



# Ethernet Services

E-Access & E-Line

## Overview

This guide provides detailed information about Windstream's Ethernet services and instructions for navigating the Ethernet ASR.

Windstream leverages its MPLS and Ethernet infrastructure to provide Ethernet E-Access and E-Line services, with customers benefitting from the extensive, unique Ethernet footprint, as well as advanced service delivery capabilities.

- Ethernet Service attributes are based on the Metro Ethernet Forum Technical Specification – MEF 2.0
- MEF defines the E-Line/E-Access EPL (Ethernet Private Line) service type as a port-based service that includes all-to-one bundling. E-Line/E-Access EVPL (Ethernet Virtual Private Line) is a VLAN-based solution that supports service-multiplexing at the UNI.

# Service Types

**E-Line EPL** – A port-based service with a high degree of transparency (figure 1). As a transparent service, there is no need to coordinate a detailed CE-VLAN ID to EVC mapping. All service frames at the UNI will be mapped to a single EVC.

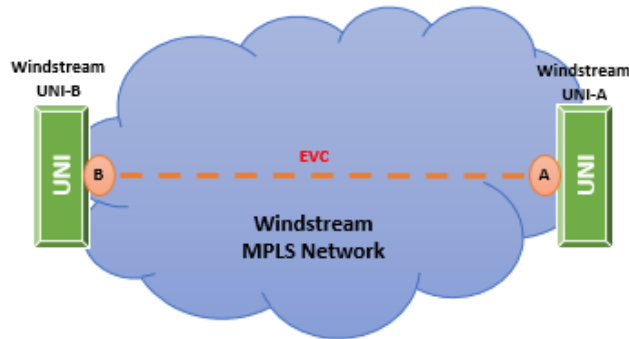


figure 1

**E-Line EVPL** – A VLAN-based service that allows multiple service instances to be configured at the UNI interface (figure 2). This service will require an EVC endpoint map for each EVC to specify how service frames are mapped at the UNI.

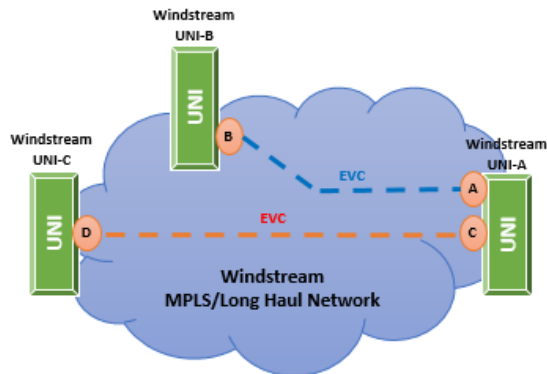


figure 2

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**E-Access EPL** – A port-based service with a high degree of transparency (figure 3). As a transparent service, there is no need to coordinate a detailed CE-VLAN ID to OVC mapping. All service frames at the UNI will be mapped to a single OVC; however, the S-VLAN ID at the ENNI is preserved and will need to be coordinated.

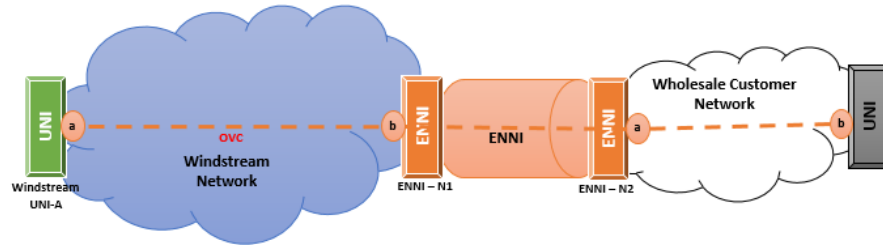


figure 3

**E-Access EVPL** – A VLAN based service that allows multiple service instances to be configured at the UNI interface (figure 4). This service will require an OVC endpoint map for each OVC to specify how service frames are mapped at the UNI. In addition, the S-VLAN ID value will need to be coordinated between Windstream and the wholesale customer.

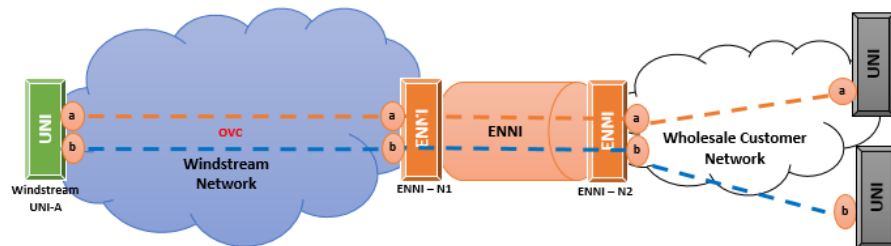


figure 4

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## Peering Locations and Service Markets for E-Access (ENNI Location)

There are several pre-established peering locations for E-Access services designated by region served.

- Each peering location has geographic service boundaries
- Peering locations serve designated markets

Customers should contact their assigned account management team for the most up-to-date list of interconnect locations and serving markets.

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# Pricing Structure For E-Access

## ENNI

- Standardized ENNI pricing for 1Gbps and 10Gbps
- Oversubscription is allowed but must be managed by the customer

## UNI

EoC and fiber loop options are available.

- 10/100Mbps, 1Gbps, and 10Gbps ports are available
- Inter-region fee allows a carrier to access end-user locations outside of the serving area of a given peering point

## ENNI Extensions

Windstream can extend service from the ENNI router location to an alternate location.

- Pricing is subject to ICB rates
- All ENNI extensions are protected

Expedites are supported for Carrier Ethernet E-Access and E-Line services and can be requested through the EXP field on the Access Service Request (in the Administrative section). The expedite request can take up to fourteen (14) calendar days from the standard interval and the expedite charge of \$1,000.00 will be billed regardless of whether Windstream can meet the date requested.

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# ASR Requirements

To accurately provision and bill for Carrier Ethernet services, Windstream requires completion of all ASR fields, based on the most recent Telecordia standards.

The following information outlines the proper use of the fields required to process an ASR for Windstream's E-Access, ENNI, UNI, and OVC/EVC services. If additional resources are needed, customers should contact Telecordia or their assigned Windstream account management team for formal ASR training.

Note: E-Access – The ENNI circuit must be ordered prior to any UNI orders. In addition, since an OVC order must reference the appropriate ENNI and UNI, the UNI must be ordered prior to the OVC.

Note: Carrier cannot change the end-user's address via a change order. This would require a new UNI order and a disconnect order for the old UNI.

