



3050 Integrated Communications Platform

Network Configuration Guide

Release 1
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Emergency Services Statement

Emergency Services are commonly known as 911 or E911 in North America. In Europe, the most commonly used access number for Emergency Services is 112, it should be noted however that this is not a standard number. Many countries use individual and proprietary numbers for Fire, Ambulance and Police (e.g. in UK 999 is also a valid Emergency Service Number).

Further References in this document for all of the above will only state "Emergency Services".

Introduction

The Mitel Networks™ 3050 Integrated Communications Platform (ICP) is based on a versatile integrated communications software bundle that runs on standard business hardware and software platforms. This software is now offered to small businesses and networks of small offices in a single hardware box, and soon as a downloadable blade from Mitel's Applications Management Center.

The Mitel Networks 3050 ICP is the first in a line of SIP open protocol devices that will complement Mitel's core desktop technology. With Mitel's recent release of the 5055 SIP Phone, customers can now enjoy all the benefits of fully open-standard, converged business communications networks.

The 3050 ICP meets the voice and data needs of small businesses and networked offices of 1 to 8 users each. It is built on a powerful combination of the Session Initiation Protocol (SIP), an open Internet Protocol (IP) standard, Linux OS, and both wired and 802.11b wireless LAN capabilities.

This document will provide a pictorial overview of a variety of configurations encompassing both end-customers and service providers. Notes accompany each diagram to assist with network configuration planning, and installation.

Important notes

The 3050 SIP ICP acts as both a traditional key telephone system and a network data server, bringing voice, data, video, e-mail and Internet access to every desk -- through one simple set of network cables. It is a cost-effective way to network multiple small offices together, and to support small office or home office access to enterprise systems. Important notes are as follows:

SIP data networking is the same as any data networking in terms of configurations, management, and user interactions -- but much easier overall. The 3050 ICP is based on a Linux OS version 2.4 kernel, and provides:

- Simple administration of data features like firewall, adding new users, Internet access, e-mail, backups, print sharing, and file server setup
- Remote access and VPNs
- Remote management capability through Mitel's ServiceLink™ (e.g. web hosting, virus scanning, 24x7 monitoring, offsite backups, alerts, reports, and application downloads)
- Digital video surveillance and recording, such as those offered by March Networks

SIP telephony is very different from traditional PBX and key telephony, impacting the way SIP phones are configured and the way they interact with the PSTN. Key differences are as follows:

- For the telephony portion of the 3050 ICP's functions, it offers ease of dialing, ease of administration, cost management (least-cost routing, toll bypass), activity logs, reduced deployment costs for new services (no truck roll), user-administered features (e.g. programming phone features via a web page)

- SIP uses a distributed architecture that lets you add routes to other locations or associated companies through a simple table entry. Therefore, you can use simple 4-digit dialing for key suppliers or customers. Adding branch offices to your phone directories is trivial.
- SIP phones use the data network (Internet, LAN) as their default connection. Because of this, SIP phones can be moved anywhere (even outside the corporate Intranet) and still work, and maintain their user identity. In addition, software upgrades can be done remotely over the Internet by the user.
- SIP devices only connect to the legacy telephony world through gateways. There are 2 kinds of gateways: FXS and FXO. FXS gateways connect POTS phones and fax machines to networks of SIP appliances, and FXO gateways connect SIP devices to the PSTN. FXO gateways are accessible through some (and eventually all) public telephone companies for a fee, but to provide access to the PSTN from any SIP phone, enterprises are generally installing their own gateways, such as the Mediatrix 1204.
- Because Mitel supports SIP as an open standard, the 3050 ICP will work with any third-party SIP phone or device.
- If there is a firewall anywhere in the connection path between 2 SIP devices, the firewall must allow SIP traversal which we will refer to as being SIP-compliant or it may block the connection. If there is a router that performs NAT (Network Address Translation) anywhere in the connection path between 2 SIP devices, the router must also be SIP compliant or it may block the connection.
- To provide Emergency services access commonly known as Emergency Services in North America via the 3050 ICP, you can:
 - a. Provide an uninterruptible power source for the ICP and phones, such as Power over Ethernet or a UPS battery backup packs and be connected to a SIP-to-PSTN gateway such as the Mediatrix 1204, with an uninterruptible power source, on each customer premise

