<https://www.centurylink.com/wholesale/pcat/isdnpri.html>

**Resale - Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) - V43.0**



**Product Description**

CenturyLink's retail telecommunications service, ISDN PRI service, is available for resale by Competitive Local Exchange Carriers (CLECs) to their end-users. Additional information about resale of CenturyLink's retail services, can be found in [Resale General](https://www.centurylink.com/wholesale/pcat/resalegeneral.html).

ISDN PRI is known by several interchangeable terms: Primary Rate Service (PRS), ISDN PRI and ISDN PRS.

ISDN PRI is a switched digital service that transfers information over the public switched telephone network via a 4-wire physical network configuration, with a full duplex transmission path between either your end-user's Customer Provided Equipment (CPE) an Interexchange Carrier (IXC) Point of Presence (POP) or your [Collocation](https://www.centurylink.com/wholesale/pcat/collocation.html) space. Deployment of ISDN PRI requires that the end-user has ISDN-compatible Customer Provided Equipment (CPE). ISDN PRI is provided on a Digital Service Level 1 (DS1) facility that is multiplexed into 24 channels in various configurations of In-only, Out-only and 2-way dialing. The basic service consists of 23 B Channels and a D Channel with a transmission rate of 1.544 Megabits per second (Mbps). Each B Channel carries user information and the D-Channel is used for signaling. The channel configuration is commonly referred to as 23B+D.

ISDN PRI service is provisioned from the trunk side of the switch. No custom calling features are available because custom calling features are designed to work on the line side of the switch.

The B channels can be used to transmit:

* Voice and data
* Circuit Switched Data (data only)

The following voice type services can ride over a B channel:

* In-only
* Out-only
* 2-way Trunks

ISDN PRI is comprised of the combination of the following elements:

Facility:

* Digital Service Level 1 (DS1)
* ISDN PRI Trunk Port

Trunks:

* Up to 24 In-only, Out-only, or 2-way Trunks ("Trunk Connections")
* Features

ISDN PRI is offered with the following standard features (may vary with state tariffs):

* Answer Supervision-The D channel provides a positive signal to the network for connecting or disconnecting calls.
* Caller Identification (ID)- Displays number or name and a number of the party calling into the end-user's ISDN PRI system. Subject to blocking or privacy restrictions imposed by the caller.
* Calling Party Name Outbound- Provides name of ISDN PRI end-user to called party. Dependent on the ability of the CPE to send a ten-digit number with which a name can be associated. A main directory number or alternate directory number must be established with CenturyLink. To establish a main or alternate directory number, use the REMARKS section of the Resale Services form. If a telephone number is not identified, the default telephone number is the main directory number. Calling Party Number Outbound- Provides the outgoing calling line identification. A main directory number or alternate directory number must be established with CenturyLink. To establish a main or alternate directory number, use the REMARKS section of the Resale Services (RS) form. If a telephone number is not identified, the default telephone number to be sent is the main directory number.
* Direct Inward Dialing (DID® ) / Direct Outward Dialing (DOD)- allows a customer to place or receive calls without using an attendant. DID numbers must be purchased in order for this feature to function.
* Trunk Signaling- Provides out-of-band D channel signaling using Q.931 protocol.

There are four options for trunk connections:

* Dedicated ISDN PRI allows you to dedicate specific B channels for a specific service. For example, you may want the first six B channels for In-only, the second six B channels for Out-only and the remaining channels for 2-way use. Or, you may want the first six channels to be 2-way in one trunk group and the second 6 channels 2-way in a second trunk group and the remaining channels are 2-way in a third trunk group.
* Call-by-Call ISDN PRI allows for any service type (In-only trunks, Out-only trunks, voice or data) to ride any B channel at any given time. For instance, if you had 12 In-only trunks and 11 Out-only trunks, a call made on the first Out-only trunk may be transmitted on the 12th B channel. The next call made on a DID In-only trunk may also be transmitted on the 12th B channel (if available).
* Uniform Access Services (UAS) ISDN PRI is a feature which allows you to have ISDN trunk side service without needing the DID station number capability. The UAS option provides for 23 In-only or 2-way trunks and a DID dialing number. Additional DS1s may be purchased with 23 or 24 trunks.
* Circuit Switched Data (data only) ISDN PRI is a feature, which allows only one dialing, number per trunk group, and does not provide voice transmission.

ISDN PRI is available in two translation protocol types, Custom and National ISDN-2 (NI-2). Both Custom and National protocol types are available in 5ESS® and DMS™-100 switch types. In a 5ESS switch, Custom protocol ISDN PRI uses a 5ESS proprietary protocol as opposed to NI-2 that is not tied to a switch-specific protocol.

The transmission path (DS1) provides 24 64 Kbps channels. With Custom protocol ISDN PRI, up to 23 of the channels may be used as 64 Kbps B channels. The 24th channel must be configured as a D channel, which will carry the signaling. In a 5ESS Custom arrangement, every facility must have its own D channel and in a DMS-100 Custom arrangement the facility can be configured with a D channel, back-up D channel or without a D channel.

With the NI-2 protocol, you have more flexibility when purchasing multiple ISDN PRI. The first ISDN PRI must be configured as a 23B+D. The additional ISDN PRI may be configured as 23B+Back-up D or 24B. One D channel can do the signaling for up to 479 B channels (20 facilities) if they all terminate at the same destination.

NI-2 provides the option of a back-up D channel. The back-up D is used if the Primary D channel fails. In case of failure, all active calls are dropped during the switch over to the back-up D channel. Once the back-up D channel is in service, the B channels will be restored and new calls can be originated or received. Calls dropped during the switch over will not be reestablished.

