



Carrier Ethernet Service Ordering Guide

Fidium Fiber Wholesale



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Maine, New Hampshire and Vermont

Carrier Ethernet Service for General Availability

Wholesale E-Line services allow the Wholesale customer to connect two or more UNI/NNI circuits through the Fidium VantagePoint network using point-to-point Ethernet Virtual Connections (EVCs) to establish connectivity. E-Line can be between two UNI/NNIs at different speeds and multiplexing may occur at one, both, or neither UNI or NNI locations.

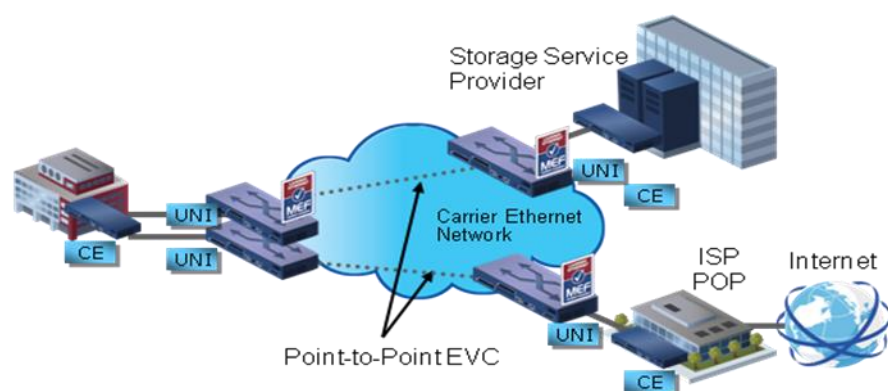
Two types of E-Line service are available:

- Ethernet Private Line (EPL)
- Ethernet Virtual Private Line (EVPL)

Ethernet Private Line (EPL)

Ethernet Private Lines (EPL) –With dedicated UNIs for point-to-point connections and **a single EVC per UNI pair**. EPL service does not support service multiplexing. **No VLAN is required.**

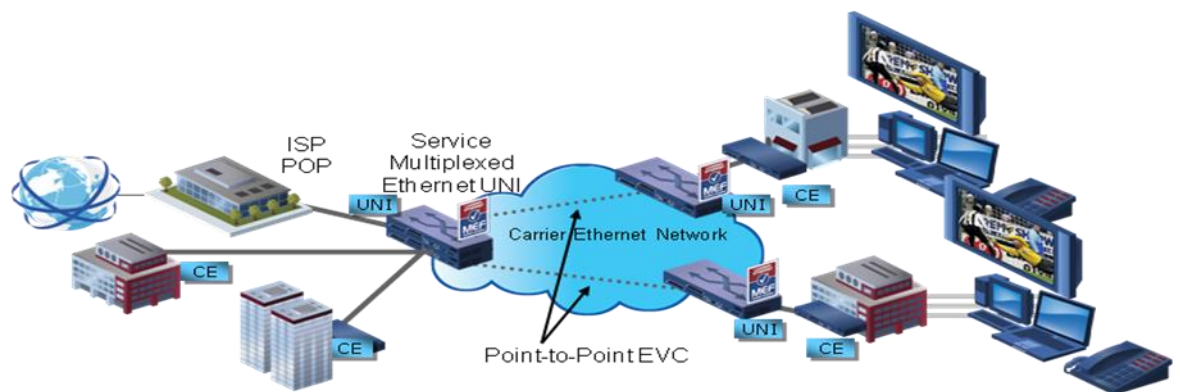
Notice in this picture there are (4) UNI Circuits and a single EVC connecting each set of UNIs.



Ethernet Virtual Private Line (EVPL)

Ethernet Virtual Private Line (EVPL) – Uses a service multiplexed UNI that allows a single UNI connection to support multiple EVC connections. This is a point-to-multi-point arrangement utilizing a multi-Port connection. **VLAN is required in the NNI connection.**

The main difference between the EPL and EVPL configurations is that the EPL solution requires multiple UNI ports (1 per EPL) at a network location, and an EVPL solution may be implemented over a single service-multiplexed UNI port at the same location.



**Product
Description**

Components of E-Line

E-Line consists of a Port and Access Line. There are two types of the Physical Component:

User to Network Interface (UNI)

- The UNI Port with Access Line Connection consists of a dedicated fiber pair that provides a link from the customer designated premises to one of the Carrier Ethernet nodes/switches and the equivalent port interface connection. No access mileage charge will apply within the NNE territory.

Network Node Interface (E-NNI)

- The E-NNI Port with Access Line Connection provides the interface connection from Fidium’s network and the Service Provider’s designated network.

Ethernet Virtual Connections (EVC)

Ethernet Virtual connections are logical / virtual connections that establish a communications path for customer traffic between two or more Ethernet ports.

- All EVCs are point-to-point and are associated with exactly two ports (UNI or NNI)
- Must be defined as Intra-MESA or Inter-MESA
- EPL will have a single EVC
- EVPL will have multiple associated EVCs

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Service Availability

Wholesale E-Line service is available throughout most of the northern New England (NNE) serving area exchanges. Service availability within a Metro Area is subject to the availability of access facilities.

Carrier Switched Ethernet is available in Fidium services areas of Maine, New Hampshire, Vermont, Boston Data Center and New York Data Center.

Port Speeds

MESA-NNI and Hub-NNI connection speeds include:

- 100 Mbps
- 1 Gbps
- 10 Gbps
- 100 Gbps

Wholesale E-Line service requires a designated Port hand-off at each end-point. The Ethernet Port is the primary customer interface / demarcation point connecting a customer to Fidium's Ethernet Network. In conjunction with a UNI-Port location Fidium will place a NID (Network Interface Device) at that premise. This equipment belongs to Fidium and is used for the delivery of Ethernet service. This NID also serves as a key point of demarcation. .

UNI Circuits NC Codes

See chart below for UNI Speeds. 3M up to 100G

Rate-Adjustable Speeds

Rate Adjustable speeds are available for the **UNI** circuits. The Rate-Adjustable speed is indicated by the NC code. To upgrade within the same adjustable rate will not change the existing circuit ID.

100 Mbps Port NC Codes

NC	Bandwidth	Rate-Adjusted
KQEN	3 MBPS Circuit	Rate-Adjusted from 100 Mbps
KQEJ	5 MBPS Circuit	Rate-Adjusted from 100 Mbps
KQE1	10 MBPS Circuit	Rate-Adjusted from 100 Mbps
KQE2	20 MBPS Circuit	Rate-Adjusted from 100 Mbps
KQE5	50 MBPS Circuit	Rate-Adjusted from 100 Mbps
KQE-	100 MBPS Circuit	Rate-Adjusted from 100 Mbps

1 Gig Port NC Codes

NC	Bandwidth	Rate-Adjusted
KRF3	3MPBS Circuit	Rate-Adjusted from 1 Gig
KRFA	5 MBPS Circuit	Rate-Adjusted from 1 Gig
KRFB	10 MBPS Circuit	Rate-Adjusted from 1 Gig
KRFD	20 MBPS Circuit	Rate-Adjusted from 1 Gig
KRFJ	50 MBPS Circuit	Rate-Adjusted from 1 Gig
KREB	10 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE1	100 MBPS Circuit	Rate-Adjusted from 1 Gig
KRFB	150 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE2	200 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE3	300 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE4	400 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE5	500 MBPS Circuit	Rate-Adjusted from 1 Gig
KRE0	1000 MBPS Circuit	Rate-Adjusted from 1 Gig

10G and 100G Port

10G Port		
NC	Bandwidth	Rate-Adjusted
KSER	200MBPS	Rate-Adjusted from 10 Gig
KSE1	1G	Rate-Adjusted from 10 Gig
KSE2	2G	Rate-Adjusted from 10 Gig
KSED	2.5G	Rate-Adjusted from 10 Gig
KSE3	3G	Rate-Adjusted from 10 Gig
KSE4	4G	Rate-Adjusted from 10 Gig
KSE5	5G	Rate-Adjusted from 10 Gig
KSE-	10G	Rate-Adjusted from 10 Gig
100G PORT		
KUEB	10G	Rate-Adjusted from 100 Gig
KUED	20G	Rate-Adjusted from 100 Gig
KUEE	25G	Rate-Adjusted from 100 Gig
KUEH	40G	Rate-Adjusted from 100Gig
KUEK	50G	Rate-Adjusted from 100 Gig
KUE-	100G	Rate-Adjusted from 100 Gig

NCI Codes

See Complete list for NCI codes. Please note the tabs at the bottom indicate Auto-Negotiate **ON** or Auto-Negotiate **OFF**. Please use the correct code for auto-neg on or off.

ASR NC/NCI Codes (double click on the paperclip) 

(In Chrome you need to download the document to enable the embedded document to open)

EVC Bandwidth

The EVC Bandwidth can be the same speed as the UNI, or a lower speed then the UNI, but it cannot be a higher than the UNI speed.

ASR Ordering Requirements

Please use the following guidelines for processing a Carrier Ethernet Service E-Line via an ASR:

- ✚ Can be ordered as REQ TYP SD or ED
- ✚ Must be at least three orders: (2) UNI/NNI and (1) EVC
- ✚ Once NNI is installed two orders are required, (1) UNI and (1) EVC (Combo is not offered in New England at this time)
- ✚ **ICSC code is EC20** for all three states
- ✚ PNUM field on the ASR must be populated (Contract ID)
- ✚ If ordering Transport Ethernet (from an ACTL to a FP SWC) will be REQ TYP SD
- ✚ If ordering from an END USER Switched Ethernet (PREM to a SWC) will be REQ TYP ED
- ✚ The UNI(s) and NNI(s) must be in a confirmed order status in M6 before the EVCs can be ordered
- ✚ The EVC must have two at least terminations, i.e., UNI to UNI or UNI to NNI identified in the RUID field.
- ✚ The EVC(s) must be ordered by 5 days prior to the Due Date of the NNI/UNI order.
- ✚ The EVC DDD will match the UNI DDD
- ✚ SPEC Code will determine Class of Service (CoS)
- ✚ PIU= 100

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ICSC Code

All Carrier Ethernet Service ordered via VFO will use the ICSC code of **EC20**. This is the new affiliated company EC code for Fidium Enhanced Services..

The ICSC code of EC20 must be tabled in VFO for your CCNA. This will be done by SYNCHRONOSS on both of our ends.

BAN Structure

The BAN structure for Carrier Ethernet Service is

FRP ENH-0001-9999 001.

Please have your account manager work with our Wholesale Service Center in acquiring a new BAN.

The BAN is not state specific; the same BAN can be used for Maine, New Hampshire, and Vermont. If you require a BAN per state, a new BAN can be established per state but you will need to populate the correct BAN on any Service Orders submitted.

Term Plans/VTA Field

The VTA field is required. Term commitments are available 12, 24, 36, 60 and 84 year pricing terms. Month to Month is 12Mo

Termination of a service prior to the fulfillment of the term commitment will result in an early termination charge.

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PNUM / Contract ID

The contract IDs (**PNUM Field**) are required on all CES orders and for all Activities.

The PNUM field of the ASR will drive the correct billing rates to the CABs bill.

PNUM will be provided pre-order by your account manager.

If the PNUM field is blank on the ASR a TP Error will be generated and the order cannot be processed.

ASR Response - TP Errored				
PRACTICE	REFNUM			
EVC_VCNUM	UREF	SUPI	LREF	
OCC				
ASR FATAL AND NON-FATAL ERROR OR CLARIFICATION/NOTIFICATION REQUEST ERROR [Optional Condition				
FID	MSG_CODE			
MESSAGE				
PNUM is required for UNI, NNI and EVC orders.				

Interval Table

The Standard Interval for CES is 20 *business* days or more for the DDD.

Orders requiring special assembly will have an interval of Engineering Construction Completion Date (ECCD) plus the standard interval of 20 *business* days.

The DDD can be 20 business days or more.

