

# LEGATO Use Cases and Requirements

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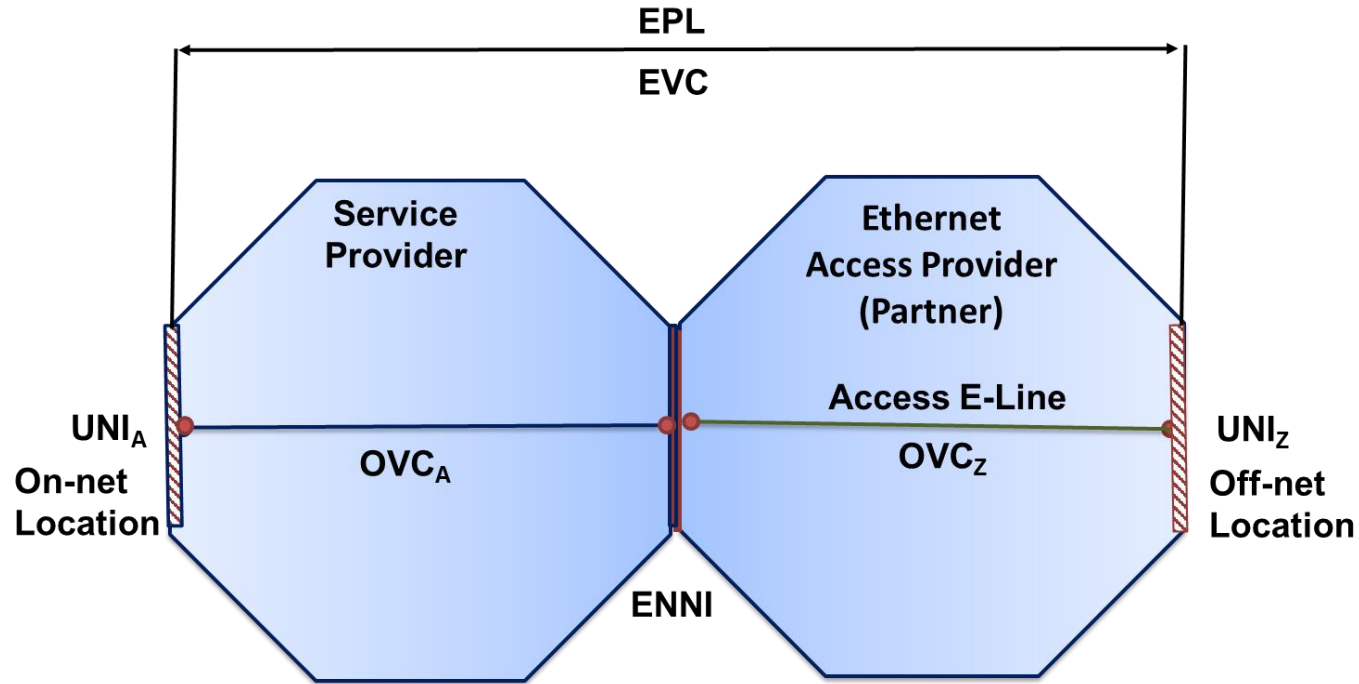


# Outline

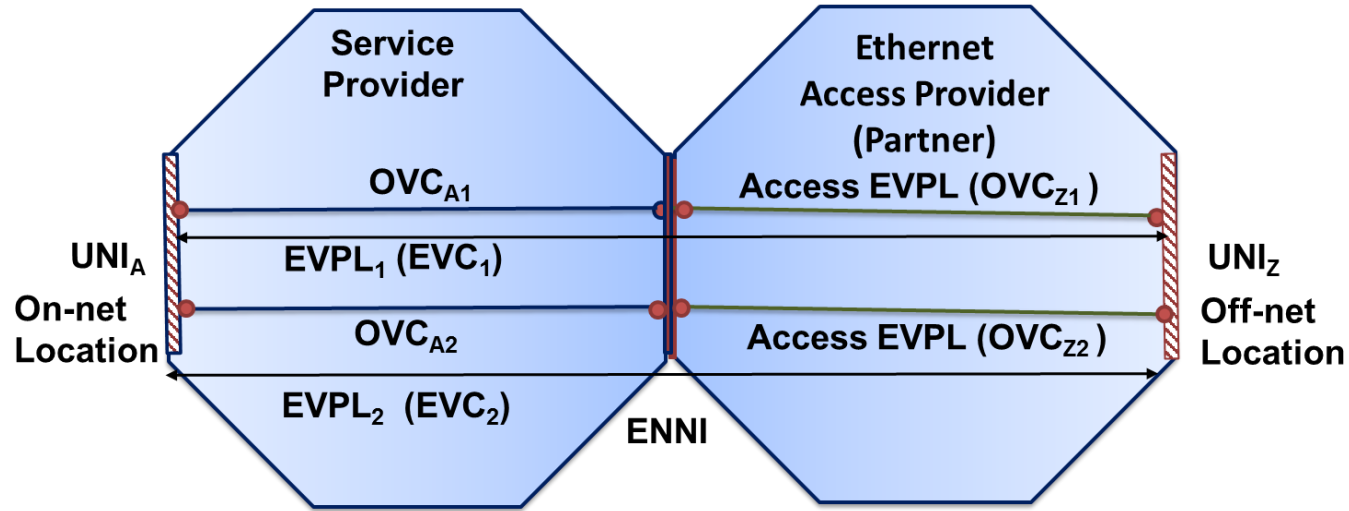
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- **On-demand Modifications of CIR for Access E-Line Services**
- **Process Flow**
- **Requirements**

