

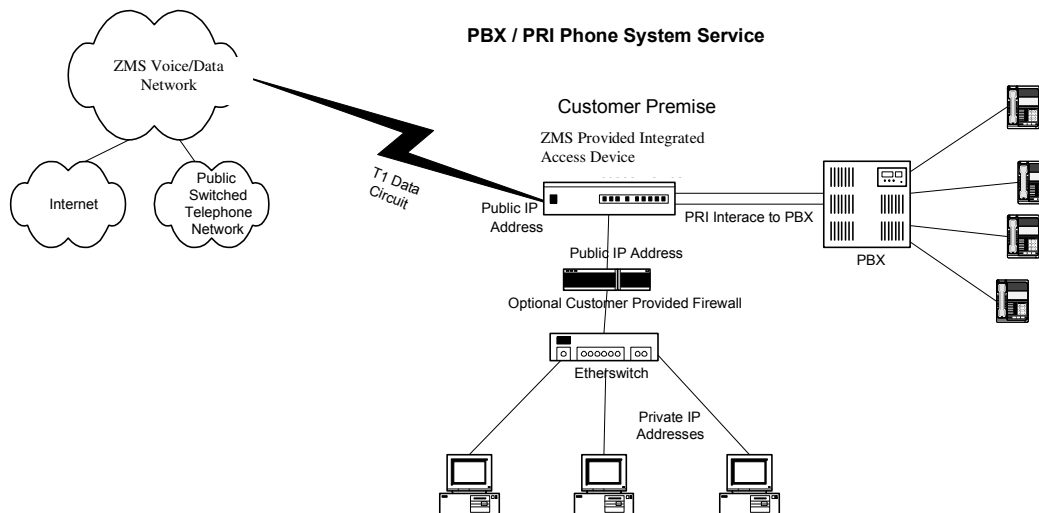
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### Service Delivery Overview

Zayo Managed Services (ZMS) PRI and Internet service offers a managed converged voice and Internet solution for small businesses that own and manage a premise-based PBX system. Voice and Internet services are delivered over a single broadband access circuit using the Internet Protocol (IP). 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 PBX system. The convergence and bundling of voice and Internet over a single broadband connection saves your company money.

### Managed PBX PRI Telephone System Service



#### ➤ Standard Customer Premise Network Configuration

##### **Standard Network Configuration**

- Internet WAN Connection: 1xT1 (1.544Mbps) or 2xT1 (3Mbps)
- Traffic shaping – voice high priority
- Compressed Voice (g7.29 codec)
- DNS – URL/public IP address resolution
- User Assignable Public IPs upon request (2 assignable by default; 6, 14 or 30 assignable upon approval)
- DHCP – allocate private IP addresses to PCs
- Basic Firewall – allow PCs to reach Internet, block traffic from Internet (unless requested by PC)
- Customer provided firewall may be used
- Static routing

##### **Standard PRI Interface**

- 1 or 2 PRI (RJ45 connector)
- PRI Channels: 23B Channels / 1D Channel
- Switch/PBX Type: National ISDN 2 (NI2)
- DID Digits Transferred: 10 digits

- Resource Selection: Linear (search for available resource beginning with the first DSO on the first PRI)
- Framing/Coding: ESF/B8ZS
- Facility Data Link (FDL): ANSI

## Non-Standard Configuration

Non-standard network configuration requests may be supported upon request. The customer's network 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.
- Direct Inward Dial (DID) numbers are available in blocks of 20 numbers and include Caller ID delivery.
- ZMS is scalable and flexible to meet the needs of your business.
  - Unlike traditional PRI service, you buy only the number of concurrent calls you need today (up to 46 concurrent calls) and you can increase by single increments as you add more employees or call volume 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.

## Optional Business Services

- To further customize your phone service, additional service options are available to enhance your overall PBX PRI System service. Available service options include:

<i>Account Codes</i>	<i>Call Forward Busy</i>	<i>Call Forward No Answer</i>
<i>Calling Plans (Toll Restrictions)</i>	<i>Fax Line</i>	<i>Toll-free Numbers</i>

- *Account Codes*: Allows tracking of calls against account codes.
- *Call Forward Busy* when added to a DID number allows inbound calls to be redirected to an alternate outside number (i.e. such as to another office or cell phone) if the system call capacity is exceeded.
- *Call Forward No Answer* when added to a DID number allows inbound calls to be redirected to an alternate outside number (i.e. such as to another office or cell phone) should your PBX become unavailable due to T1 failures or PBX hardware failure.
- *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

- *Fax Line* A dedicated fax line allows your fax machine to be connected directly to an FXS analog port on a ZMS provided integrated access device for better fax reliability (see below FAQs for more on fax machines).
- *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 ZMS service.

### **Frequently Asked Questions**

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

##### **Q: What is the ZMS Converged Internet and PRI Trunk service?**

A: This service combines voice and Internet access over a single high-speed broadband connection to your office. Instead of having multiple voice and Internet circuits 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 split and direct Internet and voice traffic. ZMS uses Voice over IP (VoIP) technology to provide voice service to your premise. The integrated access device converts voice calls between PRI and IP data.

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

A: Fax machines may be used. However, fax transmission can be unpredictable when used with any VoIP service. This is particularly true if your fax machine is connected to your PBX where VoIP calls are delivered in a compressed format. Connecting the fax machine directly to an analog FXS port on the integrated access device allows us to "tune" the fax line for better reliability.

It is a good idea to handle faxes completely outside of the ZMS service (or any VoIP service) if your business depends heavily on sending and receiving faxes. This is particularly true of credit card machines.

##### **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 the ZMS service. There may be a brief interruption of existing Internet service while the Integrated Access Device (IAD) is being installed.

##### **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: If my T1 WAN 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. Optional call redirection can be added to important DID numbers so inbound calls are rerouted to another phone number in the event of a system failure.

### ***Voice Questions***

**Q:** If I transfer an outside call from my office PBX phone to another external phone, will the call still transverse through my PBX?

**A:** Yes. If you transfer a call from an outside party to another outside party, the call will hair pin through your PBX, using two PRI channels, until the call is disconnected.

**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:** What level of voice quality can I expect?

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

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

**Q:** How does having two PRI interfaces to may PBX work?

**A:** The integrated access device will support one or two PRI connections to your PBX. If using two PRI, they are configured as two separate circuits. Your DID's are configured on both PRI and the system will deliver calls starting with the first channel on the first PRI. If that PRI reaches capacity or otherwise becomes unavailable, inbound calls will begin to be routed to the second PRI.

### ***Network Questions***

**Q:** I host my own website at our office. Can I still host my own website if I get ZMS service?

**A:** ZMS service 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 ZMS service provides basic network address translation and blocks all Internet traffic unless requested by your PC. For additional LAN protection, you may wish to manage your own external firewall.