ISDN PRI is available in the following configurations:

* 23+D - the first DS1 must always be a 23B+D. It provides 23 B channels and 1 D channel. The B channels carry the circuit switched voice and data, while the D channel handles signaling information.
* 24B - provides for 24 B channels. The B channels carry the circuit-switched voice and data information. The signaling is provided by the D channel of a 23B+D configuration. (You must have a 23B+D before ordering a 24B). (Not available with 5ESS Custom.)
* 23B+ back-up D - provides for 23 B channels and a back-up D channel. The back-up D channel provides the ISDN PRI signaling for multiple DS1 facilities when the primary D channel fails. When transitioning to the back-up D channel all active calls will be dropped. Once the back-up D channel is in service, the B channels will be restored and new calls can be originated or received. Calls dropped will not be reestablished. (Not available with 5ESS Custom.)

**PRI utilization for Voice Over Internet Provider (VoIP) Providers**

PRI service is available for resale by CLECs to their end-users to be used as network infrastructure for Information Service Providers (ISP), including VoIP. The PRI may terminate at an IXC POP. Additional components of the service include:

* DID numbers - PRI VoIP specific
* Special Intercept Service

Certification is required and will be part of the signed Individual Case Basis (ICB) that the service will only be used to provide "information services" as defined in 47 U.S.C. ?153 (20). The customer must certify the PRS regardless if termination occurs at an IXC POP or not.

Companies certifying that the PRS will be used exclusively for VoIP will be allowed to:

* Terminate ISDN PRS at an Interexchange Carrier Point of Presence (IXC POP) premises, however, PRS traffic must be segregated from Feature Group D traffic destined for the IXC switch.
* Terminate at a Collocation Cage if the ISP/ESP is the owner of the cage.

ISDN PRI may not be used to exchange Toll VoIP-PSTN traffic.

Contact your [CenturyLink Sales Executive](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information.

**Availability**

ISDN PRI service is available throughout [CenturyLink QC](https://www.centurylink.com/wholesale/pcat/territory.html)but it is not available in all central offices (CO). COs that have Basic Rate ISDN (2B+D) may not have ISDN PRI capability.

ISDN PRI may terminate at an IXC POP it is limited to data service for Internet access only, terminating on the Internet by an Internet Service Provider (ISP) who is your end-user. Voice Service may not terminate at the IXC POP.

In remote central offices where ISDN PRI is not deployed, but can be provided from the host switch, the service will be provided with numbers from the remote (serving) central office. The service will be offered on a bulk rated basis only. If you request telephone numbers from the host switch, you will be billed interoffice mileage charges.

**Terms and Conditions**

ISDN PRI service is offered on a month-to-month or contract basis.

ISDN PRI service may be provided via a fiber optic facility. Construction charges, as specified in your Interconnection and/or Resale contract and/or the state [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html) may apply.

End-user ISDN CPE is required in order to utilize this service. CPE can be in the form of Terminal Adapters or ISDN terminal equipment (telephones). Configuration and Capability Package Ordering Codes are available from [iconectiv](https://iconectiv.com/contact)[®](https://iconectiv.com/contact) , or check with your CPE Vendor/Manufacturer.

The ISDN PRI DS1 signals at the end-user's CPE will be timed from the Central Office Timing Supply or directly from the CenturyLink CO switch. All new DS1 signals must be Network Timed.

DID Digit Manipulation allows the expansion of a number range to include numbers that do not fit the current end-user's CPE (PBX) programmed dialing pattern. Additional information can be found in the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

ISDN PRI service is available in:

* Foreign Central Offices (FCO) or Foreign Exchange (FX) Services
* Intrastate, Intra Local Access and Transport Area (IntraLATA) only

ISDN PRI service is not available for use by Commercial Mobile Radio Carriers (CMRS), Private Mobile Radio Carriers (PMRS), or Interexchange Carriers (IXC) in the provisioning of services to their end-users.

The following products, features and services are not allowed to traverse an ISDN PRI DS1 facility:

* Anonymous Call Rejection
* Blocked/Private Calls Inbound
* Call Forwarding
* Complimentary Dial Tone
* Custom Calling Services
* D Channel Call Forwarding
* Feature Groups A, B, C, or D
* PBX trunks (with the exception of Hotel-LD terminals)
* SwitchNet 56
* Wide Area Telephone Service (WATS) /800 Service
* Other private line/access services and facilities

Due to emergency 911 concerns, In-only trunks are the only trunk type available with Resale ISDN PRI services that terminate in your collocation space, i.e., outgoing calls to 911 emergency services would appear to originate from the collocation space address, and not from the end-user address.

**Technical Publications**

Technical recommendations, including Network Channel/Network Channel Interface (NC/NCI™) codes, are specified in [Technical Publication 77400 Primary Rate ISDN Service](http://centurylink.com/techpub/77400/77400.pdf).

* [Telecordia Special Reports (SRs), SR-2275, Notes on the Network](https://telecom-info.njdepot.ericsson.net/site-cgi/ido/docs.cgi?ID=271272036SEARCH&KEYWORDS=&TITLE=Notes+on+the+Network&DOCUMENT=sr-2275&DATE=&CLASS=&COUNT=1000)
* [American National Standards Institute (ANSI) Standard Publications](http://webstore.ansi.org/).

**Pricing**

**Rate Structure**

Termination Liability Charges (TLA) may apply to convert an end-user to ISDN PRI and if applicable, are billed to the end-user on their final bill.

Nonrecurring charges apply when establishing, changing, or converting existing service to ISDN PRI service.

