server Specifications  
Redundancy, Interconnects

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# Infrastructure

## Networking

### Cisco networking infrastructure

- Strategically placed 4500's
- Various types of POE switches
  - QOS in-switch
- Multi-home servers

## Power System

### APC Installation

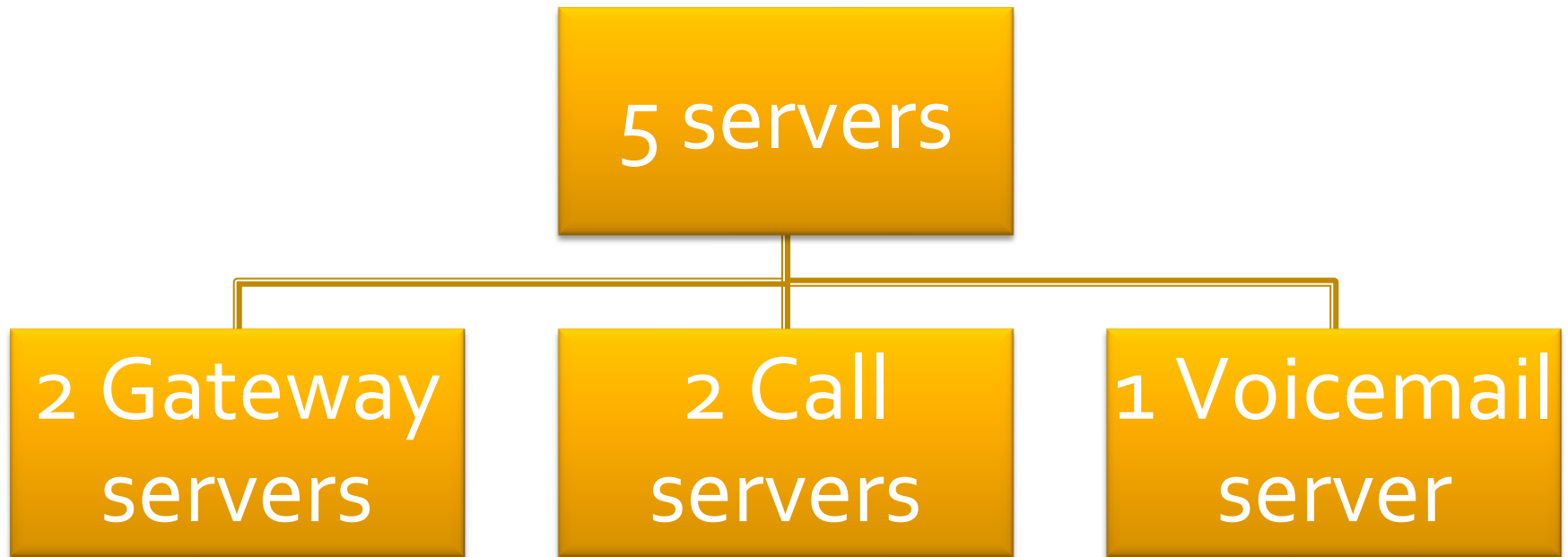
- Generator capable of powering server system for 4 days
- Redundant power supplies
- Multiple power phases

## Server Room

### APC Installation as well

- A/C with humidity control
- Recently renovated for future growth

# Redundancy



# Server Specifications

- All servers:
  - Dual homed (Voice VLAN, Data VLAN)
- Gateways:
  - 1 Dell, 1 Blackbox
  - 2 TE412P/TE407P's per box
- Call Servers:
  - 2 Dells
- Voicemail:
  - 1 Dell



# Redundancy – Gateway Servers



## DUNDi

- If one server's Asterisk service dies or becomes unreachable, the call servers ignore that server as a candidate



## T1 Lines

- Meridian system has routes to both servers, so if the T1 line is red, no calls go through



## T1 Cards

- Dual internal cards in case of card specific failure

# Redundancy – Call Servers

Duplication of configurations

DUNDi

Phone registrations

Heartbeat CRM

# Interconnects

## T1 connections

- Four 4-port T1 Cards
- Digium
  - 2 TE407P's in 1 gateway
  - 2 TE412P's in the other
- Provides echo cancellation for TDM calls.
- Allows for internal failures.

## VoIP Connection

- Testing phase only
- Multiple providers
- Free long-distance
- National local DIDs

# Deployment Status

Where are we?

Where will we go next?

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# Where are we?

- 1610 phones total
  - 128 Faculty/Staff
  - 1482 Dorm

# Where will we go next?

- Approximately 6000 phones
- Decision stage
  - Devices
  - Infrastructure
  - Server Considerations