See quick reference table below for the required form by service type:

Order Type	ASR	Switched Ethernet Service Request (SESR)	SALI	EVC
ENNI	X	X	X	
E-Access EVPL	X	X	X	
E-Access EPL	X	X	X	
E-Line EVPL	X	X	X	
E-Line EPL	X	X	X	
OVC	X			X

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EVC	X			X
Combo Order	X	X	X	

Note: if the primary location is an ACTL, the SALI form is not required.

The example table below shows an ASR order layout for Carrier Ethernet services:

Example Orders	PON	PON #2
ENNI	ASR-EUSA (ENNI)	
E-Access and E-Line EVPL	ASR-SESR-SALI (UNI)	ASR-EVC
E-Access and E-Line EPL	ASR-SESR-SALI (UNI)	ASR Transport

Note: Windstream supports the Combo ASR form for E-Access Service.

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# Access Service Request – Administrative Section

This section contains information about Windstream services that are being ordered. Associated fields on the ASR administrative screen can be found below:

Field	Description	Populate With/Usage
<b>CCNA</b>	<b>Custom Carrier Name Abbreviation</b> - 3-alpha characters.	<b>Required</b>
<b>PON</b>	<b>Purchase Order Number</b> – Identifies the customer’s unique purchase order number for the request. 16-alpha/numeric characters.	<b>Required</b>
<b>VER</b>	<b>Version Identification</b> – Identifies the provider service center. 4-alpha/numeric characters.	<b>Required</b> Initial ASR request = 00; if sending SUPP then assign next number (i.e.: 01, then 02, then 03...)
<b>ICSC</b>	<b>Interexchange Customer Service Center</b> – Identifies the provider service center. 4-alpha/numeric characters.	<b>Required</b> Valid entry key: KD05
<b>D/TSENT</b>	<b>Date and Time Sent</b> – Identifies the date and time that the ASR is sent by the customer. 17-alpha/numeric characters including 3-hypens.	<b>Required</b> System populated

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<b>CBD</b>	<b>Call Before Dispatch</b> – Identifies site operational availability in hours	<b>Optional</b>
<b>DDD</b>	<b>Desired Due Date</b> – Identifies the customer’s desired due date. 10-alpha/numeric characters.	<b>Required</b> Valid entry: YYYYMMDD Standard intervals: <input type="checkbox"/> ICB, capacity needed
<b>PROJECT</b>	<b>Project Identification</b> – Identifies the project associated to the request. 16-alpha/numeric characters.	<b>Optional</b> Note: field use example would be relating multiple Access Service Requests, previously negotiated orders, etc...
<b>CNO</b>	<b>Case Number</b> – Identifies the quotation tracking number assigned by the provider in response to a provisioning arrangement inquiry, i.e. diversity. 12-alpha/numeric characters.	<b>Conditional</b> Valid entry: customer to enter the quote ID provided for ICB based pricing. Note: For non-MSA products
<b>REQTYP</b>	<b>Requisition Type and Status</b> – Identifies the type of service being requested and the status of the request. 2-alpha characters	<b>Required</b> Valid entries: <input type="checkbox"/> REQTYP = SD (Special Access) <input type="checkbox"/> REQTYP = ED (End-user Request) – Value for UNI or NNI with an address

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<b>ACT</b>	<b>Activity</b> – Identifies the activity involved in the service request. 1-alpha character	<b>Required</b> Valid entries: <input type="checkbox"/> N = New <input type="checkbox"/> D = Disconnection <input type="checkbox"/> C = Change or Modify existing service
<b>RTR</b>	<b>Response Type Requested</b> – Identifies the type of confirmation response requested by the customer. 2-alpha/numeric characters.	<b>Required</b> Valid entry: <input type="checkbox"/> F = Send FOC only
<b>QSA</b>	<b>Quantity Service Address Location Information</b> – Identifies the total number of service address location information forms being sent by the customer. 2-numeric characters.	<b>Conditional</b> Example: 01 Note: Prohibited when EVCI = A, leave field blank Required for UNI or a NNI when not using an ACTL as the A location
<b>EVCI</b>	<b>Ethernet Virtual Connection Indicator</b> – Indicates that an Ethernet Virtual Connection Form is associated with this service request. 1-alpha character.	<b>Conditional</b> Required when ordering EVC or an OVC. Valid entries: <input type="checkbox"/> A = Stand-alone EVC – EVC form will be attached <input type="checkbox"/> B = Combination EVC – EVC form attached

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<b>SEI</b>	<b>Switched Ethernet Indicator</b> – Identifies this service request is ordering a UNI/ENNI connection to a provider owned Ethernet switch/router.	<b>Conditional</b> Required when ordering a UNI or ENNI Valid entry: Y (yes)
<b>EXP</b>	<b>Expedite</b> – Indicates that expedited treatment is requested, and any charges generated in provisioning this request will be accepted.	<b>Conditional</b> Valid entries: <input type="checkbox"/> Y (yes) <input type="checkbox"/> Applicable charges
<b>CUST</b>	<b>Customer Name</b> – Identifies the name of the customer originating this request.	<b>Required</b> - when the CCNA field is “CUS”, otherwise optional.
<b>CKR</b>	<b>Customer Circuit Reference</b> – Identifies the circuit number or range of circuit numbers used by the customer.	<b>Conditional</b> Required when ordering UNIs or ENNIs. Prohibited when ordering standalone EVCs or OVCs
<b>UNIT</b>	<b>Unit Identification</b> – Identifies whether the Quantity (QTY) field contains number of circuits, ring segments, Busy Hour Minutes of Capacity (BHMC) for switched access service or percent of market share.	<b>Required</b> Valid entry: C
<b>PIU</b>	<b>Percentage of Interstate Usage</b> – Identifies the expected Interstate Usage for the access service for the request. 3-alpha/numeric characters.	<b>Required</b> Valid entry: 100
<b>QTY</b>	<b>Quantity</b> – Identifies the quantity involved in the service request.	<b>Required</b> Example: 0000001