You may change features, Primary Interexchange Carrier (PIC), listings, and/or telephone numbers at the time of conversion, applicable charges will apply.

Mileage charges may apply for Foreign Central Offices (FCO) or Foreign Exchange Services.

Monthly and/or recurring charges may apply for some features.

Bulk pricing enables CLECS and CenturyLink Retail customers to obtain lower rates for ISDN PRI service by signing a Variable Term Agreement (VTA). A single bulk rate, for the trunks and facility, is paid for the contracted term. All charges are billed to the facility account and not the trunk account.

To order bulk pricing, contact your [CenturyLink Sales Executive](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for a contract number and bulk pricing USOCs, this information will need to be entered on your service request. When the contract number is entered in the VTA field on the LSR facility request, it constitutes signing and agreeing to the terms of the contract. A unique contract number must be obtained for each of your end-users, however, multiple facilities and their associated trunks may be on the same contract. Bulk pricing USOCs must be entered in the REMARKS on the RPL form and in the FEATURE field on the RS form.

The rate elements for ISDN PRI include:

Facility:

* DS1
* Configuration
* CALC (5 per facility)

Trunks:

* Trunk termination charge
* DID Termination Charges
* DID Station Charges
* DID numbers are purchased in banks of numbers from the exchange Tariffs/Catalogs/Price Lists and are in addition to the ISDN PRI charges.

The rate element for ISDN PRI service provided with numbers from the host switch when the service is not deployed in a remote central office is offered on a bulk rated basis only. The service includes DS1 facility and common equipment, interoffice transport, a 23B+D, 24B, or 23B+D backup service configuration, and 24 trunks that are provisioned as In-only with DID, Out-only, or Two-way with DID or a UAS network connection.

PRI utilization for Voice Over Internet Provider (VoIP) is priced on an Individual Case Basis (ICB), Contact your [CenturyLink Sales Executive](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information.

**Rates**

CenturyLink's retail rates for products and services, less any applicable resale discount, apply for resold services.

Resale rates and/or applicable discounts are available in Exhibit A or the specific rate sheet in your Interconnection or Resale Agreement.

Retail rates can be found in the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

**Tariffs, Regulations and Policies**

For CenturyLink's retail rates and changes, view the [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

**Optional Features**

Optional feature offerings may vary with state [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

ISDN PRI service is provisioned from the trunk side of the switch. Consequently, Custom Calling features and CLASS™ features are not available with ISDN PRI service because they are provisioned on the line side of the switch. Some ISDN features provide similar functionality to Custom Calling and CLASS features. The following list identifies ISDN PRI features and specific optional feature ordering information. For more information on forms and fields required for ordering refer to the [Ordering](https://www.centurylink.com/wholesale/pcat/isdnpri.html#ordering) section of this PCAT.

* B-Channel Availability Signaling- Available in 5ESS switches only. Provisioned on the D channel. To order include the FID BSRV after the D channel Universal Service Order Code (USOC) LTGDX on the RS form.
* [Billed Number Screening](https://www.centurylink.com/wholesale/clecs/features/billnumscreen.html) - Blocks incoming and/or third number billed calls to a DID number or to a trunk that is called directly by dialing the trunk telephone number.
* Blocking Number Inbound- Blocks inbound calling party numbers from the ISDN PRI end-user. No USOCs or Field IDentifiers (FIDs) are used to order this feature, requires an entry of "Blocking Number Inbound" in the REMARKS section of the RS form.
* Blocking Number Outbound- This is a function of the ISDN PRI CPE. Not ordered through CenturyLink.
* Calling Name Delivery - This feature is available in 5ESS and DMS-100 switches, however in the DMS-100 switch, it is only available with National protocol. This feature is engineered to be compliant with iconectiv®. Specifications, you must ensure that the end-user's PBX/CPE is also in compliance with the iconectiv® specification. Provisioned on the DS1 facility and ordered by including an entry of "Calling Name Delivery" in the REMARKS section of the Resale Private Line (RPL) form.
* [CustomNet](https://www.centurylink.com/wholesale/clecs/features/customnet.html) - Blocks certain types of outgoing operator assisted long distance calls, using USOCs SEA, and SRG. Provisioned on the S2N telephone number.
* Individual Station Billing - Allows long distance calls to be billed to individual DID stations. The end-user's CPE must be able to send the DID telephone number. To order contact your CenturyLink Service Manager.
* Redirecting Call Features- A package of three features, providing information on calls forwarded to an ISDN PRI number when the ISDN PRI end-user subscribes to the service. They are available in 5ESS and DMS-100 switches with NI-2 protocol and not available with Custom Protocol. Provisioned on the DS1 facility. To order include "Redirecting Call Features" in the REMARKS section of the RPL form.
	+ Redirecting Number Delivery - Delivers to the called party the number that forwarded the call, as well as the calling number.
	+ Redirecting Reason - On calls forwarded, the Redirecting Reason indicates to the Redirecting Number Delivery (RND) subscriber why a call was forwarded (e.g., because the Call Forwarding Variable, Call Forwarding Interface Busy, or the Call Forwarding Don't Answer feature was active). When a call is forwarded multiple times, a NI-2 switch will provide the first and last Redirecting Reasons to the RND subscriber.
	+ Privacy of Redirecting Number - On calls that are redirected by a number that has requested privacy on a subscription basis, privacy will be respected and the redirecting number will not be delivered to the RND user.
* 2B Channel Transfer - Available in 5ESS and DMS100 switches. Enables the end-user to transfer a call outside the ISDN PRI system using two B channels, one to carry the incoming call and one to carry the outgoing transferred call. To order include and entry of "2B Channel Transfer" in the REMARKS section of the RS form.
* Trunk Group Overflow- Allows an ISDN PRI trunk group to overflow to another trunk-side trunk group (ISDN PRI, DSS, or analog two-way DID) belonging to the same end-user. No USOCs or FIDs are required to order this feature. To order include an entry of "Trunk Group Overflow" in the REMARKS section of the RS form.
* Private Switch/Automatic Location Identification (PS/ALI) is available for Resale but is not available at a Resale discount (except in MN and WY) and must be separately purchased out of the Exchange Services Tariff for the particular State where it is located. PS/ALI allows the end-user to utilize PRI trunks in lieu of PS/ALI private lines (commonly referred to as CAMA trunks). In a DMS100 switch, however, 911/E911 messages cannot be sent via a PRI trunk and requires a separate trunk as identified in the Access to Emergency Services (911/E911) PCAT, unless you specifically subscribe to the PS/ALI product, PS/ALI is available to end-users who currently subscribe to PS/ALI and are ordering ISDN PRI service. A subscription to PS/ALI service is required to allow 911/E911 messaging. PS/ALI is offered separately from 911/E911 services. For details on Resale PS/ALI, see [Access to Emergency Service (911/E911)](https://www.centurylink.com/wholesale/pcat/911.html).