Installation Type	Circumstance	Target Interval
New Installation	All Facilities Exist	20 business days
New Installation	Facilities do NOT exist (MSE hardware required)	ECCD + 20 business days
New Installation	Facilities do NOT exist (construction required)	ECCD + 20 business days

The 20 day interval includes the Port and Access Line and the EVC. Customers may submit their EVC order anytime after the FOC for the UNI/NNI circuit is

received.

Change Order

Installation Type	Circumstance	Target Interval
Upgrade	UNI and EVC	15 business days
Upgrade	EVC only	10 business days
VLAN Change	EVC only	10 business days

Disconnect

EVC order needs to be issued first and then the UNI order

Installation Type	Circumstance	Target Interval
Upgrade	UNI and EVC	6 business days

SPEC Codes and Level of Service (CoS)

Fidium offers (4) levels of Class of Service for CES. The SPEC Code will determine the CoS . The CoS is at the EVC level but the SPEC Code is required on all orders; NNI, UNI, and EVC, and for all activities N, C, and D.

Each EVC will have an associated CoS and there will only be a single CoS per EVC. A customer with multiple CoS is required to have at least one EVC per CoS and tagging is required to ensure that packets are correctly routed to the respective EVC/CoS. An EPL does not require tagging.

- **Standard- VPEVCBE**
- **Expedite- VPEVCEX**
- **Priority- VPEVCPR**
- **Critical- VPEVCCR**

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Project Field

The Project Field is required so all the orders will be worked together:

The project ID field allows 16 alpha/numeric characters. We require the customer to populate this field with their ACNA and CES.

For example:

ABC-CES

NC/NCI/SECNCI Codes

The CES NC/NCI/SECNCI codes are listed by Auto-Negotiated and Non-Auto Negotiated.

Fidium's default is **Auto-Negotiated**, if **Non-AutoNegotiated** is required use the applicable Codes from the list below.

[See List attachment on page 8](#)

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EVC NC/NCI

Point to Point	Definition
VLP-	ELINE Point to Point

EVC- NCI

EVC NCI Codes	Definition
02VLN.A2	PORT MAP WITH ALL TO ONE BUNDLE (This EVC/OVC accepts ALL frames ingressing the UNI/NNI, No service multiplexing)
02VLN.A2P	PORT WITH ALL TO ONE BUNDLE + PBIT MAP (This EVC/OVC accepts ALL frames ingressing the UNI/NNI, and ALSO supports multiple classes of service distinguished via P-bits. Untagged frames are supported but their lack of P-bits may cause default to some undetermined class of service)
02VLN.AL3	PORT WITH ALL TO ONE BUNDLE + DSCP/TOS MAP (This EVC/OVC accepts ALL frames ingressing the UNI/NNI, and ALSO supports multiple classes of service distinguished via Layer 3 DSCP/TOS)
02VLN.UL3	PORT + UNTAGGED FRAMES + DSCP/TOS MAP (This EVC/OVC accepts only untagged frames ingressing the UNI/NNI, and ALSO supports multiple classes of service distinguished via Layer 3 DSCP/TOS)
02VLN.UNT	PORT + UNTAGGED FRAMES MAP (This EVC/OVC maps to all untagged frames on a UNI/NNI)

EVC NCI Codes	Definition
02VLN.V	PORT + VLAN MAP(This EVC/OVC accepts only tagged frames with a specific CE-VLAN ID)
02VLN.VB	PORT + Bundled VLAN MAP. (This EVC/OVC accepts only tagged frames with two or more specific CE-VLAN IDs. It should not be confused with All-to-one bundling which is a different attribute. See MEF 10.1 for clarification)
02VLN.VB3	PORT + Bundled VLAN + DSCP/TOS MAP (This EVC/OVC accepts only tagged frames with two or more specific CE-VLAN IDs. It should not be confused with All-to-one bundling which is a different attribute. See MEF 10.1 for clarification. This EVC/OVC ALSO supports multiple classes of service distinguished via Layer 3 DSCP/TOS.)
02VLN.VBP	PORT + Bundled VLAN + PBIT MAP (This EVC/OVC accepts only tagged frames with two or more specific CE-VLAN IDs. It should not be confused with All-to-one bundling which is a different attribute. See MEF 10.1 for clarification. This EVC/OVC ALSO supports multiple classes of service distinguished via Pbit).

EVC NCI Codes	Definition
02VLN.VBT	PORT + Bundled VLAN MAP with a stacked tag per IEEE 802.1ad (This EVC/OVC accepts only tagged frames with two or more specific CE-VLAN IDs. It should not be confused with All-to-one bundling which is a different attribute. See MEF10.1 for clarification. The ingress/egress frames will also carry an additional or "stacked" VLAN ID, also known as Q-in-Q tagging based on the IEEE 802.1q standard that described VLAN-tag enabled Ethernet frames.)
02VLN.VL3	PORT + VLAN + DSCP/TOS MAP (This EVC/OVC accepts only tagged frames with a specific CEVLAN ID and ALSO supports multiple classes of service distinguished via Layer 3 DSCP/TOS)
02VLN.VP	PORT + VLAN + PBIT MAP (This EVC/OVC accepts only tagged frames with a specific CEVLAN ID and ALSO supports multiple classes of service distinguished via Pbit)

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Conversions and Upgrades

When a customer requests an upgrade/downgrade for the UNI/NNI access line speed at an existing address within the same adjustable rate, this can be done on a Change order.

A Change order is allowed if no equipment change is required.
Equipment change will require a Disconnect and New Order.
Interval for an upgrade is 15 business days.

EVC Upgrades

If the customer is changing their CoS and upgrading from Standard to Expedite, Priority or Critical, both a UNI and an EVC order is required as a change order.

If the customer is downgrading the CoS from a higher to the standard, both a UNI and an EVC order is required.

If the customer is changing their CoS from Expedite to Priority or Critical, or vice versa, only an EVC order is required and can be done on a Change order.

This chart describes the change and the order type required:

From	To	Order Type
Standard	>Standard	UNI & EVC –  ACT C on the UNI can be submitted and if it is determined it can't be done by ACT C, then the order would be Jeopardy, and a clarification sent to the customer that ACT D&N is required to change the equipment.
Standard	>Standard	UNI & EVC Equipment can support- it ACT-C
>Standard	Standard	UNI & EVC on ACT-C
>Standard	>Standard	EVC ONLY on ACT-C

- Any changes to the UNI/NNI circuit requires an ACT=C and a D and N Activity on the EVC form.
- An upgrade of the BDW on the EVC Circuit is an ACT of “C” if no change to the equipment; a D&N if change to the equipment.
- Change of CoS on the EVC is a case by case basis. An ACT- C if no change to the equipment, a D&N if change to the equipment.

Moves of Access Line

Outside Move

When a customer requests a move of the CES access line to a different address and/or different building (**Outside Move**), the move or relocation will be treated as a termination of the existing Service and the establishment of a new Service for the application of all charges. Interval is 20 business days

New minimum period and/or Service Discount Plan requirements will be established for the new services.

Inside Move

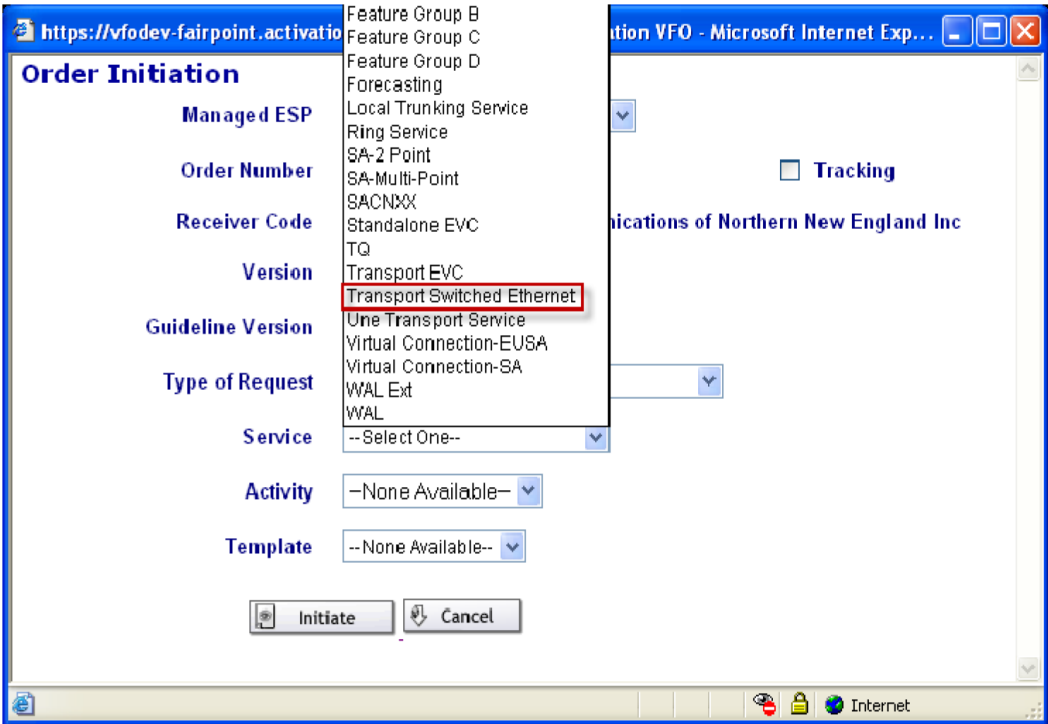
When a Customer requests a move of the CES access line to a new location within the same address and/or same building (**Inside Move**), this can be done on a change order. Interval is 15 business days

There will be no changes to the term commitment period on an inside move.

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VFO ORDER EXAMPLES UNI/NNI

This service is ordered via VFO. The NNI are ordered as:
REQTYP SD= Transport Switched Ethernet (ACTL to SWC)



REQTYP SD NNI Order:

The fields **required** to be populated on the ASR tab are below.

ASR Tab / Section	ASR field entry value
ICSC	EC20
CCNA (ASR/Administrative)	Your CCNA
Project (ASR/Administrative)	Populated with CCNA-CES
DDD	20 Business days or more
REQTYP (ASR/Administrative)	SD
ACT (ASR/Administrative)	N
RTR (ASR/Administrative)	F
CKR (ASR/Administrative)	Optional
PIU (ASR/Administrative)	100
QTY (ASR/Administrative)	1
BAN (ASR/Administrative)	FRP-ENH-00XX (New BAN required)
SPEC (ASR/Administrative)	VPEVCBE (determines the CoS)
ACTL (ASR/Administrative)	Your ACTL
APOT	
RPON (ASR/Administrative)	
REMARKS	EVPL or EPL (per contract) NNI and port Speed
BILLNM (ASR/Bill Section)	
SBILLNM (ASR/Bill Section)	
ACNA (ASR/Bill Section)	ACNA
FUSF (ASR/Bill Section)	N or E
BILL_STR (ASR/Bill Section)	Required
BILL_CITY (ASR/Bill Section)	Required
BILL_STATE (ASR/Bill Section)	Required
BILL_ZIP (ASR – Bill Section)	Required
BILLCON (ASR – Bill Section)	Required
BILLCON_TEL(ASR/Bill Section)	Required
VTA (ASR/Bill Section)	Blank, 12, 36, 60, 78 (term plan from Contract)
PNUM	Contract ID is required
INIT (ASR/Contact)	Input your name
INITIATOR_TEL (ASR/Contact)	Input your contact telephone #
DSGCON (ASR/Contact)	Input name
DSGCON_TEL (ASR/Contact)	Input telephone #
IMPCON (ASR/Contact)	Input depart , duty tech or name
IMPCON_TEL (ASR/Contact)	Input telephone #

The fields **required** to be populated on the Transport tab:

NC (Transport)	See NC Codes
NCI (Transport)	See NCI Codes
SECNCI (Transport)	See NCI Codes
ESP	XXXXXXXXX Example PTLDMEFO (SWC of ACTL)

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UNI ASR:

UNI Order REQ TYP ED= End User Switched Ethernet

Order Initiation

Managed ESP	FAIRPOINT_NNE	
Order Number	UNI EXAMPLE	☐ Tracking
Receiver Code	EC20	Enhanced Communications of Northern New England Inc
Version	01	
Guideline Version	50	
Type of Request	Firm Order	
Service	End User Switched Ethernet	
Activity	N	
Template	--None Available--	

REQTYP ED UNI ASR:

The fields **required** to be populated on the ASR and Billing tab are below.

