



PORTFOLIO

Cloud Minor

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My Motivation / Learning goal

Brian Dekker

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I am following the course HBO-ICT software engineering. My motivation for doing this minor is that i want to learn more about the cloud in general all I know about it at the moment is that a cloud is basically a large datacenter with a lot of computers. I want to learn more about how it works from the inside and what cloud computers are capable of the advantages and disadvantages. Another part for why I choose this minor is because one of the sub subjects is data and I really like working with data so I thought it might be good to have some experience with how to interact between data and the cloud. I have done some research and came across courses that azure offers for people that want to learn about their cloud system so i think i will use that as a guide line on what type of path I want to take in learning more about azure.

For now my roadmap looks something like this:

First i will study the material for the azure fundamentals (AZ-900). After that you can look at the associate level courses like right now I'm thinking of Data Scientist(DP-100), Data Engineer((DP-200/201) and Developer(AZ-203). And as the final expert course I'm thinking of looking at DevOps Engineer(AZ-400) if I get that far this minor.

Right now that is my plan for this minor in terms of individual learning goals.

Screenshots fundamental courses.



700 XP

Discuss Azure fundamental concepts

24 min • Module • 6 Units

★★★★★ 4.8 (94,614) Rate it


Beginner Administrator Developer Solution Architect Student Azure Functions

Are you interested in the cloud, but aren't sure what it can do for you? In this module, you'll learn about the advantages of using cloud computing services, and you'll learn to differentiate between the categories and types of cloud computing.

Learning objectives

After completing this module, you'll be able to:

- Identify the benefits and considerations of using cloud services
- Describe the differences between categories of cloud services
- Describe the differences between types of cloud computing

 Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

Microsoft Azure Fundamentals: Describe core Azure concepts

Introduction	2 min	✓
Discuss different types of cloud models	5 min	✓
Describe cloud benefits and considerations	5 min	✓
Describe different cloud services	5 min	✓
Knowledge check	5 min	✓
Summary	2 min	✓



900 XP

Introduction to Azure fundamentals

43 min • Module • 8 Units

★★★★★ 4.8 (153,136)

Rate it

Beginner

Administrator

Developer

Solution Architect

Student

Azure

Cloud Services

This module introduces you to the basics of cloud computing and Azure, and how to get started with Azure's subscriptions and accounts.

Learning objectives

After you complete this module, you'll be able to:

- Describe the basic concepts of cloud computing.
- Determine whether Azure is the right solution for your business needs.
- Differentiate between the different methods of creating an Azure subscription.

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

[Microsoft Azure Fundamentals: Describe core Azure concepts](#)

[Azure for Researchers part 1: Introduction to Cloud Computing](#)

Introduction

4 min



What is cloud computing?

9 min



What is Azure?

9 min



Tour of Azure services

11 min



Get started with Azure accounts

4 min



Case study introduction

2 min



Knowledge check

3 min



Summary

1 min





800 XP

Describe core Azure architectural components

27 min • Module • 7 Units

★★★★★ 4.8 (65,591)

Rate it

Beginner Administrator Developer Solution Architect Student Azure Azure Resource Manager

In this module, you'll examine the various concepts, resources, and terminology that are necessary to work with Azure architecture. For example, you'll learn about Azure subscriptions and management groups, resource groups and Azure Resource Manager, as well as Azure regions and availability zones.

Learning objectives

After completing this module, you'll be able to describe the benefits and usage of:

- Azure subscriptions and management groups.
- Azure resources, resource groups, and Azure Resource Manager.
- Azure regions, region pairs, and availability zones.

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

[Microsoft Azure Fundamentals: Describe core Azure concepts](#)

[Azure for Researchers part 1: Introduction to Cloud Computing](#)

Introduction	2 min	✓
Overview of Azure subscriptions, management groups, and resources	2 min	✓
Azure regions, availability zones, and region pairs	7 min	✓
Azure resources and Azure Resource Manager	4 min	✓
Azure subscriptions and management groups	6 min	✓
Knowledge check	4 min	✓
Summary	2 min	✓



✓ 1000 XP

Explore Azure compute services

52 min • Module • 9 Units

★★★★★ 4.8 (42,192)

Rate it

Beginner Administrator Developer Solution Architect Student Azure App Service Container Instances
Container Registry Kubernetes Service Virtual Machines

In this module, you'll learn how to take advantage of several virtualization services in Azure compute, which can help your applications scale out quickly and efficiently to meet increasing demands.