OR

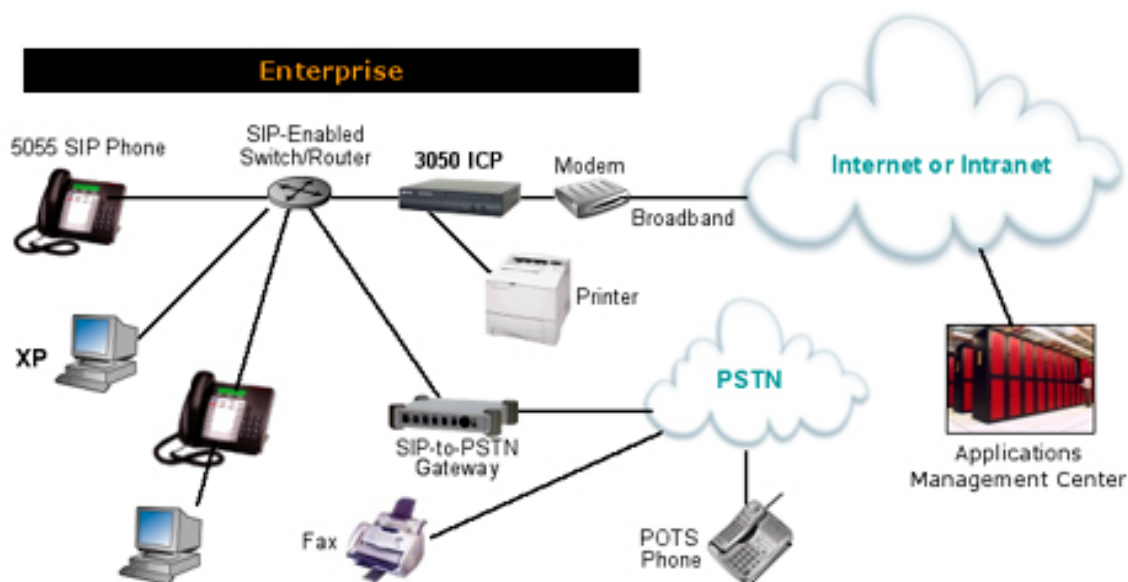
- b. Provide a dedicated POTS phone for Emergency Services access in a central location within each customer or home office premise

Enhanced Emergency Services access will be deployed in later releases.

- Voice communications costs are dramatically reduced, since most voice services are now provided on the data network (e.g. long-distance toll bypass).

The 3050 ICP supports all SIP phone to SIP phone telephone calls, 3-way conferencing, voice mail, auto-attendant, call hold, call forward, caller ID, call transfer, do not disturb, as well as distribution of data (e-mail, Internet access, file sharing, print sharing, etc.) and firewall security. With the addition of a SIP-to-PSTN gateway (either private or through the service provider), it also supports PSTN calls. A wireless base station can be added to the 3050 ICP to connect wireless devices, and the 3050 ICP can be daisy-chained to provided added line or set capacity within the network.

Small enterprise with a 3050 ICP



The 3050 ICP allows an enterprise to install a complete office communications system with one set of cables to access telephones, data systems, multimedia files, Internet, e-mail, VPNs, printers, shared files, and the PSTN.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external 56kb/s connection at minimum, broadband connection (cable, DSL) is preferred, SIP-to-PSTN gateway.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote offsite back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP), business phone and fax lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy)

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add single users, or add whole locations (refer to the diagrams that follow).
Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port

What security issues are there with this configuration?

