D3.5 “Implementation of the centralized MAINS PCE”

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Table of Contents

0 Executive Summary

This document provides the release notes of the MAINS centralized PCE prototype, delivered in the form of a Virtual Machine. Along with the MAINS GMPLS prototype released in D3.4, this MAINS PCE prototype completes the WP3 GMPLS control plane implementation activities.

In section 2 some general information about the MAINS PCE prototype are provided, in terms of developed building blocks and their interactions. The interaction and integration with the TSON SLAE tool delivered in WP4 is also described. Finally, the content and the structure of the MAINS PCE software is detailed with installation, configuration and operation instructions.

In section 3 a set of topology configuration files for MAINS PCE stand-alone usage is also provided.

1 Introduction

1.1 Purpose and Scope

This deliverable presents the MAINS PCE prototype developed in WP3 and released in the form of a Virtual Machine.

The objective of this document is to provide some details about the MAINS PCE software, in terms of structure, configuration and installation procedures. For this purpose, the specification of the MAINS path computation procedures and mechanisms defined in MAINS D3.3 are assumed as starting point.

1.2 Reference Material

1.2.1 Reference Documents

[1] IETF, “RFC 4655: A Path Computation Element (PCE) – Based Architecture”, Ed. A. Farrel, J. P. Vasseur, J. Ash, August 2006.

[2] MAINS D3.3 “Control plane extensions for GMPLS”

[3] MAINS D4.5 “Implementation of sub-lambda assignment element”.

[4] IETF, “RFC 5440: Path Computation Element (PCE) Communication Protocol (PCEP)”, JP. Vasseur, JL. Le Roux, March 2009

[5] MAINS D3.4 “Implementation of GMPLS extensions”

[6] IETF, “draft-king-pce-hierarchy-fwk: The Application of the Path Computation Element Architecture to the Determination of a Sequence of Domains in MPLS & GMPLS", Ed. King, D. and A. Farrel, work in progress

[7] IETF, “draft-ietf-pce-gmpls-pcep-extensions: PCEP extensions for GMPLS", C. Margaria, Ed., et al., work in progress.

[8] IETF, “RFC 5541: Path Encoding of Objective Functions in the Path Computation Element Communication Protocol (PCEP)”, JP. Vasseur, JL. Le Roux, Y. Lee, June 2009.

[9] IETF, “draft-dhody-pce-pcep-service-aware: Extensions to the Path Computation Element Communication Protocol (PCEP) to compute service aware Label Switched Path (LSP)”, D. Dhody, V. Manral, work in progress.

[10] IETF, “draft-zhang-pce-hierarchy-extensions: Extensions to Path Computation Element Communication Protocol (PCEP) for Hierarchical Path Computation Elements (PCE)”, F. Zhang, O.G. de Dios, R. Casellas, D. King, work in progress.

[11] IETF, “RFC 5520: Preserving Topology Confidentiality in Inter-Domain Path Computation Using a Path-Key-Based Mechanism”, R. Bradford, Ed., et. al., April 2009.

1.2.2 Acronyms

CLI	Command Line Interface
CORBA	Common Object Request Broker Architecture
GMPLS	Generalized Multiprotocol Label Switching
IETF	Internet Engineering Task Force
LRM	Link Resource Manager
NCC	Network Call Controller
OF	Objective Function
OVF	Open Virtual Format
PCC	Path Computation Client
PCE	Path Computation Element
PCEP	PCE communication Protocol
SLAE	Sub-Lambda Assignment Element
TE	Traffic Engineering
TSON	Time-Shared Optical Network
VM	Virtual Machine

1.3 Document History

Version	Date	Authors	Comment
0.1	29/01/2012	G. Bernini	First ToC draft
0.4	16/02/2012	G. Bernini	Contributions on PCE structure
0.7	09/03/2012	G. Bernini	Contributions on VM and PCE configurations
1.0	13/03/2012	G. Bernini	Final integrated version

2 MAINS PCE prototype

2.1 Release overview

The MAINS PCE is compliant with the PCE architecture defined in IETF RFC4655 [1] and implements the path computation procedures and mechanisms defined in MAINS D3.3 [2]. In particular, on the one hand it is responsible for the maintenance of a summarized and aggregated sub-wavelength network topology, detailed in terms of nodes, TE links, wavelengths and aggregated time-slice availabilities. On the other hand it interacts with the TSON SLAE [3] to provide end-to-end network routes (i.e. link + wavelength hops) augmented with time-slices allocation.

The MAINS PCE interacts for path computation requests, replies and notifications through the PCE communication Protocol (PCEP) [4]. Moreover, it offers a further interface, based on CORBA, to be used for configuration and management purposes. This interface exposes three main types of functionalities:

- configuration and monitoring aspects, e.g. for PCEP sessions configuration, routing algorithms, timers and policies definition;
- management of the TE Database to allow the operator to add, delete, update or query information about the network topology, in particular nodes and TE links, including sub-wavelength information;
- routing services, e.g. to request path computations for calls and connections (i.e. LSPs) associated to the sub-wavelength network services to be installed in the metro network.

