OpenSIPS, Cloud Solutions.

Ali Pey

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Cloud Services for Business

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Cloud Services for Business

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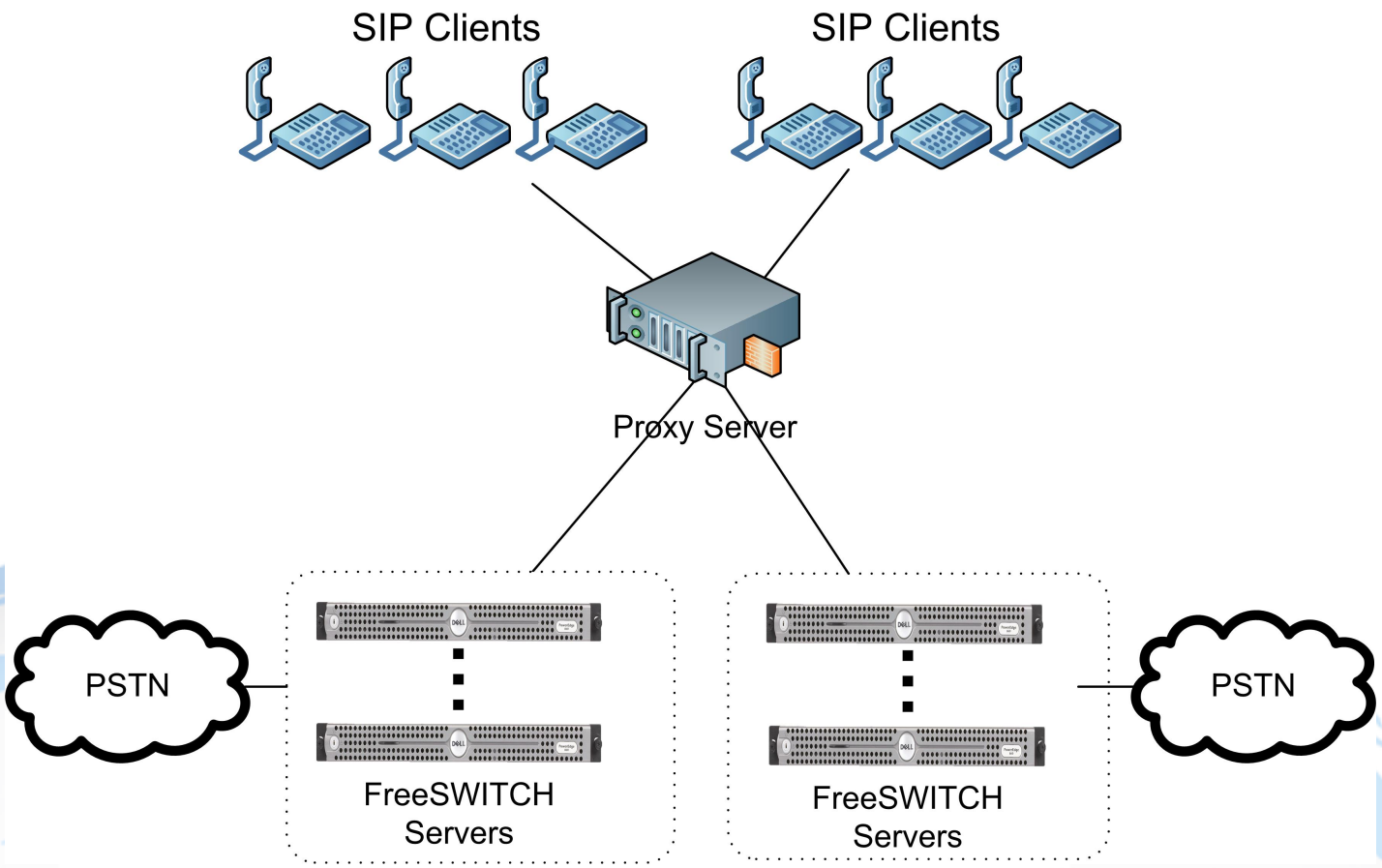
- FuseMail®
- Campaigner®
- KeepItSafe®
- Onebox®
- www.j2.com

Outline:

- Trivia Questions
- OpenSIPS
- Cloud
- Redundancy and High Availability
- Question?

