

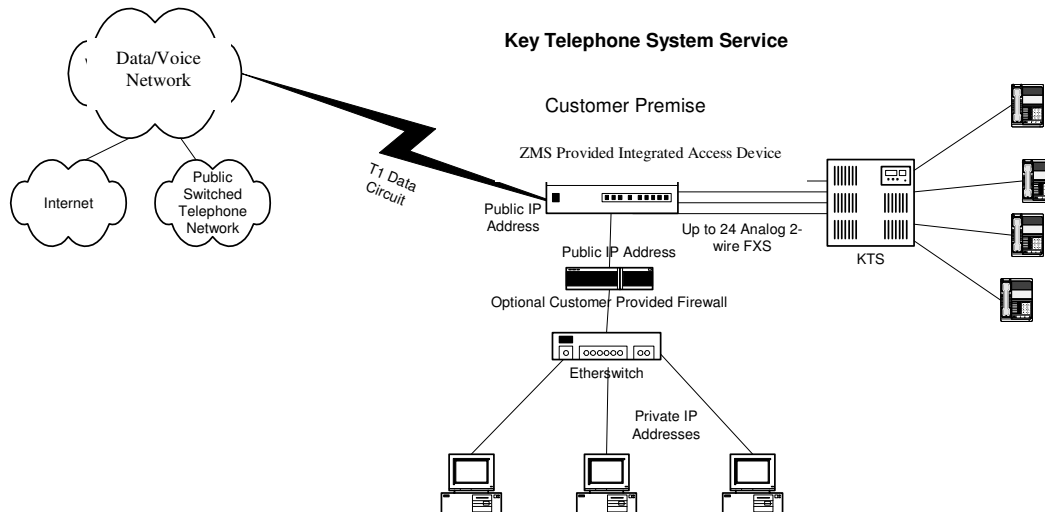
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### Service Delivery Overview

Zayo Managed Services (ZMS) Key Telephone System (KTS) and Internet service offers a managed converged voice and Internet solution for small businesses that own and manage an analog Key Telephone System or simply wish to use standard analog office phones in their business. Voice and Internet services are delivered over a single broadband access circuit using the Internet Protocol (IP). Analog phone calls are converted and sent over the broadband connection. Within the ZMS network facilities, calls are sent and received over the traditional public switched telephone network.

The broadband bandwidth is dynamically allocated between voice and Internet. When people are not speaking on the phone, the entire bandwidth is available for Internet. Voice traffic always takes priority for maximum call quality. You can benefit from new technology without investing heavily in new phones or abandoning the investment you already have with your key telephone system. The convergence and bundling of voice and Internet over a single broadband connection saves your company money.

### Managed Key Telephone System Service



#### ➤ Standard Customer Premise Network Configuration

##### **Standard Configuration**

- T1 (1.544Mbps)
- Traffic shaping – voice high priority
- Up to 24 Analog Phone Lines
- DHCP – allocate private IP addresses to PCs
- DNS – URL/public IP address resolution
- User Assignable Public IPs upon request (2 assignable by default; 6, 14 or 30 assignable upon approval)
- NAT – translate between public IP addresses and private IP addresses assigned to PCs and host systems
- Customer provided firewall may be used
- Static routing

## Non-Standard Configuration

Non-standard network configuration requests may be supported upon request. The customer's LAN Administrator and the ZMS Sales Engineer will work together to develop an appropriate network design. Additional installation and monthly recurring charges may apply.

- Voice/Data router
  - As part of the service, an appropriate Integrated Access Device (IAD) will be installed, managed, and maintained at your network's edge.
- A Web Portal can be used for call control and feature personalization on all KTS/analog extensions.
  - Using an Internet browser to access the Web Portal, employees, whether in the office or away, can have access to an array of productivity tools for conveniently managing their calls.
- Calling features are available in three different bundles – *Key Telephone System Line*, *Standard Seat*, and *Professional Seat*. Select the best service to complement your existing Key Telephone System or analog Business Line needs.

If you have a Key Telephone System to manage call control for your office, then the basic Key Telephone System Line may be all you need. Depending on your Key Telephone System's existing capabilities, or if you are simply using standard analog phones without a Key Telephone System, then you may benefit from additional features found in the Standard or Professional seats.

