Study guide for Exam AZ-120: Planning and Administering Azure for SAP Workloads

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
Review the skills measured as of January 30, 2023	This list represents the skills measured AFTER the date provided. Study this list if you plan to take the exam AFTER that date.
Review the skills measured prior to January 30, 2023	Study this list of skills if you take your exam PRIOR to the date provided.
Change log	You can go directly to the change log if you want to see the changes that will be made on the date provided.
How to earn the certification	Some certifications only require passing one exam, while others require passing multiple exams.
Certification renewal	Microsoft associate, expert, and specialty certifications expire annually. You can renew by passing a **free** online assessment on Microsoft Learn.
Your Microsoft Learn profile	Connecting your certification profile to Learn allows you to schedule and renew exams and share and print certificates.
Passing score	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.

Useful links	Description
Request accommodations	If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.
Take a practice test	Are you ready to take the exam or do you need to study a bit more?

Updates to the exam

Our exams are updated periodically to reflect skills that are required to perform a role. We have included two versions of the Skills Measured objectives depending on when you are taking the exam.

We always update the English language version of the exam first. Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

Note

The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

Note

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

Skills measured as of January 30, 2023

Audience profile

Candidates for this exam have extensive experience with and knowledge of the 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.

Responsibilities for architects or engineers for Azure for SAP workloads include making recommendations on services and adjusting resources as appropriate for optimal resiliency, performance, scale, provision, size, and monitoring.

Architects or engineers for Azure for SAP workloads partner with cloud administrators, cloud database administrators, and clients to implement solutions.

They should be familiar with SAP applications, including SAP NetWeaver, SAP HANA, and S/4HANA, and they need experience with integrating one or more of them. Candidates should have experience with

operating systems for SAP applications and databases, Azure administration, infrastructure as code, cloud infrastructure, high availability, disaster recovery, backup, security, and data protection.

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

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

Migrate SAP workloads to Azure (25–30%)

Identify requirements for target infrastructure

- Estimate target sizing for SAP workloads
- Determine supportability of SAP workloads in Azure
- Evaluate compliance by using SAP HANA hardware and cloud measurement tools
- Identify compute, storage, and network requirements for SAP workloads and HANA Large Instances (HLI)
- Assess constraints imposed by subscription models and quota limits
- Evaluate licensing and pricing across SAP tiers
- Identify an appropriate data integration service
- Specify an Azure support plan for target infrastructure

Design and implement identity, access, and governance for SAP workloads

- Design and implement access control for SAP workloads
- Design and implement governance and compliance by using Azure Policy
- Design and integrate Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra, Azure Active Directory Domain Services (Azure AD DS), and Active Directory authentication for SAP workloads
- Design and implement authentication for SAP software as a service–based (SaaS-based) applications

Design and implement an SAP migration strategy

- 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 SAP migration to Azure
- Configure storage to support migration

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

Design and implement a compute solution for SAP workloads

- Specify an appropriate compute platform, including Azure Virtual Machines and HLI
- 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 and deploy a custom image to an Azure virtual machine
- Automate deployment of Azure Virtual Machines by using infrastructure as code
- Request an Azure HLI
- Connect to an Azure HLI
- Configure license registration for an Azure HLI
- Configure and apply operating system updates to an Azure HLI

Design and implement networking for SAP on Azure Virtual Machines or Azure HLI

- Design and implement virtual networks and subnets
- Implement Accelerated Networking for Azure Virtual Machines
- Design and configure proximity placement groups
- Design networking to minimize latency
- Design and implement network security
- Design and implement service endpoints and private endpoints for Azure Storage
- Design and implement network flow control
- Design name resolution for integration with Azure DNS
- Design and configure Azure ExpressRoute for hybrid connectivity
- Configure Azure ExpressRoute for Azure HLI
- Design and implement networking for Azure HLI
- 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 Machines or Azure HLI

- Specify an appropriate storage option, including Managed, Premium, Ultra disk, SOFS with Storage Spaces Direct, Azure NetApp Files, and Azure shared disks
- 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 high availability and disaster recovery (HA/DR) (20–25%)

Design and implement a high-availability solution for SAP on Azure Virtual Machines or Azure HLI

- 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 SAP HANA and SAP Central Services
- Configure Pacemaker and STONITH
- Configure an Azure fence agent or STONITH Block Device (SBD)
- Design and configure storage-level replication for SAP workloads
- Design and configure high availability for Azure HLI
- Automate deployment by using the SAP deployment automation framework on Azure

Design and implement a disaster recovery solution for SAP on Azure Virtual Machines or Azure HLI

- Design and implement an Azure Site Recovery strategy for SAP infrastructure
- Design a disaster recovery solution with regional considerations
- Specify network configurations for disaster recovery
- Design and 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 (15–20%)

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 virtual machines (VMs) to reserved instances
- Optimize performance and cost by resizing VMs
- Optimize storage costs
- Optimize performance and cost of SAP application servers and databases

Monitor SAP on Azure

- Monitor VMs

- Monitor HLIs
- Monitor high availability
- Monitor storage
- Monitor networking
- Configure Azure Monitor for SAP Solutions

Study resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	Choose from self-paced learning paths and modules or take an instructor-led course
Find documentation	Azure Center for SAP solutions SAP workload development and test settings SAP on Azure architecture design
Ask a question	Microsoft Q&A | Microsoft Docs
Get community support	Azure Community Support
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community
Find a video	Exam Readiness Zone Azure Fridays Browse other Microsoft Learn shows

Change log

Key to understanding the table: The topic groups (also known as functional groups) are in bold typeface followed by the objectives within each group. The table is a comparison between the two versions of the exam skills measured and the third column describes the extent of the changes.

Skill area prior to January 30, 2023	Skill area as of January 30, 2023	Change
Audience profile	Audience profile	No change
Migrate SAP workloads to Azure	**Migrate SAP workloads to Azure**	No change
Identify requirements for target infrastructure	Identify requirements for target infrastructure	No change
Design and implement identity, access, and governance for SAP workloads	Design and implement identity, access, and governance for SAP workloads	No change
Design and implement an SAP migration strategy	Design and implement an SAP migration strategy	No change
Design and implement an infrastructure to support SAP workloads on Azure	**Design and implement an infrastructure to support SAP workloads on Azure**	No change
Design and implement a compute solution for SAP workloads	Design and implement a compute solution for SAP workloads	No change
Design and implement networking for SAP on Azure Virtual Machines or Azure HLI	Design and implement networking for SAP on Azure Virtual Machines or Azure HLI	No change
Design and implement a storage solution for SAP on Azure Virtual Machines or Azure HLI	Design and implement a storage solution for SAP on Azure Virtual Machines or Azure HLI	No change
Design and implement high availability and disaster recovery (HA/DR)	**Design and implement high availability and disaster recovery (HA/DR)**	No change
Design and implement a high availability solution for SAP on Azure Virtual Machines or Azure HLI	Design and implement a high availability solution for SAP on Azure Virtual Machines or Azure HLI	Minor

Skill area prior to January 30, 2023	Skill area as of January 30, 2023	Change
Design and implement a disaster recovery solution for SAP on Azure Virtual Machines or Azure HLI	Design and implement a disaster recovery solution for SAP on Azure Virtual Machines or Azure HLI	No change
Maintain SAP workloads on Azure	**Maintain SAP workloads on Azure**	No change
Optimize performance and costs	Optimize performance and costs	No change
Monitor SAP on Azure	Monitor SAP on Azure	No change

Skills measured prior to January 30, 2023

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