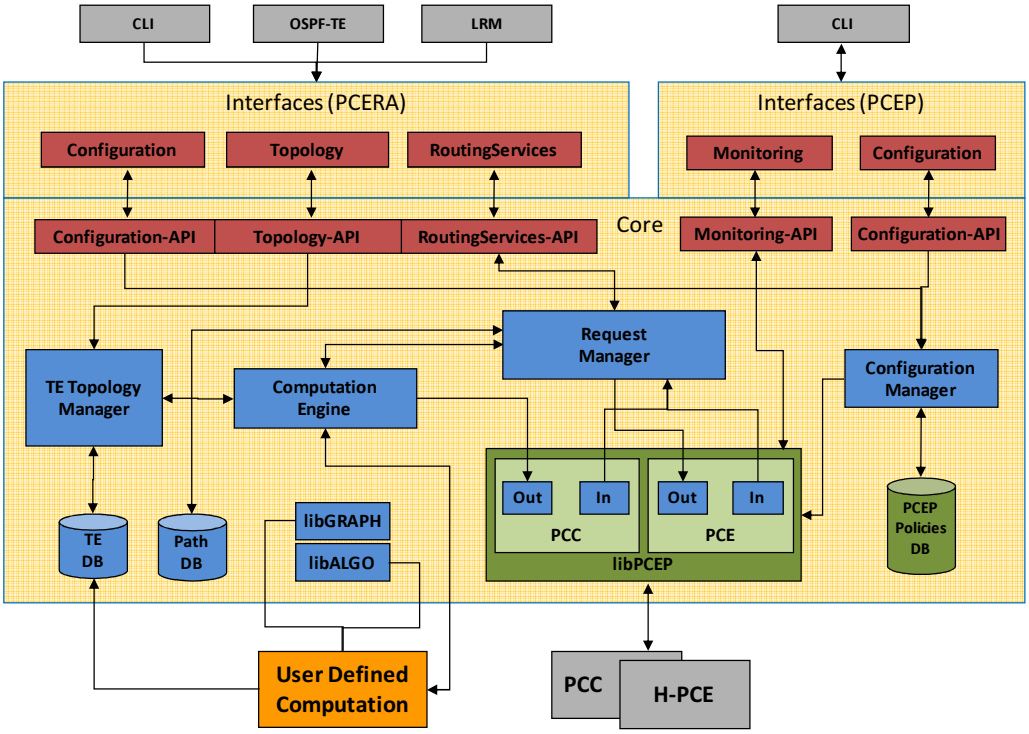

Figure 2.1 MAINS PCE prototype.

As depicted in Figure 2.1, the MAINS PCE prototype is composed of three main blocks:

PCE CORBA NorthBound interfaces

Configuration: it allows to set parameters associated to the PCEP protocol (e.g. PCEP session timers, parent PCE support for multi-domain scenarios, maximum number of acceptable sessions) or internal policies. These policies include e.g. acceptable Path Computation Clients (PCCs), Objective Function (OF)/metric re-definitions, and selection of routing algorithms. This Configuration interface is invoked from the interactive CLI included in this software release (see section 2.3.3).

Monitoring: it allows to retrieve information about internal performance and statistics (e.g. path computation duration, received requests, etc.). It is usually invoked from the external interactive CLI delivered with the MAINS PCE prototype.

Routing Services: it is used to request path computations for calls and connections. This interface is mainly used for debug purposes, since it can be called from the external CLI.

Topology: it is used to fill and update the internal TE Database. This interface can be invoked in different ways. First, by the external CLI, in case the MAINS PCE is used as a stand-alone element for debug purposes, or to query the internal TE Database. Moreover, it can be invoked by an OSPF-TE instance co-located with the MAINS PCE, capable to listen the routing protocol advertisements in the network domain under the MAINS PCE ownership and then capable to fill the PCE internal TE Database through this interface. For the prototype implementation, the project consortium agreed to focus on the MAINS key aspects and concepts. The OSPF-TE has not been selected as a key feature to validate and demonstrate the MAINS concepts, particularly for what concerns sub-wavelength connections provisioning in the metro/regional networks. Indeed, the flooding of sub-wavelength network resource information through a routing protocol can be replaced by a direct interaction between Link Resource Manager (LRM [5]) in each GMPLS controller and the MAINS PCE through the Topology CORBA interface. Therefore, the local sub-wavelength network resource information stored in each LRM is directly pushed towards the MAINS PCE and updated when needed.

Core modules

Configuration Manager: it is in charge of setting the session and timer parameters of the PCEP library and the internal PCE policies, as configured through the associated CORBA interface.

Request Handler: it is dedicated to the management of the PCEP Request/Reply messages sent/received from/to the CORBA or the PCEP interfaces. It queues the requests from either CORBA NorthBound or PCEP SouthBound interface (e.g. call Route, connection Route). Moreover, it handles these requests, invoking the Computation Engine and storing the computed path in the Path Database. It is also in charge of invoking the PCEP library to send the path computation reply to the requesting peer (i.e. the PCC).

