JUNIPER NETWORKS | **Education Services**

DATA CENTER, EXPERT (JNCIE-DC)

Earn an expert-level certification that demonstrates competency in advanced data center technologies and related configuration and troubleshooting skills.

One of four certifications in the Data Center track (the JNCIE-DC, expert) is designed for data center professionals wanting to advance their knowledge and validate their ability to deploy, configure, manage, and troubleshoot devices on the Juniper Networks® Junos® Platform. During the practical exam, you will build and configure Juniper Networks MX Series Routing Platforms and QFX Series Switches for Clos fabric, Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN), Data Center Interconnect (DCI), and class of service (CoS).

Exam Preparation

We recommend the following resources to help you prepare for your exam. However, these resources aren't required, and using them doesn't guarantee you'll pass the exam.

Recommended Training

- JNCIE-DC Certification Self-Study Bundle
- All courses listed for the underlying certifications

Exam Resources

- Juniper TechLibrary
- Extensive real-world hands-on experience

Additional Preparation

- Juniper Learning Portal

Exam Objectives

Here is a high-level view of the skillset required to successfully complete the JNCIE-DC certification exam.

Layer 3 Underlay

In a controllerless data center, a successful candidate will:

- Build, deploy, and troubleshoot an IP fabric
- Use routing policies to ensure that only required addresses are advertised
- Use all available links for forwarding traffic

In a data center managed by Juniper® Apstra software, a successful candidate will:

- Build, deploy, and troubleshoot an IP fabric
- Use routing policies to ensure that only required addresses are advertised
- Create and use custom tags
- Restrict all fabric device configurations to Apstra
- Use all available links for forwarding traffic

Overlay

In a controllerless data center, a successful candidate will:

- Deploy, manage, and troubleshoot an EBGP- or IBGP-signaled EVPN-VXLAN overlay
- Establish communication between multihomed and single-homed end devices
- Create multiple separate Layer 2 and Layer 3 tenant environments
- Enable routing between different Layer 3 tenants
- Configure and optimize multicast communication

In a data center managed by Apstra, a successful candidate will:

- Deploy, manage, and troubleshoot an EBGP-signaled EVPN-VXLAN overlay
- Establish communication between multihomed and single-homed end devices
- Create multiple separate Layer 3 tenant environments
- Enable routing between different Layer 3 tenants

Data Center Interconnect (DCI)

A successful candidate will:

- Deploy, manage, and troubleshoot a DCI solution between a Juniper Apstra-managed data center and a controllerless data center using Type 2 or Type 5 EVPN routes to enable tenant communication between data centers without the use of Apstra configlets

- Deploy, manage, and troubleshoot a DCI solution between two controllerless data centers using seamless VXLAN-to-VXLAN stitching to enable tenant communication between data centers
- Identify incoming VXLAN virtual network identifier (VNI) information from an unmanaged preconfigured peer device

Security

A successful candidate will:

- Deploy, manage, and troubleshoot security features that protect the data center infrastructure and edge devices
- Restrict device access from unauthorized protocols and networks
- Monitor and log excessive traffic events
- Monitor and track various spanning-tree messages and take required actions according to the defined security requirements

Class of Service (CoS)

A successful candidate will:

- Configure and troubleshoot CoS settings for server traffic connected to leaf nodes

Management

A successful candidate will:

- Use tags and probes to track critical services and trigger Apstra anomalies when specific conditions are met or exceeded
- Create and use custom Apstra configlets
- Enable subsecond link failure detection using Bidirectional Forwarding Detection (BFD) between leaf and external devices
- Implement date and time synchronization for devices
- Configure local and remote system logging
- Enable streaming telemetry on custom ports
- Use SNMP monitoring in the data centers

Exam Details

Exam questions are derived from the recommended training and the exam resources listed above. The exam is only provided in English.

Exam Code

JPR-981

Prerequisite Certification

JNCIP-DC

Delivered by

Juniper Networks

Exam Length

6 hours

Exam Type

Hands-on lab exam

Software Versions

- vQFX Virtual Switch: 21.3
- vSRX Virtual Firewall: 20.2
- vMX Virtual Router: 20.4
- Apstra Version: 4.0.2

Recertification

Juniper certifications are valid for three years. For more information, please see Recertification.

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

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