Learning objectives

After completing this module, you'll be able to describe the benefits and usage of:

- Azure Virtual Machines
- Azure App Service
- Azure Container Instances
- Azure Kubernetes Service
- Azure Functions
- Azure Virtual Desktop

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

Architect compute infrastructure in Azure

Azure for Researchers part 1: Introduction to Cloud Computing

Microsoft Azure Fundamentals: Describe core Azure services

Introduction	2 min	✓
Overview of Azure compute services	4 min	✓
Decide when to use Azure Virtual Machines	8 min	✓
Decide when to use Azure App Service	3 min	✓
Decide when to use Azure Container Instances or Azure Kubernetes Service	12 min	✓
Decide when to use Azure Functions	10 min	✓
Decide when to use Azure Virtual Desktop	9 min	✓
Knowledge check	3 min	✓
Summary	1 min	✓



800 XP

Explore Azure networking services

38 min • Module • 7 Units

★★★★☆ 4.6 (28,760)

Rate it

Beginner

Administrator

Developer

Solution Architect

Student

Azure

ExpressRoute

Virtual Network

VPN Gateway

In this module, you'll take a look at several of the core networking resources that are available in Azure. You'll learn about Azure Virtual Network, which you can configure into a customized network environment that meets your company's needs. You'll also learn how you can use Azure VPN Gateway and Azure ExpressRoute to create secure communication tunnels between your company's different locations.

Learning objectives

After completing this module, you'll be able to:

- Describe the core networking resources that are available in Azure.
- Describe the benefits and usage of Virtual Network, VPN Gateway, and ExpressRoute.

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

Microsoft Azure Fundamentals: Describe core Azure services

Introduction

2 min



Azure Virtual Network fundamentals

8 min



Azure Virtual Network settings

7 min



Azure VPN Gateway fundamentals

10 min



Azure ExpressRoute fundamentals

5 min



Knowledge check

4 min



Summary

2 min





900 XP

Explore Azure Storage services

27 min • Module • 8 Units

★★★★★ 4.8 (26,549)

Rate it

Beginner Administrator Developer Solution Architect Student Azure Blob Storage Files Storage
Storage Accounts Storage Explorer

In this module, you'll learn about some of the different storage options that are available in Azure Storage services, and the scenarios in which each storage option is appropriate. As you complete the individual units in this module, you'll learn about Azure Blob Storage, Azure Disk Storage, Azure Files, and Blob access tiers.

Learning objectives

After completing this module, you'll be able to describe the benefits and usage of:

- Azure Blob Storage
- Azure Disk Storage
- Azure Files
- Azure Blob access tiers

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

Azure for Researchers part 1: Introduction to Cloud Computing

Microsoft Azure Fundamentals: Describe core Azure services

Introduction	2 min	✓
Azure Storage account fundamentals	4 min	✓
Disk storage fundamentals	4 min	✓
Azure Blob storage fundamentals	4 min	✓
Azure Files fundamentals	4 min	✓
Understand Blob access tiers	4 min	✓
Knowledge check	3 min	✓
Summary	2 min	✓



✓ 1100 XP

Explore Azure database and analytics services

43 min • Module • 10 Units

★★★★★ 4.7 (33,953)

Rate it

Beginner Administrator Developer Solution Architect Student Azure Cosmos DB Data Lake Databricks HDInsight SQL Database Synapse Analytics

In this module, you'll learn about several of the database services that are available on Microsoft Azure, such as Azure Cosmos DB, Azure SQL Database, Azure SQL Managed Instance, Azure Database for MySQL, and Azure Database for PostgreSQL. In addition, you'll learn about several of the big data and analysis services in Azure.