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<b>SPEC</b>	<b>Service and Product Enhancement</b>	<b>Conditional</b>
	<b>Code</b> – Identifies a specific product or service offering. 5-alpha/numeric characters, 7-alpha/numeric characters.	Required when ordering UNIs or ENNIs. Prohibited when ordering standalone EVCs or OVCs
	Note: E-Line with CoS (Class of Service) only provided in specific markets. List provided with available markets in attachment.	Valid entries:
	To validate, please go to: <a href="https://internal.windstreamwholesale.com/transport/tools/specTool.php">https://internal.windstreamwholesale.com/transport/tools/specTool.php</a>	<ul style="list-style-type: none"> <li><input type="checkbox"/> AEVPL – E-Access EVPL</li> <li><input type="checkbox"/> AEPLX – E-Access EPL</li> <li><input type="checkbox"/> AEVPLCS – E-Access EVPL with CoS</li> <li><input type="checkbox"/> AEPLXCS – E-Access EPL with CoS</li> <li><input type="checkbox"/> EEVPL – E-Line EPL no CoS</li> <li><input type="checkbox"/> EEEPL – E-Line EPL no CoS</li> <li><input type="checkbox"/> EVPLCoS – E-Line EVPL with CoS</li> <li><input type="checkbox"/> EEPLCoS – E-Line EPL with CoS</li> </ul>
<b>BAN</b>	<b>Billing Account Number</b> – Identifies the billing account to which the recurring and non-recurring charges for this request will be billed.	<b>Required</b>
		Valid entry: E
<b>ACTL</b>	<b>Access Customer Terminal Location</b> – Identifies the CLLI code of the Customer Facility terminal location. 11-alpha/numeric characters.	<b>Required</b> – for the ENNI when the primary location is not an end user. Note: an ACTL will normally be provided for an ENNI order.

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<b>RPON</b>	<b>Related Purchase Order Number</b> – Identifies the PON of a related Access Service Request. RPON and Remarks should be used to associate new ports to an existing service.	<b>Conditional</b> On an order for a UNI with an activity of “N”, this should contain the PON of the related UNI for the E-Line product; otherwise, optional.
<b>REMARKS</b>	<b>Remarks</b> – Identifies a free-form field and can be used to expand upon and clarify other data on this request. 186-alpha/numeric characters.	<b>Optional</b> Valid entry: Additional clarifying information

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## Access Service Request – Bill Section

The billing section of the ASR is required to ensure the accuracy of the billing data.

**Note:** These fields are order-specific and are not required on subsequent revisions unless changes are being made to the original request.

Field	Description	Populate With/Usage
<b>BILLNM</b>	<b>Billing Name</b> – Identifies the name of the person, office, or company receiving the bill (designated by the customer).	<b>Required</b>
<b>SBILLNM</b>	<b>Secondary Billing Name</b> – Identifies the name of a department or group within the designated BILLNM entry. 25-alpha/numeric characters.	<b>Optional</b>
<b>ACNA</b>	<b>Access Customer Name Abbreviation</b> – Identifies the common language code for the customer who should receive the bill for ordered services. 3-alpha characters.	<b>Required</b>
<b>TE</b>	<b>Tax Exemption</b> – Indicates whether customer has submitted a tax exemption form to the provider.	<b>Conditional</b>
<b>FUSF</b>	<b>Federal Universal Service Fee</b> – Identifies the service ordered on this request should be assessed or exempted from the FUSF.	<b>Conditional</b> Required for new or change activities. Prohibited for disconnect orders.

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<b>STREET</b>	<b>Street Address (Bill)</b> – Identifies the street of the billing address associated with the billing name. 25-alpha/numeric characters.	<b>Required</b>
<b>ROOM</b>	<b>Room (Bill)</b> – Identifies the room for the billing address associated with the billing name. 6-alpha/numeric characters.	<b>Required</b>
<b>CITY</b>	<b>City (Bill)</b> – Identifies the city, village, or township of the billing address associated with the billing name. 25-alpha/numeric characters.	<b>Required</b>
<b>STATE</b>	<b>State (Bill)</b> – Identifies the two-character postal code for the state of the billing address associated with the billing name. 2-alpha characters.	<b>Required</b>
<b>ZIP CODE</b>	<b>Zip Code (Bill)</b> – 12-alpha/numeric characters.	<b>Required</b>
<b>BILLCON</b>	<b>Billing Contract (Bill)</b> – 15-alpha/numeric characters.	<b>Required</b>
<b>TEL NO</b>	<b>Telephone Number (Bill)</b> – 17-numeric characters, including 3-hyphes.	<b>Required</b>
<b>EMAIL</b>	<b>Billing Contact Electronic Mail Address (Bill)</b> – Identifies the electronic mail address of the billing contact when a customer profile does not already exist.	<b>Required</b>

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<b>VTA</b>	<b>Variable Term Agreement (Bill)</b> – Identifies the duration, contract date, or contact identification number of any variable term agreement that may be offered by a provider.	<b>Required</b>
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# Access Service Request – Contact Section

The Contact Section of the ASR contains relevant contact information for the person initiating the order with Windstream

Field	Description	Populate With/Usage
<b>INIT</b>	<b>Initiator</b> – Identifies the customer’s employee originating the request. 15-alpha/numeric characters.	<b>Required</b>
<b>INIT TEL NO</b>	<b>Telephone Number (INIT)</b> – Identifies the telephone number of the customer’s employee originating the request. 17-alpha/numeric characters, including 3-hyphens.	<b>Required</b>
<b>INIT FAX NO</b>	<b>Initiator Fax Number (INIT)</b> – Identifies the fax number of the initiator. 12-numeric characters, including 2-preprinted hyphens.	<b>Required</b>
<b>INIT EMAIL</b>	<b>Initiator Electronic Mail Address (INIT)</b> – Identifies the electronic mail address of the initiator. 60-alpha/numeric characters.	<b>Required</b>
<b>DSGCON</b>	<b>Design/Engineering Contact Information</b> – Identifies the employee of the customer or agent who should be contacted on design and/or engineering matters and to whom the DLR may be sent. 15-alpha/numeric characters.	<b>Conditional</b> Required when the ACT field is “N” or “C”, otherwise prohibited.

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<b>DSGCON TELNO</b>	<b>Telephone Number (DSGCON)</b> – Identifies the telephone number of the customer’s employee who should be contacted on design and/or engineering matters. 17-alpha/numeric characters, including 3-preprinted hyphens.	<b>Conditional</b> Required when the DSGCON field is populated, otherwise prohibited.
<b>DSG FAX NO</b>	<b>Design Fax Number (DSGCON)</b> – Identifies the fax number on the design contact. 12-numeric character, including 2-preprinted hyphens.	<b>Conditional</b> Required when the ACT field is “N”, “C”, or “T”, the DRC field is not populated, the RTR field is “S” or “1-10” and the STREET (DSGCON) field is not populated, otherwise optional.
<b>DSG EMAIL</b>	<b>Electronic Mail Address (DSGCON)</b> – Identifies the email address of the DSGCON. 60-alpha/numeric characters.	<b>Conditional</b> Required when the DSGCON field is populated.
<b>STREET</b>	<b>Street Address (DGSCON)</b> – Identifies the street address for the designer and/or engineering contact. 25-alpha/numeric characters.	<b>Conditional</b> Required when the DSGCON field is populated.
<b>FL</b>	<b>Floor (DSGCON)</b> – Identifies the floor of the design and/or engineering contact’s address. 3-alpha/numeric characters.	<b>Conditional</b> Optional when the STREET (DSGCON) field is populated, otherwise prohibited.

