

CCIE Service Provider Lab Workbook v4.0

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CCIE SP v4 Advanced Technology Labs - MPLS TE

Inter-AS MPLS TE

« [Inter-Area MPLS TE with IS-IS \(/workbook/view/service-provider-v4/task/inter-area-mpls-te-with-is-is-Mjg4OA%3D%3D\)](/workbook/view/service-provider-v4/task/inter-area-mpls-te-with-is-is-Mjg4OA%3D%3D) | [LISP - Basic overlay IPv4 to IPv4 \(/workbook/view/service-provider-v4/task/lisp-basic-overlay-ipv4-to-ipv4-Mjk1MQ%3D%3D\)](/workbook/view/service-provider-v4/task/lisp-basic-overlay-ipv4-to-ipv4-Mjk1MQ%3D%3D) »

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Note:

Initial Configuration & Diagrams: [Load the initial configuration files for the section named Base IPv4, which can be found in CCIE SPv4 Topology Diagrams & Initial Configurations \(<http://labs.ine.com/workbook/view/service-provider-v4/task/ccie-spv4-topology-diagrams-initial-configs>\).](#) [Refer to the Base IPv4 Diagram in order to complete this task.](#)

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Task

- Configure IS-IS routing in the network as follows:
 - R1, R2, R3, and R4 should run IS-IS and use NET address 00.0000.0000.000Y.00, where Y is the router number.
 - Level-2 consists of links interconnecting R1 & R2, R2 & R3, R2 & R4, R3 & R4, and all their Loopback0 interfaces.
- Configure OSPF routing in the network as follows:
 - R5, R6, XR1, and XR2 should run OSPF.
 - Area 0 consists of links interconnecting R5 & R6, R5 & XR1, R6 & XR1, XR1 & XR2, and all their Loopback0 interfaces.
- Configure the network to support MPLS TE tunnels as follows:
 - Enable MPLS TE support for IS-IS Level-2 on R1, R2, R3, and R4.
 - Enable MPLS TE support for OSPF Area 0 on R5, R6, XR1, and XR2.
 - Set the MPLS TE Router-IDs to be the Loopback0 interfaces.
 - Enable support for RSVP and MPLS TE on all transit interfaces.
- Configure Inter-AS MPLS TE support as follows:
 - Do not advertise the Inter-AS links (R3 & R6, R4 & R5, and R4 & R6) into IGP.
 - Instead, configure these links as passive interfaces for the MPLS TE process.
 - Use the routers' Loopback0 interfaces as the neighbor TE ID.
- Configure an MPLS TE tunnel from R1 to XR2 as follows:
 - Unnumber the tunnel to R1's Loopback0 interface.
 - Set the tunnel destination as XR2's Loopback0 interface.
 - Configure the tunnel's explicit path option to use loose next-hops as follows:
 - R1 should use R3 as the first ASBR.
 - R3 should use R6 as the next ASBR.
 - Configure Autoroute Destination so that R1 uses the tunnel to route toward XR2's Loopback0.
- Configure an MPLS TE tunnel from XR2 to R1 as follows:
 - Unnumber the tunnel to XR2's Loopback0 interface.

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- Set the tunnel destination as R1's Loopback0 interface.
- Configure the tunnel's explicit path option to use loose next-hops as follows:
 - XR2 should use R6 as the first ASBR.
 - R6 should use R4 as the next ASBR.
- Configure static routing so that XR2 uses the tunnel to route toward R1's Loopback0.
- When complete, you should be able to ping and traceroute between the Loopback0 networks of R1 and XR2.

Configuration [Click to expand](#)

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