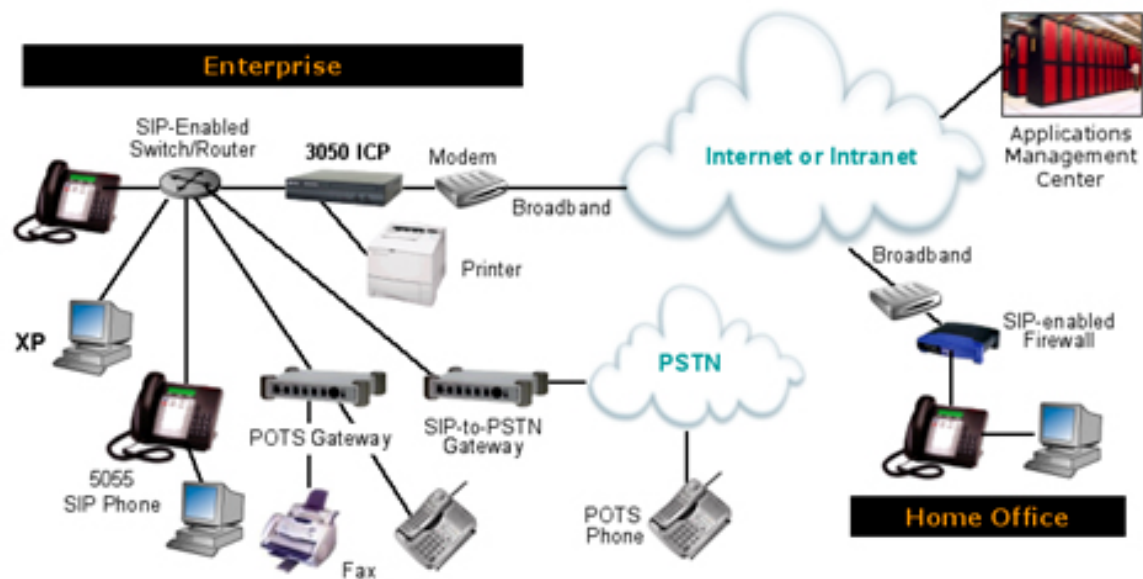
None.

How does this configuration access the PSTN?

To access the PSTN from a SIP phone, calls are routed through the SIP-to-PSTN gateway (such as the Mediatrix 1204) shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through the qualification of an Emergency Services enabled SIP service by the carrier. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

Enterprise with one remote home office

An enterprise can support access to both telephone and data systems by a home office or other single-user location.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external 56kb/s connection at minimum, broadband connection (cable, DSL) is preferred in both locations, SIP-to-PSTN gateway.

What value-added features does this configuration support?

Working from home, digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote offsite back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for both locations, business phone and fax lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, reduced costs by removing the need for a separate fax line, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy)

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add multiple single users using this same configuration per location, or add whole offices locations (refer to the diagrams that follow). Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP (includes the home office SIP phone)

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP.

What security issues are there with this configuration?

A VPN is used to securely tunnel through the Internet to connect the home office to the enterprise.

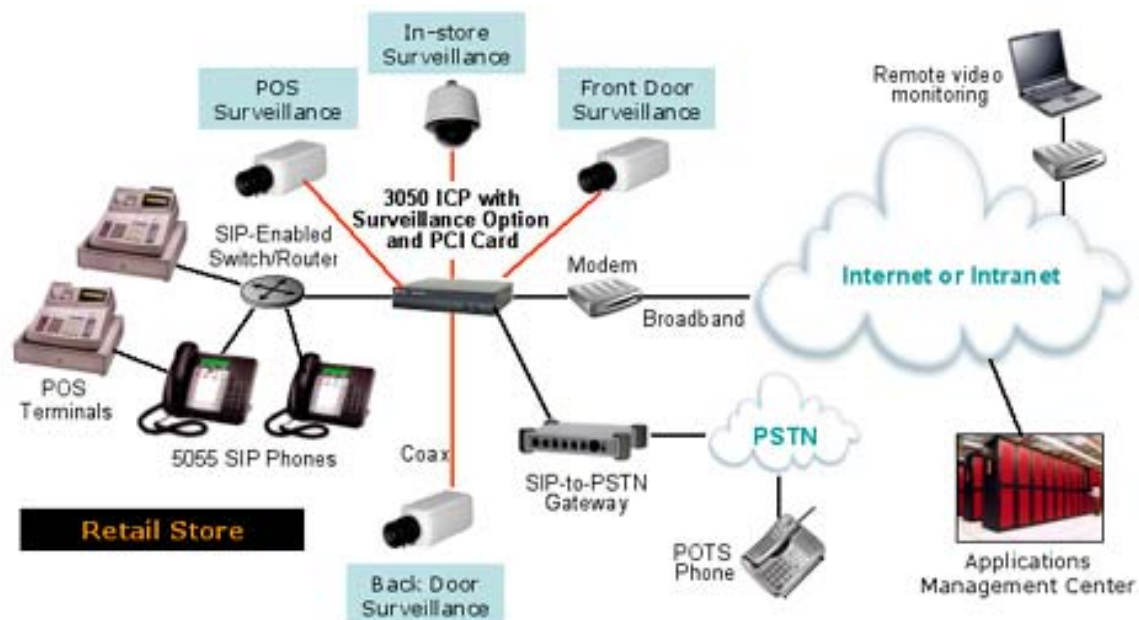
How does this configuration access the PSTN?

