

## **AZ-120T00: Planning and Deploying SAP on Azure**

**Duration : 32 Hours**

### **Audience profile**

As a candidate for this exam, you're an architect or engineer with extensive experience and knowledge of the systems applications and products (SAP) system landscape and industry standards that are specific to the initial migration or integration and the long-term operation of an SAP solution on Microsoft Azure.

As an architect or engineer for Azure for SAP Workloads, you're responsible for:

- Making recommendations on services.
- Adjusting resources as appropriate for optimal resiliency, performance, scale, provision, size, and monitoring.

In these roles, you implement solutions by partnering with:

- Cloud administrators
- Cloud database administrators
- Clients

You should have extensive experience and knowledge of the following applications and services: SAP high-performance Analytic Appliance (HANA), SAP Business Suite 4 (S/4) HANA, SAP NetWeaver, SAP Business Warehouse 4 (BW/4) HANA, servers for SAP applications and databases, Azure portal, Azure Marketplace, and Azure Resource Manager templates.

You should also have experience with:

- Virtualization
- Cloud infrastructure
- Storage structures
- High availability design
- Disaster recovery design
- Data protection concepts
- Networking

**For this exam, we strongly recommend that candidates have an Azure Administrator Associate certification.**

### **Skills at a glance**

- Migrate SAP workloads to Azure (25–30%)
- Design and implement an infrastructure to support SAP workloads on Azure (35–40%)
- Design and implement high availability and disaster recovery (HA/DR) (15–20%)
- Maintain SAP workloads on Azure (10–15%)

## **Migrate SAP workloads to Azure (25–30%)**

### **Identify requirements for target infrastructure**

- Estimate target sizing for SAP workloads
- Identify supported scenarios for SAP deployments on Azure
- Identify compute, storage, and network requirements for SAP workloads
- Assess constraints imposed by subscription models and quota limits
- Identify software licensing requirements for target workloads
- Identify cost implications for target workloads
- Specify an Azure support plan for the target infrastructure
- Choose between lift and shift, lift-shift-migrate, and lift-shift-migrate to HANA
- Choose an appropriate SAP workload migration strategy and tools

### **Design and implement an Azure environment to support SAP workloads**

- Design and implement authorization and access control for SAP workloads
- Design and implement governance and compliance by using Azure Policy
- Design and implement authentication for SAP workloads
- Design and implement authentication for SAP software as a service (SaaS) applications
- Design and implement a management hierarchy, including management groups, subscriptions, and resource groups
- Design Azure landing zones for SAP

## **Design and implement an infrastructure to support SAP workloads on Azure (35–40%)**

### **Design and implement a compute solution for SAP workloads**

- Choose an SAP-certified Azure virtual machine for a given SAP workload
- Configure the Azure VM extension for SAP solutions
- Deploy an operating system by using an Azure Marketplace image
- Create a custom image and deploy it to an Azure virtual machine
- Automate a deployment of Azure virtual machines by using IaC, including Bicep and Azure Resource Manager (ARM) templates
- Automate a deployment by using the SAP on Azure Deployment Automation Framework
- Automate a deployment by using Azure Center for SAP solutions

### **Design and implement networking for SAP on Azure virtual machines**

- Design and implement virtual networks and subnets
- Implement Accelerated Networking for Azure virtual machines
- Design and configure proximity placement groups
- Design networking to meet SAP workload latency requirements
- Design and implement network flow control
- Design and implement network security
- Design and implement service endpoints and private endpoints for Azure Storage
- Design name resolution for integration with Azure DNS
- Design and configure ExpressRoute for hybrid connectivity

### **Design and implement a storage solution for SAP on Azure virtual machines**

- Choose a storage type
- Specify when to use disk striping and simple volumes
- Design for storage security considerations
- Design and implement data protection
- Design and implement caching for disks
- Configure Write Accelerator
- Configure encryption for storage, disks, and data
- Design and implement volumes by using Azure NetApp Files
- Design and implement volumes by using Azure Files

### **Design and implement high availability and disaster recovery (HA/DR) (15–20%)**

#### **Design and implement a high availability solution for SAP on Azure virtual machines**

- Design for service-level agreement (SLA) considerations
- Design and deploy SAP workloads into availability sets and availability zones
- Design and implement load balancing for high availability
- Configure clustering for HANA and SAP Central Services (SCS)
- Configure clustering for SQL
- Configure Pacemaker and STONITH
- Configure an Azure fence agent or STONITH Block Device (SBD)
- Design and configure storage-level replication for SAP workloads
- Configure restart of SAP systems, instances, and HANA databases

### **Design and implement a disaster recovery solution for SAP on Azure virtual machines**

- Design and implement an Azure Site Recovery strategy for an SAP infrastructure
- Design a disaster recovery solution with regional considerations
- Specify network configurations for disaster recovery
- Design a backup strategy to meet SLA requirements
- Implement policies for backups and snapshots
- Configure and validate snapshots and backups for SAP workloads
- Perform backup and restore
- Test disaster recovery

### **Maintain SAP workloads on Azure (10–15%)**

#### **Optimize performance and costs**

- Optimize performance and costs for an SAP workload by using Azure Advisor recommendations
- Analyze and optimize network performance
- Optimize costs by configuring snoozing and deploying reserved instances
- Optimize performance and costs by resizing Azure virtual machines
- Optimize storage costs
- Optimize performance and costs of SAP application servers and databases

#### **Monitor and maintain SAP on Azure**

- Monitor Azure virtual machines by using Azure Monitor

- Monitor high availability by using Azure Monitor
- Monitor storage by using Azure Monitor
- Monitor networking by using Azure Monitor and Azure Network Watcher
- Configure Azure Monitor for SAP solutions
- Manage backups by using Azure Backup
- Start and stop SAP systems by using Azure Center for SAP solutions
- Manage virtual instances by using Azure Center for SAP solutions
- Implement the SAP Landscape Management (LaMa) connector for Azure