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<b>CITY</b>	<b>City (DSGCON)</b> – Identifies the city of the design and/or engineering contact’s address. 25-alpha/numeric characters.	<b>Conditional</b> Required when the STREET (DSGCON) field is populated, otherwise prohibited.
<b>STATE</b>	<b>State (DSGCON)</b> – Identifies the two-character postal code for the state/province of the design and/or engineering contact’s location. 2-alpha characters.	<b>Conditional</b> Required when the STREET (DSGCON) field is populated, otherwise prohibited.
<b>ZIPCODE</b>	<b>Zip Code (DSGCON)</b> – Identifies the zip code or postal code of the design and/or engineering contact’s address. 12-alpha/numeric characters.	<b>Conditional</b> <b>Required</b> when the STREET (DSGCON) field is populated, otherwise prohibited.
<b>IMPCON</b>	<b>Implementation Contact</b> – Identifies the customer’s employee responsible for control of installation and completion. 15-alpha/numeric characters.	<b>Required</b>
<b>TEL NO</b>	<b>Telephone Number (IMPCON)</b> – Identifies the telephone number of the implementation contact. 17-numeric characters, including 3-preprinted hyphens.	<b>Required</b>

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# Switched Ethernet Services Request

Information provided in this section should be entered when ordering the UNI or an ENNI. **Note:** E-Access is when the customer orders from a UNI end-user location to Windstream's ENNI. E-Line is when the customer orders UNI to UNI service.

Field	Description	Populate With/Usage
<b>NC</b>	<b>Network Channel</b> – Identifies the Network Channel (NC) code for the circuit(s) involved. The NC code describes the channel provided by Windstream from the end-user's location. 4-alpha/numeric characters.  The NC also describes portions of a circuit: <ul style="list-style-type: none"><li><input type="checkbox"/> ACTL to HUB</li><li><input type="checkbox"/> HUB to HUB</li><li><input type="checkbox"/> HUB to End-user's Location</li></ul>	<b>Required</b> See service code section
<b>NCI</b>	<b>Network Channel Interface Code</b> – Identifies the electrical conditions on the circuit at the primary location. 5 to 12-alpha/numeric characters.	<b>Required</b>
<b>SECNCI</b>	<b>Secondary Network Channel Interface</b> – Identifies the Ethernet switching point, terminating equipment or terminating location, in CLLI code format at the UNI/ENNI termination	<b>Conditional Required</b>

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**ESP**

**Ethernet Service Point** – Identifies the Ethernet Switching point, terminating equipment or termination location, in CLLI code format, at the UNI/ENNI

**Conditional**

When the ACT field on the ASR form is populated with “N”, ESP may be populated with the customer’s preferred switch location or left blank. The provider will determine the applicable switch location and provide the switch CLLI Code on the Confirmation Notice (CN). On a change order, the ESP is required. The ESP will be provided on the Confirmation Notice. In some cases, the ESP may change after the original confirmation has been sent. If this is the case, an additional confirmation will be sent with the corrected ESP.

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**L2CPP**

**Layer 2 Control Protocol Peering** – Identifies a set of protocols that are used for various control purposes that allow the Ethernet network to effectively process information for subscribers who chose to deploy 802.1Q

**Optional**

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**L2CP-ADDR****Layer 2 Control Protocol Address**

**Set** – Identifies the discard/pass action for all non-peered layer 2 control protocols

**Optional**

Valid entries:

- CTA = CVLAN Tag Aware
  - CTB = CVLAN Tag Blind
  - CTB-2 = CVLAN Tag blind option 2
- 

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# Service Address Location Information Form

The Service Location Information Form (SALI) must be provided to accurately reflect the service address information. **Note:** This form is required only for the UNI. It is not required for NNI. If an ACTL does not exist, customers may specify address for NNI.

Field	Description	Populate With/Usage
<b>PI</b>	<b>Primary Location Indicator</b> – Indicates the provided service address location information is a primary location.	<b>Conditional</b> Required when request type begins with “E” and location is the primary. Should not be used for the end-user “Z” location.  Valid entry = Y (yes)
<b>EUNAME</b>	<b>End User Name</b> – Identifies the end user name associated with the termination location. 25-alpha/numeric characters.	<b>Required</b> Example: ABC Corp
<b>NCON</b>	<b>New Construction</b> – Indicates the service address is new construction. 1-alpha character.	<b>Optional</b> Valid entry: Y = Yes
<b>SAPR</b>	<b>Address Number Prefix</b> – Identifies the prefix for the address number of the service address. 6-alpha/numeric characters.	<b>Optional</b> Example: 50 W is the address number prefix for 50W 100 ½ SW Main Street NW, Floor 5, Wing 2, Suite 10A

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<b>SANO</b>	<b>Address Number</b> – Identifies the number of the service address. 10-alpha/numeric characters.	<b>Required</b> Example: 100 is the address number for 50W 100 ½ SW Main Street NW, Floor 5, Wing 2, Suite 10A
<b>SASF</b>	<b>Address Number Suffix</b> – Identifies the suffix for the address number of the service address. 4-alpha/numeric characters.	<b>Optional</b> Example ½ is the address number suffix for 50W 100 ½ SW Main Street
<b>SASD</b>	<b>Street Directional Prefix</b> – Identifies the street directional prefix for the service address. 2-alpha characters	<b>Optional</b> Valid entries: N, S, E, W, NE, NW, SE, SW
<b>SASN</b>	<b>Street Name</b> – Identifies the street name of the service address. 60-alpha/numeric characters.	<b>Required</b>
<b>SATH</b>	<b>Street Type</b> – Identifies the thoroughfare portion of the street name of the service address. 7-alpha characters.	<b>Optional</b>
<b>SASS</b>	<b>Street Directional Suffix</b> – Identifies the street directional suffix for the service address. 2-alpha characters.	<b>Optional</b> Valid entries: N, S, E, W, NE, NW, SE, SW
<b>LD1, LD2, LD3</b>	<b>Location Designators</b> – Identifies additional specific information related to the service address (e.g., building, floor, room). 4-alpha characters.	<b>Optional</b>
<b>LV1, LV2, LV3</b>	<b>Location Values</b> – Identifies the value associated with the first location designator of	<b>Required</b>