\* note: depending on your KTS, not all extended features found in the different bundles will be applicable to your office environment

- Key Telephone System Line Features:

<i>3-Way Calling</i>	<i>Call Forwarding Always</i>
<i>Call Forwarding Busy</i>	<i>Call Forwarding No Answer</i>
<i>Call Hold</i>	<i>Caller ID</i>
<i>Call Return</i>	<i>Call Transfer</i>
<i>Call Waiting</i>	<i>Last Number Redial</i>

- Standard Seat Features:

<i>3-Way Calling</i>	<i>Call Forwarding Always</i>
<i>Call Forwarding Busy</i>	<i>Call Forwarding No Answer</i>
<i>Call Hold</i>	<i>Caller ID</i>
<i>Call Return</i>	<i>Call Transfer</i>
<i>Call Waiting</i>	<i>Do Not Disturb</i>
<i>Last Number Redial</i>	<i>Speed Dial 8</i>
<i>Speed Dial 100</i>	<i>Voice Messaging</i>
<i>Voicemail-to-email</i>	

- Professional Seat Features:

<i>3-Way Calling</i>	<i>Anonymous Call Rejection</i>
<i>Call Forwarding Always</i>	<i>Call Forwarding Busy</i>
<i>Call Forwarding No Answer</i>	<i>Call Forwarding Selective</i>
<i>Call Hold</i>	<i>Caller ID</i>
<i>Call Notify</i>	<i>Call Return</i>
<i>Call Transfer</i>	<i>Call Waiting</i>
<i>CommPilot Express</i>	<i>Do Not Disturb</i>
<i>Last Number Redial</i>	<i>Priority Alert</i>
<i>Remote Office</i>	<i>Selective Call Acceptance</i>

<i>Selective Call Rejection</i>	<i>Sequential Ring</i>
<i>Simultaneous Ring</i>	<i>Speed Dial 8</i>
<i>Speed Dial 100</i>	<i>Voice Messaging</i>
<i>Voicemail-to-email</i>	<i>Telephony Toolbar (Outlook®, Internet Explorer®)</i>

- If your company has more than one location, Multi-Site Service will provide the following benefits:
  - A dialing plan enabling calls between locations to be completed using multi-location extension dialing
  - No measured call usage charges between locations
  - One receptionist can answer calls for all locations
  - Enables calling features to work across multiple locations, such as:

<i>Call Transfer</i>	<i>Call Groups</i>
<i>Auto-Attendant</i>	<i>Hunt Groups</i>

- ZMS is scalable and flexible to meet the needs of your business
  - Buy only the number of KTS/analog extensions you need today and incrementally add more as the number of employees grows. Available term commitments are 12, 24, or 36 months.
- Long Distance provides cost-effective intrastate, interstate, international and toll-free calling
- Unlimited local calling with no per usage charge

### **Group/Business Services**

- To further customize your phone service, additional Group/Business options are available to enhance your overall Key Telephone System or analog line service. Available Group/Business Service options:

<i>Account Codes</i>	<i>Attendant Console</i>	<i>Auto-Attendant</i>
<i>Call Center</i>	<i>Call Park/Retrieve</i>	<i>Call Pickup</i>
<i>Calling Plans (Toll Restrictions)</i>	<i>Hunt Groups</i>	<i>Music on Hold</i>
<i>Series Completion</i>	<i>Toll-free Numbers</i>	

- *Account Codes*: Allows tracking of calls against account codes.
- *Attendant Console* enables for example, a receptionist, to monitor from a graphic display a set of users to determine if their phones are currently busy or idle. The name, number, and call duration of the parties the users' are speaking with is also viewable.
- The *Auto-Attendant* answers a ringing line with a recorded announcement and then allows the caller to dial by extension or by name to reach the desired person or department within your company. The Auto-Attendant can be configured to automatically be enabled during certain times of the day and days of the week. The Time-of-Day component controls when the Auto-Attendant will answer the main number. Auto-Attendants give companies the ability to have a main attendant and separate attendants for mission critical functions such as sales and customer service. Features include:

<i>Announcement</i>	<i>Programmable menus</i>
<i>Dial by Name</i>	<i>Dial by Extension</i>
<i>Time-of-day (business hours, after hours)</i>	<i>Timeout handling</i>

- *Call Center* will hold a caller in a *queue* until a company representative is available to speak with the caller. Callers will be able to wait and speak with a live person rather than reaching a busy signal or being forced to leave a message. Call Center allows efficient handling of calls with fewer employees and allows them to concentrate on the current call without being interrupted and be confident the Call Center is managing other callers. Employees assigned to a Call Center are known as agents and can be selected to answer incoming calls based on:

Round robin	Top-to-bottom
Simultaneous	Longest idle agent

Each Call Center bundle includes:

