## PCEP Extensions for SFC in SR Networks

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## PCE-based SR-SFC Architecture

```
SR Netowrks
      |PCC || (1) +---+-(3) || SF3 |
--> |SFC +---+|---> | Service |--->|+----+
```

The PCC provides an ordered list of SF IDs to the PCE and indicates to the PCE that what type of path is requested (e.g., an SFP, or a compact SFP, or an SR-specific SFP, or a compact SR-specific SFP), and then the PCE responds with a corresponding path.

[I-D.xu-spring-pce-based-sfc-arch]

# PCEP Message Extensions for SR-SFC

### **SR-SFC PCE Capability TLV**

The SR-SFC-PCE-CAPABILITY TLV is an optional TLV for use in the OPEN Object to negotiate SR-SFC capability on the PCEP session. The format of the SR-SFC-PCE-CAPABILITY TLV is shown in the following

# PCEP Message Extensions for SR-SFC

### PCReq Message

> PATH-SETUP-TYPE TLV

#### Four new Path Setup Types (PST):

PST = 2: The path is an SFP.

PST = 3: The path is a compact SFP.

PST = 4: The path is an SR-specific SFP.

PST = 5: The path is a compact SR-specific SFP.

[I-D.sivabalan-pce-lsp-setup-type]

Include Route Object (IRO)

#### A new IRO sub-object type:

```
Type Sub-object
```

5 Service Function ID

# PCEP Message Extensions for SR-SFC

### PCRep Message

PCRep message carrying an SFP (<SR-SFC- ERO>)

#### NSI Type (NSIT):

indicates the type of NSI associated with the SID.

#### NSIs:

'IPv4 Node ID': is specified as an IPv4 address. In this case, NSIT and Length are 1 and 12 respectively.

'IPv6 Node ID': is specified as an IPv6 address. In this case, NSIT and Length are 2 and 24 respectively.

'Service ID': is specified as an SF ID. In this case, NSIT and Length are TBD. IETF90 Toronto

### Thanks!