# Access E-Line (EPL)



# Access E-Line (EVPL)



# CIR Change

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1. There is no rate change for EPL. Customer can use EVC rates up to UNI PHY rate for EPL.
2. Customer via user portal requests change within CIR bounds for CIR per bandwidth profile flow ,  $\langle \text{CIR}_{\text{lb}} , \text{CIR}_{\text{ub}} \rangle$  for EVC End Point
  - a. Immediately
    - i. With no end time for new CIR ,  $\text{CIR}_{\text{elastic}}$  , where  $\text{CIR}_{\text{elastic}} = \text{CIR}_{\text{lb}} + \text{N} \times \text{CIR}_{\text{increment}}$  ,CIR or  $\langle \text{one of CIR rates available in SP list} \rangle$  where N is an integer between 1 and  $\text{N}_{\text{max}}$ , CIR
    - ii. With end time for new CIR,  $\text{CIR}_{\text{elastic}}$ , where  $\text{CIR}_{\text{elastic}} = \text{CIR}_{\text{lb}} + \text{N} \times \text{CIR}_{\text{increment}}$  or  $\langle \text{one of CIR rates available in SP list} \rangle$  where N is an integer between 1 and  $\text{N}_{\text{max}}$ . After end time elapses, the rate becomes  $\text{CIR}_{\text{lb}}$

$\text{CIR}_{\text{ub}}$  is different than  $\text{CIR}_{\text{max}}$  defined in MEF 6.2 and 10.3.  $\text{CIR}_{\text{max}}$  defines the total CIR tokens for the envelope while  $\text{CIR}_{\text{ub}}$  defines the maximum CIR for a given EVC based on the customer-service provider contract.

Allowable CIR rates are defined in Table 7 of MEF 51 [4 ] and Table 5 of MEF 33 [5].

# CIR Change (cont.)

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## b. At certain time and day in the future