Computation Engine: it is the entity in charge of performing the path computation. It interacts with the TE Topology Manager to load the network information (including aggregated sub-wavelength parameters) from the TE Database and computes the path using the most suitable routing algorithm. The selection of the routing algorithm depends on the request type, or the metrics and OFs defined in the request. In case of multi-domain path computation, the Computation Engine is in charge of forwarding the path computation request to the parent PCE, through the PCEP SouthBound interface, according to the hierarchical PCE model [6] supported by the MAINS GMPLS. The routing algorithms are

implemented in the PCE as external “user defined computation algorithms” (yellow box in Figure 2.1). Each user defined computation algorithm is imported as a dynamic library, and exports to the PCE its own capabilities (e.g. in terms of multi-layer path computations, sub-wavelength support, etc.). For each path computation, a user defined computation algorithm is selected by the Computation Engine and invoked in 2 phases: *Load*, to provide access to the TE Database and build or update the network graph, and *Request*, to compute the path(s). A dedicated routing algorithm has been implemented for MAINS, in the form a user defined computation algorithm capable to interface with the TSON SLAE [3] for path and time-slice computations (see details in section 2.1.1).

TE Topology Manager: it acts as a wrapper for the TE Database and allows the other components to access the TE Database guaranteeing synchronization and consistency. The MAINS PCE TE Database includes not only the traditional network TE information, but also the aggregated and summarized sub-wavelength availabilities.

PCEP SouthBound interface

This interface implements the PCEP protocol and procedures defined in RFC5440 [4], and also supports the set of messages, objects and TLVs, already defined in existing IETF RFCs and Internet Drafts, which constitute the reference PCEP protocol information set to be typically applied in both single- and multi-domain scenarios. These are:

Extensions	REF	Description
GMPLS extensions	ID-gmpls-pcep-ext [7]	Global GMPLS extensions (e.g. generalized bandwidth and end-points, LSP attributes for protection, label set, etc.).
Objective Function (OF)	RFC 5541 [8]	Support of objective functions to specify the optimization criteria in the path computation.
PCEP extensions for service-aware LSP computation	ID-service-aware-pcep-ext [9]	Support of new metrics associated to network performances (delay, jitter, packet loss).
PCEP extensions for Hierarchical PCE	ID-pce-hierarchy-ext [10]	PCEP extensions for inter-PCE cooperation in multi-domain path computation, based on the hierarchical PCE approach.
Path Key object and ERO sub-object	RFC 5520 [11]	Support of path keys for preserving topology confidentiality in multi-domain path computation.

As depicted in Figure 2.1, two different instances of the PCEP may run in the MAINS PCE: the PCE-side and the PCC-side. The PCE-side instance of the PCEP library is used for the intra-domain path computations; the peer for this kind of requests is the PCC co-located with the Network Call Controller (NCC [5]), that is in charge of asking the PCE for calls and LSPs path computations. On the other hand, the PCC-side instance of the PCEP library is used for the multi-domain path computations. In this scenario, the MAINS PCE acts as a child PCE according to the hierarchical PCE model [6], and the PCEP protocol is used to send summarized topology information and request for multi-domain path computations to the peering parent PCE.

2.1.1 Interaction with the TSON SLAE

The MAINS route selection procedure is composed by two key elements [2]:

- the computation of the end-to-end explicit route, i.e. a sequence of hops with links and wavelengths
- the exact per-hop sub-wavelength resources allocation

To satisfy this requirement, a specific user defined computation algorithm has been implemented for the MAINS PCE to let it interact with the TSON SLAE tool developed in WP4. The TSON SLAE tool has been designed and implemented as a centralized sub-wavelength resource allocation module; in addition to this main feature, it is able to perform also route calculations and wavelength assignments [3]. Therefore the TSON SLAE can be considered as a Route, Wavelength, and Time Assignment tool (RWTA).

For these reasons, the whole TSON SLAE, including its RWTA features, has been imported in the MAINS PCE as a stand-alone routing algorithm in the user defined computation module. The TSON SLAE has been released as a jar file, and need to be invoked with at least the following arguments [3]:

- network topology matrix, describing nodes and links in the network (in the form a txt file)
- number of wavelengths per link
- number of time slices per each wavelength
- source node identifier
- destination node identifier
- requested bandwidth
- number of paths to be computed with KSP algorithm

The result of the RWTA performed by the TSON SLAE contains the end-to-end explicit route (i.e. links + wavelengths), augmented with the per-hop sub-wavelength resources allocation. This output is produced in the form of a txt file.

