



🕒 Apr 25 💬 13

## Preparation Guide for Microsoft AZ-500 Microsoft Azure Security Technologies Certification

Posted by [squastana](#)

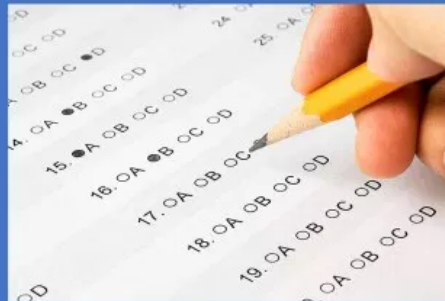
I just get my **AZ-500 Microsoft Azure Security Technologies Certification** (and a new badge : **Microsoft Certified: Azure Security Engineer Associate**) and it is time now to share my preparation notes for those who are interested to pass this exam and get certified too.

This article is just **one another preparation guide to Microsoft exam AZ-500** but I hope it will be useful 😊



# Preparation Guide for Microsoft AZ-500 Microsoft Azure Security Technologies Certification

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Even if you don't plan to take the exam, all this content is really interesting to read and understand if you want to discover and improve your knowledge on security on Azure.

Before starting studying, **you must know very well what this certification is about and what are the prerequisites.**

The topics included in this exam are the following :

- Manage identity and access (20-25%)
- Implement platform protection (35-40%)
- Manage security operations (15-20%)
- Secure data and applications (30-35%)

More details :

<https://www.microsoft.com/en-us/learning/exam-az-500.aspx>

## Manage identity and access (20-25%)

## — Configure Microsoft Azure Active Directory for workloads —

How to: Use the portal to create an Azure AD application and service principal that can access resources

<https://docs.microsoft.com/en-us/azure/active-directory/develop/howto-create-service-principal-portal>

Permissions and consent in the Azure Active Directory v2.0 endpoint

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-permissions-and-consent>

Configure Multi-Factor Authentication settings

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-mfasettings>

Enterprise user management documentation – Azure Active Directory

<https://docs.microsoft.com/en-us/azure/active-directory/users-groups-roles/>

Manage Microsoft Azure AD directory groups

Create a basic group and add members using Azure Active Directory

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-groups-create-azure-portal>

What is guest user access in Azure Active Directory B2B?

<https://docs.microsoft.com/en-us/azure/active-directory/b2b/what-is-b2b>

## — Configure Microsoft Azure AD Privileged Identity Management —

Configure Microsoft Azure AD identity protection

What is Azure Active Directory Identity Protection?

<https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/overview>

Vulnerabilities detected by Azure Active Directory Identity Protection

<https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/vulnerabilities>

Configure Microsoft Azure AD Privileged Identity Management

Monitor privileged access, configure Access Reviews, activate Privileged Identity Management

<https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-getting-started>  
<https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-deployment-plan>

### — Configure Microsoft Azure tenant security —

Transfer Microsoft Azure subscriptions between Microsoft Azure AD tenants, manage API access to Microsoft Azure subscriptions and resources

Transfer ownership of an Azure subscription to another account

<https://docs.microsoft.com/en-us/azure/billing/billing-subscription-transfer>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-aad>

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-manager-api-authentication>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/active-directory-graph-api>

## Implement platform protection (35-40%)

### — Implement network security —

What is Azure Virtual Network?

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-overview>

Security Group

<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview>

Configure Network Security Groups (NSGs)

<https://docs.microsoft.com/en-us/azure/virtual-network/manage-network-security-group>

Understanding Application Security Groups in the Azure Portal

<https://www.petri.com/understanding-application-security-groups-in-the-azure-portal>

Create and configure application security groups

<https://azure.microsoft.com/en-gb/blog/applicationsecuritygroups/>

Services Tags

<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview#service-tags>

What is Azure Firewall ?