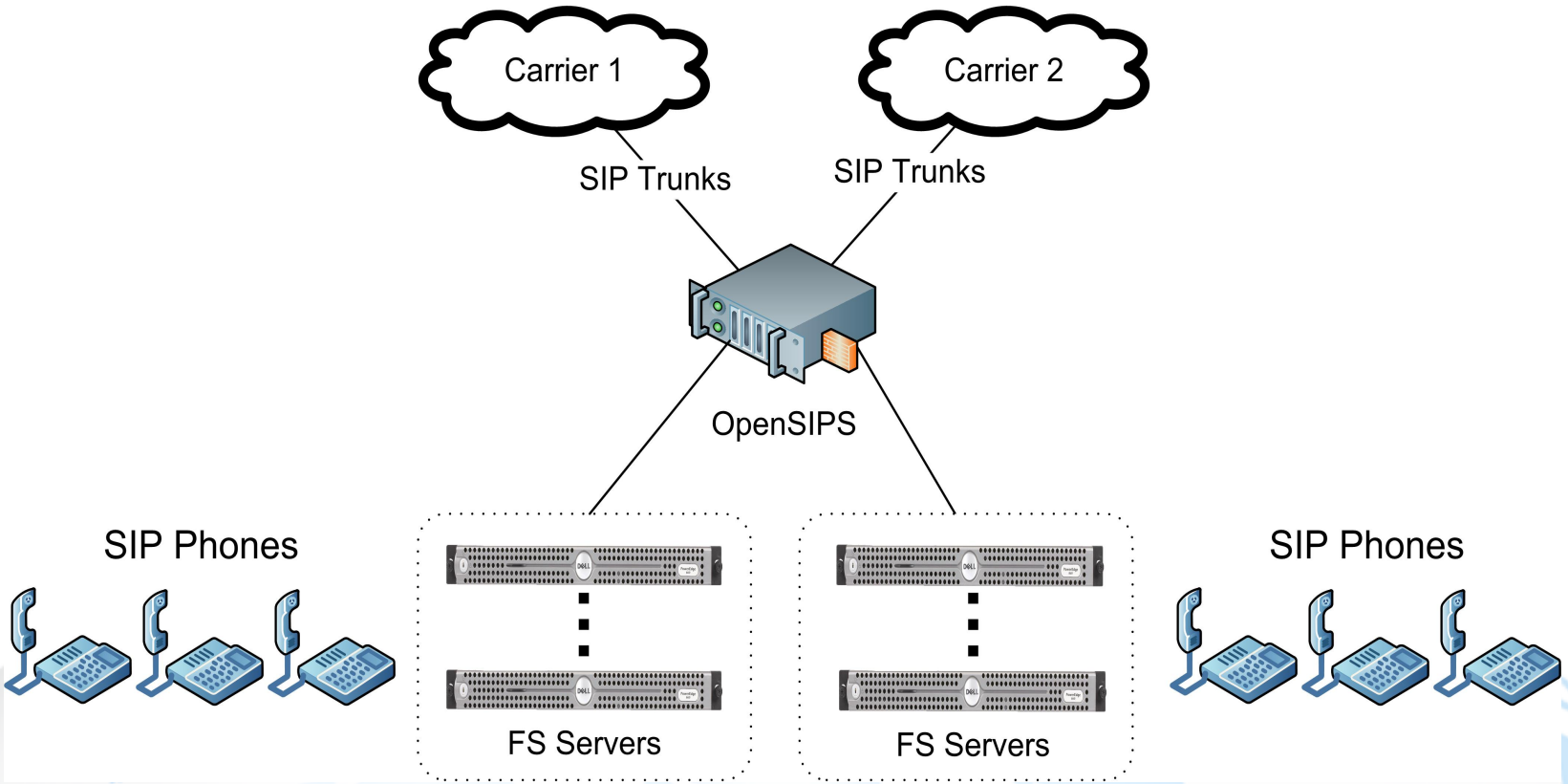
Trivia Question

Incoming calls from SIP Phones should be routed to a different Freeswitch server based on the destination number, e.g. 4xxx goes to FS1, 5xxx goes to FS2 and so on. What's the best way to do this?