The MAINS user defined computation algorithm has been implemented according to these TSON SLAE input and output requirements, and its path computation workflow (depicted in Figure 2.2) can be summarized as follows:

- *[step 1]* the Computation Engine is invoked by the Request Manager to perform an end-to-end path computation
- *[step 2]* the Computation Engine selects the MAINS user defined code algorithm and invoke its *Load* method
- *[step 3]* during the *Load* phase the Computation Adapter accesses the MAINS PCE TE Database and retrieves all the needed information, in terms of nodes, links and end-points, building a network graph
- *[step 4]* the Computation Adapter runs a preliminary pruning of the network graph, discarding links whose aggregated sub-wavelength availabilities don't match the requested computation constraints. After that, it coverts this network graph into the network topology matrix to be sent to the TSON SLAE

- *[step 5]* the *Load* phase is concluded
- *[step 6]* the Computation Engine invokes again the MAINS user defined computation algorithm to request for the computation, starting the *Request* phase
- *[step 7]* the Computation Adapter invokes the TSON SLAE, through a system call to the jar file, passing all the needed arguments and parameters.
- *[step 8]* the TSON SLAE performs the RWTA and produces the computation result
- *[step 9]* the Computation Adapter parses the output produced by the TSON SLAE, and translate it in an explicit route format that can be forwarded to the Computation Engine
- *[step 10]* the *Request* phase is concluded
- *[step 11]* the path computation response (i.e. explicit route with time-slices allocation) is sent back to the requesting peer (e.g. the PCC co-located with the NCC through the PCEP interface).

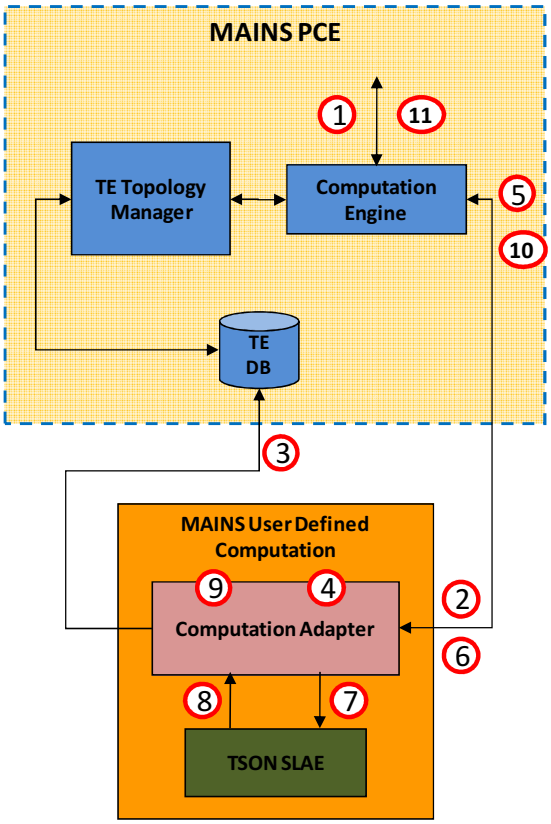

Figure 2.2 MAINS user defined computation algorithm workflow.

2.2 Release format

The MAINS PCE prototype is released as a virtual appliance[1] composed of a virtual machine compressed image file. The released VM image file is:

NXW-GMPLS-MAINS-PCE-D35.ova

The virtual appliance image is Ubuntu 10.10 based distribution, equipped with all the software packages (i.e. libraries and programs) required for the correct operations of the MAINS PCE software modules. The image has been exported as OVA file, the single file version of an Open Virtualization Format (OVF) image, therefore it can be imported into OVA compliant virtualization solutions as Oracle VirtualBox, VMWare Player, VMWare Workstation, RedHat Enterprise Virtualization solutions etc.

In the following, the use of Oracle VirtualBox (version>= 4.1.8-r75467) is assumed.

The image of the virtual appliance can be operated by following these steps:

1. Import the OVA file <file>.ova obtained in the previous step into the virtualization platform
    - *File → Import Appliance*
2. Enable the first network adapter (i.e. Adapter1)
    - *Settings → Network → Adapter1 → Enable Network Adapter*
3. Start the VM
4. Login into the VM using the credentials:
    - User: *gmpls*
    - Password: *nextworks*
5. Open a terminal
    - *Applications → Accessories → Terminal*
6. Follow the steps reported in 2.3.4

It's worth pointing out that each VM is pre-configured with a single network adapter (bridged) and a static IP address that may be overridden according to the user's network requirements.

The virtual appliance inter-networking configuration description is out of the scope of this document; the following references may be used in order to obtain a suitable setup:

- Virtual Machine networking configuration:

[1] A virtual appliance is a pre-built software solution, comprised of one or more virtual machines that is packaged, maintained, updated, and managed as a unit. A virtual appliance contains a pre-installed, pre-configured Operating System and an application stack optimized to provide a specific set of services.

- http://www.ubuntugeek.com/ubuntu-networking-configuration-using-command-line.html
- http://www.ubuntugeek.com/ubuntu-networking-configuration-using-graphical-tool.html

- VirtualBox virtual networking configuration:
  - http://www.virtualbox.org/manual/ch06.html

The MAINS PCE operation and configuration procedures are described in the following sub-sections. Further details about network topology configurations examples are provided in section 3.

2.3 PCE software structure

This section provides some generic details about the structure of the Nextworks PCE software developed in MAINS. The software description carried out in the following subsections also provides details and guidelines on how to operate and configure the MAINS PCE.

