

Zayo Managed Services (ZMS) provides two flavors of PRI voice service for your premise-based PBX. The first is a traditional ISDN-PRI circuit connecting your PBX directly to switching equipment on the Zayo Managed Services PSTN network.

The second method for providing PRI service is over a managed converged voice and data network. Voice and Internet service is delivered over a single broadband access circuit using the IP Protocol. An integrated access device at your location is used to provide the IP WAN connection to the Internet and to provide a T1/PRI interface to your PBX.

Feature/Functionality	Traditional PRI	Converged-PRI
Basic Service Description	<p>T1/PRI voice-only trunking service for premise-based PBX systems. Provides 23 voice channels (23 simultaneous calls) for inbound/outbound calling.</p> <p>A separate data circuit is required for Internet access.</p> <p>Provision as many PRI as needed to support your office.</p>	<p>Voice and Internet services are delivered over a single broadband access circuit using the Internet Protocol (IP).</p> <p>An integrated access device (IAD) provides T1/PRI trunking for premise-based PBX and LAN/WAN interface for dedicated high-speed Internet access.</p> <p>You choose the number of simultaneous calls needed for your PRI – for example if you don't need 23 simultaneous calls as provided with traditional PRI, you can select ten simultaneous calls or whatever number meets your needs.</p> <p>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.</p> <p>Based on voice compression used and Internet needs, a maximum of two PRI is typical.</p>
Pricing Model	Flat-rate monthly recurring charge for each PRI plus usage, such as Long Distance charges.	<p>Flat-rate monthly recurring charge for IP-Connect (ie. Internet connection and managed router).</p> <p>Flat-rate monthly recurring charge for the specified number of simultaneous calls.</p> <p>Usage charges, such as Long Distance charges.</p>
PRI Service Type	<p>The entire PRI can be configured for inbound-only, outbound-only, or two-way.</p> <p>Or, specific channels can be set for inbound-only, outbound-only, or two-way.</p>	<p>The entire PRI can be configured for inbound-only, outbound-only, or two-way.</p> <p>Specific channels can not be set; however, the maximum number of simultaneous inbound-only, outbound-only, and two-way calls that are allowed can be specified.</p>
Translation Protocols	<p>National ISDN 1 National ISDN 2 Lucent 5ESS AT&T 4ESS Nortel DMS-100</p>	<p>National ISDN 2 Lucent 5ESS AT&T 4ESS Nortel DMS-100</p>
Multiple PRI Arrangement	For NI2 and DMS-100 protocols – 1 st PRI	For all protocols, PRI must be configured as

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	<p>must be configured as 23B+1D. Additional PRI can be configured as 23B+1D or 23B.</p> <p>For Lucent 5ESS all PRI must be configured as 23B+1D.</p>	<p>23B+1D.</p>
Resource Selection	<p>Linear – ascending or descending; calls can be accepted on the lowest or highest numbered DS0 available when received.</p> <p>Circular – calls will be evenly distributed across all available DS0s when received.</p> <p>Random – calls will be answered by an available random DS0 when received.</p> <p>All DIDs can be assigned across all PRI, or specific DIDs can be assigned on a specific PRI.</p>	<p>Linear – ascending or descending; calls can be accepted on the lowest or highest numbered DS0 available when received.</p> <p>Circular – calls will be evenly distributed across all available DS0s when received.</p> <p>All DIDs can be assigned across all PRI, or specific DIDs can be assigned on a specific PRI.</p>
Framing/Coding/Facility	<p>Framing: ESF or D4 Coding: B8ZS or AMI FDL: ANSI</p>	<p>Framing: ESF or D4 Coding: B8ZS or AMI FDL: ANSI</p>
Direct Termination Overflow	<p>Calls will be directed to a second PRI if all channels are busy on the first PRI.</p>	<p>Calls will be directed to a second PRI if all channels are busy on the first PRI.</p> <p>Call Forward Busy can be applied on specific DIDs to automatically forward calls to an outside number if the maximum number of simultaneous rings has been exceeded.</p> <p>Call Forward No Answer can be applied to specific DIDs to automatically forward calls to an outside number in the event the T1 fails (the number of rings on the PBX must be shorter than the number of rings set on the ZMS softswitch for this to work).</p> <p>Call Forward Always can also be manually configured via web portal in the event of a system failure.</p> <p>The addition of an Economy seat is required to add Call Forward Busy, Call Forward No Answer, or Call Forward to a DID.</p>
Multi-site	<p>If you have multiple locations that are not local to each other, then long distance calling charges will be applied when calling between locations.</p>	<p>If you have multiple locations that are not local to each other, there are no long distance charges for calling between locations (No tie-lines required).</p>
Direct Inward Dial (DID) Numbers	<p>Available in blocks of 20 numbers.</p> <p>Provide individual phone numbers for each person or station on your PBX.</p>	<p>Available in blocks of 20 numbers.</p> <p>Provide individual phone numbers for each person or station on your PBX.</p>
Local Number Portability (LNP)	<p>You can port your numbers to or from ZMS.</p>	<p>You can port your numbers to or from ZMS.</p>
911	<p>Your main or billing telephone number is used as the outgoing caller ID for emergency calls.</p>	<p>Your main or billing telephone number is used as the outgoing caller ID for emergency calls.</p>
Toll-Free Service	<p>Allows your customers to reach you without</p>	<p>Allows your customers to reach you without</p>

