Alcatel OmniPCX for the Branch or Small Office

Unified Communications Solutions for the Branch or Small Office

At-A-Glance

What Do Customers Care About in Terms of a Unified Communications Solution?

- Controlling costs, protecting investment in existing equipment, and lowering total cost of ownership (TCO)
- Reliability and redundancy of branch or small office
- Enabling more effective, efficient communication and collaboration
- Security
- Ease of administration, effective use of limited staff resources
- Scalability and growth

What Are the Strengths of Cisco Unified Communications?

Cisco® Unified Communications offers a new way to communicate. This comprehensive IP communications system of voice, video, data, and mobility products and applications enables more effective, more secure, and more personal communications that directly affect both sales and profitability. It is part of an integrated solution that includes network infrastructure, security, mobility, network management products, lifecycle services, flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

Cisco Unified Communications helps businesses improve efficiency, strengthen security, enhance customer relationships, control costs, maintain profitability, and respond to a rapidly changing business environment. Cisco Unified Communications is a critical component of the Cisco Smart Business Roadmap, which is specifically designed to provide small and medium-sized businesses (SMBs) with a structured, planned evolution path to help them take advantage of today's business opportunities and maximize the long-term potential of their technology investments.

Cisco Unified Communications can scale to support up to 240 Cisco Unified IP, SIP, or Wireless IP Phones. It allows migration from a distributed call-processing model to centralized call processing with Cisco Unified Communications Manager at the headquarters and Cisco Unified Survivable Remote Site Telephony (SRST) at the branch office. Businesses can convert Cisco Unified Communications Manager Express licenses to SRST licenses at no extra charge. IP phones, branch office routers, and switches can be reused in a centralized deployment.

Because Cisco Unified Communications Manager Express builds on Cisco IOS® Software, a wide range of Cisco IOS Software features can be used, including security services, quality of service (QoS), and robust routing protocols.

Cisco Unified IP, SIP, and Wireless IP Phones obtain voice VLAN information directly from Cisco Catalyst® Express 500 Series switches or switching modules integrated into Cisco integrated services routers. Administrative overhead is reduced, and moves, adds, and changes become less cumbersome.

Alcatel Traps and Cisco Strategies

Cisco Position: There is great benefit in running the Cisco Business Communications Solution on top of a Cisco data infrastructure.

Amplification: By running Cisco Unified Communications Manager Express and Cisco Unity® Express on top of a world-class data networking platform, customers are able to take advantage of all the routing, QoS, and security features and applications available on the platforms and in Cisco IOS Software, such as IP Security (IPsec) VPNs, Cisco IOS Software security services, intrusion detection, content engine, switching, Auto-QoS, management features, Cisco Discovery Protocol, and a wide range of trunk connectivity features.

Cisco Position: Cisco customers can migrate from a distributed Cisco Unified Communications Manager Express call-processing model to a centralized Cisco Unified Communications Manager and Cisco Unified SRST call-processing model with investment protection for IP phones and data networking equipment at no additional cost. Are Alcatel customers able to do that?

Response: Alcatel customers need to replace the CPU in the OmniPCX Office platform to migrate to an OmniPCX Enterprise system.

Cisco Position: Cisco Unified Communications Manager Express supports up to 240 phones. How many phones does OmniPCX Office support?

Response: Alcatel OmniPCX Office supports up to 200 IP Touch phones.

Cisco Position: Cisco Unified Communications Manager Express is a single integrated platform supporting 240 IP phones with network modules to provide WAN connectivity. Does Alcatel support a similar configuration?

Response: Alcatel requires multiple chassis to scale up to 200 IP phones.

Alcatel's Claim: Alcatel's OmniPCX Office solution is a powerful, single, all-in-one solution.

Response: Not necessarily. Alcatel does not offer any switches delivering power to IP phones for the SMB market. Third-party switches such as Cisco Catalyst switches are required.

Alcatel's Claim: OmniPCX Office provides integrated voicemail.

Response: OmniPCX Office provides only 2 voice ports and 20 minutes of voice storage in its basic offering. Cisco Unity Express provides 4 voice ports and 8 hours of storage in its entry-level offering.

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Alcatel's Claim: The Cisco Unified Communications Manager Express solution does not support many applications.

Response: Multiple software licenses are required in order to make use of Alcatel applications. Cisco provides standard interfaces to allow partners to integrate applications.

Top Technical Weaknesses in Alcatel's IP Communications Solution

Basic Features

- No inline power options are included; external switches are required.
- The Office product does not support SIP.
- The current IP phone range is narrow, with only three options: IPtouch 4028, 4038, and 4068.
- IP PIMphony provides soft phone support for a maximum of only 200 users.
- Different CPUs are required, depending on whether the customer is using voice-only services or integrated voice and data services.

Data Infrastructure

- Alcatel does not have a comprehensive security strategy (equivalent to the Cisco Self-Defending Network) for its IP communications solution. No IP phone load security, encryption, or host systems security guidelines are published yet. This is currently dependent on inherent operating system security and external guidance.
- Voice and data VLAN selection is carried out through Dynamic Host Control Protocol (DHCP), not through direct Layer 2 switch interaction. Cisco provides direct interaction through Cisco Discovery Protocol. Alcatel requires open LAN access in order for phones to start up.

Scalability

- Alcatel supports up to 200 IP phones but requires expansion cabinets in order to carry digital signal processor (DSP) modules. Once the slots are used up with DSP modules, any WAN connectivity or LAN switch modules also require slots in the chassis, requiring more expansion cabinets, unless external switches such as Cisco Catalyst switches are used. If non-Alcatel IP phones are used, the capacity shrinks to 150 IP phones.