2.3.1 PCE directories structure

The Nextworks PCE software is installed in the `/opt/nxw` directory, which is structured as reported in the following table:

Directory	Contents
bin	PCE binaries
Include	Headers files[2]
lib	Shared libraries[3]
lib/pkgconfig	pkgconfig files[4]
lib/python2.6/site-packages/gmpls/idl	Interface Description Language (IDL) files[5]
var/gmpls	logs and IOR files produced by the PCE modules

Table 1 PCE software directories contents

[2] Required for third parties modules integration

[3] Required for third parties modules integration

[4] pkg-config is a helper tool used when compiling applications and libraries. It helps inserting the correct compiler options on the command line without hard-coding flags and paths for compilation/linking related operations. It is language-agnostic, so it can be used for defining the location of documentation, tools etc.

[5] Required for third party integration against the CORBA interfaces

The most important executables available in the `/opt/nxw/bin` directory are:

Executable	Description
gmpls-manager	The stack manager
gmpls-sh	The stack shell
gmpls-pcera	PCE software module

Table 2 PCE binaries

Each software module is a self contained binary which may interact with other modules located in the VM. In that case, the module checks for its requirements upon its start and waits for their satisfaction until a predefined timeout. The module shutdowns automatically if its constraints satisfaction cannot be verified at the end of the timeout.

The manual management (i.e. start/stop) of the aforementioned dependencies is allowed, albeit discouraged for its complexity. The PCE software installation contains the gmpls-manager tool that facilitates the startup/shutdown operations by automatically handling all inter-dependencies on behalf of the user.

2.3.2 PCE operation: gmpls-manager

The gmpls-manager is a non-interactive CLI tool that simplifies the PCE startup/shutdown activities by managing the dependencies automatically.

The gmpls-manager supports the following options:

- `start`: This option starts the PCE (e.g. '`gmpls-manager start`')
- `stop`: This option stops the PCE (e.g. '`gmpls-manager stop`')
- `restart`: This option restarts the PCE (e.g. '`gmpls-manager restart`')
- `status`: This options display a brief status report
- `summary`: This option display a complete status report

2.3.3 PCE configuration: gmpls-sh

The gmpls-sh (gsh) is an interactive CLI tool that allows the configuration of the PCE. In order to run the gsh locally, the following command must be executed:

```
/opt/nxw/bin/gmpls-sh –o /opt/nxw/var/gmpls
```

The gsh represents all its commands in a tree-like approach as the most commonly known router-oriented CLIs do. The tree navigation is supported by the '`cd <node>`' and '`cd ..`' commands, where <node> ma+y represent a software module (in the PCE specific case, the `pcera` module).

Moreover, the gsh allows the configuration of the PCE through the execution of a single command:

```
/opt/nxw/bin/gmpls-sh –o /opt/nxw/var/gmpls -f <FILE>
```

where `FILE` is the configuration file containing the list of gsh commands to be executed for the MAINS PCE. Some examples are provided in section 3.

The complete list of gsh configuration and debug commands for the PCE is provided in the Appendix.

2.3.4 PCE instructions

The PCE operation instructions can be summarized as follows:

- Start the PCE:
  `/opt/nxw/bin/gmpls-manager start`
- Wait until all the deamons appear running, by checking the output of:
  `/opt/nxw/bin/gmpls-manager summary`
- Configure the PCE [*needed only in case of stand-alone scenario – see sec. 3*]:
  `/opt/nxw/bin/gmpls-sh –o /opt/nxw/var/gmpls -f <FILE>`
- The PCE is now ready to be invoked and operate through its external interfaces:
  - CORBA topology interface: LRM, or CLI (i.e. gmpls-sh) for debug purposes
  - CORBA routing service interface: CLI (i.e. gmpls-sh) for debug purposes
  - Protocol interface: PCEP
- To stop the PCE:
  `/opt/nxw/bin/gmpls-manager stop`

3 MAINS PCE configuration

A couple of network topology configuration files have been distributed with this MAINS PCE prototype release. Each configuration file let the PCE start a stand-alone operation without any peering MAINS GMPLS controller. The Appendix provides the list of *gmpls-sh* commands for the PCE (e.g. to show the topology details) that can be run once the network topology has been loaded in the TE Database.

In section 3.1.1 the network topology configuration file for a full OBSC network domain is provided. In particular, it allows to load in the PCE TE Database TE-links with Switching Capability set to "*OBSC"* and Encoding Type set to "*TSON-flexible*", therefore emulating a network domain built by four TSON nodes implementing the flexible time-slice switching paradigm.

In section 3.1.2 the network topology configuration file for a hybrid L2SC-OBSC network domain is provided. In particular, it allows to emulate the MAINS multi-region metro domain, built by the interconnection of an OPST ring (modelled at GMPLS and PCE level as a single Ethernet switch) and a TSON mesh.

It is important to highlight that a user who wants to deploy the MAINS PCE in its own test-bed with the MAINS GMPLS controllers [5], must not use these configuration files (or similar) to load the topology in the PCE TE Database. Indeed, he should carefully configure the MAINS PCE VM network interface(s) according to the specific test-bed network connectivity, to let the MAINS PCE interact with the MAINS GMPLS controllers (in particular the LRM modules) through the PCEP SouthBound interface and the CORBA NorthBound interface. This kind of network configurations are out of the scope of this document.