<https://docs.microsoft.com/en-us/azure/firewall/overview>

Tutorial: Deploy and configure Azure Firewall using the Azure portal

<https://docs.microsoft.com/en-us/azure/firewall/tutorial-firewall-deploy-portal>

Configure remote access management – Security management in Azure

<https://docs.microsoft.com/en-us/azure/security/azure-security-management>

Configure baseline – Protect your network resources in Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-network-recommendations>

Configure Azure Storage firewalls and virtual networks

<https://docs.microsoft.com/en-us/azure/storage/common/storage-network-security>

Azure SQL Database and SQL Data Warehouse IP firewall rules

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-firewall-configure>

### — Implement host security —

configure VM Security – Security best practices for IaaS workloads in Azure

<https://docs.microsoft.com/en-us/azure/security/azure-security-iaas>

Manage endpoint protection issues with Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-install-endpoint-protection>

Manage virtual machine access using just-in-time

<https://docs.microsoft.com/en-us/azure/security-center/security-center-just-in-time>

Manage Windows updates by using Azure Automation

<https://docs.microsoft.com/en-us/azure/automation/automation-tutorial-update-management>

Automate resources in your datacenter or cloud by using Hybrid Runbook Worker

<https://docs.microsoft.com/en-us/azure/automation/automation-hybrid-runbook-worker>

Configure Baseline – Customize OS security configurations in Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-customize-os-security-config>

### — Configure container security —

Container Security in Azure

<https://azure.microsoft.com/mediahandler/files/resourcefiles/container-security-in-microsoft-azure/Open%20Container%20Security%20in%20Microsoft%20Azure.pdf>

Configure network – Enable containers to use Azure Virtual Network capabilities

<https://docs.microsoft.com/en-us/azure/virtual-network/container-networking-overview>

Configure authentication – Service principals with Azure Kubernetes Service (AKS)

<https://docs.microsoft.com/en-us/azure/aks/kubernetes-service-principal>

Secure traffic between pods using network policies in Azure Kubernetes Service (AKS)

<https://docs.microsoft.com/en-us/azure/aks/use-network-policies>

Configure AKS security – Security concepts for applications and clusters in Azure Kubernetes Service (AKS)

<https://docs.microsoft.com/en-us/azure/aks/concepts-security>

Configure container registry

<https://docs.microsoft.com/en-us/azure/container-registry/>

Best practices for Azure Container Registry

<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-best-practices>

Configure container instance security

<https://docs.microsoft.com/en-us/azure/container-instances/>

Implement vulnerability management

<https://www.aquasec.com/solutions/azure-container-security/>

### — Implement Microsoft Azure Resource management security —

Create Microsoft Azure resource locks

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-lock-resources>

Manage resource group security with Azure RBAC

<https://docs.microsoft.com/en-us/azure/role-based-access-control/overview>

Built-in roles for Azure resources

<https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles>

Configure custom RBAC roles

<https://docs.microsoft.com/en-us/azure/role-based-access-control/custom-roles>

Configure Microsoft Azure policies

<https://docs.microsoft.com/en-us/azure/governance/policy/tutorials/create-and-manage>

Configure subscription and resource permissions

<https://docs.microsoft.com/en-us/azure/role-based-access-control/role-assignments-portal>

## Manage security operation (15-20%)

## — Configure Security Services —

Configure Microsoft Azure Monitor

Azure Monitor overview

<https://docs.microsoft.com/en-us/azure/azure-monitor/overview>

Configure Azure Log Analytics for data security

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/data-security>

Configure Azure diagnostic logs

<https://docs.microsoft.com/en-us/azure/security/azure-log-audit#azure-diagnostics-logs>

Configure Microsoft Azure Log Analytics

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/manage-access>

Configure diagnostic logging and log retention

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/diagnostic-logs-overview>

Configure vulnerability scanning

<https://docs.microsoft.com/en-us/azure/security-center/security-center-vulnerability-assessment-recommendations>

## — Configure Security Policies —

Working with security policies

<https://docs.microsoft.com/en-us/azure/security-center/tutorial-security-policy>

Azure security policies monitored by Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-policy-definitions>

Configure centralized policy management by using Microsoft Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/tutorial-security-policy>

Configure Just in Time VM access by using Microsoft Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-just-in-time>

### — Managed Security Alerts —

Create and customize alerts

Custom Alert Rules in Azure Security Center (Preview)

<https://docs.microsoft.com/en-us/azure/security-center/security-center-custom-alert>

Review and respond to alerts and recommendations

<https://docs.microsoft.com/en-us/azure/security-center/security-center-managing-and-responding-alerts>

<https://docs.microsoft.com/en-us/azure/security-center/security-center-recommendations>

Configure a playbook for a security event by using Microsoft Azure Security Center

<https://docs.microsoft.com/en-us/azure/security-center/security-center-playbooks>

