

Customized Routing

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Customized Routing

Customized Routing (CR) is an option available to CLECs for use when reselling local exchange service and when purchasing unbundled local switching (ULS). This service/process replaces Resale Selective Routing in **SBC MIDWEST REGION 5-STATE**.

CR is not itself a Unbundled Network Element (UNE), it's a functionality/capability associated with the switch providing the resold service or ULS, even when "SBC-13STATE" (As used herein, **SBC-13 STATE** means **SBC SOUTHWEST REGION 5-STATE, SBC MIDWEST REGION 5-STATE, SBC-2STATE** and **SBC CONNECTICUT** the applicable SBC-owned ILEC(s) doing business in Arkansas, California, Connecticut, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas, and Wisconsin) **uses Advance Intelligent Network (AIN)-based facilities to provide**. Customized Routing provides a CLEC with the ability to route its own Operator Services (OS) and/or Directory Assistance (DA) traffic originating from resold local service or ULS, according to digits dialed to an specific, alternate trunk group established by or available to the CLEC. That specific, alternate CLEC trunk group allows CLECs customer-originated calls to route to a CLEC-selected OS and/or DA platform. CLECs can request Customized Routing for the following classes of traffic:

- Local Operator Services Traffic: 0-, 0+ Local, 0+411
- Local Directory Assistance Traffic: 1+411

Local ULS Originating Traffic "(i.e., routing based on full NPA-NXX or NXX blocks)

Specifically excluded are:

- IXC traffic, whether dialed 0+, 1+, 10XXX, etc. to include international
- IntraLATA Toll Carrier traffic whether dialed 0+, 1+, 10XXX, etc.
- Other Local traffic dialed with 10XXX.
- 0+/1+ FNPA-555-1212, which goes to the interLATA Presubscribed Interexchange Carrier (PIC) assigned to the line
- 0+/1+ HNPA-555-1212, which goes to the intraLATA PIC2 (LPIC) assigned to the line
- Cannot be used to customize route any interLATA or international traffic
- OS/DA traffic designated over Feature Group D (FGD) trunk groups (subject to its ICA or tariff, as applicable, CLEC may submit a request for FGD OS/DA customized routing pursuant to the applicable bona fide request or equivalent provisions)

Definition of customized routing from UNE Remand Order, 441 n. 867,

"Customized routing permits requesting carriers to designate the particular outgoing trunks associated with unbundled switching provided by the incumbent, which will carry certain classes of traffic originating from the requesting provider's customers. This feature would allow the requesting carrier to specify that OS/DA traffic from its customers be routed over designated trunks which terminate at the requesting carrier's OS/DA platform or a third party's OS/DA platform."

SBC-13STATE provides Customized Routing as and to the extent that it is required to provide unbundled local circuit switching.

Service Feature Description

Customized Routing is required if the CLEC desires OS/DA routing different from that of SBC-13STATE's routing tables resident in the switch

Overview

Customized Routing (CR) is an option available to the CLECs described above, that allows them to route certain classes of originating traffic. For example, the CLEC can request the establishment of CR that will route only Directory Assistance traffic to the CLEC's DA platform/vendor, while the Operator Services traffic routes per the SBC-13STATE switches routing tables. Note that such use is not considered a UNE combination. CR requires a CLEC to establish its own trunking for the CR'd traffic, or to obtain the right to direct the CR'd traffic to another telecommunications carrier's trunks.

InterLATA usage will continue to be transported as designated by the PIC on the resold service or ULS port. CR is only available at end offices, and as an originating network arrangement.

The dedicated transport the CLEC is required to provide or otherwise arrange for must be direct connected to the end office switches that are used to provide local service to a CLEC's end users. A CLEC may designate a Switched Access Feature Group C (FGC) message trunk group as its dedicated transport for its CR arrangements.

SBC-13STATE uses two methods of providing Customized Routing, depending on available facilities:

1. Line Class Coding (LCC)
2. Advanced Intelligent Network (AIN)

CR using AIN must be done on a class of call basis (i.e., all OS, all DA, or all OS&DA) for CLEC's traffic for an end-office basis

How Customized Routing Works with AIN

Used where technically available and facilities exist Customized Routing via AIN utilizes certain components and functionalities used to provide the wholesale product unbundled shared transport to also route the CLEC's Operator Service (OS) and/or Directory Assistance (DA) traffic to the CLEC's OS/DA platform. (Unbundled shared transport may also be referred to as "Local Routing Service" or "LRS" within the States of Arkansas, Kansas, Missouri, Oklahoma, and Texas, and is also known as "ULS-ST" in the States of Illinois, Indiana, Michigan, Ohio, and Wisconsin).