The following listings are available on ISDN PRI service:

|  |  |
| --- | --- |
| **DIRECTORY LISTINGS** | **Universal Service Order Codes (USOCs)** |
| Additional Directory Listing | CLT |
| Alternate Listing | CLT, FNA, NSH |
| Directory Line of Information | XLL |
| Foreign Listing (state where listing is to appear determines rate) | FAL, CLT |
| Non-Listed Service | NLT |
| Non-Published Service | NPU |

Additional information regarding listings is available in [White Pages Directory Listings](https://www.centurylink.com/wholesale/pcat/whitepagedirlist.html).

Traffic Data Report Service (TDRS) provides customers with a summary of traffic data on certain network facilities. For additional information contact your [CenturyLink Service Manager](https://www.centurylink.com/wholesale/clecs/accountmanagers.html).

**Features/Benefits**

|  |  |
| --- | --- |
| **Features** | **Benefits** |
| ISDN PRI Digital Service | * Provides speed and accuracy
 |
| Out-of-band signaling | * Signaling information is over a separate D channel - speeding up the origination, termination, or any other changes required to process your end-user's calls
 |
| Functions on standard analog 4-wire and fiber optic circuits | * technology that is both widely deployed and cost effective.
 |

**Applications**

ISDN PRI provides end-users with the ability to transmit and receive video, voice and data simultaneously. This product works well for end-users desiring a digital connection with a transmission rate of 1.544 Mbps.

ISDN PRI service applications

* Backbone Local Area Network (LAN) access
* Business continuation and disaster recovery
* Image transfer
* Local Area Network (LAN) interconnection
* PBX
* Video conferencing
* Virtual office
* Voice and data integration

**Implementation**

**Product Prerequisites**

If you are a new CLEC and are ready to do business with CenturyLink, please view [Getting Started as a Facility-Based CLEC](https://www.centurylink.com/wholesale/clecs/clec_index.html) or [Getting Started for Resellers](https://www.centurylink.com/wholesale/clecs/reseller_index.html).

If you are an existing CLEC wishing to amend your Interconnection Agreement or your New Customer Questionnaire, you can find additional information in the [Interconnection Agreement](https://www.centurylink.com/wholesale/clecs/negotiations.html).

**Pre-Ordering**

General pre-ordering information is located in the [Pre-Ordering Overview](https://www.centurylink.com/wholesale/clecs/preordering.html).

ISDN PRI pre-qualification is a two step process to determine the ISDN PRI service is available to your end-user and there are facilities available to provision the service. CenturyLink strongly suggests that you complete the ISDN PRI pre-qualification process prior to ordering ISDN PRI.

Step one

Verify the availability in the end-user's CO by referring to the [Network Disclosures](http://centurylink.com/disclosures/netdisclosure402/index402.html). Select the state for the end-user's CO location, then select the end's users CO. If the ISDN PRI DATE column is populated with "Deployed", ISDN PRI is available.

Step two

Verify if facilities are available to provision the ISDN PRI T1 at the end-user's address, use the [EASE-LSR User's Guide](https://ease.lumen.com/). Follow the instructions for a High-Capacity Facility check. In completing the High-Capacity Facility check, use the Class of Service and USOC specific to the product for which you are checking the facility.

If the PRI T1 (DS1) will ride a higher facility (DS3), a facility check is not performed.

Or if you use [EASE-LSR XML](https://ease.lumen.com/), select the release you would like to execute the query in and scroll to the chapter that is titled "Facility Availability Transaction" and follow the instructions.

The following activities may need to be performed by you in preparation for the issuance of the ordering request:

* Validate address
* Check facility availability
* Check service availability
* Customer Service Record (CSR) retrieval and review for both the facility and the trunks

New ISDN PRI telephone numbers can not be reserved using EASE-LSR. CenturyLink will return telephone numbers to you on the Firm Order Confirmation (FOC). If your end-user wants to convert an existing non-ISDN telephone number to Resale ISDN PRI, check with your CenturyLink Service Manager to see if the telephone number can be converted. Availability of ISDN PRI in the end-user's serving office does not guarantee that the prefix will be compatible.

There are at least two CSRs for each ISDN PRI service configuration, the T1 facility CSR, and one or more trunk CSRs for the services riding the T1. When converting these products, both the facility and the trunks are to be converted and you must review both the facility and the trunk CSRs. Based on the type of request, subsequent changes may also require the review of both CSRs.