ICSC	EC20
ASR Tab / Section	ASR field entry value
CCNA (ASR/Administrative)	Your CCNA
DDD	20 or more Business Days
Project (ASR/Administrative)	Use same Project ID on all Orders
CNO (ASR/Administrative)	
REQTYP (ASR/Administrative)	ED
ACT (ASR/Administrative)	N
QSA (ASR/Administrative)	01
RTR (ASR/Administrative)	F
Customer Name	
CKR (ASR/Administrative)	
PIU (ASR/Administrative)	100
QTY (ASR/Administrative)	1
BAN (ASR/Administrative)	FRP ENH-00XX
SPEC (ASR/Administrative)	See SPEC Codes
ASR REMARKS	New CES and Port Speed
BILLNM (ASR/Bill Section)	
SBILLNM (ASR/Bill Section)	
ACNA (ASR/Bill Section)	Your ACNA
FUSF (ASR/Bill Section)	N or E
BILL_STR (ASR/Bill Section)	Bill Address
BILL_CITY (ASR/Bill Section)	Bill City
BILL_STATE (ASR/Bill Section)	Bill State
BILL_ZIP (ASR – Bill Section)	Bill Zip Code
BILLCON (ASR – Bill Section)	Bill Contact
BILLCON_ (ASR/Bill Section)	Bill Contact TN
VT A (ASR/Bill Section)	Blank, 12, 36, 60, 78
PNUM (ASR /Bill Section)	CONTRACT ID- Required
INIT (ASR/Contact)	Input your name
INITIATOR_TEL (ASR/Contact)	Input your contact telephone #
DSGCON (ASR/Contact)	Input name
DSGCON_TEL (ASR/Contact)	Input telephone #
IMPCON (ASR/Contact)	Input depart or name
IMPCON_TEL (ASR/Contact)	Input telephone #

Below are the **required** fields to be populated on the **SES** tab in VFO

NC	SEE NC Codes
NCI	SEE NCI Codes
SECNCI	SEE NCI Codes
ESP	SWC of End User
GETO	If required
PI	Y
EUNAME	End User Customer's Name
SANO	Street Address #
SASF	Input if needed
SASN	Input the Street Name
SATH	Input if needed
CITY	Input the City name
STATE	Input the State
ZIP	Input the Zip Code
JS	D
LCON	Name
ACTEL	Contact Tel No.
LCON Email	Email

Ordering Rules for EVC

- EVC can be ordered once the UNI/NNI order is in “Confirm” Status
- CoS designation is on the EVC form in the SPEC field.
- RUID is required and identifies the CKTID of the physical circuit. The physical circuit has to be in a “Confirmed” status before the EVC order can be placed.
- EVC must be ordered separately from the UNI
- Use the same PNUM on the EVC order as the UNI
- If the customer is changing their CoS and upgrading from Standard to Expedite, Priority or Critical, both a UNI and an EVC order is required. If the customer is changing their CoS from Expedite to Priority or Critical, or vice versa, only an EVC order is required.
- The 20 day interval includes the Port and Access Line and the EVC. Customers may submit their EVC order anytime after the FOC for the UNI/NNI circuit is received. If the EVC is not received within 10 days post FOC, the order will be cancelled and cancellation charges will apply.

Bandwidth Restrictions (Over Prescription)

Multiple Virtual connections on UNI Circuits are allowed (EVPL), but the EVC bandwidth cannot exceed the bandwidth of the lowest physical circuit. For an example, if the UNI circuit's 100Mbps and there are two existing virtual circuits with 50Mbps each, Fidium will not allow another virtual circuit on these connections.

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Class of Service (CoS)

Fidium Enhanced offers four Levels of Class of Service.

Standard Class of Service (SPEC=VPEVCBE)

Standard CoS is defined by the transport priority levels (p-bit) setting of 1. Standard CoS is the base-line transport service that is good for most data applications – especially those such as internet access, e-mail and other delay insensitive traffic.

Expedite Class of Service (SPEC=VPEVCEX)

Expedite CoS is defined by the transport priority levels (p-bit) setting of 2. Expedite CoS is a slightly higher CoS than Standard CoS and has associated Quality of Service (QoS) metrics for packet-delivery and latency and is more applicable for applications that may be more sensitive to latency.

Priority Class of Service (SPEC=VPEVCPR)

Priority CoS is defined by the transport priority levels (p-bit) setting of 3. Priority is the next higher CoS level and has higher QoS target metrics than Expedite and Standard and has a metric for jitter. This CoS is can be used for packetized voice and video as well as other applications that are delay sensitive.

Critical Class of Service (SPEC=VPEVCCR)

Critical CoS is defined by the transport priority levels (p-bit) setting of 4. Critical CoS is the highest CoS offered with Fidium CES and should be used with the highest of business critical traffic such as real-time voice/video traffic and circuit emulation traffic.

EVC Tagging Options - VLAN

These tags are used to manage the routing and priority of packets as they flow through the Fidium CES network and to the respective customer CPE. VLAN Tagging is used to implement Class of Service Transport levels, VLAN stacking or aggregation, and VLAN [re-]mapping.

If a port has multiple EVCs associated with that port, VLAN (C-Tag) tagging (by the customer) would be required in order for Fidium to place the frame on the appropriate EVC. A Port connection with only 1 EVC associated with it, would not have that requirement, but may still need to accept tagged frames from the customer for the CoS or routing management of the frame through their portion of the Ethernet network.

- NC code for an EVC is VLP-
- NCI **02VLN.A2** is for EPL UNI circuit only
- On an EVC the CE-VLAN (**C-TAG**) field will identify if the circuit requires tagging
- The **CE-VLAN field is required on the NNI** end of the EVC since there are multiple EVCs connecting to the HUB.
- The CE-VLAN field is **not required** on the **UNI** end of the EVC.
- The SE-VLAN (S-Tag) field should not be populated
- P_BIT and COS is required.

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QnQ Tagging

'Q in Q Tagging' enables Fidium to use a single VLAN to support customers who have multiple VLANs and is now available for Wholesale CES 2.0 service with a Class of Service (CoS) of either **Expedite**, **Priority** or **Critical**.



: Standard CoS is not eligible for Q in Q Tagging.

To order Q in Q tagging the appropriate NCI code on the EVC Form to indicate this option as noted in the table below.

The CE_VLAN (C-TAG) is also required and assigned by the customer.

NCI	EVC SPEC CODES	Level of Service	P-Bit
02VLN.VBT 02VLN.VST	VPEVCEX	Expedite	2
	VPEVCPR	Priority	3
	VPEVCCR	Critical	4



Please add QnQ tagging to remarks on UNI and EVC orders.

EVC Orders

The Fields “highlighted” are required on the EVC order.

ETHERNET VIRTUAL CONNECTION – The fields in BOLD are required the other fields are optional.

- **EVC NUM** – EVC number. Only “1” is allowed (one EVC per order).
- **NC** – Common Language Network Channel code (represents EVC type).
- **EVCID** – EVC Identifier (uses CLCI S/S circuit ID), only filled on **change/disconnects**.
- **NUT** – Number of UNI terminations – “2” for point to point.

ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL

- **UREF** – UNI reference – sequential numbers to distinguish UNI mapping sections.
- **UACT** – UNI map Activity, N=New connect, C=change at this termination, etc.
- **NCI** –Network Channel Interface
- **EVCSP** – EVC switch point. CLLI code of the UNI termination switch (returned on FOC).

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CUSTOMER EDGE VIRTUAL LOCAL AREA NETWORK

- CE-VLAN – VLAN ID(s) on the customer's data for tagging their EVC (C-TAG) **(Required only if Tagging)**
- RUID – Related UNI ID. The CLCI SS ID of the UNI this EVC is associating.

ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE

- LREF – Level of Service Number – Distinguishes different COS sections on this order.
- COSACT – Level of Service Activity – New, Change, Disconnect, etc.
- SPEC – VPEVCBE, VPEVCEX, VPEVCPR, VPEVCCR
- P-BIT – Priority Bit. Use 1-4
- BDW – Bandwidth – EVC Bandwidth must be in format of digit and “M” or digit and “G” example 10M or 1G

EVC SPEC CODES	Level of Service	P-Bit
VPEVCBE	Standard	1
VPEVCEX	Expedite	2
VPEVCPR	Priority	3
VPEVCCR	Critical	4

EVC Order Example

To Order the EVC In VFO Select “**Standalone EVC**”

ICSC= EC20

Order Initiation

Managed ESP: FAIRPOINT_NNE

Order Number: EVPLEVC ☐ Tracking

Receiver Code: EC20 Enhanced Communications of Northern New England Inc

Version: 01

Guideline Version: 43

Type of Request: Firm Order

Service: Standalone EVC

Activity: N

Template: --None Available--

- This will create the applicable FORMS – **ASR and EVC**
- The REQ TYP is “SD” but the ACTL field is NOT Required
- The EVCI field is automatically populated with “A”

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ORDER		PREORDER									
RECEIVER CODE	ACT	PON	OWNER		DTSENT						
EC20	N	EVC EXAMPLE ORD	bboyd								
VERSION SUP	STATUS	REQTYPE	DDD	CUSTOMER CODE		MANAGED ESP					
01	PendingValidation	SD		MJD		FAIRPOINT_NNE					
ADMINISTRATIVE [Required]											
CCNA	PON	VER	ASRNO	SPA	ICSC						
	EVC EXAMPLE ORD	01			EC20						
CC	UNE	QA	CBD	DDD	FDT	PROJECT	CCI				
	--Select--	--Select--		08/27/2012		MNE-CES	--Select--				
CNO	PPTD	NOR	LUP	BSA	REQTYP	ACT	ACTI	QSA	WST		
				--Select--	SD		--Select--		--Select--		
LATA	EVC										
	A										
SRN	RTR	SUP	AFO	QNAI	TQ	EXP	EDA	AENG	ALBR		
	F	--Select--				--Select--	--Select--	--Select--	--Select--		
AGAATH	DATED	CUST	LA	LADATED	LANM	JPR					
--Select--			--Select--								
FBA	FNI	FNT	RFNI	CFNI	PSL	PSLI					
		--Select--				--Select--					
CKR	UNIT		PIU	PLU	WSI						
	c		100		--Select--						
LTP	ECCKT	QTY	BAN	ASG	BIC						
		1	FRPENH0099		--Select--						
BIC_TEL	BIC_ID	TSC	ISTN								
ACTL	APOT	RORD	RPON								
LAG	--Select--										
CCVN	ASC_EC	TSP	SAN	AFG	SPEC						
	--Select--			--Select--							
ASR_REMARKS											
EVC to W/W 84/KFGD/123456/00/MJD/ and 84/KRGM/654321/00/MJD/											

The SPEC code on the ASR form is blank. The SPEC Code for the EVC order is populated on the EVC form.