In other words, the technology used to provide unbundled shared transport (aka LRS, ULS-ST) will be used to accomplish the customized routing of certain OS/DA calls from CLEC end users in the RESALE & UNE environment to dedicated trunk groups. The technology utilized for provisioning is Advanced Intelligent Network (AIN) capabilities and components.

The AIN capabilities and components are used to generate Automatic Message Accounting (AMA) records for both terminating and originating traffic on an unbundled local switching (ULS) port. Initially, SBC-13STATE explored the use of line class codes (LCCs) to provide CR. However, SBC-13STATE early on perceived LCCs as only an interim solution and promised competitive local exchange carriers (CLECs) an AIN solution within the States of Arkansas, Kansas, Missouri, Oklahoma, and Texas by the end of 1997. AIN-based CR permits a CLEC to apply customized routing to its Operator (OPR), Directory Assistance (DA), and Local ULS Originating traffic (NPA-NXX/NPA) (LOCAL). This routing results in a CLEC having the ability to route none, one, or more of these three traffic types to a specific, alternate trunk group established by or available to the CLEC.

Customized Routing via AIN is the preferred product offering for providing CLECs with Customized Routing for Operator Services / Directory Assistance and Local ULS Originating traffic.

A dedicated connection must be made at each end office. First, the CLEC must establish a network "footprint" to include the following information for each end office to be included in the "footprint":

- The end office CLLI code.
- Class of call to be routed (i.e., Operator Services and/or Directory Assistance).
- The dedicated trunk group with the appropriate AM number (2/6 code) to route the calls.

Customized Routing via AIN involves a SBC-13STATE end office query to the AIN Service Control Point (SCP), activated by the end office's Off-Hook-Delay (OHD) trigger. This query determines, for example, if the end user's originating OS/DA call will be transported to the SBC-13STATE OS/DA platform, or customized routed to the CLEC's dedicated trunk arrangement.

When an end user originates a call, the SBC-13STATE end office switch makes a decision based on the dialed telephone number.

Examples are:

- The SBC-13STATE end office switch receives a 1+10 digit telephone number. The switch will recognize the number as an InterLATA/IntraLATA/Interstate toll call, and will route the toll call to the 'carrier of choice' as designated by the Pre-subscribed Interexchange Carrier (PIC) or Local Pre-subscribed Interexchange Carrier (LPIC) on the ULS port.
- The SBC-13STATE end office switch receives a 7-digit/10-digit telephone number. Assuming dialed correctly, the switch will recognize this number as local call, and to send a query to the SCP. The SCP will respond with the route index, which will tell the switch whether to route the call to the CLEC's dedicated trunk group for Customized Routing, or to route per the end office switch's routing tables.

The following switch types and services are not AIN compatible. Alternate custom routing is explained in [How Customized Routing Works Without AIN](#).

Limitations on using AIN for Customized Routing include:

- DMS-10 Switches (non-SS7/AIN)
- #5ESS Switches with Voice Dial.
- Network Signaled Coin (all switches)
- Hotel/motel (all switches)
- Inmate service (all switches)
- Resold Plexar/Centrex-like ULS ports (all switches)
- Resold lines with toll deny

How Custom Routing Works without AIN

The SBC-13STATE end office switches use Line Class Codes (LCC) on the ULS ports to determine whether SBC-13STATE or the CLEC will transport the originated traffic.

When the CLEC requests Customized Routing and AIN is not used, a Line Class Code (LCC) will be created and translated into the SBC-13STATE end office switch. Because SBC-13STATE has not established standardized LCC parameters, the same LCC in one end office switch will likely not be able to be used in a totally different type of routing in another end office switch. Also, a LCC for one switch won't work in any other type of switch made by a different vendor, and may not work in the same type switch/same vendor within the same SBC-13STATE region/state due to translation differences, and likely won't work in same type of switch/same vendor in a different SBC-13STATE region/state.

When an end user originates a call, the SBC-13STATE switch will make a decision based on the dialed telephone number and the customized routing LCC on the end user's resold line or ULS port.

