



SIPeerior
Technologies

A superior way to connect

What's to Fear
From Peer-to-Peer?
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What is Peer-to-Peer?

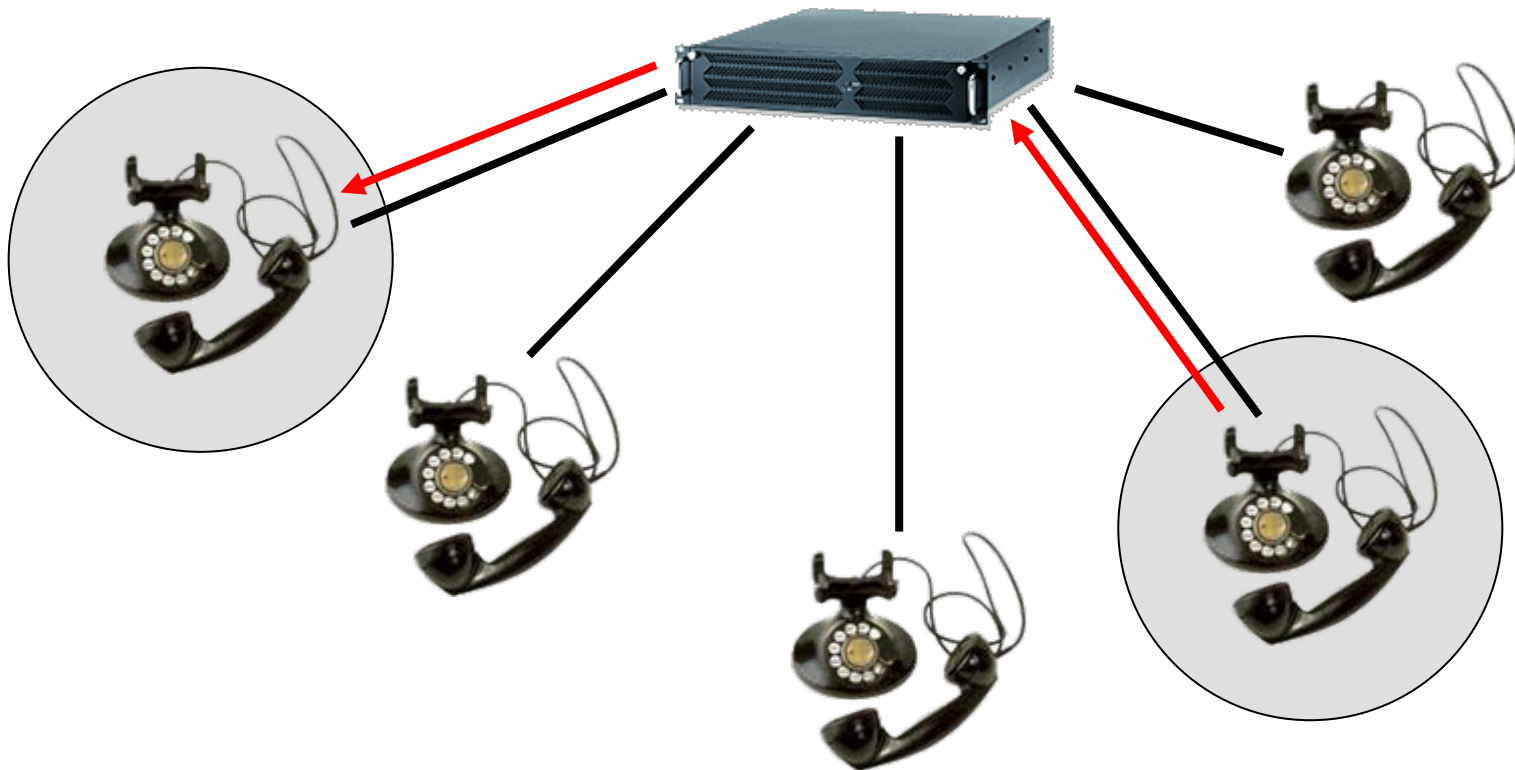


- Peer-to-Peer (P2P) technology
 - Fundamentally different than client server
 - Nodes cooperate to provide (collectively) the functionality a central server would provide
 - Not all nodes provide all services/know everything, but as a group they do
 - Central servers – and the configuration that goes with them – are unnecessary
- Most P2P VoIP products try to replace lookup/user location, media relay, and/or voicemail, with smarts in the phone