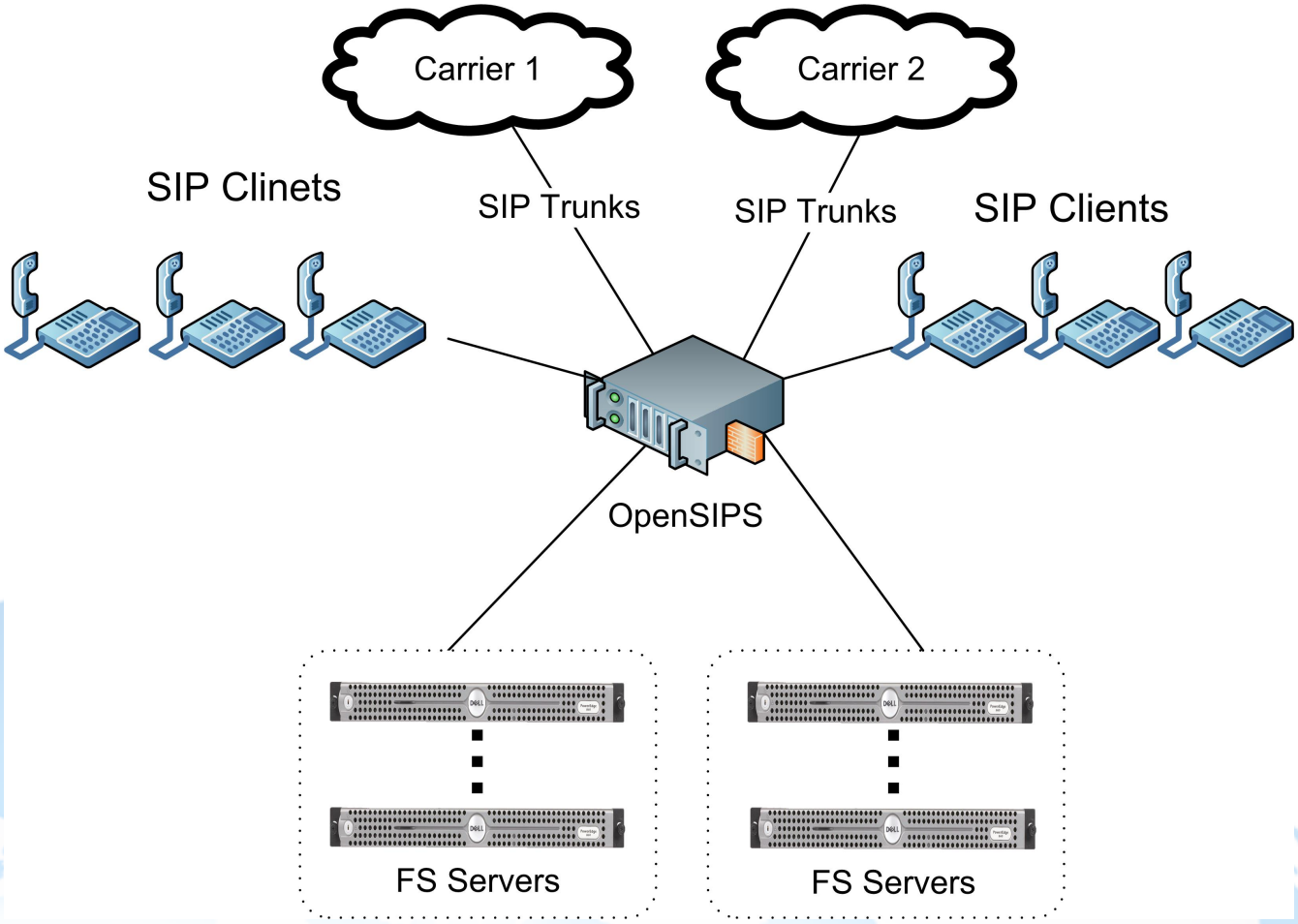
Trivia Question 2

Calls From Carriers Need to reach a different set of SIP Phones based on the destination dialed.



Trivia Question 3

Same Rules on both directions?



