



# Design, Associate (JNCIA-design)

Earn an associate-level certification that demonstrates competency in HPE Juniper Networking design principles and associated technologies.

As part of the HPE Juniper Networking Design track, the JNCIA-Design, Associate, is for networking professionals and designers with beginner knowledge of network design, theory, and best practices. During the multiple choice exam, you will demonstrate your understanding of network design fundamentals.

## 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

- [Juniper Design Fundamentals](#)

### Exam resources

- Industry/product knowledge
- [HPE Juniper Networking TechLibrary](#)

### Additional preparation

- [HPE Juniper Networking Learning Portal](#)

## Exam objectives

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

### Customer network design requirements

Identify initial network design requirements for:

- HPE Juniper Networking lifecycle service approach
- Proposal boundaries and considerations
- Greenfield and brownfield deployments
- Top-down networks

- Capacity planning

Identify the roles of different HPE products and solutions, including:

- Routers
- Switches
- Security
- WLAN
- Software-defined networking (SDN)
- Network management

### Securing the network

Identify security design principles for:

- General security design and considerations
- Securing a data center
- Securing the campus WAN
- Zero trust security
- Secure access service edge (SASE)

### Network management or reliability

Identify network design considerations for business continuity, including:

- High-resiliency design
- Link- and device-level redundancy
- Multihomed Ethernet Segment Identifier Link Aggregation Groups (ESI LAGs)
- Juniper SRX Series Firewalls redundancy
- Virtual chassis
- Campus redundancy best practices

Identify design considerations for network automation, including:

- Benefits of network automation
- HPE automation products
- Junos® XML, Representational State Transfer (REST), JET service process (JSD) APIs

- Junos OS on-box and off-box automation

Identify design considerations for network management strategies, including:

- Network management methodologies
- Separation of production and management traffic
- Configuration backups
- Remote console access
- HPE Juniper Networking management strategies

### **Campus and branch LAN design**

Identify considerations for a wired campus or branch LAN, including:

- Campus LAN design best practices
- Modular design
- Subnet and VLAN design
- Access control design
- Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN) architecture
- Campus oversubscription ratios
- Campus design architectures

Identify considerations for a wireless LAN, including:

- WLAN design phases
- Gathering business requirements
- Gathering technical requirements
- Device types
- Designing secondary coverage
- Designing real-time location services
- Access point (AP) coverage patterns
- Co-channel contention
- Gathering RF requirements
- RF modeling

### **Campus and branch WAN design**

Identify considerations for a campus or branch WAN, including:

- Campus or branch WAN connectivity functions
- Best practices for designing the campus or branch WAN
- Campus WAN performance
- Campus WAN VPN design
- Campus active/active and active/passive high availability (HA)

Identify considerations for an SD-WAN, including:

- SD-WAN design considerations
- SD-WAN devices
- Assurance models
- SD-WAN inter-site connectivity

### **Data center network design**

Identify considerations for general data center network, including:

- Data center design best practices
- Traffic patterns
- Virtual chassis
- Environmental considerations
- Data center fabric architectures

Identify considerations for IP fabric-based data center network, including:

- Benefits of IP fabric over other data center architectures
- Design options with IP fabrics
- Spine-and-leaf device placement recommendations
- Underlay and overlay design
- Routing protocol selection
- IP fabric best practices
- IP fabric scaling

## Exam details

Exam questions are derived from the recommended training and the exam resources listed above. Pass/fail status is available immediately after taking the exam. The exam is only provided in English.

### Exam code

JNO-1103

### Prerequisite certification

None

### Delivered by

[Pearson VUE](#)

### Exam length

90 minutes

### Exam type

65 multiple-choice questions

## Recertification

HPE Juniper Networking certifications are valid for three years. For more information, see [Recertification](#).

## About HPE

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