- Agent login/logout (anyone in your company can be an agent)
  - Queuing of incoming calls when all available agents are currently busy (queue length can be from 1 to 50)
  - Overflow to another number when all agents are busy and the queue is full
  - No Answer Policy - enables a call distributed to an agent, but not answered in a specific number of rings, to be redirected to the next available agent. If all idle agents have been visited once without an answer, there is an option to handle the call in one of two ways: forward call to another number, or send the call to voicemail.
  - Redirect to another destination outside of business hours
  - Play repeated comfort message to callers held in queue
  - Play music on hold for queued callers
  - Queue Exit Policy – when a caller in queue presses “0,” the caller can be handled in one of two ways: forward the call to another number, or send the call to voicemail (queue exit and no answer policy are handled in the same manner)
  - Call Center Statistics are available for administrators or supervisors to monitor the performance of the Call Center and shows Average Number Agents Busy, Average Hold Time Before Call Loss, Agents Logged In or Out of Queue, Average Time Agent Spends on Calls, Amount of Time Each Agent is Logged On or Idle.
  - Up to two additional phone numbers can be assigned as a pilot number coming into the Call Center (this, for example, allows old published phone numbers to continue to be used)
- *Call Park/Retrieve* allows a call to be placed on-hold and retrieved from another station. To park a call, the user dials the call park feature code. To retrieve the parked call, the user dials the call retrieve feature code from another station followed by the extension where the call is parked.
  - *Call Pickup* allows a user to answer any ringing line within their pick up group. To pick up a ringing call coming in on any phone within the pick up group, the user dials the call pick up feature code from his own phone.
  - *Calling Plans (toll restrictions)*: Provides a Class of Service for call blocking at a service location. Options available include:

- *Classes of Service with 900/976 Blocking:*

IntraCustomer Only -	Block Local, IntraLATA Toll, InterLATA & International
IntraLATA only -	Block NPA 900 & 976 like NXXs, InterLATA & International, Allow NPA 800
World Zone 1 only -	Block NPA 900 & 976 like NXXs & International
Unrestricted -	Block NPA 900 & 976 like NXXs

- *Classes of Service without 900/976 Blocking:*

IntraLATA only -	Block InterLATA & International, Allow NPA 800
World Zone 1 only -	Block International
Unrestricted -	Block nothing

- *Hunt Groups* allow an incoming call on a main number to hunt among a group of extensions in a specified manner for an answer. Incoming calls can be distributed based on:

Round robin  
Simultaneous

Top-to-bottom  
Longest idle agent

Hunt group options available:

- *Basic Hunt Group:*
  - Specify number of rings before incoming call goes to next extension
  - No Answer Policy - enables a call distributed to an extension, but not answered in a specific number of rings, to be redirected to the next extension in the list. If all extensions have been visited once without an answer, there is an option to forward the call to another number or let the call hang-up.
- *Pro Hunt Group:*
  - Specify number of rings before incoming call goes to next extension
  - No Answer Policy - enables a call distributed to an extension, but not answered in a specific number of rings, to be redirected to the next extension in the list. If all extensions have been visited once without an answer, there is an option to handle the call in one of two ways: forward call to another number, or send the call to voicemail.
  - Call Forward Busy allows a call to be sent to another extension if all extensions in the hunt group are currently busy with other calls.
  - Redirect to another destination outside of business hours
  - Up to two additional phone numbers can be assigned as a pilot number coming into the hunt group (this, for example, allows old published phone numbers to continue to be used)
- *Music on Hold* allows callers to listen to music while on hold. An audio file (.wav file containing music, advertising, etc.) may be uploaded and played when callers while on hold.
- *Series Completion* is a form of hunting in which the next line in the series completion group is tried if the called line is busy.
- *Toll Free Inbound numbers* allows callers to dial an 8xx number to reach your company without the callers incurring long distance charges. Toll-free long distance incurred by callers is charged to your company's service.

### **Feature Descriptions**

- *3-way calling:* Users can initiate a three-way call with two additional parties, allowing all parties to talk with each other.
- *Anonymous call rejection:* Allows user to reject calls from anonymous parties who have restricted their Caller ID. The user's phone does not ring and the caller is informed that calls from unidentified callers are not accepted.
- *Call forwarding:*
  - *Busy* - Allows users to forward calls arriving at their phone while it is busy or set on Do Not Disturb to another number. Calls are sent to the number they entered as the forward destination.
  - *No answer* - Allows users to forward calls that are unanswered at their phone to another number. Calls are sent to the number they entered as the forward destination.
  - *Always* - Allows users to forward all calls to another number. Calls will not ring at their phone and will be sent to the number they entered as the forward destination.
  - *Selective* – Allows users to define criteria that causes certain incoming calls to be redirected to another destination. Criteria is based on Caller ID, time of day and day of week.
- *Call hold:* Allows user to put the caller on hold and make a consultation call to another party.