The trunk CSR has a standard telephone number as the account telephone number and is available in EASE-LSR via the standard pre-order CSR request function. The facility CSR has a private line account number, also known as a Mechanized Account Number (MAN) or Special Billing Number (SBN). If you know this account number you can also obtain the facility CSR via EASE-LSR.

If you don't have the account number, you may find it cross-referenced on the trunk CSR. The cross-reference may appear:

* Following the COS (Customer Other Service) Field IDentifier (FID) in the Bill Section e.g., COS 206-T31-1234.
* Following the DES (Description) FID or WW (Works With) FIDs after the trunk USOC e.g., TJ21X/TN 206-224-2222/WW 206-T31-1234.
* As a retained remark (RMKR) e.g., RMKR T1 billed on 206-T31-1234 123.

If the facility account number is not referenced on the trunk CSR, locate the Common Language Facility Identification (CLFI™). The CLFI appears on the trunk CSR after each trunk USOC, following the CFA (Connecting Facility Assignment) FID, and identifies the name of the facility the trunk rides, as well as the channel it occupies, e.g., CFA 101 T1ZF 23 CLLI™ CLLI. CenturyLink can use the CLFI to obtain the facility account number for you.

If you are unable to locate the facility CSR, call the CenturyLink [Customer Service Inquiry and Education (CSIE)Interconnect](https://www.centurylink.com/wholesale/clecs/customercontacts.html) and select the Centrex and Complex Resale option to reach the appropriate workgroup.

When contacting the CenturyLink ISC, be prepared to provide:

* End-user name
* Trunk account number
* CFA or CLFI information
* Proof of agency authorization

Depending on your needs, CenturyLink can:

* Give you the account number of the facility so you can find the CSR in EASE-LSR
* Fax, mail, or email the CSR to you
* Review the CSR with you on the telephone

**Ordering**

It is important to understand the [Resale General](https://www.centurylink.com/wholesale/pcat/resalegeneral.html) Procedures before ordering Resale ISDN PRI.

General ordering activities are identified in the [Ordering Overview](https://www.centurylink.com/wholesale/clecs/ordering.html).

[Disclosure Information and other LSR instructions are available on the web](http://centurylink.com/disclosures/numericindex.html).

CenturyLink will provision ISDN PRI according to the standard intervals for the equivalent retail service. Service interval guidelines are found in the [Service Interval Guide (SIG)](https://www.centurylink.com/wholesale/guides/sig/index.html).

You may order new ISDN PRI service or convert existing retail or resale ISDN PRI.

At the time of conversion, you may include changes to features, PIC, Local Primary Interexchange Carrier (LPIC), listings, and telephone numbers.

ISDN PRI orders are completed following the [Local Service Ordering Guidelines (LSOG)](https://www.centurylink.com/wholesale/clecs/lsog.html) along with the appropriate NC/NCI codes. Orders should be placed using [EASE-LSR Extensible Markup Language (XML)](https://ease.lumen.com/) or [EASE-LSR Graphical User Interface (GUI)](https://ease-lsr.lumen.com/).

A new installation (ACT N) of ISDN PRI service requires at least two local service requests. One local service request for the facility and one or more local service requests for the trunk. The local service requests must be issued at the same time and related to each other using the RPON field.

The facility request requires the following LSOG forms:

* Local Service Request (LSR)
* Resale Private Line (RPL) Form

The trunk request requires the following LSOG forms:

* LSR
* End User (EU)
* Resale Service (RS) (one per trunk group, and one for DID numbers)
* Directory Listing (DL), as appropriate

The following checklists identify unique ordering information for the ISDN PRI facility and trunk requests, more detailed information on the order entries follows the checklists.

Facility Request:

* Include the protocol type in the REMARKS field of the LSR form.
* Include the appropriate configuration USOC in the REMARKS section of the RPL form.

Trunk Request:

* Include the trunk type USOC in the FEATURE field of the RS form
* Include the trunk connection type in the FEATURE field of the RS form
* Order DID telephone numbers for In-only and 2-way trunks, except if the UAS option is ordered.
* Include the S2N USOC in the FEATURE field along with the assigned telephone number in the FEATURE DETAIL field of the RS form, on all In-only and 2-way DID PRI trunk groups
* Include the hunting type in the REMARKS field of the LSR form
* Provide the channel assignment information, for new installations (ACT N) include an entry in the REMARKS section of the RS form, and for existing service include an entry in the FEATURE DETAIL field of the RS form
* Include the CPE Manufacturer and model number in the REMARKS section of the EU form on a new installation (ACT N), outside move (ACT T), or change (ACT C) requests involving a DMS-100 switch.

The facility request must include Protocol information. On new installations (ACT N) include and entry of 'Y' in the MANUAL IND field and the protocol type in the REMARKS section of the LSR form. On Conversions As Specified (ACT V) or changes (ACT C) of protocol include the words "Protocol change required" along with the new protocol type in the REMARKS section of the LSR form of the facility request. If the new installation (ACT N), outside moves (ACT T) or changes (ACT C) involving a DMS-100 switch, include the CPE manufacturer and CPE model number in the REMARKS section of the EU form. Contact your CenturyLink Service Manager to discuss ordering protocols.

The facility request requires a configuration USOC in the REMARKS Section of the RPL form. The following table identifies the configuration USOCs.

**Configuration on Bulk Rate or Promotional Contracts**

|  |  |
| --- | --- |
| **USOC** | **Description** |
| ZPXJX | 23B+D |
| ZPXKX | 24B |
| ZPXLX | 23B+Back-up D |

These USOCs are used regardless of contract length.