To access the PSTN from any SIP phone (including the one in the home office), all SIP calls are routed to the SIP-to-PSTN gateway (such as the Mediatrix 1204) shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the carrier. Emergency calls from the home office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

Store with video surveillance and remote monitoring



An enterprise can easily add digital video recorder-based surveillance to the network by adding the March Networks Video Option with a PCI Card. This is especially attractive to retail stores and warehouse locations, with the ability for a remote user, such as the owner or security monitoring team, to view realtime or recorded video images. These cameras can be equipped to respond to other security components such as timers, motion detectors, or a Point of Sale trigger (such as a cash transaction over a specified amount).

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external broadband connection (cable, DSL) in both locations. 3050 ICP with March Networks Video Surveillance Option, PCI Card, and digital video cameras, SIP-to-PSTN gateway.

What value-added features does this configuration support?

Working from anywhere, remote digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote offsite back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for all locations, business phone and fax lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services, security monitoring service

What types of costs will be saved:

Fewer security site visits and false alarm charges, additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy)

Who administers the system:

Self-administered by the enterprise, or administered by the reseller. Video surveillance optionally monitored by a security service.

How does this configuration scale:

Locations: multiple single authenticated users could check into the video surveillance system using this same configuration. Similar video surveillance systems can be added in each location. Add multiple single-user locations, or add whole offices locations (refer to the diagrams that follow). Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP (includes the home office SIP phone)

Digital video cameras: 4 per PCI Card or more behind a multiplexor

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP

What security issues are there with this configuration?

A VPN can be used to securely tunnel through the Internet to connect the remote user to the enterprise. The single laptop should have a built-in or external firewall for data security. The security monitoring service has controlled and limited access to the network's video files by password protection and Linux file system security.

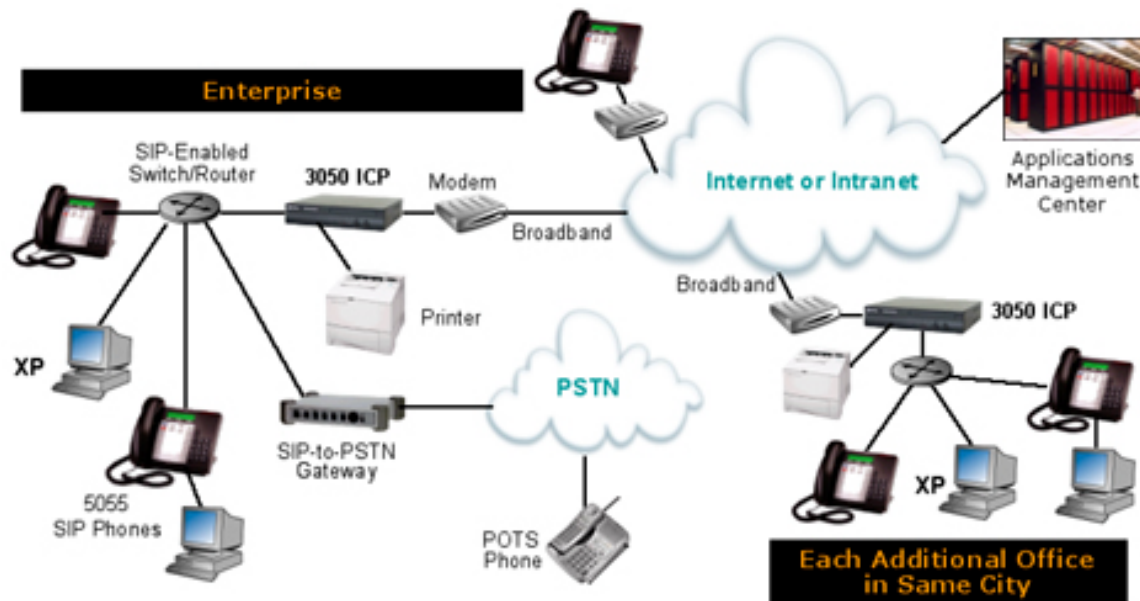
How does this configuration access the PSTN?