- The VTA for the term plan is required.
- If the contract is month-to-month this field is blank.
- The PNUM is required on all orders. The applicable rates are built into CDG CABs per the contract.
- EVC PNUM is the same as the UNI ASR

BILLING [Optional Conditional]					
BILLNM	SBILLNM	ACNA	TE	FUSF	
Example		ABC	--Select--	E	
EBP	BILL_STR	BILL_FL	BILL_RM	BILL_CITY	
BILL_STATE	BILL_ZIP	BILLCON	BILLCON_TEL		
BILLCON_EMAIL					
VTA	VCVTA				
36					
IWBAN	PNUM	PSD			
	FRP-1018.11004.36H				

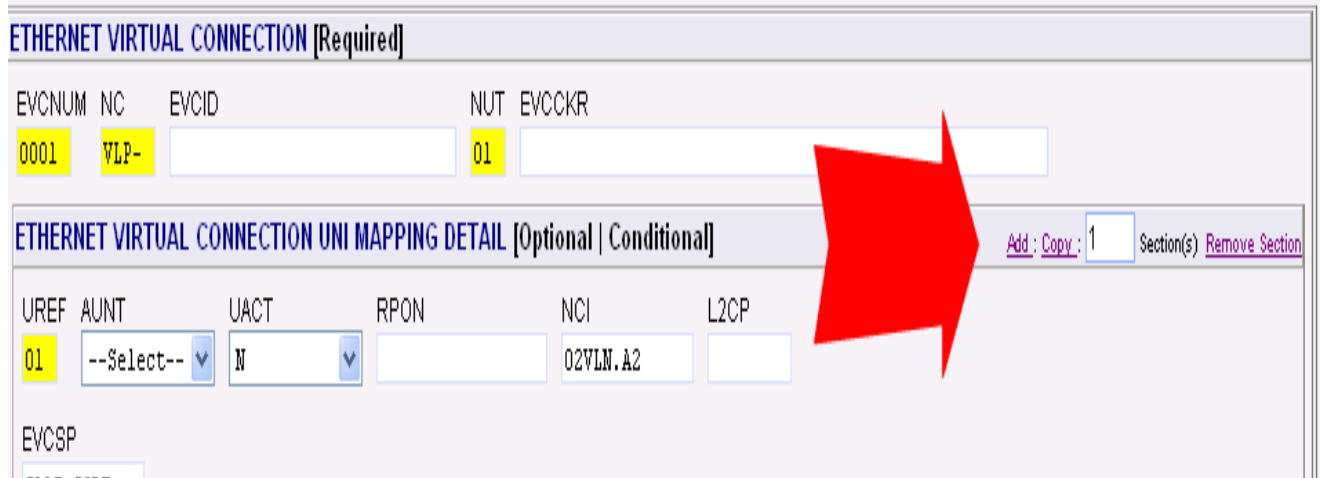
EVCNUM 0001

Enter the required fields highlighted in **Yellow** of the first circuit. NNI if this is a NNI to UNI connection.

ORDER		PREORDER					
RECEIVER CODE	ACT	PON	OWNER	DTSNT			
EC20	N	EVC EXAMPLE ORD	bboyd				
VERSIONSUP	STATUS	REQTYPE	DDD	CUSTOMER CODE	MANAGED ESP		
01	PendingValidation	SD		MJD	FAIRPOINT_NNE		
   							
ETHERNET VIRTUAL CONNECTION [Required]							
EVCNUM	NC	EVCID	NUT	EVCCR			
0001	VLP-		02				
ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL [1] [Optional Conditional] Remove Section							
UREF	AUNT	UACT	RPON	NCI	L2CP		
01	--Select--	N		02VLN.A2			
EVCSP NNCHNHC01SW							
CUSTOMER EDGE VIRTUAL LOCAL Add: Copy: 1 Section(s) Remove Section							
CE_VLAN_START	CE_VLAN_END						
An EVPL NNI should have the CE_VLAN (C-Tag) field populated. The S_VLAN will be blank as Fairpoint will assign the S-Tag.							
RUID	RL	S_VLAN_IND	S_VLAN	EVCMPID			
84/RFGD/123456/00/MJD/	--Select--	--Select--					
ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE [Optional Conditional] Add: Copy: 1 Section(s) Remove Section							
LREF	LOSACT	LOS	SPEC	P_BIT	BDW	DSCP	TOS
1	N		VPEVCCR	4	10M		

You will need to manually add the 2nd EVC

On the 1st EVC form select the “COPY” link at the EVC UNI Mapping Detail Section:



The screenshot shows a web form titled "ETHERNET VIRTUAL CONNECTION [Required]". Below the title, there are input fields for EVCNUM (0001), NC (VLP-), EVCID (empty), NUT (01), and EVCCR (empty). Below this is a section titled "ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL [Optional | Conditional]". This section contains input fields for UREF (01), AUNT (--Select--), UACT (N), RPON (empty), NCI (02VLN.A2), and L2CP (empty). To the right of the mapping detail section, there is a link "Add : Copy : 1" and a "Remove Section" link. A large red arrow points from the "Copy" link to the right.

This will create the EVC UREF 0002

Remember to change the following:

- UREF- to 02
- EVCSP- to the 2nd Circuit SCW CLI Code
- RUID- to the 2nd Circuit ID

For EXAMPLE:

- If you have a NNI and UNI connection, populate the RUID and EVCSP of the 1st NNI Circuit in the UREF 1 fields.
- Once you add the second part of the form, add the UNI Circuit ID and EVCSP of this second circuit.
- C-Tag is required for the NNI end but not the UNI end.

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ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL [2] [Optional Conditional]							Add : Copy : 1	Section(s)	Remove Section(s) : 1
UREF	AUNT	UACT	RPON	NCI	L2CP				
02	--Select--	N		02VLM.A2					
EVCSP									
PTMONHIS12W									
CUSTOMER EDGE VIRTUAL LOCAL AREA NETWORK [Optional Conditional]							Add : Copy : 1	Section(s)	Remove Section
CE_VLAN_START		CE_VLAN_END							
RUID			RL	S_VLAN_IND	S_VLAN	EVCMPID			
84/RIGN/654321/00/MJD/			--Select--	--Select--					
ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE [Optional Conditional]							Add : Copy : 1	Section(s)	Remove Section
LREF	LOSACT	LOS	SPEC	P_BIT	BDW	DSCP	TOS		
1	N		VPEVCCR	4	10M				
REMARKS									

The CE-VLAN (C-Tag) field is blank if no tagging is required on the UNI end.

Circuit ID's

Service Codes and Modifiers

The CES Circuit ID is in CLS format and will begin with the originating state and end with the Company Code of '**MJD**' indicating Fidium. The Service Code Modifier will contain the 1st two characters of the NC Code and "**GN**" for **UNI** and "**GD**" for **NNI**.'

- The Circuit Prefix is the state (**82-ME**), (**84-NH**), (**88-VT**)
- The modifier is K*GN or K*GD
- The Circuit Suffix = 00= UNI/NNI
 - 82/KE**GN**/123456/00/MJD/
 - 84/KG**GD**/123456/00/MJD/
 - 88/KF**GN**/123456/00/MJD

Virtual Circuit ID

The VIRTUAL and OVC orders will have the Prefix of 10 and the Service Code of VLXP. The Service Type will contain a 22 for the EVC order.

Example:

10/VLXP/553622/22 /MJD /

EVC Circuit ID

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Rate Structure CES is not mileage sensitive on the UNI Access within the NNE Territory.

UNI Port & Access

- A monthly rate applies on a per port and access bundled connection.
- A nonrecurring charge applies to the installation of the UNI Port and Access Connection.

NNI Port & Access

- A monthly rate applies on a per E-NNI port and access bundled connection
- A nonrecurring charge applies to the installation of the E-NNI Port and Access Connection bundled connection
- NNI with Collocation bills a Port and Cross Connect charge in-lieu of the Access Line.

Ethernet Virtual Circuit (EVC)

- A monthly rate applies on a per EVC– Standard EVC basis and varies by the bandwidth selected.
- A nonrecurring charge applies to the installation of the EVC

CES Extended Connect

CES Extended connect at this juncture, is offered at one existing Fidium out of franchise location: Boston, MA and Albany, NY.

Please contact your Account Manager for further details.

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Order Example for Extended Connect

Below are “how to” create and enter CES ASR screen shots for the 1G NNI

REQTYP SD NNI Order:

1. The fields **required** to be populated on the ASR tab are below.

ASR Tab / Section	ASR field entry value
ICSC	EC20
PON	Purchase Order Number
VER or AA	System Generated
CCNA	ABC
Project	ABCCES
DDD	20 business days or more
REQTYP	SD
ACT	N
RTR	F
CKR	OPTIONAL- YOUR CKT ID
PIU	100
QTY	1 (only)
UNIT	C
BAN	FRP-ENH-0099 (“E” after initial order) New BAN to be assigned
SPEC	(see SPEC JA)
ACTL	BSTPMALLH99 (EXAMPLE)
REMARKS	NEW 1G NNI CES in Boston
BILLNM	Company Name
SBILLNM	Company Address
ACNA	ABC
FUSF	N or E
BILLNM	ABC
BILL_STR	Billing Address
BILL_CITY	Billing Address
BILL_STATE	Billing Address
BILL_ZIP	Billing Address
BILLCON	Billing Contact
BILLCON_TEL	Billing Contact Tel No
BILLCON_EMAIL	billing contact email
VT_A	BLANK= Monthly, 12=1 Year, 36=3 Years, 60=5 Years
PNUM	1018.12099.EC (example- will be provided)
INIT (ASR/Contact)	Input your name
INITIATOR_TEL	Input your contact telephone #
INITIATOR_EMAIL	Email address
DSGCON	Input name
DSGCON_TEL	Input telephone #
DRC or DSG FAX NO	
DSGCON_EMAIL	EMAIL address
IMPCON	Input depart , duty tech or name
IMPCON_TEL (ASR/Contact)	Input telephone #

SES Form

NC	SEE NC Codes
NCI	SEE NC Codes
SECNCI	SEE NC Codes
ESP	BSTPMALL
CCEA	LOA from Vendor

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Cancellation Charges

If the Customer cancels the Service subsequent to placement of an order for Services under this Product Schedule and prior to the in-service date of the Service, Customer shall pay Fidium cancellation charges pursuant to the following schedule. Cancellation must be in writing to Fidium via the ASR process.

Customer Cancellation Liability for Orders cancelled prior to installation:

Customer Cancellation Liability for Orders cancelled prior to installation:		
	<u>UNI</u>	<u>NNI</u>
Pre-Order	\$0.00	\$0.00
Facility Check (FACHKOSP/FACHKIOF)	\$200.00	\$300.00
Outside Engineering complete	\$400.00	\$600.00
Circuits designed/ Records Issue Date (RID)	\$600.00	\$900.00
Circuits provisioned, wired and office tested (WOT)	\$800.00	\$1,200.00

Termination Liability

The Customer shall purchase the Service for a period of either month to month (MTM), 12, 24, 36, 60 or 84 consecutive months, as designated in the Order submitted by the Customer, following the execution of the Schedule and the Service Agreement and installation of the Service. MTM service requires a three (3) month minimum period. Termination charges will apply to all Service disconnected prior to the end of the Service Period or any extended Service Period. The Service Period and Billing for the circuits shall begin on the In-Service Date, which is the date Fidium informs the Customer that the circuits are functioning properly and the Service is available for the Customer's use.

Service Level Agreement (SLA)

A Service level agreement applies to this service.

The Service on the Fidium Network will be available at least 99.95% of the time ("Service Availability") in a calendar month.

In order to be eligible for SLA Credits, Customer must report an Outage by opening a trouble ticket with Fidium. The length of an outage is calculated based on outage information.

See contract for details.

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TSP Codes

Telecommunications Service Priority (TSP) indicates the provisioning and restoration priority as defined under the TSP Service Vendor Handbook.

TSP is available in Maine, Vermont and New Hampshire jurisdictions and is regulated under Federal Communications Commission (FCC) tariff. FCC No. 1, Section 10.8.1 (D)

WHOLESALE CARRIER REQUIREMENTS

To be eligible for TSP, the Wholesale Carriers must:

- Obtain a TSP Authorization Code from the Federal Government Office of Priority Telecommunications which will identify the wholesale customer to receive priority service for provisioning and/or restoration
- Provide the TSP Authorization Code on their Access Service Request (ASR) • Pay any applicable charges for this TSP service.