Examples are:

- The SBC-13STATE switch receives a 1+10 digit telephone number. The switch will recognize the number as an InterLATA/IntraLATA toll call, and will route the toll call to the 'carrier of choice' as designated by the PIC and LPIC on the ULS port. This example works the same as the Customized Routing via AIN arrangement.
- The SBC-13STATE end office switch receives a 7-digit/10-digit telephone number. Assuming dialed correctly, the switch will recognize this as a local call and the customized routing LCC will match (or map) to the LCC in the switch. The LCC will provide the route index of the CLEC's dedicated trunk group for Customized Routing, or route the end user's call per the end office switch's routing tables.

Unbundled Local Switching and Resale Routing

There are several different Unbundled Shared Transport (sometimes referred to as “common transport”) and Customized Routing arrangements due to different switch capabilities and the deployment of AIN. This is a review of each ULS Port Routing Category.

Unbundled Shared Transport (ULS-ST)

This is the use of SBC-13STATE’s network’s Unbundled Shared Transport **without the AIN capability** and the SBC-13STATE standard traffic routing patterns. ULS-ST is for:

- Unbundled Shared Transport only,
- Traffic that is not Customized Routed
- No Call restrictions or Toll restrictions.

Unbundled Shared Transport & Customized Routing

This is for traffic customized routed via AIN. This category provides two options for routing traffic originated by the CLEC’s end user ports. Regular traffic over ULS-ST & OS/DA Customized Routing is for:

- Unbundled Shared Transport With or Without Call Restrictions
- Customized Routing With Call or Toll Restrictions

Note: Toll Restriction in SBC-13STATE #5ESS **does not block** 0+, 0- calls to the Customized Routed Platform.

- Customized Routing Without Call or Toll Restrictions

Unbundled Shared Transport & Customized Routing without AIN

This is for traffic routing without AIN capability (Also known in California/Nevada as Resale Operator Alternate Routing –ROAR or Option A/B/C for UNE). This category provides two options for routing traffic originated from CLECs end user switch ports: Unbundled Shared with Call Restrictions via LCCs, Customized Routing via LCCs with or without Call Restrictions and Toll Restrictions. Note: “ULS-ST & Customized Routing without AIN” requires the CLEC to submit the ULS Custom Routing Request Form.

How Customized Routing Is Ordered

A two-stage provisioning process is used. In the first stage, the CLEC provides a spreadsheet (on the SBC-13STATE-supplied ULS Customized Routing Request Form) identifying each SBC-13STATE end office in which CLEC intends to customize route traffic and the administrative code (AM number) for the trunk group in that end office to be used for the Customized Routed traffic. Once the "footprint" is established and the requested Customized Routing is made available, please see the Specific Region Ordering Instructions section on whether a service order must be issued by CLEC for each of its customers in the identified SBC-13STATE end offices that are to be Customized Routed.

Establishing Direct Trunk Groups

Before a Customize Routed "footprint" order can be submitted, the CLEC must compile a list of the SBC-13STATE end offices in which CLEC intends to use CR. The CLLI code for each end office switch can be obtained from the LERG. For each targeted office, the CLEC should verify that it has a direct trunk group existing at that end office which is capable of carrying the type of traffic being Customized Routed. If no direct trunk group presently exists, CLEC will need to arrange for a new trunk group at that end office. Once the CLEC's trunk orders pass the provisioning design stage, the LSC will be able to provide the TIRKS AM numbers that uniquely identify each new group.

The OS and DA traffic can share a trunk group at the CR subscriber's option as both are Multi-Frequency (MF) with Operator Signaling trunk group types known as Modified Operator Service Signaling (MOSS) conforming to GR-1144.

Generally, the OS, DA, and OTHER will each require its own Route Index (RI) pointing to a trunk group for each End Office (EO) where a CLEC wants to route that type of traffic to its facilities. As already noted, the OS and DA RI's can point to the same trunk group.

The CLEC will use different Alternate Exchange Carrier Number (AECN) for ULS Customized Routing and Customized Routing for Resale.

Trunk Group Requirements

A CLEC wanting to customize route traffic must establish a direct trunk group from each SBC-13STATE end office to carry the traffic. Customized routed traffic cannot currently be delivered to the CLEC through a SBC-13STATE tandem.