OpenSIPS

- History

The middle man

- IP: Firewalls, Routers, NATs
- ISDN Gateways: Digital and Analog
- Electricity: Distribution Panels
- Water Supply Distribution System
- Airport transits

VoIP

- When it comes to VoIP, you need OpenSIPS

Advantages of using a proxy server

- Improved performance
- Security and Authentication
- Flexibility and Customization
- NAT
- Redundancy and High Availability (failure detection and re-routing)
- Distribution
- Routing, Rules and Priorities

Advantages of using a proxy server (Cont'd)

- Load balancing
- SIP Signaling, Codec and Digit Manipulation
- Scripting
- Resource Allocation
- Rate Limiting
- Media Proxy (or Direct Media Path)

Open Source

- No Cost, no licensing fees
- Flexibility, Customization and Integration
- More independence (not depending on a single company)
- Community
  - Wider support
  - Continued enhancements
  - Tools

- In line with future of telecom

OpenSIPS Overview

- Call Routing (Rules, Priorities, LCR & Reporting)
- NAT Traversal
- Security
- Registrar Server
- SIP Signaling, Codec and Digit Manipulation
- Load Balancing
- Failure detection and re-routing
- Scripting
- Database
- Management Interface

OpenSIPS Overview

- Performance – Over 1000 calls per second
- Distributed architecture
- Over 130 Modules
- www.opensips.org
- Learning Curve
- Mailing Lists, Forums, OpenSIPS Summits, etc.

Modules (over 120 modules)

- SIP Clients related modules:
  - Registrar Server
  - Authentication
  - Presence Server
  - Instant messaging, Jabber, Json, SMS
  - NAT Traversal
  - Back to Back User Agent (topology hiding)
  - Database (mysql, oracle, odbc, postgres)

Modules

- Trunks and Routing
  - Dynamic Routing (Prefix base rules, priority, time, distribution, drain mode, failure detection and re-routing)
  - Load Balancer (Dispatcher)
  - Dial Plan
  - SIP MSG OPS
  - NAT Traversal
  - TLS
  - XMPP (SIP to XMPP Gateway)

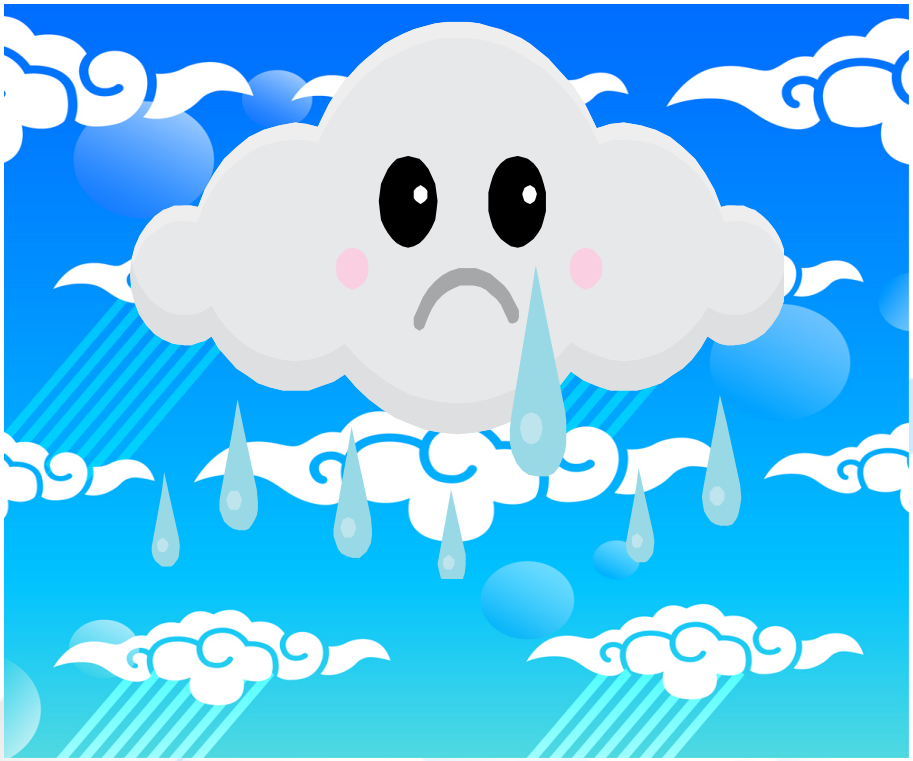
Modules

- Utilities
  - Rate Limit
  - Statistics
  - SNMP interface
  - SIP Trace
  - SIP Capture
  - Pike – Flood detector
  - Perl
  - Accounting
  - Call Control (PrePaid application module)

Cloud

What is Cloud?