- *Caller ID:* This feature displays the caller's number on display phones. The outbound Caller ID can reflect the extension or a main number. The outbound Caller ID delivery may also be turned off.
- *Call notify:* Send an e-mail with the caller's name and number to a specified e-mail address when pre-defined criteria, such as phone number, time of day or day of week, are met.
- *Call return:* Allows the user to call back the last party that called by dialing a feature code.
- *Call transfer:* Lets a user transfer a call to another internal extension or external number. The transfer can be consultative (consult with destination party before completing transfer) or blind (immediately transfer caller to destination party without any consultation – Caller ID of caller will be sent to transfer destination).
- *Call waiting:* Lets a user receive and answer a call on the same line that is currently busy. If desired, the user can then toggle back-and-forth between the two calls. User will hear a beep when another incoming call is received.
- *CommPilot Express:* Allows a user to pre-configure four profiles to control their inbound calls. These profiles can quickly be changed using the web or phone when leaving their desk or when they are at a remote location. CommPilot Express, takes precedence over other service settings associated with processing incoming calls.
- *Do not disturb:* Allows a user to block incoming calls and still be able to make outbound calls. Incoming calls go to voicemail without ringing the user's phone.
- *Last number redial:* This feature allows a user to redial the last number that was dialed.
- *Priority alert:* Ring the user's phone with a distinctive ring when pre-defined criteria, such as phone number, time of day or day of week, are met.
- *Remote office:* This feature provides the capability to set up a remote phone to act as if it were the user's office phone. Instead of placing and receiving calls from the office desktop phone, calls are made and answered from the remote phone. For example, a user can configure a home phone to be the remote phone, and it will act as if it is the user's office phone. All calls coming into the office phone will ring the home phone instead. Outbound calls are initiated through the web portal or *Telephony Toolbar*. The service will first call the remote phone and once answered will initiate a call to the desired party. The called party will see the caller ID of the user's office phone.
- *Selective call acceptance:* Establish criteria for determining which inbound calls are allowed to complete while all other inbound calls are blocked. Criteria is based on caller id, time of day, or day of week.
- *Selective call rejection:* Establish criteria for determining which inbound calls are rejected while all other inbound calls are allowed to complete. Criteria is based on caller id, time of day, or day of week.
- *Sequential ring:* Enables user to create a "find-me" list of phone numbers. Incoming calls matching specified criteria will sequentially call each number defined in the list until the user is found. The caller is provided with a comfort announcement indicating the user is being located.
- *Simultaneous ring:* Enables users to have multiple phones ring simultaneously when any calls are received on their main extension. For example, calls to a user's desk phone could also ring the user's mobile phone at the same time.
- *Speed dial 8:* Enables user to dial single digit code to call up to eight different numbers such as frequently dialed numbers or long strings of digits that are hard to remember.
- *Speed dial 100:* Allows users to program and store a list of up to 100 frequently used phone numbers. The telephone numbers can be called using 4-digit abbreviated dialing.
- *Voice messaging:* When incoming calls are not answered or receive busy treatment (do not disturb), callers can be sent to the user's voicemail box where voice messages can be left. Users can retrieve voicemail from any phone and can listen to, save,

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and delete each message, as well as move to the previous or next message. During playback, users have the option of skipping forward, skipping back, or pausing. Messages can also be forwarded to other members.

- *Voicemail-to-email:* Users can control whether their voicemail messages are to be delivered to their email accounts as .wav attachments. An email can also be sent to the user as notification that a voicemail has been received.
- *Telephony Toolbar:* A call control toolbar embedded in Microsoft Outlook® and Microsoft Internet Explorer® allowing users to click on icons within these applications to control all their advanced voice features, such as selective call forwarding and do not disturb, voicemail to email, and simultaneous ring.

### **Frequently Asked Questions**

#### ***General Questions***

##### **Q: What is the ZMS Key Telephone System service?**

A: This service combines voice and Internet access to a single high-speed broadband connection to your office. Instead of having multiple analog business line circuits and DSL Internet service from the incumbent phone company, your phone and Internet service is consolidated and delivered over a single carrier-class high-speed data connection.

An integrated access device provided by ZMS is installed in your office to provide analog signaling for your KTS or analog phones. Due to the merging of voice and data, calling features and functionality beyond traditional analog service are available.

Not all available advanced features may be applicable to your phone environment. If you have a Key Telephone System, then call control is primarily managed by that Key Telephone System. If you do not have a Key Telephone System, then features found in the seat bundles and group services will provide you with an outsourced solution providing you with the capabilities and benefits of a Key Telephone System without actually owning one.