3.1.1 Full OBSC network topology

```
###### Enter PCE module
cd pcera

######  NODE 1
node net add id 192.168.100.1
node net update id 192.168.100.1 domain false adm-state enabled op-state up
te-colors 0 power-consumption 175
node net update id 192.168.100.1 add-area 0

######  NODE 2
node net add id 192.168.100.2
node net update id 192.168.100.2 domain false adm-state enabled op-state up
te-colors 0 power-consumption 215
node net update id 192.168.100.2 add-area 0

######  NODE 3
node net add id 192.168.100.3
node net update id 192.168.100.3 domain false adm-state enabled op-state up
te-colors 0 power-consumption 365
node net update id 192.168.100.3 add-area 0

######  NODE 4
```

```
node net add id 192.168.100.4
node net update id 192.168.100.4 domain false adm-state enabled op-state up
te-colors 0 power-consumption 415
node net update id 192.168.100.4 add-area 0

######  LINK 1 -> 2
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 19 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
```

```
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0

######  LINK 2 -> 1
telink add lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 1 -> 3
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
```

```
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 3 -> 1
telink add lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000
```

```
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 2 -> 4
telink add lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 4 -> 2
telink add lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8
```

```
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 1 -> 4
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 19 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
```

```
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0

######  LINK 4 -> 1
telink add lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000
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telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 4 -> 3
telink add lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 3 -> 4
telink add lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8
```

```
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  TNA 1
tna add rid 192.168.100.1 id-addr 10.10.10.1 id-pref 24 rc-id 0.0.0.0

######  TNA 2
tna add rid 192.168.100.3 id-addr 30.30.30.1 id-pref 24 rc-id 0.0.0.0

######  TNA 3
tna add rid 192.168.100.4 id-addr 40.40.40.1 id-pref 24 rc-id 0.0.0.0
```

3.1.2 Hybrid L2SC-OBSC network topology

```
###### Enter PCE module
cd pcera

######  NODE 1
node net add id 192.168.100.1
node net update id 192.168.100.1 domain false adm-state enabled op-state up
te-colors 0 power-consumption 175
```

```
node net update id 192.168.100.1 add-area 0

######  NODE 2
node net add id 192.168.100.2
node net update id 192.168.100.2 domain false adm-state enabled op-state up
te-colors 0 power-consumption 215
node net update id 192.168.100.2 add-area 0

######  NODE 3
node net add id 192.168.100.3
node net update id 192.168.100.3 domain false adm-state enabled op-state up
te-colors 0 power-consumption 365
node net update id 192.168.100.3 add-area 0

######  NODE 4
node net add id 192.168.100.4
node net update id 192.168.100.4 domain false adm-state enabled op-state up
te-colors 0 power-consumption 415
node net update id 192.168.100.4 add-area 0

######  NODE 5
node net add id 192.168.100.5
node net update id 192.168.100.5 domain false adm-state enabled op-state up
te-colors 0 power-consumption 140
node net update id 192.168.100.5 add-area 0


######  LINK 5 -> 1
telink add lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
```

```
telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.5 lcl-id-addr 1.5.1.2 rem-rid 192.168.100.1
rem-id-addr 1.5.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"l2sc" enc-type "ethernet" max-lsp-bw 1000000

######  LINK 1 -> 5
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 19 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.5.1.1 rem-rid 192.168.100.5
rem-id-addr 1.5.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"l2sc" enc-type "ethernet" max-lsp-bw 1000000


######  LINK 1 -> 2
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 19 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
```

```
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid 192.168.100.2
rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
```

```
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.2.1.1 rem-rid
192.168.100.2 rem-id-addr 1.2.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0

######  LINK 2 -> 1
telink add lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid 192.168.100.1
rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 1.2.1.2 rem-rid
192.168.100.1 rem-id-addr 1.2.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 1 -> 3
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid 192.168.100.3
rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.3.1.1 rem-rid
192.168.100.3 rem-id-addr 1.3.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 3 -> 1
telink add lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
```

```
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid 192.168.100.1
rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 1.3.1.2 rem-rid
192.168.100.1 rem-id-addr 1.3.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 2 -> 4
telink add lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000
```

```
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid 192.168.100.4
rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.2 lcl-id-addr 2.4.1.1 rem-rid
192.168.100.4 rem-id-addr 2.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 4 -> 2
telink add lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid 192.168.100.2
rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 2.4.1.2 rem-rid
192.168.100.2 rem-id-addr 2.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 1 -> 4
telink add lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 19 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8
```

```
telink update lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid 192.168.100.4
rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.1 lcl-id-addr 1.4.1.1 rem-rid
192.168.100.4 rem-id-addr 1.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0

######  LINK 4 -> 1
telink add lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
```

```
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid 192.168.100.1
rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 1.4.1.2 rem-rid
192.168.100.1 rem-id-addr 1.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0


######  LINK 4 -> 3
telink add lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000
```

```
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid 192.168.100.3
rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.4 lcl-id-addr 3.4.1.2 rem-rid
192.168.100.3 rem-id-addr 3.4.1.1 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  LINK 3 -> 4
telink add lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-metric
10 te-metric 10 color-mask 12345678 prot-mask 20 max-bw 10000000 max-resv-bw
9000000 power-consumption 29 max-bw-up 1000 max-bw-down 2000

telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 adm-state
enabled op-state up
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 0
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 1
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 2
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 3
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 4
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 5
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 6
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 avail-bw
10000000 at-prio 7
telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 srlg-id 8

telink update lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid 192.168.100.4
rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id 0.0.0.0 gen sw-cap
"obsc" enc-type "tson-flex" max-lsp-bw 1000000
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 36 ntp-sec 1346568900 ntp-fraction 234
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 28 ntp-sec 1346569990 ntp-fraction 464
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 42 ntp-sec 1346571101 ntp-fraction 120
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
```

```
0.0.0.0 signal-type 1 free-slots 18 ntp-sec 1346572000 ntp-fraction 200
wavel-id 0x2600000b
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 31 ntp-sec 1346568900 ntp-fraction 100
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 76 ntp-sec 1346570900 ntp-fraction 789
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 54 ntp-sec 1346571800 ntp-fraction 340
wavel-id 0x2600000c
telink append obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0 signal-type 1 free-slots 12 ntp-sec 1346572200 ntp-fraction 10 wavel-
id 0x2600000c
telink commit obscbwcal lcl-rid 192.168.100.3 lcl-id-addr 3.4.1.1 rem-rid
192.168.100.4 rem-id-addr 3.4.1.2 mode p2p lcl-rc-id 0.0.0.0 rem-rc-id
0.0.0.0



######  TNA 1
tna add rid 192.168.100.5 id-addr 50.50.50.1 id-pref 24 rc-id 0.0.0.0

######  TNA 2
tna add rid 192.168.100.3 id-addr 30.30.30.1 id-pref 24 rc-id 0.0.0.0

######  TNA 3
tna add rid 192.168.100.4 id-addr 40.40.40.1 id-pref 24 rc-id 0.0.0.0
```