Valid TSP Entries

Value	Description
	Nine Character TSP Control Identifier
	One Character Provisioning Priority Level (E, 0-5)
	One Digit Restoration Priority Level (0-5)

CCVN

ASC_EC

--Select-- ▾

TSP

TSP12345CE1

SAN

Omit any hyphens

The valid entries and their description are as follows:

TSP Restoration Priority Valid Levels	TSP Description of Level Priority
1	Highest Priority
2	Lowest Priority
3	Lowest Priority
4	Lowest Priority
5	Lowest Priority
0 in 12 th position	No restoration priority is assigned
0 in the 11 th AND 12 th positions (00)	Revocation of a priority level assignment for both provisioning & restoration

Disclaimer

IPR statement



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FIDIUM- ASR Ordering Guide for Switched Ethernet Service Wireline (Non-Wireless) in CA, IA, IL, KS, MN, MO, PA, TX, ND, SD, WI

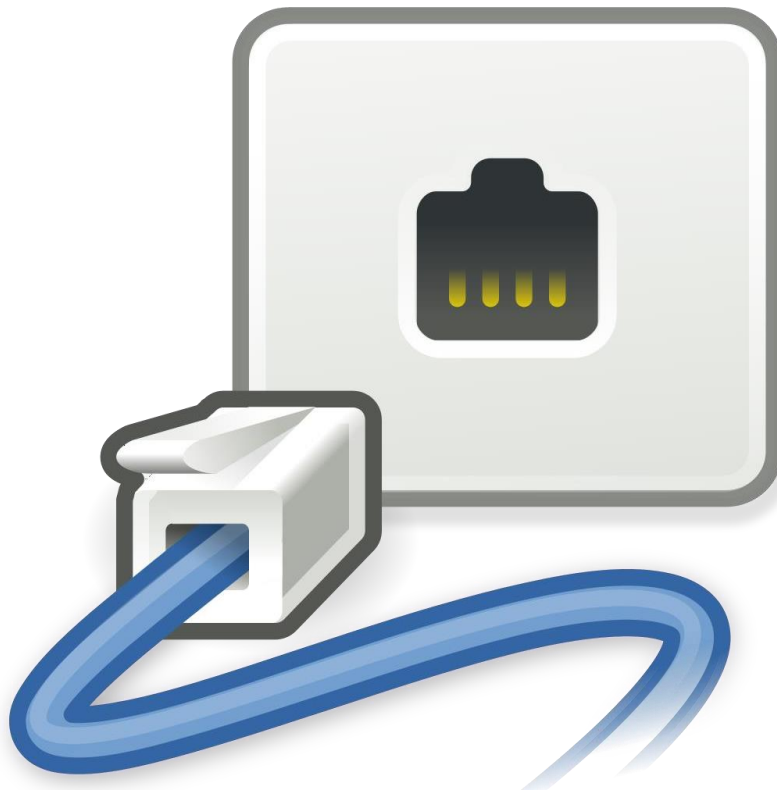


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Ordering Overview

Access Service Requests (ASRs) will be used to process customer service orders for Switched and Aggregated Ethernet Service (Ethernet Service) ordered from a Master Service Agreement (MSA). This document contains information necessary to correctly populate an ASR for new or change order activity for Ethernet Service.

The ASR will identify the user network interface, routing method and CIR requested for Ethernet Service. Ethernet Service has unique ordering requirements. A physical port must be ordered for each end-user location, IXC/ISP POP, cell site or MTSO into the switched Ethernet core network that is accessed.

Once the physical ports are ordered, Ethernet Virtual Connections (EVCs) connect the physical ports to one another via logical links within the network.

Product Elements

- **Port Connection** - Provides the physical transport facilities from the customer's premises to an Ethernet switch at Fidium. Available at transmission speeds of **100M, 1G, 10G, 25G, 40G, 100G**. (NOTE: A NNI/UNI port connection circuit cannot be disconnected until all associated Ethernet Virtual Circuits are disconnected.)
 - **Port-Based UNI** – Supports one EVC
 - **VLAN-Based UNI** – Supports multiple EVCs
- **Committed Information Rate (CIR)** - Provides the bandwidth available on a Customer Port Connection. CIR is available per Customer Port Connection and is provided by Network Channel Code (NC)

Ethernet Virtual Circuit (EVC) - Provides a logical channel to enable the flow of Ethernet traffic for point-to-point (P2P) configurations. **Multipoint EVC's are not available at this time.**



Please use the applicable NC codes for Port based or VLAN based.

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Ordering Requirements

Please use the following guidelines for processing a Switched Ethernet Service via an ASR:

- ✚ **REQTYP “SD”** is only required for NNI service (Transport Switched Ethernet)
- ✚ **REQTYP “ED”** is used for ordering an **UNI** to an End User location. (End User Switched Ethernet)
 -  **Fidium in these ICSC Entities prefer Combo ASRs for End User locations and any Aggregated Ethernet sites but are not required. (Combo-EVCI field = B).**
- ✚ EVCI= A- for non-combo order (UNI only and separate EVC order)
- ✚ EVCI= B- for combo orders (both UNI and EVC) (**preferred**)
- ✚ Use applicable ICSC code per Fidium entity (see list)
- ✚ The CNO field on the Admin ASR form should be populated when FIDIUM provides a quote ID.
- ✚ VTA field is required per the contract on all Combo orders. Not required on Stand Alone EVC orders.
- ✚ SPEC Code optional
- ✚ CIR/Speed 3M up to 100G
- ✚ BAN- can use “E” for existing BAN (N if new BAN is required)
- ✚ UNI and EVC Circuit IDs will be returned on the FOC

Note: CoS is only required if in your MSA, otherwise optional

ICSC Codes

Fidium Fiber ICSC Codes and Contacts by Region		
Order Inquiry Available Mon – Fri 8am – 5pm ET		
All Other Regions – CA, IA, IL, MN, MO, PA, TX, ND, SD, WI		
ICSC	Company Name	Contact Information
CC05	Consolidated Comm. Telcom Srvs., Mattoon, IL	(866) 925-8971 option #2 or via email CarrierWSC@fidium.com
ET02	Enventis Telecom (aka Minnesota Power Telecom), Duluth, MN Use this ICSC code for Ethernet orders.	
FB01	Consolidated Comm of Fort Bend CO (Prev Ft. Bend Telephone Co), Irving, TX	
IC90	Illinois Consolidated Tel, Mattoon, IL	
IO01	Ideaone Telecom Group LLC., Fargo, ND	
LF10	Consolidated Comm of Texas Company (Prev TXU Comm Tele Co), Lufkin, TX	
MK01	Mankato Citizens Tel Co, Mankato, MN Use this ICSC code for T1s, T3s, Switched orders.	
NP05	North Pittsburgh Telco, Gibsonia, PA	
PT30	Penn Telecom Inc., Cranberry TWSP, PA	
RS02	Surewest Telephone (Prev Roseville Telco), Citrus Heights, CA (ILEC/CLEC)	
Northern New England – ME, NH, VT		
ICSC	Company Name	Contact Information
EC20	FairPoint Enhanced Communications (CES product)	(866) 925-8971 option #2 or via email WSCASR@fidium.com
FP01	FairPoint Communications	

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Class of Service (SPEC Code)

The SPEC Code is optional on the ASR form and the EVC form.

A Class of Service (CoS) Option must be in the MSA to order a Class of Service other than Standard.

The CoS offered:

SPEC	BW Profile Name	Description
VPEVCCR	Fixed Mission Critical (MC)	Fixed CoS with 100% allocated to Mission Critical CoS
VPEVCEX	Fixed Expedite Data	Fixed CoS with 100% allocated to Expedite Data CoS
VPEVCBE	Fixed Standard Data (SD)	Fixed CoS with 100% allocated to Standard Data
VPEVCRT	Real Time (RT) / PPCOS	Per Packet Class of service allocated between three classes of service (RT, MC, SD) as defined in the ASR PPCOS field.

UNI Order SPEC Example

The UNI order will require a SPEC code indicating the COS. This is the field on the ASR form. It must be the same SPEC on the UNI and EVC form. This is required for both Combo and non-combo orders.

The screenshot displays the ASR form interface. At the top, there are five icons: ASR (highlighted with a red box), SES, EVC, NAI, and GEN. INFO. Below the icons is the 'ADMINISTRATIVE [Required]' section. The form contains various fields for data entry, including CCNA, PON, VER, ASRNO, SPA, ICSC, CC, UNE, QA, CBD, DDD, FDT, PROJECT, CCI, CNO, PPTD, NOR, LUP, BSA, REQ TYP, ACT, ACTI, EU, QSA, WST, LATA, EVCI, SEI, PVC I, NPVC, RTR, SUP, AFO, QNAI, TQ, EXP, EDA, AENG, ALBR, AGAUTH, DATED, CUST, LA, LADATED, LANM, JPR, NAG, PSLI, CKR, UNIT, PIU, PLU, WSI_P, WSI_S, LTP, ECCKT, QTY, BAN, ASG, BIC, BIC_TEL, BIC_ID, TSC, ISTN, ACTL, APOT, RORD, RPON, LAG, CCVN, ASC_EC, TSP, SAN, GOV, SPEC, and PREV_PON. The 'SPEC' field is highlighted with a red box and contains the value 'VPEVCCR'. The 'BAN' field is also highlighted with a yellow box and contains the value 'E'. The 'ASR_REMARKS' section at the bottom contains the text 'EXAMPLE OF SPEC CODE'.

CCNA	PON	VER	ASRNO	SPA	ICSC
	EX COMBO	01			NP05
CC	UNE	QA	CBD	DDD	FDT
	--Select--	--Select--		01/12/2022	
CNO	PPTD	NOR	LUP	BSA	REQ TYP
				--Select--	ED
ACT	ACTI	EU			
N	--Select--	--Select--			
QSA	WST	LATA	EVCI	SEI	PVC I
01	--Select--	123	B	Y	--Select--
NPVC	RTR	SUP	AFO		
	S	--Select--			
QNAI	TQ	EXP	EDA	AENG	ALBR
		--Select--	--Select--	--Select--	--Select--
AGAUTH	DATED	CUST	LA	LADATED	LANM
--Select--		CCI	--Select--		
NAG	PSLI	CKR	UNIT	PIU	PLU
--Select--	--Select--		C	100	
WSI_P	WSI_S	LTP	ECCKT	QTY	BAN
--Select--	--Select--			01	E
ASG	BIC	BIC_TEL	BIC_ID		
	--Select--				
TSC	ISTN	ACTL	APOT		
RORD	RPON	LAG			
		--Select--			
CCVN	ASC_EC	TSP	SAN	GOV	SPEC
	--Select--			--Select--	VPEVCCR
					PREV_PON
ASR_REMARKS					
EXAMPLE OF SPEC CODE					

EVC Order SPEC Example

There are two fields on the EVC portion of the ASR that will be used to determine the Class of Service ordered; (SPEC and PPCOS).

- For the Fixed COS, the Spec Code field will determine the CoS and the PPCOS Field is **not** required.
- Real Time (per packet CoS) the Spec Code field **and** the PPCOS Field is required, along with either the P_BIT or DSCP field. The PPCOS field will indicate the percentages of the three CoS needed.

EVC Order Example

The SPEC Code field is on the EVC forms of the ASR. On the EVC order the SPEC code is required for both terminations of the NNI and UNI. The SPEC code must be the same for both terminations.