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	the service address. 10-alpha/numeric characters.	
<b>CITY</b>	<b>City</b> – Identifies the city, village, township, etc. of the service address. 32-alpha/numeric characters.	<b>Required</b>
<b>STATE</b>	<b>State</b> – Identifies the state/province of the service address. 2-alpha characters.	<b>Required</b>
<b>ZIP</b>	<b>Zip/Postal Code</b> – Identifies the ZIP code, ZIP code + extension or postal code of the service address. 12-alpha/numeric characters.	<b>Required</b>
<b>AAI</b>	<b>Additional Address Information</b> – Identifies additional location information about the service address. 150-alpha/numeric characters.	<b>Optional</b> Example: Specific access hours, availability, contact notification requirements, specific access requirements
<b>JS</b>	<b>Jack Status</b> – Indicates whether the access service is to terminate at a new or existing registered jack or demark. 1-alpha character	<b>Required</b> when ACT type is “N”. Valid entry: F
<b>LCON</b>	<b>Local Contact</b> – Identifies the local contact name for access. 15-alpha/numeric characters.	<b>Required</b>
<b>ACTEL</b>	<b>Access Telephone Number</b> – Identifies the telephone number to be used for arranging access to the service address location for installation purposes. 14-numeric characters, excluding 3-preprinted hyphens.	<b>Required</b>

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<b>LCON EMAIL</b>	<b>Local Contact Email Address</b> – Identifies the electronic mail address of the local contact. 60-alpha/numeric characters.	<b>Conditional</b> Required for all activities except disconnect. Prohibited for disconnect orders.
<b>OFC</b>	<b>Optical Fiber Connector</b> – Optional when the JS field is “D” or blank, PI field is “Y”, and the NCI field on the service specific form specifies an optical hand-off.	<b>Conditional</b> Valid entry: 14-alpha/ numeric characters

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# Ethernet Virtual Connection

The Ethernet Virtual Connection form (EVC) must be completed to provide specific detail related to the ordering and provisioning of the “EVC”. The term EVC is to be interpreted to be used for E-Line (EVC) and E-Access (OVC).

Field	Description	Populate With/Usage
<b>CCNA</b>	<b>Customer Carrier Name Abbreviation</b> – 3-alpha characters.	<b>Required</b>
<b>PON</b>	<b>Purchase Order Number</b> – Identifies the customer’s unique purchase order number for the request. 16-alpha/numeric characters	<b>Required</b>
<b>VER</b>	<b>Version Identification</b> – Identifies the customer version number.	<b>Required</b>
<b>ASR NO</b>	<b>Access Service Request Number</b> – Identifies the number that may be generated by the provider to identify a customer’s request.	<b>Conditional</b> Required on all supplement orders when PON is not unique. Prohibited on initial request.
<b>EVC NUM</b>	<b>Ethernet Virtual Request Number</b> – Identifies a unique number associated with the Ethernet Virtual Connection or the Operator Virtual Connection.  The EVC/OVC number is customer assigned and is returned on the confirmation notice to the ordering customer.	<b>Required</b>

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<b>NC</b>	<p><b>Network Channel</b> – Identifies the network channel (NC) code for the circuit(s) involved. The NC code describes the channel provided by Windstream from the end-user’s location. 4-alpha/numeric characters.</p> <p>The NC also describes portion of a circuit</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> ACTL to HUB</li> <li><input type="checkbox"/> HUB to HUB</li> <li><input type="checkbox"/> HUB to End-User’s Location</li> </ul>	<p><b>Required</b></p> <p>See Service Codes section</p>
<b>EVCID</b>	<p><b>Ethernet Virtual Connection Identifier</b> – Identifies the provider assigned to the EVC/OVC identifier.</p>	<p><b>Conditional</b></p> <p>Optional on new requests. Required on Change and Disconnect requests. 28-alpha/numeric characters.</p>
<b>NUT</b>	<p><b>Number of UNI/ENNI Terminations</b> – Reflects the number of UNI/ENNI termination occurrences being affected by the service request.</p>	<p><b>Conditional</b></p> <p>Valid entry: 01-20</p>
<b>SVP</b>	<p><b>SVLAN ID Preservation</b> – Identifies the customer is requesting S-VLAN ID preservation on a requested OVC. Used for E-Access only.</p>	<p><b>Conditional</b></p>
<b>EVCKKR</b>	<p><b>Ethernet Virtual Connection Customer Circuit Reference</b> – Identifies the circuit number used by the customer.</p>	<p><b>Optional</b></p>

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<b>EPS</b>	<b>Egress Profile Selection</b> – Identifies the traffic allocation exiting the Provider Edge (PE) device and being delivered to the customer’s route.	<b>Conditional</b> Valid entry: 30-alpha/numeric characters
<b>UREF</b>	<b>User Network Interface (UNI) Reference Number</b> – Identifies the reference number associated to the UNI port or ENNI termination point to which the EVC/OVC mapping requirements will be applied	<b>Conditional</b>
<b>EI</b>	<b>ENNI Indicator</b> – Identifies when the UREF is an ENNI. E-Access only.	<b>Conditional</b>
<b>AUNT</b>	<b>Associated UNI/ENI Termination</b> – Identifies the UREF termination point associated with the physical port being requested on the ASR.	<b>Conditional</b> Required when the EVCI field on the ASR form is “B”, the associated UREF field is populated and it is the termination point associated with this UNI/ENI, otherwise prohibited.