To access the PSTN from any SIP phone, SIP calls are routed to the SIP-to-PSTN gateway (such as the Mediatrix 1204) shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the carrier. Emergency calls from the home office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

Enterprise with remote small offices in the same dialing district



With the 3050 ICP, an enterprise can easily add multiple small offices in the same city (or dialing district) to the network, with access to both telephone and data systems. Voice communications costs are dramatically reduced, since most voice services are now provided on the data network (e.g. long-distance toll bypass), and, where multiple SIP-to-PSTN gateways are available, calls to the PSTN tunnel through the data network to the nearest SIP-to-PSTN gateway to the call destination, further reducing voice costs.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external 56kb/s connection at minimum, broadband connection (cable, DSL) is preferred in both locations. One SIP-to-PSTN gateway such as the Mediatrix 1204 within the dialing district.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for each location, business phone and fax lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). If fax machines are present in the network, costs could be further reduced by adding an FXS gateway to add fax machines to the network and eliminate the cost of dedicated fax lines or long-distance faxing.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add multiple single offices using this same configuration, or add whole offices locations. Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at each site connected to the 3050 ICP

What security issues are there with this configuration?

A VPN is used to securely tunnel through the Internet to connect multiple offices to the enterprise or each other.

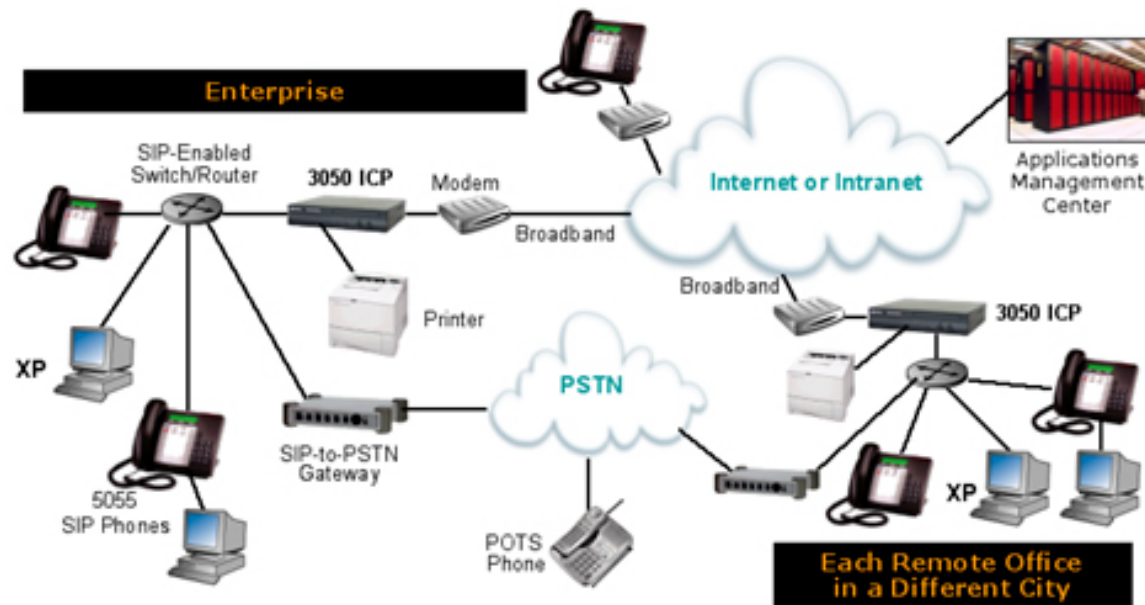
How does this configuration access the PSTN?

To access the PSTN from any SIP phone, all SIP calls are routed to the SIP-to-PSTN gateway (such as the Mediatrix 1204) shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the carrier. Emergency calls from the remote office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

Enterprise with remote small offices in different dialing districts



With the 3050 ICP, an enterprise can also easily add multiple small offices in different cities or dialing districts to the network, with access to both telephone and data systems. Voice communications costs are even more dramatically reduced, since most voice services are now provided on the data network (e.g. long-distance toll bypass), and calls to the PSTN tunnel through the data network to the nearest SIP-to-PSTN gateway to the call destination, further reducing voice costs.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external 56kb/s connection at minimum, broadband connection (cable, DSL) is preferred in both locations. One SIP-to-PSTN gateway such as the Mediatrix 1204 is required in each distinct dialing district to save the maximum amount on long-distance costs.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for each location, business phone and fax lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Long-distance charges on SIP and PSTN calls as the infrastructure becomes available, additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). If fax machines are present in the network, costs could be further reduced by adding an FXS gateway to add fax machines to the network and eliminate the cost of dedicated fax lines and long-distance faxing.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add multiple offices using this same configuration. Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at each site connected to the 3050 ICP

What security issues are there with this configuration?