**Configuration Contracted with DS1 Facility & Trunks**

|  |  |
| --- | --- |
| **USOC** | **Description** |
| ZPXJ1 | 23B+D - 1 Year with Trunks |
| ZPXJ2 | 23B+D - 2 Year with Trunks |
| ZPXK1 | 24B - 1 Year with Trunks |
| ZPXK2 | 24B - 2 Year with Trunks |
| ZPXL1 | 23B+BUD - 1 Year with Trunks |
| ZPXL1 | 23B+BUD - 1 Year with Trunks |
| ZPXL2 | 23B+BUD - 2 Year with Trunks |
| ZPXJ3 | 23B+D Configuration - 3 Year with Trunks |
| ZPXJ5 | 23B+D Configuration - 5 Year with Trunks |
| ZPXK3 | 24B Configuration - 3 Year with Trunks |
| ZPXK5 | 24B Configuration - 5 Year with Trunks |
| ZPXL3 | 23B+Back-up D - 3 Year with Trunks |
| ZPXL5 | 23B+Back-up D - 5 Year with Trunks |

**Configuration Contracted with DS1 Facility Only**

|  |  |
| --- | --- |
| **USOC** | **Description** |
| ZPXB3 | 23B+D Configuration - 3 Year |
| ZPXB5 | 23B+D Configuration - 5 Year |
| ZPXB7 | 23B+D Configuration - 7 Year |
| ZPXBO | 23B+D Configuration - 10 Year |
| ZPXC3 | 24B Configuration - 10 Year |
| ZPXD3 | 23B+Back-up D - 3 Year |
| ZPXD5 | 23B+Back-up D - 5 Year |
| ZPXD7 | 23B+Back-up D - 7 Year |
| ZPXDO | 23B+Back-up D - 10 Year |

**Configuration Month to Month Only**

|  |  |
| --- | --- |
| **USOC** | **Description** |
| ZPAZD | 23B+D Configuration - Month-to-Month |
| ZPA1X | 24B Configuration - Month-to-Month |
| ZPAZA | 23B+Back-up D Configuration - Month-to-Month |

The trunk request requires USOCs to identify the trunk type, channel, trunk connection, DID trunk terminations (if applicable), long distance billing/911 identification, and hunting.

The following tables identify the trunk type USOCs, include the trunk type USOC in the FEATURE field on the RS form.

|  |  |
| --- | --- |
| **Trunk Type USOCs** | **Description** |
| T1KAB | 2-way Trunk Group via T1 Channel - Data - Dedicated |
| T1KAC | 2-way Trunk Group via T1 Channel - Voice and Data - Dedicated |
| T1KAE | In-only Trunk Group via T-1 Channel - Data - Dedicated |
| T1KAF | In-only Trunk Group via T-1 Channel - Voice and Data - Dedicated |
| T1KAJ | Out-only Trunk Group via T-1 Channel - Voice and Data - Dedicated |
| T1KBF | In-only Trunk Group via T-1 Channel -Call-by-Call |
| T1KBJ | Out-only Trunk Group via T-1 Channel - Voice and Data -Call-by-Call |

The following table identifies the channel USOCs, include the channel USOC in the FEATURE field of the RS form.

|  |  |
| --- | --- |
| **Channel USOCs** | **Description** |
| DR5 | B Channel - There are a maximum of 23 DR5s on a 23B+D and 23B+ Backup D and 24 DR5s on a 24B |
| LTGDX | D Channel |

The following tables identify the four types of trunk connections with the appropriate USOCs. The trunk connection applies to each ISDN PRI channel that has access to the circuit switched network and will be using either voice or voice and data. Include the appropriate trunk connection USOC in the FEATURE field on the RS form.

|  |  |
| --- | --- |
| **Call-by-Call Trunk Connection USOC** | **Description** |
| PT31C | Call-by-Call |

|  |  |
| --- | --- |
| **Dedicated Trunk Connection USOCs** | **Description** |
| PT311 | Dedicated In-only Trunk |
| PT310 | Dedicated Out-only Trunk |
| PT312 | Dedicated 2-way Trunk |

|  |  |
| --- | --- |
| **UAS Trunk Connection USOCs** | **Description** |
| NWO | UAS Network Connections, per T1 facility-Can only pass on conversions, if existing on account. Cannot be used on new installations. |
| NWO1X | UAS Network Connections, per T1 facility In--only Network Connection |
| NWO2X | UAS Network Connections, per T1 facility 2-way Network Connection |

|  |  |
| --- | --- |
| **Circuit Switched Data Connection (data only) Trunk Connection USOCs** | **Description** |
| PT3TA | 23 Data only channels, Dedicated |
| PT3TB | 24 Data only channels, Dedicated |

On a Dedicated Trunk Connection, the DID trunk termination USOCs apply for each B channel (DR5 USOC) that is capable of In-only or 2-way trunking. Call-by-Call requires 1 ND2 USOC per trunk. The DID Trunk Termination USOCs do not apply to UAS or Circuit Switched Data (data only) options.

|  |  |
| --- | --- |
| **DID Trunk Termination USOCs** | **Description** |
| NDT | In-only trunk |
| ND2 | 2-way trunk |

DID telephone numbers must be ordered for In-only and 2-way trunks, except if the UAS option is ordered. The DID Trunk Termination USOC is entered in the FEATURE field on the RS form on the first trunk order.