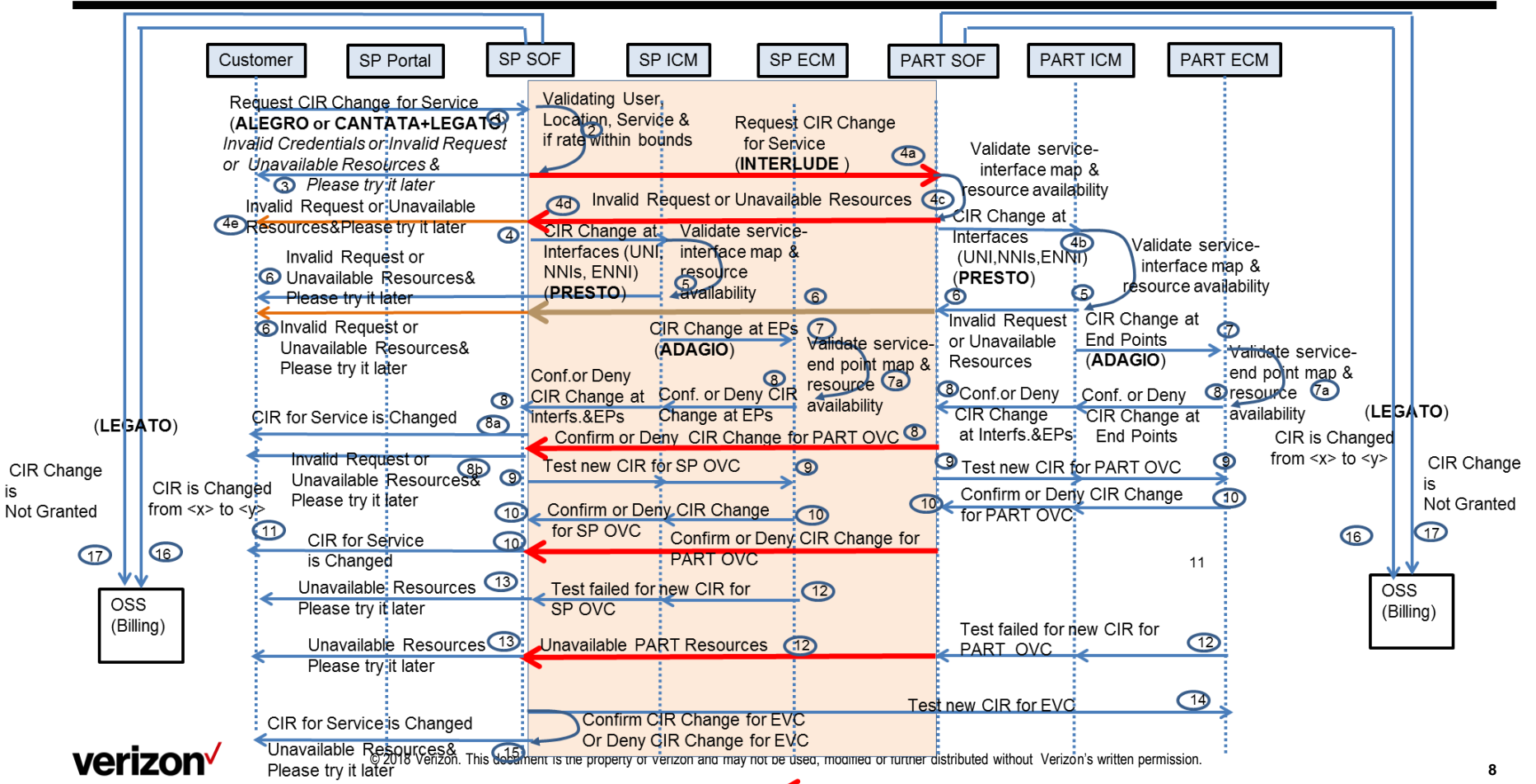
- i. With no end time for new CIR ,  $CIR_{elastic}$  , where  $CIR_{elastic} = CIR_{lb} + Nx CIR_{increment,CIR}$  or <one of CIR rates available in SP list> where N is an integer between 1 and  $N_{max}$ ,
- ii. With end time for new CIR ,  $CIR_{elastic}$  where  $CIR_{elastic} = CIR_{lb} + Nx CIR_{increment,CIR}$  or <one of CIR rates available in SP list> where N is an integer between 1 and  $N_{max}$ . After end time elapses, the rate becomes  $CIR_{lb}$

# CIR Change (cont.)

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1. Time intervals for on-demand modification of CIR immediately can be defined in the contract between SP and customer ( $T_{sp-cust}$ ), and SP and PART ( $T_{sp-part}$ ). The time interval for PART is expected to be smaller than the time interval for the SP. For example if  $T_{sp-cust}$  is 15 minutes,  $T_{sp-part}$  could be 10 minutes.
  - a. The time interval for fulfillment between SP and customer can be recorded. In the customer contract, there can be a penalty associated with the requests that are not fulfilled within  $T_{sp-cust}$ .
  - b. The time interval for fulfillment between SP and PART can be recorded. There can be a penalty associated with the requests that are not fulfilled within  $T_{sp-part}$ .
  - c. If the customer request is not fulfilled within  $T_{sp-cust}$ , the customer can cancel the request. The cancelation may be counted for penalty per the contract.
  - d. The customer may request from user portal a monthly history report consisting of  $T_{sp-cust}$  and  $T_{sp-part}$ .

# Process Flow for CIR Modifications



Step 9, 10, 12 and 14 could be optional

Represents messages crossing Interlude



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# Requirements

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- **LEGATO shall support  $CIR_{elastic}$ ,  $CIR_{lb}$ ,  $CIR_{ub}$ ,  $N$ ,  $N_{max,CIR}$  and  $CIR_{increment}$  for elastic EVC.**

*Note that the service attributes must be supported by LEGATO in its communications with SP SOf.*

- **LEGATO MUST support percent of valid requests accepted (TAR/TVR) per month and percent of accepted requests fulfilled (TFR/TAR) per month for CIR change for Elastic EVC.**

**Note that the SLO parameters must be supported by LEGATO API.**

- **On-demand request for changing EVC CIR immediately or at certain day and time in the future shall be supported from LEGATO interface.**
- **SP LEGATO API MUST be able to support Tsp-cust and Tsp-part for on-demand CIR change.**
- **PART LEGATO API MUST be able to support Tsp-part for on-demand CIR change.**
- **SONATA API MUST be able to support Tsp-cust and Tsp-part for on-demand CIR change.**