# Microsoft Certified: Azure for SAP Workloads Specialty – Skills Measured

*This document contains the skills measured on the exams associated with this certification. It does not include any upcoming or recent changes that have been made to those skills. For more information about upcoming or recent changes, see the associated exam details page(s).*

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

## Exam AZ-120: Planning and Administering Microsoft Azure for SAP Workloads

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

**Identify requirements for target infrastructure**

- estimate target database size
- determine supportability of operating systems and databases in Azure
- estimate compute, storage, and network requirements for the target database
- determine target SAPS by using Early Watch Alert (EWA) reports or Quick Sizer
- assess constraints imposed by subscription models and quota limits
- evaluate licensing and pricing across SAP tiers
- evaluate components, such as Azure Data Factory, Data Lake, Microsoft Power BI, and SAP Cloud
- specify a Microsoft support option for SAP on Azure

**Design and implement identity and access for SAP workloads**

- design and implement access control and authorization for SAP workloads
- design and implement authentication for SAP workloads
- manage access permissions to SAP systems

**Design and implement an SAP migration strategy**

- choose a migration scenario (lift-and-shift, lift-shift-migrate, lift-shift-migrate to HANA) or greenfield

- choose migration methods
- configure storage to support migration
- implement an SAP migration

## Design and implement an infrastructure to support SAP workloads (25–30%)

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

- specify a compute platform (Azure Virtual Machines versus HANA Large Instances [HLIs])
- configure Azure VM Extension for SAP
- configure Accelerated Networking
- configure VMs for Availability Sets
- configure VMs for Availability Zones
- deploy an OS by using an Azure Marketplace image
- create and deploy a custom image
- automate deployment by using ARM templates
- connect to an Azure HLI
- configure license registration for an Azure HLI
- configure and apply operating system updates to an Azure HLI
- configure a snapshot

### Design and implement a network topology for SAP on Azure Virtual Machines or Azure HLI

- design and configure proximity placement groups
- define zones and subnets
- design for latency considerations
- design for network security
- design and implement networking for Azure HLI
- plan for the use of Azure ExpressRoute (FastPath versus Direct)
- optimize networking to minimize latency between/within SAP tiers
- configure routing for Azure HLI
- design and configure load balancing for a reverse proxy

### Design and implement a storage solution for SAP on Azure Virtual Machine or Azure HLI

- specify an appropriate storage option (Managed, Premium, Ultra disk, SOFS with Storage Spaces Direct [SSD], Azure NetApp Files, Azure shared Disks)
- specify when to use disk striping and simple volumes

- design for security considerations for storage
- design for data protection considerations
- design and implement caching for disks
- configure Write Accelerator
- configure encryption

## Design and implement high availability and disaster recovery (HA/DR) (20–25%)

### Design a high availability and disaster recovery solution for SAP on Azure Virtual Machine or Azure HLI

- design an Azure Site Recovery strategy for SAP workloads
- design HANA System Replication/SQL Server Always On/Oracle Data Guard
- design an availability set and availability zone strategy for SAP workloads
- design load balancing for SAP HA or database HA
- design for regional considerations
- design for service-level agreement (SLA) considerations

### Implement high availability and disaster recovery

- configure STONITH
- configure database-level replication, including HANA System Replication, SQL Server AlwaysOn, and Oracle Data Guard
- configure fencing/Stonith Block Device (SBD)
- configure Azure Site Recovery
- configure storage-level replication for SAP Central Services
- configure load balancing for SAP HA or database HA
- configure clustering
- configure and validate backups
- perform backup and restore
- test disaster recovery

## Maintain SAP workloads on Azure (15–20%)

### Optimize performance and costs

- optimize performance and cost of SAP HANA virtual hardware and Azure HLI
- optimize performance and cost by using SAP HANA Hardware and Cloud Measurement Tools (HCMT)

- measure/reduce network latency between SAP servers and clients
- optimize network performance and bandwidth costs
- optimize performance and cost of SAP application servers
- measure performance by using the SAPS benchmark tool
- configure snoozing
- resize VMs
- optimize storage costs
- optimize an SAP workload on Azure by using Azure Advisor

**Monitor SAP on Azure**

- monitor SAP workloads by using Azure Monitor for SAP Solutions
- monitor SAP workloads by using Log Analytics
- monitor networking