A VPN is used to securely tunnel through the Internet to connect multiple offices to the enterprise or each other.

How does this configuration access the PSTN?

To access the PSTN from any SIP phone, all SIP calls are provided on the data network (e.g. long-distance toll bypass), and calls to the PSTN tunnel through the data network to the nearest SIP-to-PSTN gateway (such as the Mediatrix 1204) to the call destination

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the carrier. Emergency calls from the remote office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

3050 ICP added to 3100* or 3300 ICP



Where a Mitel Networks 3100 or 3300 ICP is installed, the 3050 ICP can be used to add SIP appliances to the local network, or cost-effectively add remote offices or single-user offices.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external broadband connection (cable, DSL) at minimum. 802.11b wireless base station on the 3050 ICP, SIP-to-PSTN gateway, FXS gateway if desired to SIP-enable POTS phones.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for each location, business phone, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Long-distance charges on SIP and PSTN calls as the infrastructure becomes available, additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). If fax machines are present in the network, costs could be further reduced by adding an FXS gateway to add fax machines to the network and eliminate the cost of dedicated fax lines.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add multiple offices using this same configuration. Dialing plans are consistent and can be maintained across all systems.

Phones: full capacity of the 3100 or 3300 ICP plus an additional 1 to 8 SIP phones per 3050 ICP

Computers: full capacity of the 3100 or 3300 ICP plus up to 50 additional computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: full capacity of the 3100 or 3300 ICP plus an additional 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP

What security issues are there with this configuration?

None.

How does this configuration access the PSTN?

To access the PSTN from a SIP phone, calls are routed to the SIP-to-PSTN gateway (such as a Mediatrix 1204), from the gateway to the PBX and from the PBX to the PSTN.

How does this configuration support Emergency Services access?

Through administration of Emergency Services IP service by the enterprise. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

3050 ICP added to SX-200 or SX-2000

Where a Mitel Networks SX-200 or SX-2000 PBX is installed, the 3050 ICP can be used to cost-effectively add remote offices or single-user offices by adding a SIP-to-PSTN gateway (such as the Mediatrix 1204) connected to ONS lines on the PBX.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external broadband connection (cable, DSL) at minimum. 802.11b wireless base station on the 3050 ICP, SIP-to-PSTN gateway, FXS gateway if desired to SIP-enable POTS phones.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly Internet access fees (from your ISP) for each location, business phone lines, long-distance fees

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Long-distance charges on SIP and PSTN calls as the infrastructure becomes available, additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). If fax machines are present in remote offices in the network, costs could be further reduced by adding an FXS gateway to add fax machines to the network and eliminate the cost of dedicated fax lines. This solution also begins the process of SIP-enabling the organization, allowing multiple small remote offices to install SIP-only systems, saving on long-distance and network capital expenditure costs increasingly over time.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller

How does this configuration scale:

Locations: add multiple small offices using 3050 ICPs. Dialing plans are consistent and can be maintained across all systems.

Phones: full capacity of the SX-200 or SX-2000 plus an additional 1 to 8 SIP phones per 3050 ICP

Computers: Up to 50 additional computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP

What security issues are there with this configuration?

None.