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Outgoing Calling Plans	<p>them having to pay any tolls by dialing an 8xx number. You pay the toll charges.</p> <p>You can allow or disallow different call types:</p> <p>Local – calls within the same LATA or non-chargeable calling region</p> <p>Toll – chargeable calls, interState, interLata calls</p> <p>Toll Free – 800, 877, 888 numbers</p> <p>International – non-domestic, calls to other countries</p> <p>Operator Assisted – calls made with the assistance of an operator</p> <p>Directory Assistance – calls made to Directory assistance such as 411 or 555-1212</p> <p>Special Services – calls to 700 numbers</p> <p>Premium Services – calls to 900, 976 numbers</p> <p>Casual Dialing – calls using 1010xxx</p>	<p>them having to pay any tolls by dialing an 8xx number. You pay the toll charges.</p> <p>You can allow or disallow different call types:</p> <p>Local – calls within same LATA or non-chargeable calling region</p> <p>Toll – chargeable calls, interState, interLata calls</p> <p>Toll Free – 800, 877, 888 numbers</p> <p>International – non-domestic, calls to other countries</p> <p>Operator Assisted – calls made with the assistance of an operator</p> <p>Directory Assistance – calls made to Directory assistance such as 411 or 555-1212</p> <p>Special Services – calls to 700 numbers</p> <p>Premium Services – calls to 900, 976 numbers</p> <p>Casual Dialing – calls using 1010xxx</p>
Call Forwarding/Call Transfers	<p>If an outside caller is transferred or call forwarded to another outside number, the call will hairpin through the PBX via two call legs.</p> <p>If an outside caller is transferred or call forwarded to another outside number, the originating caller ID is replaced with the outbound caller ID of your office number.</p> <p>* NOTE: An update is expected in 8/2008 to allow the original caller ID to be sent when the call is forwarded and to allow the forwarded call to be release back upstream so it does not hairpin through the PBX.</p>	<p>If an outside caller is transferred or call forwarded to another outside number, the call will hairpin through the PBX via two call legs.</p> <p>If an outside caller is transferred or call forwarded to another outside number, the originating caller ID is replaced with the outbound caller ID of the user’s office number.</p> <p>(note: Simultaneous Ring feature can be added to a DID on the ZMS softswitch to ring both a user’s office phone and cell phone while preserving the original calling party’s caller ID).</p>
Authorization/Accounting Codes	<p>No additional charge for codes.</p> <p>Authorization Codes are verified – correct code must be entered to permit the outbound call to be completed.</p> <p>Accounting Codes are not verified – the user is prompted for a code to be associated with the call detail record (billing record). The Accounting code is not verified and will not block an outbound call.</p> <p>Authorization/Accounting Codes can be applied to all calls or just to toll calls.</p>	<p>No additional charge for codes.</p> <p>Authorization Codes are verified – correct code must be entered to permit the outbound call to be completed.</p> <p>Accounting Codes are not verified – the user is prompted for a code to be associated with the call detail record (billing record). The Accounting code is not verified and will not block an outbound call.</p> <p>Authorization/Accounting Codes can be applied to all calls or just to toll calls.</p>

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	<p>All codes must be the same length and up to 16 digits are supported.</p> <p>Codes can be applied to all users or to specific subscribers (provided outbound caller ID of specific users is sent).</p> <p>Codes are ZMS-administered.</p>	<p>All codes must be the same length and up to 14 digits are supported.</p> <p>Codes can be applied to all users or to specific subscribers (provided outbound caller ID of specific users is sent).</p> <p>Codes are customer-administered.</p>
Caller ID and Name Delivery	<p>When available, an inbound caller's phone number and name are delivered.</p> <p>A single outbound name and number can be set for an entire organization, or can be set for each individual.</p> <p>Anonymous outbound calling is permissible.</p>	<p>When available, an inbound caller's phone number and name are delivered.</p> <p>A single outbound name and number can be set for an entire organization, or can be set for each individual.</p> <p>If you want anonymous calling, this must be set permanently on the ZMS softswitch for the DID account. Or, *67 must be allowed to transparently pass through the PBX and up to the ZMS switch. If anonymous calling is set by the PBX, then the ZMS softswitch will see this as an invalid DID account.</p>