Conference Services

- OmniPCX Office provides a three-party conference facility. Cisco Unified Communications Manager Express offers a variety of enhancements, including 8-party ad-hoc and 32-party Meet-Me (reservationless and no password required) conferencing.

Upgrade Path

- Although OmniPCX Office uses the same basic chassis as an Enterprise system, if the Office system is to be upgraded and used as a remote site survivable system within a full OmniPCX Enterprise environment, the call-processor hardware must be replaced. Cisco Unified Communications Manager Express requires no hardware changes, simply a change in operating mode.

Voicemail

- The basic Alcatel voicemail offering provides only 2 ports and 20 minutes of storage, compared to 4 ports and 8 hours of storage with Cisco Unity Express. Expansion modules are available to add up to 8 ports and 200 hours but require the addition of Xmem64 modules.
- No interworking between the OmniPCX Office voicemail and the OmniPCX Enterprise voicemail system is available. Cisco Unity Express 2.0 supports Voice Profile for Internet Mail (VPIM) in order to allow Cisco Unity Express and Cisco Unity to interoperate and provide feature transparency.

Network Services

- OmniPCX Office makes use of Linux as an operating system; most network services are provided as applications within the Linux system. This results in limited routing capability and places dependency on the CPU to multitask activities. Cisco Unified Communications Manager Express is built into Cisco IOS Software, which supports a wide range of routing protocols and security features as standard services. With Cisco Unified Communications Manager Express, dedicated network modules are available for specific services such as caching and intrusion detection, reducing the dependency on the core operating system.

Call Accounting

- Call accounting is carried out through integration with the 4760 management station, which requires the appropriate license to be installed in the OmniPCX Office system. Cisco Unified Communications Manager Express makes use of a standard RADIUS server for generating call accounting records, which can be exported to partner billing systems.

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OmniPCX Office Overview and Hardware

The OmniPCX Office product has been available outside North America since its introduction, and has recently been made available in North America through Verizon, which is offering it as a managed service to SMBs. The basic hardware is the same as that used in some OmniPCX Enterprise deployments, using the same network modules and chassis. The main difference is the use of a different CPU, running different software to the enterprise communication server. There are two CPU variants, both based on Linux. The CPU2 is a basic keyswitch, offering only voice services. The CPUe offers additional host-based applications such as routing, Internet caching, e-mail, and firewall services. In principle, this provides a flexible offering to a small office environment and offers much more than just a simple keyswitch, but it does require different CPU options and associated licenses.

OmniPCX supports all the standard Alcatel telephone sets, including the traditional Reflex phones, the Digital Enhance Cordless Technology (DECT) phones, and the newer IP Touch phones. It supports up to 236 digital stations, 200 Alcatel IP phones, or 150 non-Alcatel IP phones. OmniPCX Office also contains voicemail, though the initial offering has limited capacity. In addition, it provides call center capability, with support for up to 20 agents and 3 supervisor stations. Three basic chassis—the e-25, e-50, and e-100—are available, based on the number of phones to be supported. The chassis can be cascaded to increase the end-station support, with the CPU needed in only one chassis. Up to three e-100 chassis can be connected, providing 27 network slots for LAN Extension (LANX) Ethernet cards, WAN interface cards, telephony trunk cards, or VoIP (DSP) cards. Voicemail expansion is carried out through the addition of an Xmem64 card or hard disk into one of the network modules.

OmniPCX Office Data Services

- **IP access/configuration**—OmniPCX Office has a proprietary wizard for initial configuration and management. An HTTP interface requires an extra license.
- **IP routing**—Basic routing services are available through the addition of routing applications within Linux. No complex routing services such as Border Gateway Protocol (BGP) or Open Shortest Path First (OSPF) are available.
- **WAN connectivity**—Office provides basic rate ISDN, asymmetric DSL (ADSL), and leased-line interfaces to provide WAN access.
- **VoIP**—OmniPCX Office naturally supports Alcatel digital handsets. In addition, it supports DECT handsets and IP handsets. The IP Touch range of phones uses protocols similar to H.323, and OmniPCX Office can support H.323 handsets as well. Office also supports mixed-function line cards offering digital and analog interfaces on the same network module. Each DSP daughterboard supports 16 IP channels. Expanding the number of IP phones requires adding VoIP daughterboards and CoCPU cards. One CoCPU and one VoIP daughterboard support 16 phones.
- **E-mail**—An e-mail server supporting all the main e-mail protocols (POP3, MIME, SMTP, IMAP4) is integrated with the CPUe. The Web proxy caching server is configurable.
- **DHCP**—Office serves as a DHCP server in order to support IP phones.
- **Network Address Translation (NAT) and VPNs**—These services are available within the core Linux operating system, but only if the CPUe is deployed.

OmniPCX Office Voice Services

- **OmniPCX call server**—Can play greetings based on the type of call received and can forward the call to defined terminals or workgroups. If not answered, the call can be sent to an automated attendant for further options or voicemail.
- **Voicemail**—To provide up to 200 hours of message recording, with up to 8 active ports, extra voicemail modules need to be added to the base OmniPCX system.
- **Music on hold (MoH)**—16 seconds of MoH is supplied, with up to 10 minutes available if a hard disk is added to the system.
- **Voice recording**—Available if the hard disk option is added to the system, with the recording being stored in the voice mailbox.
- **Call center**—A call-center application is embedded within Office, providing up to 20 agents and 3 supervisors. The automatic call distributor (ACD) application provides GUI interfaces to the call center activity.
- **Fax T.38**—Office supports T.38 for receiving IP fax calls.
- **Soft phone**—Office supports the new PIMphony clients, providing a phone assistant that carries out call logging, voicemail, and set monitoring. Additionally, a pure IP variant of PIMphony can be deployed.

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