The screenshot displays the EVC Order form with the following sections and fields:

- ETHERNET VIRTUAL CONNECTION [Required]**
 - EVCNUM: 0001
 - NC: VLP-
 - EVCID: [Empty]
 - NUT: 02
 - OAM_IND: --Select--
 - SVP: --Select--
 - MSFS: [Empty]
 - CEV_P: --Select--
 - CEV_CP: --Select--
 - EVCCR: [Empty]
 - EPS: [Empty]
- ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL [1] [Optional | Conditional]**
 - UREF: 01
 - EI: --Select--
 - AUNT: --Select--
 - UACT: N
 - RPON: [Empty]
 - NCI: 02VLN.A2
 - EVCSP: CONRTXXA
 - BUM_FD: [Empty]
 - RUID: 13/L9GN/080223//LCTX/
 - RL: --Select--
 - EVCHIPID: [Empty]
 - OTC: [Empty]
 - ASN: [Empty]
 - VPN_ACT: --Select--
 - VPN_ID: [Empty]
 - VPN_NM: [Empty]
- SERVICE VIRTUAL LOCAL AREA NETWORK MAPPING DETAIL [1] [Optional | Conditional]**
- ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE MAPPING DETAIL [1] [Optional | Conditional]**
 - LREF: 1
 - LOSACT: N
 - LOS: [Empty]
 - SPEC: VPEVCBE** (highlighted in red)
 - P_BIT: [Empty]
 - BDW: 100G
 - DSCP: [Empty]
 - TOS: [Empty]
 - CIR_I: [Empty]
 - CBS_I: [Empty]
 - EIR_I: [Empty]
 - EBS_I: [Empty]
 - CHI_I: --Select--
 - BCF_I: --Select--
 - P_BIT_I: [Empty]
 - P_BIT_E: [Empty]
 - PPCOS: [Empty]

ETHERNET VIRTUAL CONNECTION UNI MAPPING DETAIL [2] [Optional Conditional]									
UREF	EI	AUNT	UACT	RPON	NCI				
02	--Select--	--Select--	N		02VLN.V				
EVCSP		BUM_FD	RUID	RL	EVCMPID				
HSTNTX89			74/KUGN/080226//EVT/	--Select--					
OTC	ASN	VPN_ACT	VPN_ID	VPN_NM					
		--Select--							

2nd Termination

CUSTOMER EDGE VIRTUAL LOCAL AREA NETWORK [Required]	
CE_VLAN_START	CE_VLAN_END
0200	

ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE MAPPING DETAIL [1] [Optional Conditional]								
LREF	LOSACT	LOS	SPEC	P_BIT	BDW	DSCP	TOS	CIR_I
1	N		VPEVCBE		100G			
CBS_I	EIR_I	EBS_I	CNI_I	BCF_I	P_BITC_I	P_BITC_E	PPCOS	
			--Select--	--Select--				

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Ordering Real Time COS (VPEVCRT)

PPCos Ordering Requirements

Enter the Real Time SPEC code of **VPEVCRT** in the SPEC code field of the ASR along with the percentages desired, in the PPCOS field.

The PPCOS field identifies the traffic for each packet class of service allocation delivered over the EVC.

- Real Time (RT)
- Critical (MC)
- Standard (SD)

Example: 25/50/25 would be 25% Real Time, 50% Mission Critical, and 25% for Standard Data levels.

- 25%RT,50%MC,25%SD (use comma to separate)
- Must add up or equal to a 100

Also required is the P-BIT populated with “1” or the DSCP populated with 000000000001

ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE MAPPING DETAIL [1] [Optional Conditional]									
LREF	LOSACT	LOS	SPEC	P_BIT	BDW	DSCP	TOS	CIR_I	
1	N		VPEVCRT	1	100M				
CBS_I	EIR_I	EBS_I	CMI_I	BCF_I	P_BITC_I	P_BITC_E	PPCOS		
			--Select--	--Select--			25%RT,50%MC,25%SD		

OR

ETHERNET VIRTUAL CONNECTION LEVEL OF SERVICE MAPPING DETAIL [1] [Optional Conditional]									
LREF	LOSACT	LOS	SPEC	P_BIT	BDW	DSCP	TOS	CIR_I	
1	N		VPEVCRT		100M	000000000001			
CBS_I	EIR_I	EBS_I	CMI_I	BCF_I	P_BITC_I	P_BITC_E	PPCOS		
			--Select--	--Select--			25%RT,50%MC,25%SD		

PPCOS Chart

	Bandwidth Profile Name	Guaranteed Bandwidth Allocation		
		Real Time % Maximum	Critical % Minimum	Standard % Minimum
90-100% Real-Time PPCOS	100/0/0	100%	0%	0%
	90/10/0	90%	10%	0%
	90/0/10	90%	0%	10%
75% Real-Time PPCOS	75/25/0	75%	25%	0%
	75/0/25	75%	0%	25%
50% Real-Time PPCOS	50/50/0	50%	50%	0%
	50/25/25	50%	25%	25%
	50/0/50	50%	0%	50%
25% Real-Time PPCOS	25/75/0	25%	75%	0%
	25/50/25	25%	50%	25%
	25/25/50	25%	25%	50%
	25/0/75	25%	0%	75%
Critical PPCOS	0/100/0	0%	100%	0%
	0/75/25	0%	75%	25%
	0/50/50	0%	50%	50%
	0/25/75	0%	25%	75%



The PPCOS along with either the P-BIT or DSCP fields are **only** required when the COS is Real Time VPEVCRT.

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CNO (Case Number)

- Optional- if Fidium Case Number provided populate in the CNO field or remarks on the ASR

VTA

- UNI ASRs must be submitted with 12, 24, 36, 60 or 84 month VTAs
- Month-to-month (M2M) option is not available use 12MO
- The M2M extension term rate is only available after a term has fully matured

Jumbo Frames

- To order jumbo frames populate the MSFS field on the ASR for the MTU size **AND** note in remarks.

VLAN

Carrier will provide a VLAN, Fidium will not assign it.

Circuit IDs

The circuit IDs will reflect the NC code used on the ASR in the modifier field.

- XX/KQGN/123456//XXX/
- XX/KRGN/123456//XXX/
- XX/KSGN/123456//XXX/
- XX/KUGN/123456//XXX/
- EVC Circuit ID: XX/VLXU/123456//XXX/

Ordering Requirements for Standalone EVC

- Service Type- Standalone EVC
- EVCI= A
- When an EVC is ordered as a standalone EVC and not on a Combo ASR, the EVC needs to be submitted when the related UNI order is in a confirm status
- The EVC(s) must be ordered within 5 days after the FOC of the UNI order.
- UNI and EVC will have the same due date unless otherwise stated in your contract.
- If the EVC is not received within 5 business days of the UNI's confirmation, Fidium can cancel the UNI order at their discretion.
- NC= VLP-
- Bandwidth is 3M up to 100G
- The EVC must have two terminations (RUIDS), i.e., NNI to UNI or UNI to UNI
- Spec Code required at both terminations for COS if applicable
- Use applicable ICSC code per Fidium entity (see list)
- EVC can be equal to or less than the UNI CIR (**rates apply to UNI CIR**)
- The placement of the NNI ECCKT is acceptable in the RUID field for either UREF 01 or UREF 02, but for Industry Standards the NNI ECCKT is usually populated in the RUID field on UREF 02.

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Interval

Ordering intervals for Switched Ethernet Service is 20 business days from clean receipt of ASR.

Fidium will try to issue FOC/Clarification/Response within 10 business days of ASR receipt whether it is on-network or off-network.

If the order needs a facility build, then Fidium will send a FOC and Due Date with the best possible date.



A list of on-net buildings can be obtained from your Account Executive

Billing

- Every tower will have a 1Gig Port and the UNI CIR/Speed can be equal to or less than 1G
- The EVC Speed can be equal to or less than the UNI CIR, but the UNI CIR rates will apply
- EVC is at no charge as rates are built into the UNI price
- A facility build will be an ICB

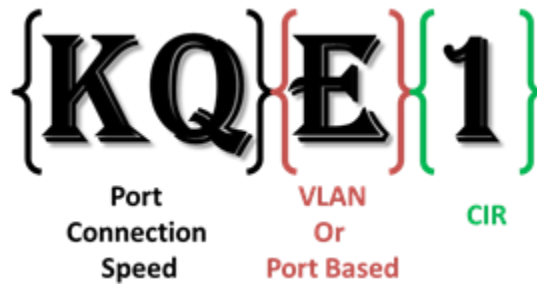
Example:

UNI CIR is 500M on 1G port
EVC is 100M

Bill Rate is for 500M UNI
EVC is \$.00

NC Codes

NC Code Breakdown



Ethernet 100 Mbps – Port Based with CIR Options

NC	Port CIR Speed (4 TH Position)	Permissible NCI/SECNCI Options
KQAP	3 Mbps	<u>NCI Electrical Interface</u> 04LN9.1CT (100 Base T) <u>NCI Optical Interfaces</u> 02LNF.A02 (100 Base LX) SMF 02LNF.A04 (100 Base SX) MMF <u>SECNCI</u> 02CXF.1GE (Central Office)
KQAM	5 Mbps	
KQA1	10 Mbps	
KQAA	15 Mbps	
KQA2	20 Mbps	
KQAB	25 Mbps	
KQA3	30 Mbps	
KQA4	40 Mbps	
KQA5	50 Mbps	
KQA-	100 Mbps	

NOTE: NC = Network Channel; NCI = Network Channel Interface; SECNCI = Secondary Network Channel Interface (SECNCI) Codes

PORT= no VLAN (tag) on Circuit

Ethernet 100 Mbps - VLAN Based with CIR Options

NC	Port CIR Speed (4 TH Position)	Permissible NCI/SECNCI Options
KQEN	3 Mbps	<u>NCI Electrical Interface</u> 04LN9.1CT (100 Base T) <u>NCI Optical Interfaces</u> 02LNF.A02 (100 Base LX) SMF 02LNF.A04 (100 Base SX) MMF <u>SECNCI</u> 02CXF.1GE (Central Office)
KQEJ	5 Mbps	
KQE1	10 Mbps	
KQEA	15 Mbps	
KQE2	20 Mbps	
KQEB	25 Mbps	
KQE3	30 Mbps	
KQE4	40 Mbps	
KQE5	50 Mbps	
KQE-	100 Mbps	

VLAN= Circuit has VLAN (TAG)

Ethernet 1 Gbps - Port Based CIR Options

NC	Port CIR Speed (4TH Position)	Permissible NCI/SECNCI Options
KRB3	3 Mbps	<u>NCI Electrical Interface</u> 08LN9.1GE (1000 Base T) <u>NCI Optical Interfaces</u> 02LNF.A02 (1000 Base LX) SMF 02LNF.A04 (1000 Base SX) MMF 02QBF.K02 (Collocation/1000 Base) SMF <u>SECNCI</u> 02CXF.1GE (Central Office)
KRBA	5 Mbps	
KRBB	10 Mbps	
KRBC	15 Mbps	
KRBD	20 Mbps	
KRBE	25 Mbps	
KRBF	30 Mbps	
KRBH	40 Mbps	
KRBJ	50 Mbps	
KRA1	100 Mbps	
KRAB	150 Mbps	
KRA2	200 Mbps	
KRA3	300 Mbps	
KRA4	400 Mbps	
KRA5	500 Mbps	
KRA6	600 Mbps	
KRA7	700 Mbps	
KRA8	800 Mbps	
KRA9	900 Mbps	
KRA0	1000 Mbps (1 Gbps)	

Ethernet 1 Gbps - VLAN Based with CIR Options

NC	Port CIR Speed (4TH Position)	Permissible NCI/SECNCI Options
KRF3	3 Mbps	<u>NCI Electrical Interface</u> 08LN9.1GE (1000 Base T) <u>NCI Optical Interfaces</u> 02LNF.A02 (1000 Base LX) SMF 02LNF.A04 (1000 Base SX) MMF 02QBF.K02 (Collocation/1000 Base) SMF <u>SECNCI</u> 02CXF.1GE (Central Office)
KRFA	5 Mbps	
KRFB	10 Mbps	
KRFC	15 Mbps	
KRFD	20 Mbps	
KRFE	25 Mbps	
KRFF	30 Mbps	
KRFH	40 Mbps	
KRFJ	50 Mbps	
KRE1	100 Mbps	
KREB	150 Mbps	
KRE2	200 Mbps	
KRE3	300 Mbps	
KRE4	400 Mbps	
KRE5	500 Mbps	
KRE6	600 Mbps	
KRE7	700 Mbps	
KRE8	800 Mbps	
KRE9	900 Mbps	
KRE0	1000 Mbps (1 Gbps)	