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<b>UACT</b>	<b>User Network Interface (UNI) Activity Indicator</b> – Identifies the activity that is taking place at this UNI/ENNI termination point.	<b>Conditional</b> Note that Windstream does not support a “C” value in the UACT field when an EVC/OVC end-point is changing via a different RPON or RUID. This type of order requires a disconnect order for the prior OVC/EVC and a new order for the OVC/EVC with the desired end-point(s).
<b>RPON</b>	<b>Related Purchase Order Number</b> – Identifies the PON of a related ASR.	<b>Conditional</b> Required when the UREF field is populated and either the RUID field or the AUNT field on the OVC/EVC form is not populated.
<b>NCI</b>	<b>Network Channel Interface Code</b> – Identifies the electrical conditions on the circuit at the primary location. 5 to 12-alpha/numeric characters.	<b>Required</b> See Service Codes section
<b>BUM-FD</b>	<b>Broadcast, Unicast, and Multicast Frame Delivery</b> – Identifies the service frame delivery disposition for broadcast, unicast, and multicast service frames outside of the provider’s specified throttling default for those providers who bill and/or provision at the port level.	<b>Conditional</b> Valid entries: <input type="checkbox"/> C = Conditional <input type="checkbox"/> D = Discard <input type="checkbox"/> U = Unconditional

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<b>EVCS</b>	<b>Ethernet Virtual Connection Switch Point</b> – Identifies the Ethernet Switching point, CLLI code format, at the UNI/ENNI termination or UNI to UNI.	<b>Conditional</b>
<b>RUID</b>	<b>Related UNI Identifier</b> – Identifies the provider's related circuit ID for a UNI to ENNI.	<b>Conditional</b> Required when the UREF field is populated and the RPRON on the EVC form is not populated
<b>R/L</b>	<b>Root/Leaf</b> – Indicates that the UNI is either a root or a leaf in a rooted multi-point EVC.	<b>Conditional</b>
<b>S-VACT</b>	<b>Service Virtual Local Area Network Activity</b> – Identifies the activity requested for the S-VLAN.	<b>Conditional</b>
<b>EVCMPID</b>	<b>EVC Meet Point ID</b> – Specifies the physical facility ID interconnecting the two service providers in an EVC meet point configuration.	<b>Conditional</b>
<b>CEV-P</b>	<b>CE VLAN Identification Preservation</b> – Identifies if the VLAN ID portion of the customer edge VLAN is preserved.	<b>Optional</b> Valid entries: <input type="checkbox"/> E = Enabled <input type="checkbox"/> D = Disabled
<b>MSFS</b>	<b>UNI Maximum Service Frame Size</b> – Indicates the maximum service frame size (in bytes) allowed at the UNI.	<b>Optional</b>

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<b>OTC</b>	<b>Other Exchange Company</b> – Identifies the EC or Company Code of the network-facing switch of the provider in an EVC meet point service arrangement.	<b>Conditional</b>
<b>ASN</b>	<b>Autonomous System Number</b> – Indicates the unique number identifying the customer Internet network ordering the BGP service.	<b>Conditional</b>
<b>VPN-ACT</b>	<b>Virtual Private Network Identifier Activity</b> – Identifies the activity requested for the VPN-ID.	<b>Conditional</b>
<b>VPN-ID</b>	<b>Virtual Private Network Identifier</b> – Indicates a unique identifier for the VPN creating a secure network connection over a public network.	<b>Conditional</b>
<b>VACT</b>	<b>Customer Edge Virtual Local Area Network Activity Indicator</b> – Identifies the activity requested for the CE-VLAN.	<b>Conditional</b>
<b>CE-VLAN</b>	<b>Customer Edge Virtual Local Area Network</b> – An identifier derivable from a content of a service frame allowing the service frame to be associated with an EVC/OVC at the UNI.	<b>Conditional</b>
<b>LREF</b>	<b>Level of Service Reference Number</b> – Identifies the reference number associated with the level of service mapping configuration being requested.	<b>Conditional</b> Required when the UACT field is “N” or “C”. Optional when the UACT field is “K”; otherwise prohibited.

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<b>LOSACT</b>	<b>Level of Service Activity Indicator</b> – Identifies the activity for the level of service at the UNI termination occurrence.	<b>Conditional</b> Valid entries: <input type="checkbox"/> C = Change <input type="checkbox"/> D = Disconnect <input type="checkbox"/> K = Cancel <input type="checkbox"/> N = New
<b>LOS</b>	<b>Level of Service Name</b> – Identifies a name for a provider-defined level of service performance associated with the Ethernet product offering.	<b>Required</b> when LREF is populated. Valid entries: <input type="checkbox"/> Real Time <input type="checkbox"/> Mission Critical <input type="checkbox"/> Standard <input type="checkbox"/> None
<b>SPEC</b>	<b>Service and Product Enhancement Code</b> – Identifies a specific product or service offering.	<b>Conditional</b>
<b>P-BIT</b>	<b>Priority Bit</b> – An optional parameter within the Ethernet frame to specify priority. In this application, it will be used to map certain traffic to a given level of service on an EVC when the provider supports multiple level of service per EVC.	<b>Conditional</b>
<b>BDW</b>	<b>Bandwidth</b> – Identifies the average rate in bits per second of ingress service frames up to which the network delivers frames and meets the performance objectives defined by the LOS service attribute.	<b>Conditional</b> Required when LOSACT is “N” or “C”.

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<b>DSCP</b>	<b>Differentiated Services Code Point</b> – Identifies an integer value encoded in the DiffServ field of an IP header.	<b>Conditional</b>
<b>TOS</b>	<b>Type of Service</b> – Identifies the quality of service desired.	<b>Conditional</b>
<b>CIR-I</b>	<b>Committed Information Rate (Ingress)</b> – Identifies the average rate (bits per second) up to which service frames are delivered as defined in the provider’s service level specifications.	<b>Conditional</b> Valid CIR expressed as a numeric value by “K”, “M”, or “G” representing Kilobits, Megabits, or Gigabits respectively.
<b>CBS-I</b>	<b>Committed Burst Size (Ingress)</b> – Identifies the bandwidth profile parameter that limits the maximum number of bytes available for a burst of service frames sent at the UNI/ENNI that will be delivered by the service provider based on the level of service specifications.	<b>Conditional</b> Maximum committed burst size valued (numeric value expressed in bytes).
<b>EIR-I</b>	<b>Excess Information Rate (Ingress)</b> – Identifies the average rate (bits per second) up to which service frames may be delivered but will not be guaranteed per the provider’s service level specifications.	<b>Conditional</b> Valid EIR expressed as numeric value represented by “K”, “M”, or “G” representing Kilobits, Megabits, and Gigabits respectively.