- Carries Rain and Thunderstorms



Cloud

- Sometime there is snow

Cloud

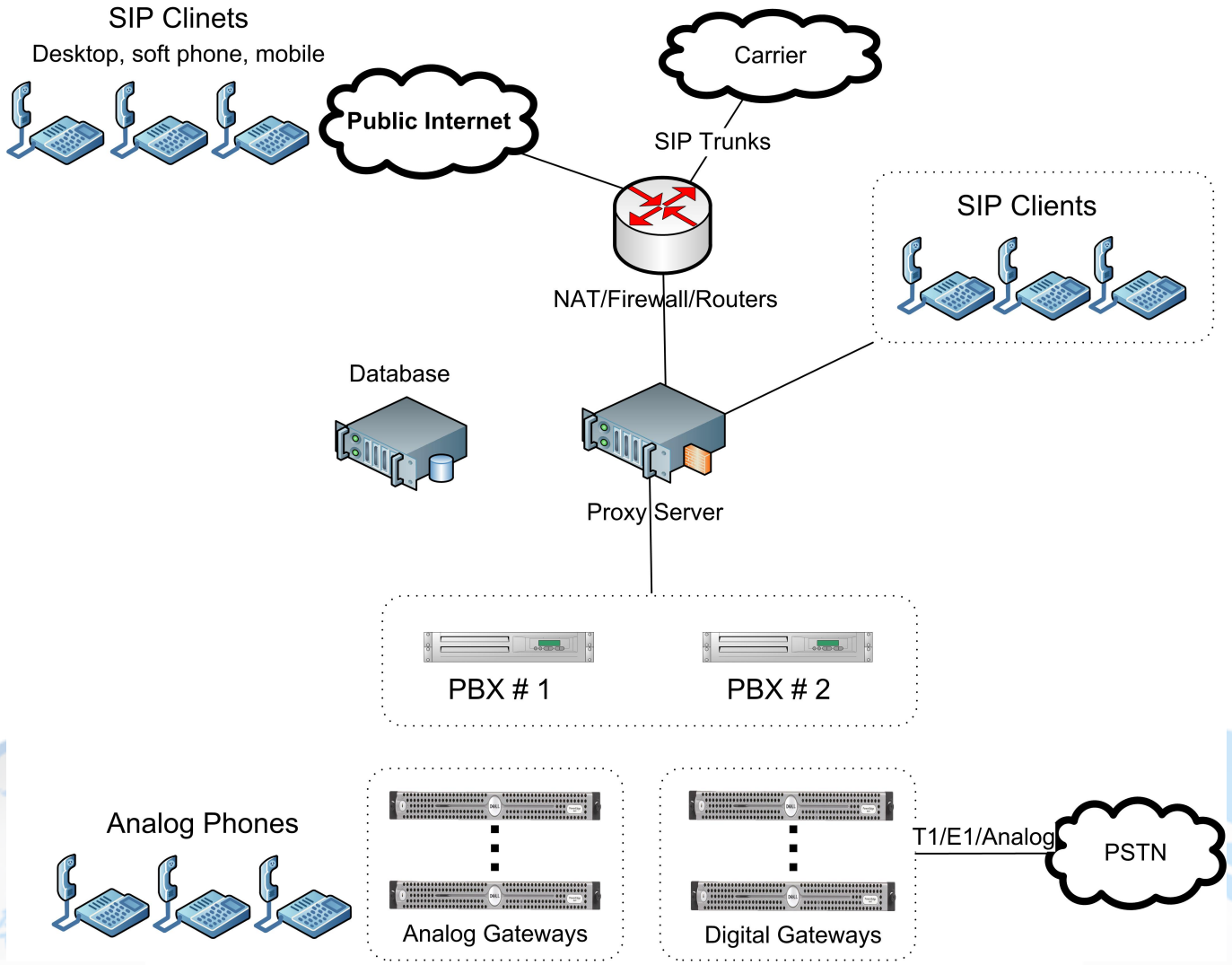
- Somewhere – Courtesy to IP (Internet Protocol)
  - Multiple geographically different locations
- Safe(‘r)
  - Emergency Power
  - Monitored
  - More Expensive and Redundant Cooling Systems
  - Secured
  - There is Higher Availability
  - Redundancy