The following table provides valid USOC combinations for the trunk request based on the trunk type.

|  |  |
| --- | --- |
| **Trunk Type** | **Valid USOC Combinations** |
| T1KAB | PT3TA (23 data only channels) or PT3TB (24 data only channels) (one for each 2-way data trunk), DR5 (one for each derived B Channel), ND2 (one for each 2-way trunk) |
| T1KAC | PT312 (one for each 2-way trunk), DR5 (one for each derived B Channel), ND2 (one for each 2-way trunk) |
| T1KAE | PT3TA (if 23 data only channels) or PT3TB (if 24 data only channels) (one for each In-only trunk), DR5 (one for each derived B Channel), NDT (one for each In-only trunk) |
| T1KAF | PT311 (one for each In-only trunk), DR5 (one for each derived B Channel), NDT (one for each In-only trunk) |
| TIKAJ | PT310 (one for each Out-only trunk), DR5 (one for each derived B Channel) |
| T1KBF | PT31C (one for each In-only trunk), DR5 (one for each derived B Channel), ND2 (one for each trunk) |
| T1KBJ | PT31C (one for each Out-only trunk), DR5 (one for each derived B Channel), ND2 (one for each trunk) |

If the UAS option is required, NWO++ replaces the PT3++ USOC. The DMS-100 switch with dedicated trunking arrangements and the DS1 facility must have the same trunk types. They cannot be mixed. Circuit Switched Data (data only) cannot be mixed with voice trunking arrangements on the same facility.

The S2N USOC is required on all Out-only and 2-way DID PRI trunk groups. Multiple trunk groups can share the same S2N. The S2N is assigned a telephone number, which will be used for long distance billing and for 911 identification. This number must be a dialable number which can be called back by emergency services personnel and which will be answered by the end-user. The end-user's published number should be used for the S2N is not possible, CenturyLink can use a DID, POTS, trunk or stand alone DID number on the account.

With existing service, review the CSR to ensure an S2N is assigned for each applicable trunk group. If not, negotiate with the end-user to determine which telephone number they want to use and indicate it on the RS form in the FEATURE and FEATURE fields. Populate "S2N" in the FEATURE and the telephone number in the FEATURE DETAILS.

When requesting a new installation (ACT N), negotiate with the end-user which published or DID number will used for each applicable trunk. Populate FEATURE field of the RS form with the USOC S2N and include a 'Y' in the MANUAL IND field along with an entry in REMARKS field, e.g., "Use published telephone number for S2N". CenturyLink will include the assigned S2N telephone number on the Firm Order Confirmation (FOC). It is your responsibility to communicate the S2N telephone number the end-user and/or their CPE vendor and in order for the CPE to direct calls to the appropriate telephone set.

When requesting new service, you should negotiate with the end-user which option, published number, other number in a DID range, stand-alone DID that they need. Populate the USOC S2N in the FEATURE field of the RS form and the chosen option in REMARKS, e.g., "Use published number for S2N". CenturyLink will indicate on the FOC the number assigned for the S2N. It is your responsibility to make sure this number is communicated to the end-user and/or their CPE vendor and is directed by the CPE to a telephone set that will be answered.

Hunting features are available with ISDN PRI and vary depending on the switch type.

Glare Resolution is the ability of a system to ensure that if a trunk is seized by both ends simultaneously, one caller is given priority and the other call is switched to another trunk. Glare occurs when both ends of a telephone line or trunk are seized at the same time for different purposes or by different users. If the CPE is set to hunt, the Central Office should be set up just the opposite to minimize glare. In the REMARKS field of the LSR form, you must enter whom "Yields to Glare". If you enter "CenturyLink Yields to Glare", your end-user's call is given priority. If you enter "(Your Name) Yields to Glare", the CenturyLink call is given priority.

Include a 'Y' in the MANUAL IND field and the Hunting Type in the REMARKS section of the LSR form for the trunk request for new installations (ACT N), changes (ACT C), and outside move (ACT T) requests. The following tables identify the types of hunting available for each switch type.

|  |  |
| --- | --- |
| **5ESS Switch Type** | **Description** |
| BGUCD | Backward Circular Sequential - The start hunt member is the last selected member -1. Hunting then continues through the trunk members in a backward direction using circular hunting to the lowest member, then starting over at the highest member. The hunt continues in this manner until an idle is found or all the members are found busy. |
| Forward | A trunk is selected starting with the first trunk in the group in ascending order. |
| GUCD | Forward Circular Sequential Hunt - The hunt member is the last selected member +1. Hunting continues through the trunk members in a forward direction using circular hunting to the highest member, then starting over at the lowest member. The hunt continues until an idle member is found or all members are found busy. |
| Reverse | A trunk is selected started with the last trunk in the group in descending order. |
| UCD | Uniform Call Distribution. The start hunt member is randomly selected, the hunting following Forward Circular Sequential hunting. |

|  |  |
| --- | --- |
| **DMS-100 Switch Type** | **Description** |
| ASEQ | Hunt members are assigned a selection sequence of Ascending. ASEQ select the first available trunk in the selection sequence (ascending or descending). |
| CWCTH | Hunt members are assigned a selection sequence of Clock-wise circular. Clock-wise circular will select the first trunk available after the one most recently released. |
| CCWCTH | Hunt members are assigned a selection sequence of Counter Clock-wise circular. Counter-clock-wise circular will select the first trunk available after the one most recently released. |
| DSEQ | Hunt members are assigned a selection sequence of Descending. DSEQ select the first available trunk in the selection sequence (ascending or descending). |
| LIDL | Hunt members are assigned a selection sequence of Least Idle. Least Idle re-selects the last trunk used. |
| MIDL | Hunt members are assigned a selection sequence of Most Idle. Most Idle distributes calls uniformly to all trunks in the group |

You must indicate on the RS form which T1 and channel that will be used for each trunk. CenturyLink will always assign a D channel or back-up D channel to channel 24 of the T-1, however, you must indicate the channel assignment for both B and D channels on existing service.