Investigate escalated security incidents

<https://docs.microsoft.com/en-us/azure/security-center/security-center-investigation>

## Secure Data and Applications (30-35%)

### — Configure security policies to manage data —

Achieving Compliant Data Residency and Security with Azure

[https://azure.microsoft.com/mediahandler/files/resourcefiles/achieving-compliant-data-residency-and-security-with-azure/Achieving\\_Compliant\\_Data\\_Residency\\_and\\_Security\\_with\\_Azure.pdf](https://azure.microsoft.com/mediahandler/files/resourcefiles/achieving-compliant-data-residency-and-security-with-azure/Achieving_Compliant_Data_Residency_and_Security_with_Azure.pdf)

Configure data sovereignty using Azure Policy

<https://docs.microsoft.com/en-us/azure/governance/policy/samples/allowed-locations>



Configure Data Retention

<https://www.microsoft.com/en-us/trustcenter/privacy/data-management>

Configure data retention (Storage Analytics)

<https://docs.microsoft.com/en-us/rest/api/storageservices/setting-a-storage-analytics-data-retention-policy>

Azure Data Explorer (Retention)

<https://docs.microsoft.com/en-us/azure/kusto/management/retention-policy>

<https://docs.microsoft.com/en-us/azure/kusto/concepts/retentionpolicy>

Configure data classification

<https://docs.microsoft.com/en-us/azure/information-protection/infoprotect-settings-tutorial>

## — **Configure security for data infrastructure** —

Enable database authentication

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-aad-authentication>

Configure and manage Azure Active Directory authentication with SQL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-aad-authentication-configure>

Get started with SQL database auditing

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-auditing>

Azure SQL Database threat detection for single or pooled databases

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-threat-detection>

Azure Storage security guide

<https://docs.microsoft.com/en-us/azure/storage/common/storage-security-guide>

Configure key management for storage accounts

<https://docs.microsoft.com/en-us/azure/storage/common/storage-service-encryption-customer-managed-keys>

Create and manage Shared Access Signatures (SAS)

<https://docs.microsoft.com/en-us/azure/storage/common/storage-dotnet-shared-access-signature-part-1>

An introduction to Apache Hadoop security with Enterprise Security Package

<https://docs.microsoft.com/en-us/azure/hdinsight/domain-joined/apache-domain-joined-introduction>

Configure security for HDInsights

<https://docs.microsoft.com/en-us/azure/hdinsight/domain-joined/apache-domain-joined-configure-using-azure-adds>

Security in Azure Cosmos DB – overview

<https://docs.microsoft.com/en-us/azure/cosmos-db/database-security>

Secure access to data in Azure Cosmos DB

<https://docs.microsoft.com/en-us/azure/cosmos-db/secure-access-to-data>

Data encryption in Azure Cosmos DB

<https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest>

High availability with Azure Cosmos DB

<https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability>

Online backup and on-demand data restore in Azure Cosmos DB

<https://docs.microsoft.com/en-us/azure/cosmos-db/online-backup-and-restore>

Configure security for Microsoft Azure Data Lake

<https://docs.microsoft.com/en-us/azure/data-lake-store/data-lake-store-network-security>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-data-lake-storage-security-guide>

### — Configure encryption for data at rest —

Implement Microsoft Azure SQL Database Always Encrypted

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-always-encrypted>

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-always-encrypted-azure-key-vault>

Implement database encryption

<https://docs.microsoft.com/en-us/sql/relational-databases/security/encryption/transparent-data-encryption?view=sql-server-2017>

Transparent data encryption for SQL Database and Data Warehouse

<https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql?view=sql-server-2017>

Azure SQL Transparent Data Encryption with customer-managed keys in Azure Key Vault: Bring Your Own Key support

<https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-byok-azure-sql?view=sql-server-2017>

How to use Key Vault soft-delete with PowerShell

<https://docs.microsoft.com/en-us/azure/key-vault/key-vault-soft-delete-powershell>

Azure Storage Service Encryption for data at rest

<https://docs.microsoft.com/en-us/azure/storage/common/storage-service-encryption>

Storage Service Encryption using customer-managed keys in Azure Key Vault

<https://docs.microsoft.com/en-us/azure/storage/common/storage-service-encryption-customer-managed-keys>

Azure Disk Encryption for IaaS VMs

<https://docs.microsoft.com/en-us/azure/security/azure-security-disk-encryption-overview>

Implement backup encryption

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-backup-faq#encryption>

### — Implement security for application delivery —

Securing PaaS deployments

<https://docs.microsoft.com/en-us/azure/security/security-paas-deployments>

Monitor availability and responsiveness of any web site

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

### — Configure application security —

App Service and Functions hosted apps can now update TLS versions!