Cloud (Cont'd)

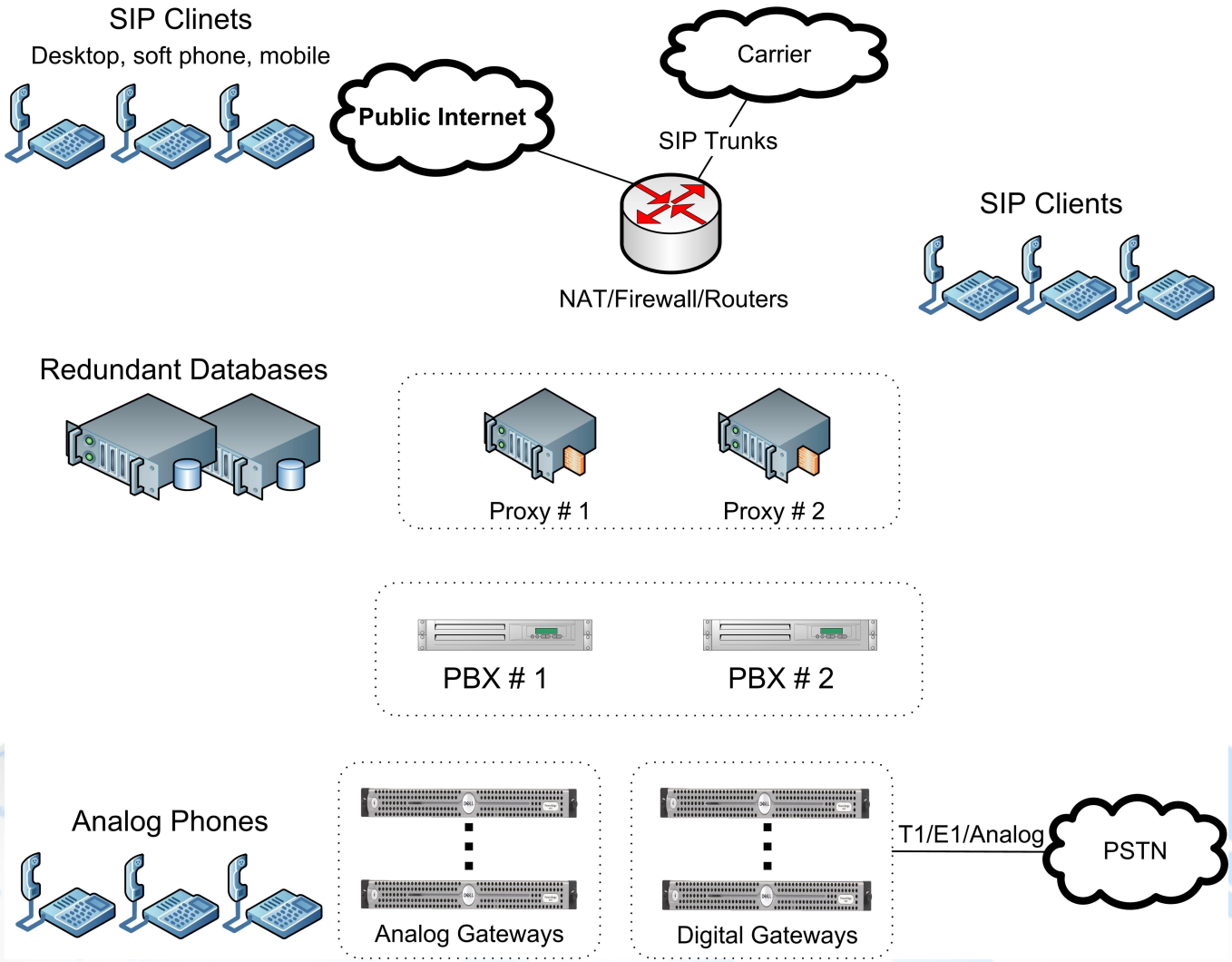
- Redundant
  - Device and Service Level Redundancy
  - Disaster Recovery (Across multiple locations)

- Cheaper
  - Shared (Colo)