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<b>EBS-I</b>	<b>Excess Burst Size (Ingress)</b> – Identifies the bandwidth profile parameter that limits the maximum number of bytes available for a burst of service frames associated with the EIR-I sent at the UNI/ENNI that will be delivered by the service provider based on the level of service performance.	<b>Conditional</b> Maximum excess burst size value (numeric value expressed in bytes).
<b>CMI-I</b>	<b>Color Mode Identifier</b> – Identifies when the provider configuration will use the specific customer CoS markings when applying the bandwidth profile CIR/EIR.	<b>Conditional</b> Valid entries: <input type="checkbox"/> E = Enable Color Aware <input type="checkbox"/> D = Disable Color Aware (change to color-blind mode)
<b>BFC-I</b>	<b>Bandwidth Coupling Flag (Ingress)</b> – Identifies when color-aware markings for a customer marked service frame EIR traffic should use available CIR bandwidth.	<b>Conditional</b> Valid entries: <input type="checkbox"/> E = Enabled <input type="checkbox"/> D = Disabled
<b>REMARKS</b>	<b>Remarks</b> – Identifies a free-form field used to expand upon and clarify other data(s) on this form. Up to 125-alpha/numeric characters.	<b>Optional</b>

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# E-Access and E-Line EVPL

## Ethernet 100Mbps UNI (Electrical/Based T Port) – VLAN based with CIR options

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options
KQEK	2Mbps	<p><b>NCI Electrical Interface</b> 04LN9.1CT (100 Base T)</p> <p><b>SECNCI</b> 02CXF.1GE (Central Office) 04C9.1CT (100Mbps)</p>
KQEN	3Mbps	
KQEJ	5Mbps	
KQEP	6Mbps	
KQE1	10Mbps	
KQEA	15Mbps	
KQE2	20Mbps	
KQEB	25Mbps	
KQE3	30Mbps	
KQEC	35Mbps	
KQE4	40Mbps	
KQED	45Mbps	
KQE5	50Mbps	
KQE-	100Mbps	

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## Ethernet 1Gbps UNI/ENNI (Optical Port) – VLAN based with CIR options.

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options
KRF2	2Mbps	<p><b>NCI Electrical Interface</b> 08LN9.1GE (100 Base T)</p> <p><b>NCI Optical Interface</b> 02LNF.A02 (1000 Base LX) 02LNF.A04 (1000 Base SX) 02QBF.K02 (Collocation/1000 Base)</p> <p><b>SECNCI</b> 02CXF.1GE (Central Office)</p>
KRF3	3Mbps	
KRFA	5Mbps	
KRF6	6Mbps	
KRFB	10Mbps	
KRFC	15Mbps	
KRFD	20Mbps	
KRFE	25Mbps	
KRFF	30Mbps	
KRFG	35Mbps	
KRFH	40Mbps	
KRFI	45Mbps	
KRFJ	50Mbps	
KRE1	100Mbps	
KREB	150Mbps	
KRE2	200Mbps	
KRE3	300Mbps	
KRE4	400Mbps	
KRE5	500Mbps	
KRE6	600Mbps	
KRE7	700Mbps	
KRE8	800Mbps	
KRE9	900Mbps	
KRE0	1000Mbps / 1Gbps	

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**Ethernet E-Access 10Gbps UNI/ENNI (Optical Port) – VLAN based with CIR Options.**

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options
KSE1	1000Mbps	<p style="text-align: center;"><b>NCI Optical Interfaces</b></p> <p style="text-align: center;">02LNF.A02 (10G Base LR SMF/1000 Base ZX)</p> <p style="text-align: center;">02LNF.A04 (10G Base SR)</p> <p style="text-align: center;">02QBF.K02 (Collocation/1000 Base)</p> <p style="text-align: center;"><b>SECNCI</b></p> <p style="text-align: center;">02CXF.10G (Central Office)</p>
KSEC	1500Mbps	
KSE2	2000Mbps	
KSE-	10000Mbps	

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# E-Access and E-Line EPL

## Ethernet 100Mbps UNI (Electrical/Based T Port) – Port based with CIR options.

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options	
<b>KQAJ</b>	2Mbps	<b>NCI Electrical Interface</b> 04LN9.1CT (100 Base T)	
<b>KQAP</b>	3Mbps		
<b>KQAK</b>	4Mbps		
<b>KQAM</b>	5Mbps		
<b>KQAN</b>	6Mbps		
<b>KQAL</b>	8Mbps		
<b>KQA1</b>	10Mbps		
<b>KQAA</b>	15Mbps		
<b>KQA2</b>	20Mbps		
<b>KQAB</b>	25Mbps		
<b>KQA3</b>	30Mbps		
<b>KQAC</b>	35Mbps		<b>SECNCI</b> 02CXF.1GE (Central Office) 04C9.1CT (100Mbps)
<b>KQA4</b>	40Mbps		
<b>KQAD</b>	45Mbps		
<b>KQA5</b>	50Mbps		
<b>KQA-</b>	100Mbps		

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## Ethernet 1Gbps UNI (Optical Port) – Port based CIR options.

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options
KRB2	2Mbps	<p><b>NCI Electrical Interface</b> 08LN9.1GE (1000 Base T)</p> <p><b>NCI Optional Interfaces</b> 02LNF.A02 (1000 Base LX) 02LNF.A04 (1000 Base SX) Q2QBF.K02 (Collocation/1000 Base)</p> <p><b>SENCI</b> 02CXF.1GE (Central Office)</p>
KRB3	3Mbps	
KRBA	5Mbps	
KRB6	6Mbps	
KRBB	10Mbps	
KRBC	15Mbps	
KRBD	20Mbps	
KRBE	25Mbps	
KRBF	30Mbps	
KRBG	35Mbps	
KRBH	40Mbps	
KRBI	45Mbps	
KRBJ	50Mbps	
KRA1	100Mbps	
KRAB	150Mbps	
KRA2	200Mbps	
KRA3	300Mbps	
KRA4	400Mbps	
KRA5	500Mbps	
KRA6	600Mbps	
KRA7	700Mbps	
KRA8	800Mbps	
KRA9	900Mbps	
KRA0	1000Mbps / 1Gbps	

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## Ethernet 10Gbps E-Line UNI (Optical Port) – Port based CIR options.