Operator Services and DA traffic must be delivered at the end office to a trunk group with the following characteristics:

Signaling Format:	Multi-Frequency (MF)
Protocol:	Modified Operator Services (MOS) Signaling - non-coin
Screening	cannot block 1+ traffic if used for DA cannot block 1411 or 0411 if used for DA
ANI Presentation:	must be configured to pass incoming 7-digit ANI to operator position

The local UNE traffic must be routed to a direct trunk group with the following characteristics:

Signaling Format:	SS7/ISUP
Direction:	Two-Way
Hunt Sequence:	Most Idle
Digits Expected:	10
Expected Measured Loss:	-6.0dB

UNE CLECs will need to purchase a UNE trunk port(s) in the switch from which Customized Routing is occurring, for use in routing the Customized Routed traffic to the UNE CLEC's transport. Resale CLECs will need to purchase an Access trunk in the switch from which Customized Routing is occurring, for use in routing the Customized Routed traffic to the Resale CLEC's transport.

CLEC Ordering Requirements for Customized Routing

If the CLEC wants the standard Customized Routing product (e.g., MOS Signaling) offered by SBC-13STATE, the CLEC must order it using the ULS Customized Routing Request Form found in the CLEC handbook or, if CLEC prefers, by submitting a BFR. If the CLEC wants something different than SBC-13STATE's standard product offering (e.g., Customized Routing over FGD), the CLEC would need to submit a BFR.

The following activities that are required for CR establishment must be communicated with Account Management:

- A Customized Routing "Footprint" must be established for the CLEC. The directions on how to create and process a Footprint Request are located in the 'Local Routing Footprint Ordering Procedures' available from the Account Manager. These Footprint Ordering Procedures are written for both UNE and Resale Custom Routing.
- The CLEC must establish the dedicated transport (message trunk group) at the each SBC-13STATE end office where CLEC customer-originated traffic is to be Customized Routed
- The CLEC must submit to its SBC-13STATE Account Manager the completed SBC-13STATE ULS Customized Routing Request Form, which will describe how the CLEC wants to direct the originating calls from the CLEC's end users to the CLEC's trunk group. The SBC-13STATE ULS Customized Routing Request Form is also found in the Forms section.

QUICK LINK : [Customized Routing Request Form](#)

Completed ULS Customized Routing Request Form

The SBC-13STATE Account Manager will:

1. Process the Footprint request according to procedures
2. Forward a written notification of the Footprint request and the firm Due Date (DD) for establishment of the CR to the SBC-13STATE Service Manager for the CLEC.
3. Keep the LSC Manager informed of any changes in the DD.

The SBC-13STATE Service Manager will:

1. Advise the service representatives of the Footprint request and the firm Due Date.
2. Keep the service representatives informed of any changes in the DD.

SBC-13STATE will forward with all Directory Assistance and Operator Services calls from CLEC customers all appropriate line data to identify the type of line. Such data shall include, but not be limited to, originating line number, 'ii' digits, line class code, and other data elements typically used by the industry to appropriately identify the originating line for purposes of call handling and recording.

All customized routing capabilities described herein do not affect the dialing patterns available to CLEC customers in dialing CLEC Directory Assistance and Operator Services that similarly-situated SBC-13STATE customers dial for reaching equivalent SBC-13STATE services.

QUICK LINK : [Customized Routing Request Form](#)

Region-Specific Information

SBC SOUTHWEST REGION 5-STATE	MO, OK, KS, AR, TX
SBC MIDWEST REGION 5-STATE	IL, IN, MI, OH, WI
SBC-2STATE	CA, NV
SBC CONNECTICUT	CT

QUICK LINK : [Customized Routing Request Form](#)

USOCs FIDs

Specific USOCs may be found using the USOC Search Tool in the Ordering Tab. A general listing of USOCs and FIDs may also be found in the Products & Services Tab, USOCs & FIDS.

Cost/Rate Element Charges

Customized Routing costs are determined in accordance with, as applicable, the CLEC's interconnection agreement or tariff (which may specify ICB pricing). Rate structures may be found at the Home Menu of CLEC Online by selecting Interconnection Agreements, Multi State Interconnection Agreement, "click here" in the body of the third paragraph, and select the state and the appropriate pricing schedule. X2A pricing may be found by selecting Interconnection Agreements, the appropriate state agreement, Unbundled Network Elements and the UNE Pricing Appendix. Tariff pricing may be found in the applicable state tariffs.