##### **Q: Do I have to have a Key Telephone System for this service?**

A: This converged service is targeted at users with an existing analog KTS. However, if you do not have a KTS, you can use analog phones and enhanced calling features to provide you with functionality like that of a premise-based Key Telephone System.

##### **Q: Do I get free equipment?**

A: An Integrated Access Device (IAD) is installed and maintained at your site as part of the service.

##### **Q: Can I use regular fax machines?**

A: Analog fax machines may be used. However, fax transmission can be unpredictable when used with VoIP services. It is a good idea to handle faxes completely outside of this service if your business depends heavily and sending and receiving faxes.

##### **Q: If I make calls between two extensions in my office, does this use bandwidth on my broadband circuit?**

A: If your phones are connected to a Key Telephone System, no bandwidth is used on the broadband circuit. If you do not have a Key Telephone System and your phones are connected directly to the analog ports on the IAD, a small amount of signaling bandwidth is used to establish a session between the two extensions. Once a session has been established between the two extensions, no further bandwidth is needed on the broadband circuit.

##### **Q: Do I require any special or custom software on my computer to use this service?**

A: A computer or software is not required to use your phone or key telephone system. However, you may access phone extension features through a web portal, using a web browser. The web portal allows some calling features to be managed, such as enabling call forwarding without the need to remember cumbersome flash and star enabled codes.

**Q: Will I be down for any length of time during setup?**

A: In most cases, there will be very minimal amount of downtime. A short disruption may occur in your phone service during the configuration process when your existing phone numbers are ported to ZMS. There may be a brief interruption of existing Internet service while the Integrated Access Device (IAD) is being installed.

### ***Voice Questions***

**Q: Will we be able to keep our current phone numbers?**

A: Yes, ZMS supports local number portability (LNP), which allows you to keep your current phone numbers.

**Q: Are my calls sent over the Internet?**

A: With ZMS, calls do not travel across the public Internet. Instead, they are on high-quality carrier lines just like any other phone call. ZMS uses voice-over-IP only between a point of presence (POP) and the customer premise.

**Q: Will the voice quality ever seem 'choppy?'**

A: Voice quality is comparable to that of your existing phone service. The Integrated Access Device uses a Quality of Service algorithm to mark and prioritize voice packets for transmission over the T1.

**Q: Can I make calls to any phone?**

A: Of course! Call anyone, anywhere.

**Q: If my T1 connection fails, will I still have phone service?**

A: ZMS service level objective is to provide 100% availability. ZMS is managed over a highly redundant backbone network to minimize the possibility of service failure. However, just like traditional voice service, a local loop failure can cause the phone system to go down. You will still be able to use your service by accessing the rich feature/functionality of ZMS allowing you to receive calls to your extension on alternate phones (i.e. mobile phones).

**Q: Do I pay a separate Long Distance Company?**

A: No. ZMS provides long-distance service at very competitive rates.

**Q: I have several employees that work from a home office. How can they benefit from ZMS services?**

A: ZMS is the ideal system to meet the needs of remote employees. With Professional Seats, they will only need one phone number. Through the web portal they can use features like Remote Office to receive and place calls from their home office phone while giving the appearance as if they were working out of the main office. And with Remote Office, remote employees can originate their long distance calls through the company system. Alternatively, remote employees can install an IP phone over their high-speed Internet connection (i.e. DSL or cable).

**Q: I have several employees that are never in an office. Can they still use ZMS?**

A: ZMS is well suited for roaming employees. Their phone extension can be configured to selectively forward calls, or to use find-me/follow-me type services so they receive calls on their mobile phone or other remote phone. Other employees can easily reach roaming users by dialing their extension.

**Q: I have offices in two different locations. How can ZMS benefit my company?**

A: ZMS allows you to "connect" your offices together in a Multi-Site service configuration. Multi-Site services provide you with a number of benefits, including abbreviated dialing between offices and a single corporate phone directory, accessible by all employees.

Additionally, call features like call transfer, call groups, conferencing, auto-attendant, authorization codes, and hunt groups work across multiple locations. The system can be centrally managed through the Customer Administration Portal; and there are no toll or measured usage charges for calls between your offices.

### *Network Questions*

**Q: I host my own website at our office. Can I still host my own website if I use the ZMS phone system?**

**A:** ZMS is delivered over a business-grade, always on, high-speed, dedicated Internet access circuit suitable for hosting your own public host systems, such as your website.

**Q: Does it work with a Firewall?**

**A:** The Integrated Access Device used for Business Line/KTS Provides network address translation so private IP addresses may be used on the LAN. For additional LAN protection, you may wish to manage your own external firewall.