Ethernet 10 Gbps - Port Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KSAB	.5G (500M)	<u><i>NCI Optical Interfaces</i></u> 02LNF.A02 (10G Base SR) SMF 02LNF.A04 (10G Base LW) MMF 02QBF.K02 (Collocation/10G Base) SMF <u><i>SECNCI</i></u> 02CXF.10G (Central Office)
KSA1	1 Gbps	
KSA2	2 Gbps	
KSA3	3 Gbps	
KSA4	4 Gbps	
KSA5	5 Gbps	
KSA6	6 Gbps	
KSA7	7 Gbps	
KSA8	8 Gbps	
KSA9	9 Gbps	
KSA-	10 Gbps	

Ethernet 10 Gbps - VLAN Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KSEB	.5 (500Mbps)	<u><i>NCI Optical Interfaces</i></u> 02LNF.A02 (10G Base SR) SMF 02LNF.A04 (10G Base LW) MMF 02QBF.K02 (Collocation/10G Base) SMF <u><i>SECNCI</i></u> 02CXF.10G (Central Office)
KSE1	1 Gbps	
KSE2	2 Gbps	
KSE3	3 Gbps	
KSE4	4 Gbps	
KSE5	5 Gbps	
KSE6	6 Gbps	
KSE7	7 Gbps	
KSE8	8 Gbps	
KSE9	9 Gbps	
KSE-	10 Gbps	

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New Port Speeds Jan/2022

Starting in January 2022 Fidium will offer new Port Speeds of 25G, 40G, and 100G

Ethernet 25 Gbps - Port Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KVAB	10 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.2LA (25G Base LR) SMF 02LNF.2SA (100G Base SR) MMF 02QBF.2LA(Collocation/100G Base) SMF 02QBF.2SA(Collocation/100G Base) MMF <u><i>SECNCI</i></u> 02CXF.2U (UNI) 02CXF.2E (NNI)
KVAA	20 Gbps	
KVA-	25 Gbps	

Ethernet 25 Gbps - VLAN Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KVEB	10 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.2LA (25G Base LR) SMF 02LNF.2SA (100G Base SR) MMF 02QBF.2LA(Collocation/100G Base) SMF 02QBF.2SA(Collocation/100G Base) MMF <u><i>SECNCI</i></u> 02CXF.2U (UNI) 02CXF.2E (NNI)
KVEA	20 Gbps	
KVE-	25 Gbps	

Ethernet 40 Gbps - Port Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KTAK	20 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.4LA (40G Base LR4) SMF 02LNF.4SA (40G Base SR4) MMF 02QBF.4LA (Collocation/10G Base) SMF 08QBF.4SA (Collocation/10G Base) MMF <u><i>SECNCI</i></u> 02CXF.40G (UNI) 02CXF.40E (NNI)
KTAL	25 Gbps	
KTA-	40 GBPS	

Ethernet 40 Gbps - VLAN Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KTEJ	20 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.4LA (40G Base LR4) SMF 02LNF.4SA (40G Base SR4) MMF 02QBF.4LA (Collocation/10G Base) SMF 08QBF.4SA (Collocation/10G Base) MMF <u><i>SECNCI</i></u> 02CXF.40G (UNI) 02CXF.40E (NNI)
KTEK	25 Gbps	
KTE-	40 Gbps	

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Ethernet 100 Gbps - Port Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KUAB	10 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.CSA (100G Base SR4) SMF 02LNF.CA4 (100G Base LR4) MMF 02LNF.CL4 (100G Base LR4) SMF 02QBF.CA4(Collocation/100G Base) SMF 02QBF.CSA(Collocation/100G Base) MMF <u><i>SECNCI</i></u> 02CXF.1HG (UNI) 02CXF.NM1 (NNI)
KUAD	20 Gbps	
KUAE	25 Gbps	
KUAH	40 Gbps	
KUAK	50 Gbps	
KUA-	100 Gbps	

Ethernet 100 Gbps - VLAN Based with CIR Options

<u>NC</u>	<u>Port CIR Speed (4TH Position)</u>	<u>Permissible NCI/SECNCI Options</u>
KUEB	10 Gbps	<u><i>NCI Optical Interfaces</i></u> 02LNF.CSA (100G Base SR4) SMF 02LNF.CA4 (100G Base LR4) MMF 02LNF.CL4 (100G Base LR4) SMF 02QBF.CA4(Collocation/100G Base) SMF 02QBF.CSA(Collocation/100G Base) MMF <u><i>SECNCI</i></u> 02CXF.1HG (UNI) 02CXF.NM1 (NNI)
KUED	20 Gbps	
KUEE	25 Gbps	
KUEH	40 Gbps	
KUEK	50 Gbps	
KUE-	100 Gbps	



10G-100G Ports are only offered as Optical

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≡ NCI/SECNCI Codes

Network Channel Interface (NCI) and Secondary Network Channel Interface (SECNCI) Codes:

NCI Code 04LN9.1CT (Used with 100 Mbps Electrical)		
04	=	Four Conductors (4-wire)
LN	=	Local Area Network Interface
9	=	100 Ohms
1CT	=	100 Base-T Ethernet

NCI Codes 02LNF.A02 or A04 (Used with 100 Mbps Optical)		
02	=	Two Conductors (2-fiber)
LN	=	Local Area Network Interface
F	=	Fiber
A02	=	1310 nm, Single-mode Fiber (100 Base LX/LH)
A04	=	850 nm, 50 micron Multi-mode fiber (100 Base SX)

NCI Code 08LN9.1GE (Used with 1 Gbps Electrical)		
08	=	Eight Conductors (4-wire)
LN	=	Local Area Network Interface
9	=	100 Ohms
1GE	=	1000 Base-T Ethernet

NCI Codes 02LNF.A02 or A04 (Used with 1 Gbps Optical)		
02	=	Two Conductors (2-fiber)
LN	=	Local Area Network Interface
F	=	Fiber
A02	=	1310 nm, Single-mode Fiber (1000 Base LX/LH)
A04	=	850 nm, 50 micron Multi-mode fiber (1000 Base SX)

NCI Codes 02LNF.A02, A03 or A04 (Used with 10 Gbps Optical)		
02	=	Two Conductors (2-fiber)
LN	=	Local Area Network Interface
F	=	Fiber
A02	=	1310 nm, Single-mode Fiber (10000 Base LX)
A04	=	850 nm, 50 micron Multi-mode fiber (10000 Base SX)

NCI Codes 02QBF.K02 (Collocation)		
02	=	Two conductors (2-fiber)
QB	=	Central Office manual cross connect termination with no sub-rating capability for non-multiplexed facilities only
F	=	Fiber
K02	=	1310 nm, single-mode fiber

SECNCI Code 02CXF.1GE (Central Office Termination)		
02	=	Two conductors (2-fiber)
CX	=	Digital termination on a switch
F	=	Fiber
1GE	=	1 Gigabit Ethernet (User to Network Interface (UNI))

EVC NC and NCI Coding

EVC NC Options - Carrier Coding Guide (CCG) Tab 2

EVC NC Pos 1-2	EVC NC Pos 3	EVC NC Pos 4	Description
VL	P	-	Ethernet Virtual Connection (EVC) point-to-point - An association of two or more UNIs that limits the exchange of Service Frames to UNIs in the Ethernet Virtual Connection per MEF 10. Defined in MEF 10 as an association of exactly two UNIs.

EVC NCI – Protocol Options – CCG Tab 3

Conductors	Protocol	Impedance	Protocol Options	Description
02	VL	N	A2	Port - all to one bundle. Used with <u>Port based UNI</u> that will send a <u>combination</u> of uncoordinated tagged and untagged traffic. No service multiplexing.
			V	Port + CEVLAN Map Used with <u>VLAN based UNI</u> that will only send tagged coordinated traffic.
			UNT	Port – Untagged Used with <u>Port Based UNI</u> that will send uncoordinated untagged traffic.

Port NC Code and EVC NCI Protocol – Combinations

Port NC Code	Port Interface Type	Port Routing Type	EVC Protocol Option(s)	EVC Protocol Description
KQA*	Electrical (100 Mbps Base T)	Port Based	02VLN. A2	All in one
KQE*	Electrical (100 Mbps Base T)	VLAN Based	02VLN. V	Tagged
KRA*	Electrical/Optical (1 Gbps)	Port Based	02VLN. A2	All in one
KRE*	Electrical/Optical (1 Gbps)	VLAN Based	02VLN. V	Tagged
KSA*	Optical (10 Gbps)	Port Based	02VLN. A2	All in one
KSE*	Optical (10 Gbps)	VLAN Based	02VLN. V	Tagged
KVA	Optical (25 Gbps)	Port Based	02VLN. A2	All in One
KVE	Optical (25Gbps)	VLAN Based	02VLN. V	Tagged
KTA	Optical (40 Gbps)	Port Based	02VLN. A2	All in One
KTE	Optical (40 Gbps)	VLAN Based	02VLN. V	Tagged
KUA	Optical (100 Gbps)	Port Based	02VLN. A2	All in One
KUE	Optical (100 Gbps)	VLAN Based	02VLN. V	Tagged

*4th position of NC is variable and represents the CIR speed

EVC NC and NCI Coding Combinations

The end user UNIs can be ordered as Port based UNIs with a point-to-point EVC connection to the aggregation UNI.

Or the aggregation UNI can be ordered as a VLAN based port, which provides unique paths for the aggregated frames.

In this configuration, the connection between the end user and the aggregator is ordered as a point-to-point EVC.

EU UNI - Port Based:

NC – VLP- (point-to-point)

NCI – 02VLN.A2 (all to one bundling)

NCI- 02VLN.UNT (untagged)

Aggregation UNI – VLAN Based:

NC – VLP- (point-to-point)

NCI – 02VLN.V (VLAN tagged)

When applying the NC codes whether Port or VLAN base, the UNI and EVC NCI code must match up. If the NC code contains an “A” in the 3rd character, the NCI of the UNI needs to be **A2**, and if the NC code contains an “E” in the 3rd character, the NCI of the EVC is **V**.

Port NC Code	Port Interface Type	Port Routing Type	EVC Protocol Option(s)	EVC Protocol Description
KQA*	Electrical (100 Mbps BaseT)	Port Based	02VLN. A2	All in one
KQE*	Electrical (100 Mbps BaseT)	VLAN Based	02VLN. V	Tagged
KRA*	Electrical/Optical (1 Gbps)	Port Based	02VLN. A2	All in one
KRE*	Electrical/Optical (1 Gbps)	VLAN Based	02VLN. V	Tagged
KSA*	Optical (10 Gbps)	Port Based	02VLN. A2	All in one
KSE*	Optical (10 Gbps)	VLAN Based	02VLN. V	Tagged

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Ordering Examples

The following are ASR examples for ordering Switched Ethernet Services. The examples do not necessarily represent all possible configurations or the ASR fields required to order Ethernet Services. Please refer to the ASOG for additional details.

ASR Information

REQTYP S is only required for Aggregated Ethernet Service. This is a P2P Ethernet Service that does not involve a NNI.

- 1. Collocated in our COs, or
- 2. At a Carrier Hotel

REQTYP E is used for ordering an UNI to an End User location.

If possible submit Combo ASRs for End User locations and any Aggregated Ethernet sites you wish to have a VLAN assigned to (EVCI field = B).