Appendix: List of the available MAINS PCE commands (gmpls-sh)

PCERA

The following table reports the `pcera` module main commands, their parameters and a brief description:

Command	Parameters	Description
`call`	`confirm id UINT32`	Confirm computed route for the Call
`call`	`create id UINT32 src-lsr IPV4 itu-country UINT32 itu-carrier UINT32 unique-ap UINT32`	Create a local ID in order to specify the parameters for the Call
`call`	`flush id UINT32`	Flush the Call with input parameters given before
`call`	`route id UINT32`	Compute route for the Call with input parameters given before
`call`	`set-info id UINT32 call-data job-name STRING job-project STRING`	Update naming info into Call
`call`	`set-info id UINT32 call-data time (start|end) year UINT16 month UINT8 day UINT8 hour UINT8 min UINT8 sec UINT8`	Update time info into Call (in local timezone)
`call`	`set-info id UINT32 call-data type (auto|spc|pc|sc|augwzugw|amgtzegw|augwzegw|aegwzmgt|aegwzugw|aegwzegw)`	Update type into Call
`call`	`set-info id UINT32 lsp-data constraints s-prio UINT32 h-prio UINT32 exc-any UINT32 inc-any UINT32 inc-all UINT32 link-prot (none|extra|unprotected|shared|dedicated_1to1|dedicated_1plus1|enhanced)`	Update LSP constraints info into the Call
`call`	`set-info id UINT32 lsp-data crankback scope (none|e2e|boundary|segmentbased) max-retr-src UINT32 max-retr-intmd`	Update protocol related LSP info data into the Call

	UINT32 record-route (all|dl_detail|tel_detail|off)	
call	set-info id UINT32 lsp-data sw-cap (l2sc|lsc|fsc|obsc) enc-type (ethernet|lambda|fiber|tson-flex|tson-fix) bw UINT32 gpid (asynch_e4|asynch_ds3_t3|asynch_e3|bit_synch_e3|byte_synch_e3|asynch_ds2_t2|bit_synch_ds2_t2|asynch_e1|byte_synch_e1|byte_synch_31ds0|asynch_ds1_t1|bit_synch_ds1_t1|byte_synch_ds1_t1|vc_11_in_vc_12|ds1_sf_asynch|ds1_esf_asynch|ds3_m23_asynch|ds3_c_parity_asynch|vt_lovc|stsspe_hovc|pos_noscrambling_16crc|pos_noscrambling_32crc|pos_scrambling_16crc|pos_scrambling_32crc|atm_mapping|ethernet|sonet_sdh|digital_wrapper|lambda|ansi_etsi_pdh|laps_x85_x86|fddi|dqdb|fiberchannel_3|hdlc|eth_v2_dix|eth_802_3|g709_oduj|g709_otuk|cbr_cbra|cbrb|bsot|bsnt|ip_ppp_gfp|ethmac_gfp|ethphy_gfp|escon|ficon) action (xconnect|book) type (spc|pc) role (worker|backup)	Update LSP base info into the Call
call	set-info id UINT32 lsp-data timers refresh-period UINT32 ack-procedure (on|off) rapid-retx-interval UINT32 rapid-retry-limit UINT32 increment-value-delta UINT32	Update protocol related LSP info data into the Call
call	set-info id UINT32 recovery-data type (unprotected|protection|preplanned|otf|otf_reverti	Update info on recovery into the Call