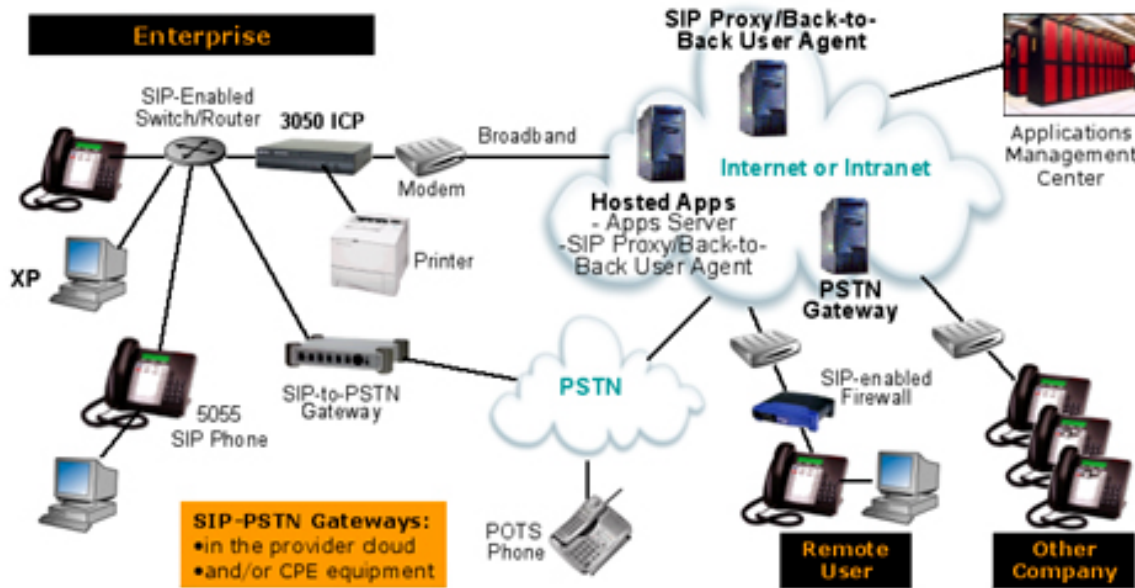
How does this configuration access the PSTN?

To access the PSTN from a SIP phone, calls are routed to the SIP-to-PSTN gateway (such as a Mediatrix 1204), from the gateway to the PBX and from the PBX to the PSTN.

How does this configuration support Emergency Services access?

Through administration of Emergency Services IP service by the enterprise. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

3050 ICP in a hybrid hosted environment



The 3050 ICP delivers voice and data services behind SIP-compliant carrier-class gateways, proxy/back-to-back user agent servers, application servers and soft-switches.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), as well as an external broadband connection (cable, DSL) is preferred in all locations. One SIP-to-PSTN gateway such as the Mediatrix 1204 within the dialing district and/or availability of a SIP-to-PSTN gateway in the service provider network.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly service fees (usually bundled services from a single carrier).

Optional: ServiceLink fees for selected value-added services, IT support services

What types of costs will be saved:

Additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). Because the service provider can offer complete bundled solutions and lower the risk of “customer churn” there may be a willingness to share the decreased cost with the end customer.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller or by the service provider.

How does this configuration scale:

Locations: add multiple single offices using this same configuration, or add whole offices locations (refer to the diagrams that follow). Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP

What security issues are there with this configuration?

A VPN is used to securely tunnel through the Internet to connect multiple offices to the enterprise or each other.

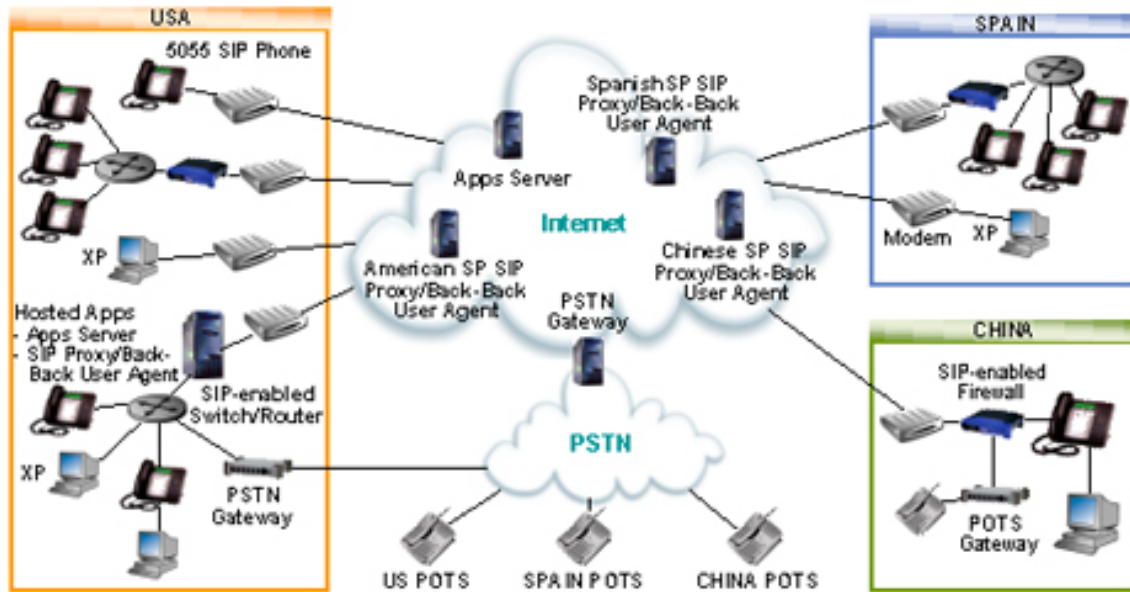
How does this configuration access the PSTN?