Learning objectives

After completing this module, you'll be able to describe the benefits and usage of:

- Azure Cosmos DB
- Azure SQL Database
- Azure SQL Managed Instance
- Azure Database for MySQL
- Azure Database for PostgreSQL
- Azure Synapse Analytics
- Azure HDInsight
- Azure Databricks
- Azure Data Lake Analytics

⊕ Save

Prerequisites

- You should be familiar with basic computing concepts and terminology.
- An understanding of cloud computing is helpful, but isn't necessary.

This module is part of these learning paths

Azure for Researchers part 1: Introduction to Cloud Computing

Microsoft Azure Fundamentals: Describe core Azure services


Architect a data platform in Azure

Introduction	2 min	✓
Explore Azure Cosmos DB	4 min	✓
Explore Azure SQL Database	4 min	✓
Exercise - Create a SQL database	12 min	✓
Explore Azure database for MySQL	4 min	✓
Explore Azure Database for PostgreSQL	4 min	✓
Explore Azure SQL Managed Instance	4 min	✓
Explore big data and analytics	4 min	✓
Knowledge check	3 min	✓
Summary	2 min	✓

Screenshots of other courses.

Git Link

Screenshots DevOps Courses



Create a build pipeline with Azure Pipelines

1 hr 20 min • Module • 10 Units

★★★★★ 4.7 (6,115) [Rate it](#)

[Beginner](#) [DevOps Engineer](#) [Administrator](#) [Developer](#) [Solution Architect](#) [Azure DevOps](#) [Pipelines](#)

Set up a continuous integration (CI) pipeline that automates the process of building your application.

Learning objectives

After completing this module, you'll be able to:

- Create a build pipeline in Azure Pipelines
- Map manual build steps to automated build tasks
- Publish your builds so others can access them
- Use templates to build multiple configurations

[+ Save](#)

Prerequisites

- An Azure DevOps organization
- Visual Studio Code
- .NET 5.0 SDK
- Git
- A GitHub account

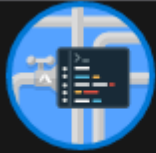
This module is part of these learning paths

AZ-400: Define and implement continuous integration

Build applications with Azure DevOps

Introduction	2 min	✓
What is Azure Pipelines?	6 min	✓
Exercise - Get the sample application	10 min	✓
Plan your build tasks	7 min	✓
Exercise - Set up your Azure DevOps environment	4 min	✓
Exercise - Create the pipeline	20 min	✓
Exercise - Publish the result to the pipeline	10 min	✓
Exercise - Build multiple configurations by using templates	11 min	✓
Exercise - Clean up your Azure DevOps environment	7 min	✓
Summary	3 min	✓

1200 XP



1100 XP

Implement a code workflow in your build pipeline by using Git and GitHub

1 hr 27 min • Module • 10 Units

★★★★★ 4.8 (4,538)

Rate it

Beginner

DevOps Engineer

Administrator

Developer

Solution Architect

Azure DevOps

Collaborate with others and merge only the highest quality code.

Learning objectives

After completing this module, you'll be able to:

- Collaborate with others by choosing an appropriate branching and merging strategy
- Add a badge to your GitHub repository to show the status of the latest build
- Add a dashboard widget to help visualize your build history
- Set up a rule on your GitHub repository to require a review

⊕ Save

Prerequisites

- An Azure DevOps organization
- Visual Studio Code
- .NET 5.0 SDK
- Git
- A GitHub account

This module is part of these learning paths

AZ-400: Manage source control

Build applications with Azure DevOps

Introduction

2 min



Choose a code flow strategy

8 min



Exercise - Set up your Azure DevOps environment

8 min



Exercise - Create a pull request

12 min



Exercise - Push a change through the pipeline

19 min



Exercise - Add a build badge

7 min



Exercise - Track your build history

5 min



Exercise - Add a rule to require a review

9 min



Exercise - Clean up your Azure DevOps environment

7 min



Summary

10 min