UNI PORT and EVC Combo ASRs

Service Type:

Transport Switched Ethernet EVC (REQTYP= SD)

End User Switched Ethernet EVC (REQTYP ED)

New UNI Port and EVC via a Combo ASR	
Using the Combo ASR process is optional . The Combo ASR allows the customer to submit a single ASR with one UNI Port and one EVC. This process is only allowed for ‘new’ or ‘complete disconnect’ activity.	
• Combo ASR entries: ○ UNI Port ASR – No special requirements, business as usual ○ EVC ASR - EVCI field MUST be populated with a “B”	
ASR Field/Form	ASR Field Entry Value
ICASR Screen	
REQTYP	ED or SD
RTR (Response Type Request)	S (DLR to be issued) D or F (No DLR will be issued)
CNO (Case Number)	Fidium provided quote ID
QSA (REQTYP “E”) (Quantity Service Address)	01
SEI (Switched Ethernet Indicator)	Y
EVCI	B
ACTL	SD REQTYP - ACTL CLLI assigned to customer POP/Cell Site (for Aggregated Ethernet Service) ED REQTYP – Leave Field Blank

PIU (Percentage Interstate Usage)	100
QTY	0000001
BAN	N: New BAN Request E: Existing BAN The BAN you want to Bill: (EX:123 N25-1000)
SPEC	CoS VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
REMARKS	Any additional information
ICADM Screen	
ACNA	ABC
VTA	Format = NN NN = contract term in months (12, 24, 36, 48, 60)
FUSF (Federal Universal Service Fee)	E = Exempt N = Non-Exempt
ICES Screen	
NC	See 'Code' Section
NCI	NCI at ACTL/POP/Cell Site – See 'Code' Section
SECNCI	NCI at CO – See 'Code' Section
ICSAP Screen	
REQTYP "E" Only	
EU Name	End User Customer Name
SANO, SASN, etc.	End User Address
JS Jack Status	D (DEMARC)
LCON, ACTEL, and Email	Name, Tel # and Email to contact for Site Visit
EVC	
ASR FIELD	VALUE
ICEVC Screen	
EVCNUM (Ethernet Virtual Connection Reference Number)	EVC Reference Number (Provided by customer)
NC (Network Channel)	VLP- Point to Point VLM- Multipoint
NUT (Number of Terminations)	Quantity of EVC UNI terminations on the ASR
UREF (UNI Reference Number)	UNI Reference Number
UACT (UNI Activity Indicator)	UNI Activity Indicator (N, C or D)
AUNT: (Associated UNI/ENNI Termination)	For UREF 01 Only: A
RUID (Related UNI Identifier)	For UREF 01: Leave Blank: For UREF 02: UNI/NNI Port Circuit ID
NCI (Network Channel Interface)	02VLN.A2 – Port combination tagged and untagged 02VLN.V – VLAN (CE-VLAN field must be populated)
CEVLAN (Customer Edge Virtual Local Area Network)	VLAN ID (If RUID is VLAN Based Port) (CE-VLAN field must be populated when VLAN applies)
LREF	1
LACT	N, C or D
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT (If applicable)
PPCOS	Required for SPEC VPEVCRT only
BDW (CIR Bandwidth)	##M (EX: 20M) (Total EVC CIR bandwidth cannot exceed the UNI CIR value)
REMARKS	Any additional information

New NNI/ UNI Port – ACTL/POP/Cell Site to Fidium Switched Ethernet	
ASR Field/Form	ASR Field Entry Value
ICASR Screen	
REQTYP	SD
RTR (Response Type Request)	S (DLR to be issued) D or F (No DLR will be issued)
CNO (Case Number)	Fidium provided quote ID
SEI (Switched Ethernet Indicator)	Y
PIU (Percentage Interstate Usage)	100
QTY	0000001
BAN	N : New BAN Request E : Existing BAN The BAN you want to Bill : (EX:123 N25-1000)
ACTL	ACTL CLLI assigned to customer POP/Cell Site
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
REMARKS	Any additional information
ICADM Screen	
ACNA	
VTAs (ASR – Bill Section) (Variable Term Agreement)	12, 36, 48, 60 & 84 (Please also check your MSA for valid VTAs)
FUSF (Federal Universal Service Fee)	E = Exempt N = Non-Exempt
ICSES Screen	
NC	See 'Code' Section
NCI	NCI at ACTL/POP/Cell Site – See 'Code' Section
SECNCI	NCI at CO – See 'Code' Section

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New UNI Port – End User to Switched Ethernet	
ASR Field/Form	ASR Field Entry Value
ICASR Screen	
REQTYP	ED
RTR (Response Type request)	S (DLR to be issued) D or F (No DLR will be issued)
CNO (Case Number)	Fidium provided quote ID
QSA (Quantity Service Address)	01
EVC	B (for combo ASR)
SEI (Switched Ethernet Indicator)	Y
PIU (Percentage Interstate Usage)	100
QTY	0000001
BAN	N : New BAN Request E : Existing BAN The BAN you want to Bill : (EX:123 N25-1000)
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
REMARKS	Any additional information
ICADM Screen	
ACNA	
VTA (ASR – Bill Section) (Variable Term Agreement)	Format = NN NN = contract term in months (12, 24, 36, 48, 60)
FUSF (Federal Universal Service Fee)	E = Exempt N = Non-Exempt
ICES Screen	
NC	See 'Code' Section
NCI	NCI at ACTL/POP/Cell Site – See 'Code' Section
SECNCI	NCI at CO – See 'Code' Section
ICSAP Screen	
EU Name	End User Customer Name
SANO, SASN, etc.	End User Address
JS	D (DEMARC)
LCON, ACTEL, and Email	Name, Tel # and Email to contact for Site Visit

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Standalone EVC Ordering Details

Only one EVC is supported per ASR EVC request.

New EVC Request

EVC - SAMPLE	
ASR FIELD	VALUE
ICASR Screen	
REQTYP	SD
RTR (Response Type Request)	F only
EVC1	A
PIU (Percentage Interstate Usage)	100
QTY	0000001
BAN	BAN used on UNI ASR
REMARKS	Any additional information
ICADM Screen	
ACNA	XXX
VTA (ASR – Bill Section) (Variable Term Agreement)	Not Required
FUSF (Federal Universal Service Fee)	E = Exempt N = Non-Exempt
ICEVC Screen	
EVCNUM (Ethernet Virtual Connection Reference Number)	EVC Reference Number (Provided by customer)
NC (Network Channel)	VLP- point- to-point
NUT (Number of Terminations)	Quantity of EVC UNI terminations on the ASR No more than 02 Valid entries: 02
UREF (UNI Reference Number)	UNI Reference Number NOTE: The total number of UREFs must equal the value specified in the Number of UNI Terminations (NUT) = 02
UACT (UNI Activity Indicator)	UNI Activity Indicator (N, C, or D)
NCI (Network Channel Interface)	02VLN.A2 – Port combination tagged and untagged 02VLN.V – VLAN (CE-VLAN field must be populated)
EVSCP (Ethernet Virtual Connection Switch Point)	IPAG Switch CLLI of the RUID
RUID (Related UNI Identifier)	UNI Port Circuit ID
CEVLAN (Customer Edge Virtual Local Area Network)	VLAN ID (0002 – 4090)
LREF (Level of Service Reference)	1 (default)
LACT (Level of Service Activity Indicator)	N, C or D
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
PPCoS	Required when SPEC is VPEVCRT
BDW (CIR Bandwidth)	xxM (EX: 20M) (Total EVC CIR bandwidth cannot exceed the UNI CIR value)

EVC Disconnect

EVC – DISCONNECT EXAMPLE	
ASR FIELD	VALUE
ICASR SCREEN	
ACT	D
REQTYP	SD
EVC I (EVC Indicator)	A
RTR (Response Type Request)	F only (DLR is not available for an EVC)
QTY	0000001
BAN	BAN EVC was established
ICEVC Screen	
EVCID	EVC Circuit ID to be disconnected
EVCNUM (Ethernet Virtual Connection Reference Number)	EVC Reference Number (Provided by customer)
NC (Network Channel)	VLP- point-to-point
REMARKS	Any additional information

EVC Administrative Section

<u>Form</u>	<u>Fields applicable for EVC Connections</u>
ICASR	ACT = N, C, D or R REQTYP = SD EVC I – Ethernet Virtual Connection Indicator = A

EVC Detail Section

EVC NUM – Ethernet Virtual Connection Reference Number
 NC – Network Channel (**VLP-**) (see EVC NC Options chart)
 EVCID – Ethernet Virtual Connection Identifier (**EVC Circuit ID - ACT C, D, R**)
 NUT – Number of Terminations

EVC- UNI Mapping Detail Section

UREF – User Network Interface (UNI) Reference Number
 UACT – User Network Interface (UNI) Activity Indicator (N, C, or D)
 NCI – Network Channel Interface (02VLN.A2 or 02VLN.V)
 EVCSP – Ethernet Virtual Connection Switch Point (equipment CLLI)
 CE-VLAN – Customer Edge Virtual Local Area Network

- **Permissible CEVLAN range is 0002 - 4090**

RUID – Related UNI Identifier (Circuit ID of UNI where EVC terminates)
 SPEC - Service and Product Enhancement Code (Specifies the CoS; See SPEC code chart)
 BDW – Bandwidth (5Mbps to 1000Mbps; EVC CIR in 1Mbps increments)

Disconnect NNI/UNI Port Configuration:

NNI/UNI Port Disconnect Prior to submitting a UNI port disconnect ASR, all associated EVC circuits must be disconnected first.	
ASR Field/Form	ASR Field Entry Value
ICASR Screen	
REQTYP	SD or ED
RTR (Response Type Request)	S (DLR to be issued) D or F (No DLR will be issued)
ACT	D (Disconnect)
ECCKT	Provide existing Circuit ID

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Switched Ethernet Service Change Orders

To change the Bandwidth (BWD) an UNI change order will need to be submitted prior to the EVC change order being submitted, for billing purposes.

The following scenarios can be done on a change order (ACT=C)

- VLAN or NNI change on EVC done as a hot cut. The words “Hot Cut” must be in remarks. Please use the FDT field and include a conference bridge and time for cut. If a cut is scheduled for after normal business hours the ALBR field is also required.
- Upgrade/downgrade if no equipment change
- Inside move same address/demarc move
- Since a combo order can't be used on a change order, the RPON field is required for both the UNI and EVC orders. The EVC PON may be JEP'D if the RPON field is not populated.
- The interval for a change order is 20 business days

Change NNI/UNI Port Configuration:

NNI/UNI CIR Change	
ASR Field/Form	ASR Field Entry Value
ICASR Screen	
REQTYP	SD or ED
RTR (Response Type Request)	S (DLR to be issued) D or F (No DLR will be issued)
ACT	C (change)
BAN	E
ECCKT	Provide existing Circuit ID
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
RPON	EVC PON
REMARKS	Changes being made
ICSES Screen	
NC	Upgrade/downgrade CIR Speed change NC code
NCI	See 'Code' Section
SECNCI	See 'Code' Section
ICSAP Screen	
EU Name	End User Customer Name
SANO, SASN, etc.	End User Address
JS	D (DEMARC)
LCON, ACTEL, and Email	Name, Tel # and Email to contact for Site Visit

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EVC Change Order

Bandwidth change

EVC – Change EXAMPLE	
ASR FIELD	VALUE
ICASR SCREEN	
ACT	C
REQTYP	SD
EVCI (EVC Indicator)	A
RTR (Response Type Request)	F only
QTY	0000001
BAN	E
RPON	UNI PON
Remarks	Changes being made
ICEVC Screen	
Ethernet Virtual Connection Detail Section	
EVCNUM	0001
NC	VLP-
EVCID	EVC Circuit ID to be changed
NUT	2
UNI Mapping Detail Section 1st Termination	
UREF	01
UACT	C
NCI	current
RUID	UNI or NNI Circuit ID
CE-VLAN	If applicable
LREF	1
LOSACT	C
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
PPCoS	Required for VPEVCRT only
BDW	New Bandwidth (must have a M or G) ex: 20M
UNI Mapping Detail Section 2nd Termination	
UREF	02
UACT	C
NCI	current
RUID	UNI or NNI Circuit ID
CE-VLAN	If applicable
LREF	1
LOSACT	C
SPEC	VPEVCBE, VPEVCEX, VPEVCCR, VPEVCRT
PPCoS	Required for VPEVCRT only
BDW	New Bandwidth (must have a M or G) ex: 20M



On a bandwidth change for an EVC circuit, the UNI is also required for billing purposes.

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