<https://blogs.msdn.microsoft.com/appserviceteam/2018/04/17/app-service-and-functions-hosted-apps-can-now-update-tls-versions/>

Configure SSL/TLS certs

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-tutorial-custom-ssl>

Tutorial: Bind an existing custom SSL certificate to Azure App Service

<https://docs.microsoft.com/fr-fr/azure/app-service/app-service-web-tutorial-custom-ssl#enforce-tls-1112>

Configure Microsoft Azure services to protect web apps

<https://docs.microsoft.com/en-us/azure/application-gateway/create-web-app>

Create an application security baseline

<https://docs.microsoft.com/en-us/azure/security/security-paas-deployments>

### — Configure and manage Key Vault —

About keys, secrets, and certificates

<https://docs.microsoft.com/en-us/azure/key-vault/about-keys-secrets-and-certificates>

Secure access to a key vault

<https://docs.microsoft.com/en-us/azure/key-vault/key-vault-secure-your-key-vault>

Manage certificates, manage secrets, configure key rotation

<https://docs.microsoft.com/en-us/azure/key-vault/key-vault-key-rotation-log-monitoring>

Azure Storage account key management

<https://docs.microsoft.com/en-us/azure/key-vault/about-keys-secrets-and-certificates#azure-storage-account-key-management>

Azure Key Vault managed storage account – CLI

<https://docs.microsoft.com/en-us/azure/key-vault/key-vault-ovw-storage-keys>

Azure Storage Account Keys Automatic Rotation

<http://www.wahidsaleemi.com/2017/08/azure-storage-account-keys-automatic-rotation/>

Hope this preparation guide will be useful for you. Don't hesitate to post a comment or send me a message on Twitter @squastana or on LinkedIn

<https://www.linkedin.com/in/stanislasquastana/>

Last but not least, don't forget to spend time on <http://microsoft.com/learn> where you can find additional materials to prepare your certification.

— Stanislas Quastana —

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# 13 thoughts on “Preparation Guide for Microsoft AZ-500 Microsoft Azure Security Technologies Certification”



*Noah James*

26/04/2019 at 00:12

REPLY

Man this is a very good job right here. You made my preparations easier with this. I've got the exam scheduled less than 48 and I'm sure this will help me brush up.



*Ankit Sharma*

23/05/2019 at 07:42

REPLY

Hi James, How your exam went? I'm also preparing to appear for this exam if you could help with guiding me.

Below are my contact details, it would be really helpful if you can share your experience.

Email – [ankit1767@gmail.com](mailto:ankit1767@gmail.com)

WhatsApp Contact – +91-9643895235



*LG*

04/05/2019 at 14:07

REPLY

Top les powerpoint, ca m'évite de tout lire 😊



*gaikwadhemantkumaremant*

25/05/2019 at 07:52

REPLY

Thanks For sharing such great information.

REPLY



*Gary Bushey*

20/06/2019 at 14:30

Great job! The PowerPoints are very useful tools



*squastana*

21/06/2019 at 09:45

Thanks appreciate 😊

REPLY



*Sankar*

08/07/2019 at 21:55

Thank a lot... do we have any video course available for AZ-500?

REPLY



*squastana*

25/07/2019 at 15:15

No, just slides & urls

REPLY



*GARY HARDY*

09/07/2019 at 10:01

Many thanks for gathering all these useful links into a single page along with the clear slides. It was of a great help for passing this test this morning !

I'm now looking forward to seeing the same for AZ-400 😊

REPLY



*squastana*

25/07/2019 at 15:15

AZ 400 preparation guide will be published very soon 😊 stay tuned

REPLY



*Vasisht*

09/08/2019 at 05:01

Wonderful job here mate. This helped me cover some topics missing in my prep plan. And I passed the exam. Great Job!!!

REPLY



*Pasle*

18/08/2019 at 21:16

Thank you so much for the generous sharing, is there any pre-requisite for AZ-500?

REPLY



squastana

22/08/2019 at 15:34

REPLY

No pre-requisite except a good preparation 😊

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