NC	Port CIR Speed (4 <sup>th</sup> Position)	Permissible NCI/SECNCI Options
KGL2	2Mbps	<p style="text-align: center;"><b>NCI Optional Interfaces</b></p> <p style="text-align: center;">02LNF.A02 (10G Base SR/LR) Q2QBF.K02 (Collocation/10000 Base)</p> <p style="text-align: center;"><b>SENCI</b></p> <p style="text-align: center;">02LNF.A02</p>
KGL3	3Mbps	
KGL4	5Mbps	
KGL5	6Mbps	
KGL6	10Mbps	
KGL7	15Mbps	
KGL8	20Mbps	
KGL9	25Mbps	
KGLA	30Mbps	
KGLB	35Mbps	
KGLC	40Mbps	
KGLD	45Mbps	
KGLE	50Mbps	
KGLF	100Mbps	
KGLG	150Mbps	
KGLH	200Mbps	
KGLI	300Mbps	
KGLJ	400Mbps	
KGLK	500Mbps	
KGLL	600Mbps	
KGLM	700Mbps	
KGLN	800Mbps	
KGLO	900Mbps	
KGL1	1000Mbps / 1Gbps	

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## NCI/SECNCI Codes

### NCI Code 04LN9.10T (Used with 10Mbps Electrical)

**04** = Four conductors (4-wire)

**LN** = Local Area Network Interface

**9** = 100 Ohms

**10T** = 100 Base-T Ethernet

### NCI Code 04LN9.1CT (Used with 100Mbps Electrical)

**04** = Four conductors (4-wire)

**LN** = Local Area Network Interface

**9** = 100 Ohms

**1CT** = 100 Base-T Ethernet

### NCI Code 08LN9.1GE (Used with 1Gbps Electrical)

**08** = Eight conductors (4-wire)

**LN** = Local Area Network Interface

**9** = 100 Ohms

**10T** = 1000 Base-T Ethernet

### NCI Code 02LNF.A02 (Used with 1Gbps Optical)

**02** = Two conductors (4-fiber)

**LN** = Local Area Network Interface

**F** = Fiber

**A02** = 1310 nm, Single-mode fiber (1000 Base LX/LH)

### NCI Code 02LNF.A02 (Used with 10Gbps Optical)

**02** = Two conductors (2-fiber)

### NCI Code 02QBF.K02 (Collocation)

**02** = Two conductors (2-fiber)

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<b>LN</b>	=	Local Area Network Interface
<b>F</b>	=	Fiber
<b>A01</b>	=	1310 nm, Single-mode fiber (1000 Base LX/LH)

<b>QB</b>	=	Central office manual cross connect termination with no sub rating for non-multiplexed facilities only
<b>F</b>	=	Fiber
<b>K02</b>	=	1310 nm, Single-mode fiber (1000 Base LX/LH)

**SECNCI Code 02CXF.1GE  
(Central Office Termination)**

<b>02</b>	=	Two conductors (2-fiber)
<b>CX</b>	=	Digital termination on a switch
<b>F</b>	=	Fiber
<b>1GE</b>	=	1Gb Ethernet (User to Network Interface – UNI)

**NCI Code 02QBF.K02  
(Collocation)**

<b>02</b>	=	Two conductors (2-fiber)
<b>CX</b>	=	Digital termination on a switch
<b>F</b>	=	Fiber
<b>10G</b>	=	10Gb Ethernet (User to Network Interface – UNI)

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## Valid NC/NCI/SECNCI Combinations

NC Code	Location	NCI	SECNCI
<b>KPA(*), KPE(*),</b>	AC/EU to CO	04LN9.10T 04LN9.1CT	02CXF.1GE
<b>KRB(*), KRA(*), KRF(*) And</b>	AC/EU to CO	08LN9.1GE 02LNF.A02 02QBF.K02	02CXF.1GE
<b>KSE(*)</b>	AC/EU to CO	02KNF.A02 02QBF.K02	02CXF.10G
<b>KRA0, KRE0, and KSE(*)</b>	CO to Cage	02LNF.A02 02QBF.K02	02CXF.1GE 02CXF.10G

Notes: (\*) 4<sup>th</sup> position will specify CIR. AC = Access Customer (PoP). CO = Central Office. EU = End User; In some situations, the configuration would be EU-EU or EU-CO, and that does not show as a valid combination, but there is an AC-EU or AC-EU, that can be used as a valid combination – Assumption is one EU is acting as the AC or the EU is acting as an AC when going to a CO.

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# OVC Ordering Details

## OVC NC Options

OVC NC Pos 1-2	OVC NC Pos 3	OVC NC Pos 4	Description
VL	C	-	Point-to-point Operator Virtual Connection (OVC) per MEF 26. (an association of one UNI and ENNI)

## OVC NCI Protocol Options

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

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## Port NC Code and OVC NCI Protocol – Combinations

Port NC Code	Point Interface Type	Port Routing Type	OVC Protocol Option(s)	OVC Protocol Option(s) Description
<b>KPA*</b>	Electrical (10Mbps Base T)	Port Based	A2	All in one
<b>KPE*</b>	Electrical (10Mbps Base T)	VLAN Based	V	Tagged
<b>KQA*</b>	Electrical (100Mbps Base T)	Port Based	A2	All in one
<b>KQE*</b>	Electrical (100Mbps Base T)	VLAN Based	V	Tagged
<b>KRA*</b>	Electrical/Optical (1Gbps)	Port Based	A2	All in one
<b>KRB*</b>	Electrical/Optical (1Gbps)	Port Based	A2	All in one
<b>KRE*</b>	Electrical/Optical (1Gbps)	VLAN Based	V	Tagged
<b>KRF*</b>	Electrical/Optical (1Gbps)	VLAN Based	V	Tagged
<b>KSA*</b>	Optical (10Gbps)	VLAN Based	V	Tagged
<b>KGL*</b>	Optical (10Gbps)	Port Based	A2	All in one

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# EVC Ordering Details

## EVC NC Options

EVC NC Pos 1-2	EVC NC Pos 3	EVC NC Pos 4	Description
VL	P	-	Point-to-point Operator Virtual Connection (OVC) per MEF 2.0. (an association of one UNI to one UNI)

## EVC NCI Protocol Options

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

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## Port NC Code and EVC NCI Protocol – Combinations.

Port NC Code	Point Interface Type	Port Routing Type	OVC Protocol Option(s)	OVC Protocol Option(s) Description
KE-A*	Electrical (10Mbps Base T)	Port Based	A2	All in one
KE-E*	Electrical (10Mbps Base T)	VLAN Based	V	Tagged
KE-A*	Electrical (100Mbps Base T)	Port Based	A2	All in one
KE-E*	Electrical (100Mbps Base T)	VLAN Based	V	Tagged
KF-L*	Electrical/Optical (1Gbps)	Port Based	A2	All in one
KF-L*	Electrical/Optical (1Gbps)	Port Based	A2	All in one
KF-E*	Electrical/Optical (1Gbps)	VLAN Based	V	Tagged
KF-E*	Electrical/Optical (1Gbps)	VLAN Based	V	Tagged
KG-	Optical (10Gbps)	VLAN Based	V	Tagged
KG	Optical (10Gbps)	Port Based	A2	All in one

Note: \*4<sup>th</sup> position of NC is variable and represents the CIR speed.

## Contacting Windstream

### Order Information and Escalations

Wholesale Access: 1-800-864-7188

\*Contact assigned account management team for Wholesale-specific information.

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