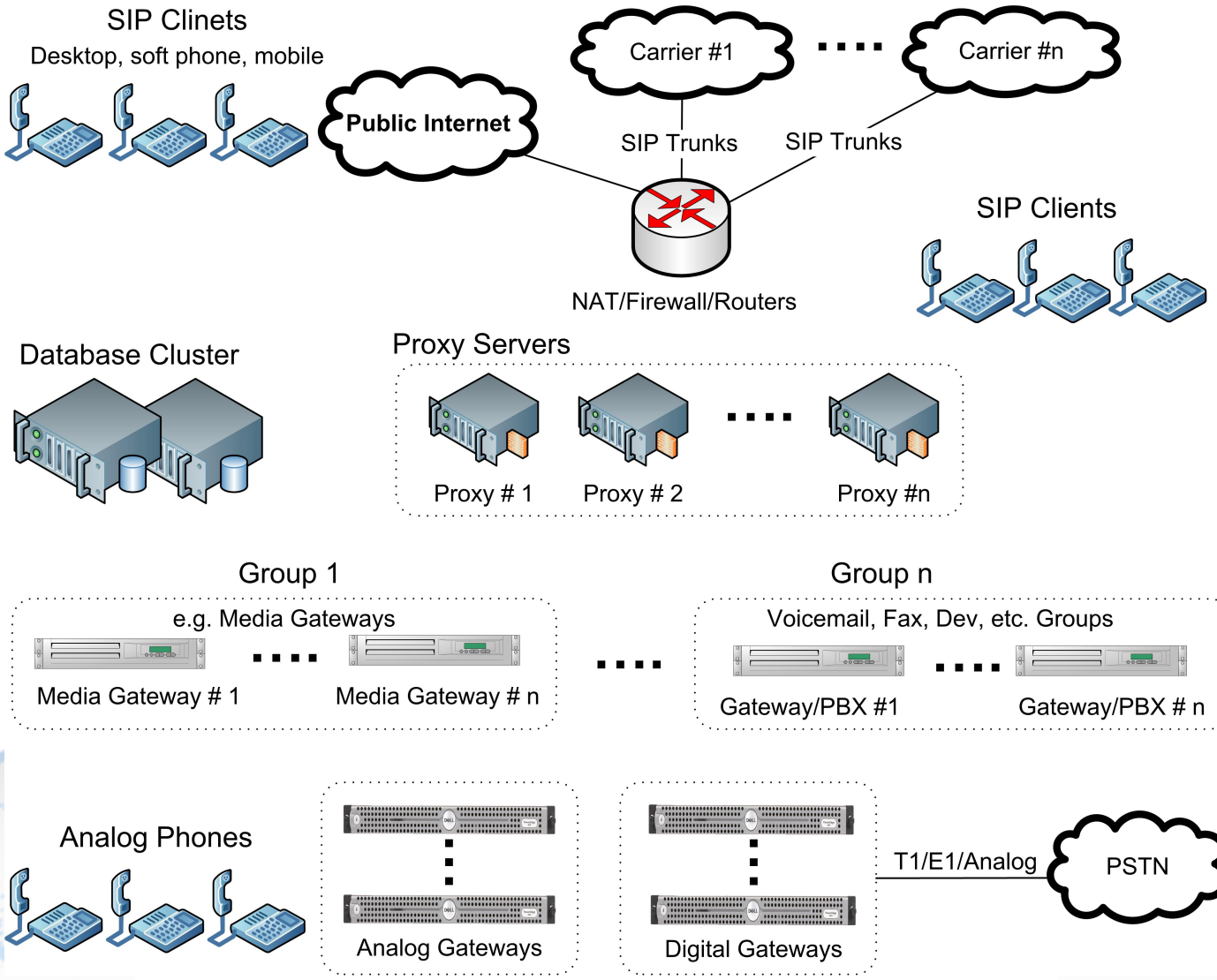
Basic Network Diagram



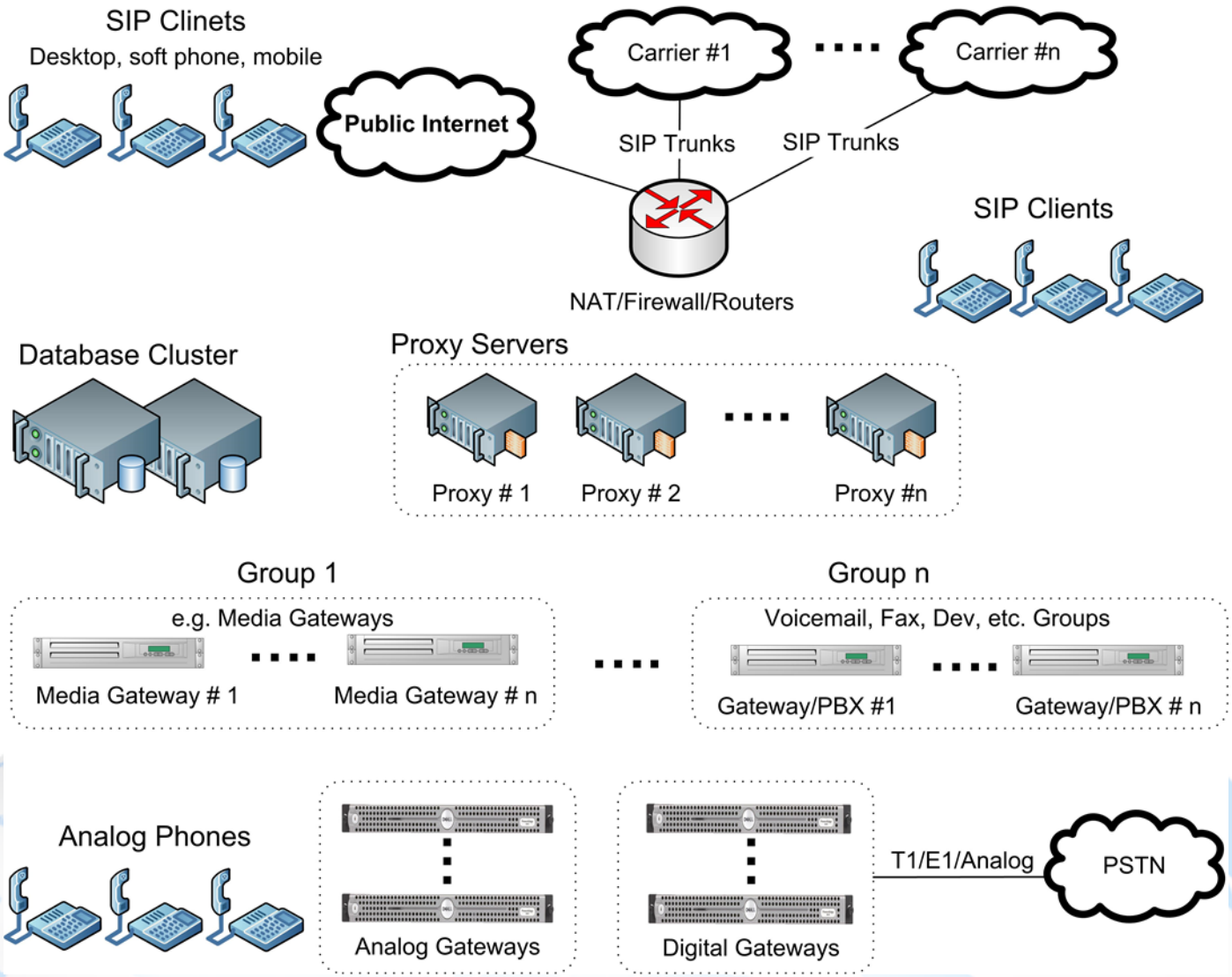
Redundancy


SIP Clinets
Desktop, soft phone, mobile
Public Internet
Carrier
SIP Trunks
NAT/Firewall/Routers
SIP Clients
Redundant Databases
Proxy # 1
Proxy # 2
PBX # 1
PBX # 2
Analog Phones
Analog Gateways
Digital Gateways
T1/E1/Analog
PSTN

Cloud Solution



Questions?


SIP Clinets
Desktop, soft phone, mobile
Public Internet
Carrier #1
Carrier #n
SIP Trunks
SIP Trunks
NAT/Firewall/Routers
SIP Clients
Database Cluster
Proxy Servers
Proxy # 1
Proxy # 2
Proxy #n
Group 1
e.g. Media Gateways
Media Gateway # 1
Media Gateway # n
Group n
Voicemail, Fax, Dev, etc. Groups
Gateway/PBX #1
Gateway/PBX # n
Analog Phones
Analog Gateways
Digital Gateways
T1/E1/Analog
PSTN

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