Client/Server Session



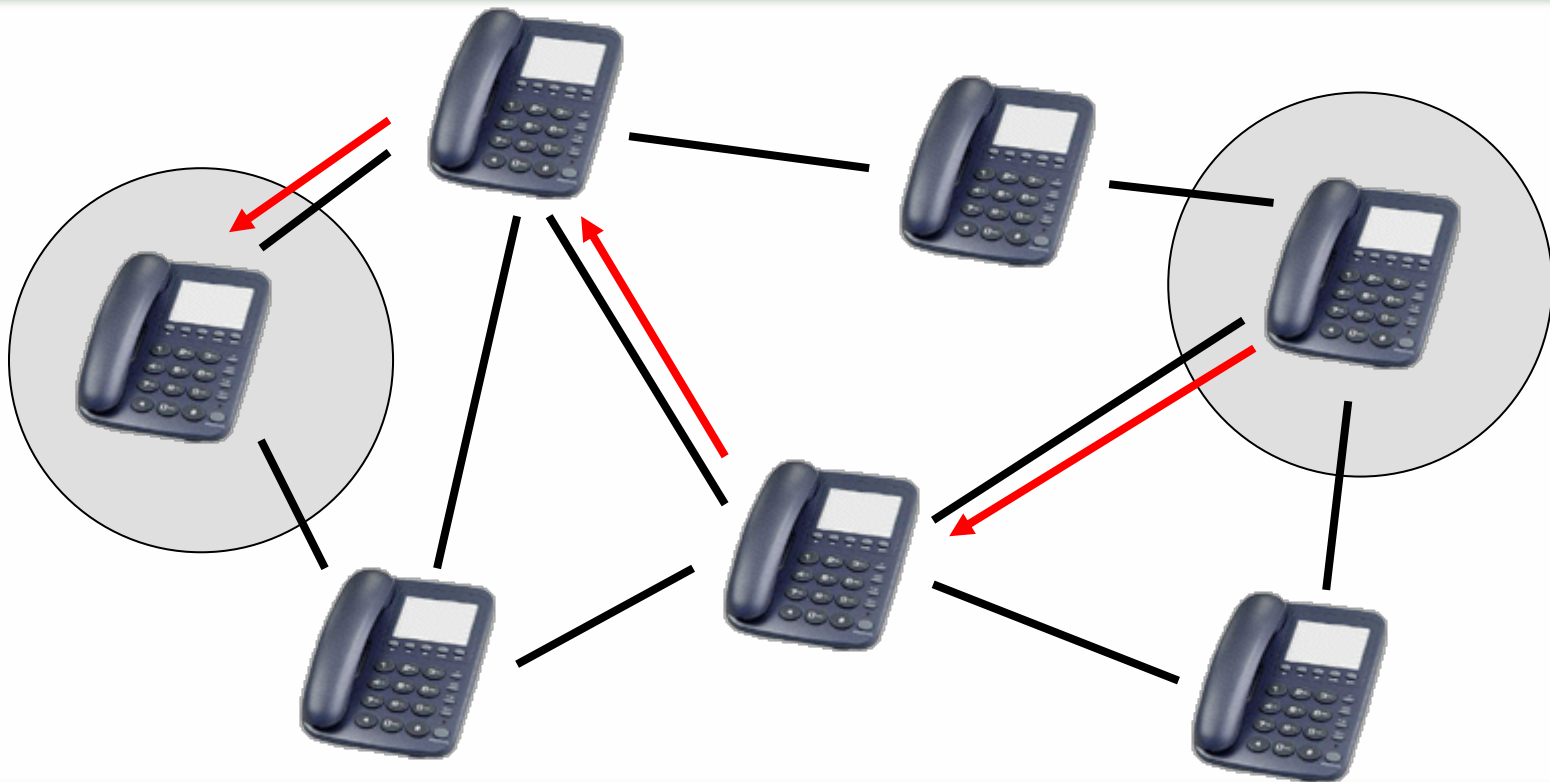
In a Client/Server session, two nodes must use a central server to communicate



P2P Session



In a Peer-to-Peer session, when two nodes communicate, a few other nodes, rather than a central server, help complete the call



Which Products Will Be P2P?



- The initial area of deployment looks to be small office PBXs
 - Underserved market
 - This market plays to P2Ps strengths
 - Ease of configuration/setup
 - Low cost (few or no servers)
 - Scalability is important, and P2P phones bring more processing capacity with each new phone

Which Products Will Be P2P?



- Some vendors will likely *not* offer large scale IP PBX P2P solutions
 - Seems to be a “protect the product line strategy”
 - P2P is inherently scalable, so no technical reason not to offer such a product
 - Skype, P2P file sharing, scale to enormous sizes
 - Some vendors own technical limitations may limit size, but not P2P as a fundamental technology
- Expect to see handset vendors push scalable PBX solution
 - For these vendors, opportunity to steal market share from PBX vendors (phone as a complete solution)

Which Products Will Be P2P?



- Other areas P2P has or may do well in
 - Internet level (Skype type service)
 - Reduces CapEx and OpEx for carrier drastically
 - As users add endpoints, carrier grows without new servers!
 - Consumer Electronics
 - Networks of devices streaming media to each other
 - Emergency Responders
 - Self organizing property of P2P networks is attractive here

What About P2P Security?



- Two cases for the enterprise phone market:
 - PBX replacements
 - These can be made as secure as traditional IP PBXs, since they too are in house or hosted
 - Global Internet (Skype-like) Services
 - May be some risk, particularly since Skype is closed and difficult to monitor
 - Less risky as standards develop and more transparency develops
 - Issue of random nodes relaying media
 - Encryption prevents risk, but still uses bandwidth
 - Who do you want your employees talking to and how much monitoring do you want to do?
 - Risk seems similar to using commercial IM clients

Building P2P Into Your Network



- P2P PBXs scale very cleanly, with simple provisioning
 - Security management will be different – likely certificates rather than server passwords
 - Preserves access control with administrator
- Monitoring and planning for the total bandwidth of network is still important
 - Same tools used for Client-Server voice can be used here
- Seat capacity planning is easier in P2P VoIP
 - Each new phone brings more processing – just buy more phones

So Why Use P2P?



- For the enterprise, emerging P2P IP PBXs offer many advantages
 - Simplified configuration
 - Lower CapEx, OpEx (for server admin)
 - Scalability
 - No single point of failure
 - Adding and interconnecting branches is simplified
 - Mergers of existing systems *should* be vastly easier...in the future once a standard emerges

Differences between P2P VoIP



- Two main camps today
- Skype
 - Largest P2P VoIP deployment, but closed
 - Hosted only service (think of Skype as a carrier with proprietary devices)
- P2PSIP
 - Products available (can run own system)
 - Services available also
 - Will (eventually!) be a standard, allowing interoperability between vendors