To access the PSTN from any SIP phone, SIP calls are routed to a local or centrally located SIP-to-PSTN gateway as shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the service provider. Emergency calls from the remote office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in “Important Notes”.

International network configuration



The hybrid hosted environment scales to International configurations. The 3050 ICP delivers voice and data services behind SIP compliant carrier-class gateways, proxy/back-to-back user agent servers, application servers and soft-switches.

System requirements:

An Internet Protocol LAN must be available (e.g. 10/100 Ethernet, category 5 wiring, 802.11 wireless LAN, etc.), and an external broadband connection (cable, DSL) is preferred in all locations. One SIP-to-PSTN gateway such as the Mediatrix 1204 within each dialing district.

What value-added features does this configuration support?

Digital video monitoring via the March Networks Surveillance option, remote services such as virus detection, 24x7 monitoring, remote back-up, Your Assistant, software upgrades, and other ServiceLink services as they emerge.

What types of costs will be incurred:

Mandatory: Monthly service fees (usually bundled services from a single carrier).

Optional: ServiceLink fees for optioned services, IT support services

What types of costs will be saved:

Additions or changes to the phone system (by simply moving the SIP phone and plugging it into the network), long-distance charges on SIP calls as the infrastructure becomes available, lower installation cost by using one set of office cables, multiple services are on a single 3050 ICP host (fewer hosts to buy). Because the service provider can offer complete bundled solutions and lower the risk of “customer churn” there may be a willingness to share the decreased operating cost with the end customer.

Who administers the system:

Self-administered by the enterprise, or administered by the reseller or service provider.

How does this configuration scale:

Locations: add multiple single offices using this same configuration, or add whole offices locations. Dialing plans are consistent and can be maintained across all systems.

Phones: 1 to 8 phones per 3050 ICP

Computers: up to 50 computers or Internet appliances per 3050 ICP with cascaded switches or SIP-compliant routers

Peripherals: 2 USB ports, 1 parallel port, 1 serial port at enterprise site connected to the 3050 ICP

What security issues are there with this configuration?

A VPN is used to securely tunnel through the Internet to connect multiple offices to the enterprise or each other.

How does this configuration access the PSTN?

To access the PSTN from any SIP phone, SIP calls are routed to a local or centrally located SIP-to-PSTN gateway as shown in the diagram.

How does this configuration support Emergency Services access?

Optionally, through qualification for Emergency Services SIP service by the service provider. Emergency calls from the remote office should not be made over the SIP Phone. To provide Emergency Services access from the 5055 SIP Phone, refer to the section on 911 in "Important Notes".

Mitel Applications Management Center

SIP devices and phones can be remotely serviced and upgraded. Mitel's Applications Management Center will soon offer service providers the ability to:

- provide routine software upgrades to SIP devices and phones
- remotely manage SIP devices
- offer value-added, subscription-based billable services such as remote offsite back-ups, virus detection, 24x7 system monitoring, and more
- offer incremental new software and services to customers as they become available

Future Connectivity Support

In the near term, we will add support for E1/T1 and ISDN access. Frame relay networks are already supported when the interface to the 3050 ICP is an Internet Protocol LAN using 10/100 Ethernet or Category 5 wiring.

For more information

To find out more about Mitel Networks 3050 ICP features, specifications, installation, or configuration, contact your Mitel Networks Account Executive or visit www.mitel.com.

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