For existing service, use the FEATURE DETAIL field on the RS form for each trunk. In the FEATURE DETAIL field populate the CFA FID, followed by the T1 and channel designation, e.g., CFA 101 T1 23 CLLI.

For a new installation (ACT N), enter trunk information in REMARKS field of the RS form, e.g., 5 call-by-call 2-way trunk channels 1-5, 5 dedicated DID trunk channels 15-20, D channel - channel 24. If a request for a new installation is received without this information, CenturyLink will put the D channel in channel 24 and use the other channels in order from 1-23, assigning members of a trunk group to contiguous channels.

In addition to the fatal EASE-LSR reject errors, CenturyLink will error or reject your request if the information provided for ISDN PRI is contradictory or insufficient to provision the service. In most instances, you will receive a telephone call asking for a Supplement (SUP) to your request, followed by an error message in EASE-LSR. If the information needed is not provided within four hours of the telephone call, your request will be rejected. Following are some examples of requests that may error or reject:

* Hunting requested on facility
* Hunting requested on facility and not requested on trunks
* DID trunks requested but no DID numbers requested
* Protocol or NCI codes requests on facility and trunks do not match
* Requested trunk type invalid on requested facility type
* The SEC NCI is populated

Additional rejection errors can be found in the [Ordering Overview](https://www.centurylink.com/wholesale/clecs/ordering.html).

Use of Universal Service Order Codes (USOCs) and Field IDentifiers (FIDs) are described in the [USOCs and FIDs Overview](https://usocfidfind.centurylink.com/). Use of the USOC/FID Finder will assist you in identifying USOC and FID requirements.

To order DID Digit Manipulation, enter the PT3DM USOC in FEATURE field and include the following information in REMARKS field on the RS form:

* DID Digit Manipulation
* instructions on how to program the new telephone number(s)

e.g. REMARKS: DID Digit Manipulation request. Program telephone number 223-1264 for three digit out pulse.

PRI utilization for Voice Over Internet Provider (VoIP) related USOCs:

|  |  |
| --- | --- |
| **PRI VoIP USOCs** | **Description** |
| ZPGTX (all states)1 - Year Plan2 - Year Plan3 - Year Plan5 - Year Plan | Primary Rate Service Package - T1 Facility with 23B+D channels for VoIP provider. |

|  |  |
| --- | --- |
| **DID Numbers USOCs** | **Description** |
| VOX (all states except OR and WA) | Direct Inward Dialing Service - VoIP - each group of 20 sequential DID numbers. |
| VOW | Direct Inward Dialing Service - VoIP - each DID number. |
| VOY (all states except OR and WA) | Direct Inward Dialing Service - (VoIP) - group of reserved sequential station numbers. |
| VOWRN | Direct Inward Dialing Service - (VoIP) - each DID number - reserved number. |

|  |  |
| --- | --- |
| **Special Intercept Service** | **Description** |
| R1TFA | Intercept - VoIP DID telephone number - routed to announcement. |
| R1TGA (all states except OR and WA) | Intercept - VoIP DID telephone number - routed to announcement - each number in range. |

PRI utilization of VoIP service is ordered on an ICB, to request new service, contact your [CenturyLink Sales Executive](https://www.centurylink.com/wholesale/clecs/accountmanagers.html).

**Provisioning and Installation**

General provisioning and installation information is identified in the [Provisioning and Installation Overview](https://www.centurylink.com/wholesale/clecs/provisioning.html).

Provisioning interval guidelines and FOC intervals are found in the [(SIG)](https://www.centurylink.com/wholesale/guides/sig/index.html).

A jeopardy occurs on a service request if a condition exists that threatens timely completion. Jeopardy notification information is described in the [Provisioning and Installation Overview](https://www.centurylink.com/wholesale/clecs/provisioning.html).

Loss and Completion Reports are based on loss and gain account activity. Completion notification, including Loss and Completion Reports, is described in [Billing Information - Additional Outputs - SMDR, Completion Report, Loss Report](https://www.centurylink.com/wholesale/clecs/output.html).

**Maintenance and Repair**

Information is available in the [Maintenance and Repair Overview](https://www.centurylink.com/wholesale/clecs/maintenance.html).

**Billing**

~~Detailed information regarding the Customer Record and Information System (CRIS) Summary Bill, Inquiry and Disputes is described in~~[~~Billing Information - Customer Records and Information System (CRIS)~~](https://www.centurylink.com/wholesale/clecs/cris.html)~~.~~ Ensemble is the new billing system for customers. For questions about the bill, please follow the instructions on the reverse side of each billing statement.

The Ensemble bill is described in [Billing Information – Ensemble](https://www.centurylink.com/wholesale/clecs/ensemble.html)

**Training**

View CenturyLink courses in the  ~~Course~~ [Training Catalog](https://www.centurylink.com/wholesale/training/coursecatalog.html)..

**Contacts**

CenturyLink contact information is identified in the [Wholesale Customer Contacts](https://www.centurylink.com/wholesale/clecs/customercontacts.html).

**Frequently Asked Questions (FAQs)**

**1. Can a DS1 Facility be installed or disconnected without a corresponding trunk order?**
No, Primary Rate Service is considered a 'bundled product' and you cannot have part of the service as a stand-alone product.

**Last Update:** October 12, 2023

**Last Reviewed:**   March 21, 2024

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