	ve) disjointness (none|link|NODE|srlg)	
call	set-info id UINT32 tna-data tributary (ingress|egress) net tna-id IPV4 dlink-id IPV4 label32 id UINT32	Update info on tributary resources into the Call
	set-info id UINT32 tna-data tributary (ingress|egress) net tna-id IPV4 dlink-id IPV4 label60 dest-mac MAC vlan-id UINT16	
call	set-info id UINT32 tna-endpoint-seq tna-data src-tna-id IPV4 src-dlink-id IPV4 src-label32 id UINT32 dst-tna-id IPV4 dst-dlink-id IPV4 dst-label32 id UINT32	Update tributary resources of the tnaEndpoint sequence into the Call
call	set-info id UINT32 tna-endpoint-seq tna-data src-tna-id IPV4 src-dlink-id IPV4 src-label60 dest-mac MAC src-vlan-id UINT16 dst-tna-id IPV4 dst-dlink-id IPV4 dst-label60 dest-mac MAC dst-vlan-id UINT16	Update tributary resources of the tnaEndpoint sequence into the Call
call	show all-ids	Show the local IDs created
call	show id UINT32	Show the information associated to a Call
call	show id UINT32 connections	Show connections for a Call with input parameters given before
connection	route callid UINT32 src-nodeid IPV4 src-telinkid IPV4 src-dlinkid IPV4 src-label32 id UINT32 dst-nodeid IPV4 dst-telinkid IPV4 dst-dlinkid IPV4 dst-label32 id UINT32	Compute the worker and protection connection path between two given endpoints
node	net add id IPV4	Add node of type network
node	net del id IPV4	Remove node of type network
node	net show level	Show nodes of the given type

	(default|verbose|very_verbose)	
node	net update id IPV4 domain (true|false) adm-state (enabled|disabled) op-state (up|down) te-colors UINT32 power-consumption UINT32	Update network node information
node	show	Show all nodes
telink	add lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4	Add TE-Link
telink	append obscbwcal lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 signal-type UINT8 free-slots UINT32 ntp-sec UINT32 ntp-fraction UINT32 wavel-id HEX	Append TE-link OBSC bandwidth calendar
telink	commit obscbwcal lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4	Commit TE-link OBSC bandwidth calendar
telink	del lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4	Delete TE-link
telink	show lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4	Show details of a TE-link
telink	show net-node-id IPV4	Show details of TE-links in a

		network node
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 adm-metric UINT32 te-metric UINT32 color-mask UINT32 prot-mask UINT8 max-bw UINT32 max-resv-bw UINT32	Update TE-link common parameters
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 adm-state (enabled|disabled) op-state (up|down)	Update TE-link administative and operative states
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 avail-bw UINT32 at-prio UINT8	Update the TE-link bandwidth at the designated priority
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 g709 oduk-mux UINT32	Update TE-link LSC G709 parameters
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 g709 oduk-signal-type UINT8 oduk-free-slots UINT32 och-signal-type UINT8 och-free-slots UINT32	Update Te-link LSC G709 bandwidth
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode	Append a ISC to the TE-link

	(p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 gen sw-cap STRING enc-type STRING max-lsp-bw UINT32	
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 psc sw-cap STRING enc-type STRING max-lsp-bw UINT32 min-lsp-bw UINT32 if-mtu UINT32	Append a ISC PSC to the TE-link
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 srlg-id UINT32	Append a SRLG ID to the TE-link
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 tdm ho-mux UINT32 lo-mux UINT32 transp-mask UINT32 ring-id UINT32	Update TE-link TDM parameters
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 tdm signal-type UINT8 free-slots UINT32	Update TE-link TDM bandwidth
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 tdm sw-cap STRING enc-type STRING max-lsp-bw UINT32 min-lsp-bw UINT32 indication UINT8	Append a ISC TDM to the TE-link
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intr	Update TE-link LSC WDM parameters

	a) lcl-rc-id IPV4 rem-rc-id IPV4 wdm d-pmd UINT32 span-length UINT32 amp-gain UINT32 amp-noise UINT32	
telink	update lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 year UINT16 month UINT8 day UINT8 hour UINT8 min UINT8 sec UINT8 avail-bw UINT32	Add a calendar event to the TE-link
telink	wdm addbitmap lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 bitmap UINT8	Add given parameters into WDM Bandwidth Bitmap
telink	wdm commit lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4	Update TE-link LSC WDM bandwidth with input parameters given before
telink	wdm create lcl-rid IPV4 lcl-id-addr IPV4 rem-rid IPV4 rem-id-addr IPV4 mode (p2p|enni_inter|enni_intra) lcl-rc-id IPV4 rem-rc-id IPV4 w-base UINT32 w-bits UINT32	Create WDM bandwidth for TE-Link
tna	add rid IPV4 id-addr IPV4 id-pref UINT8 rc-id IPV4	Add TNA
tna	del rid IPV4 id-addr IPV4 id-pref UINT8 rc-id IPV4	Delete TNA
tna	show net-node-id IPV4	Show details of TNAs in a network node