Microsoft 365 Cloud Concepts

by Vlad Catrinescu

Microsoft 365 is one of the most popular productivity clouds in the world! This course will teach you the foundations of cloud computing with a focus on Microsoft 365.

Course Overview

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Hello, everyone. My name is Vlad Catrinescu, and welcome to my course, Microsoft 365 Cloud Concepts. I'm a Microsoft MVP and independent consultant from Montreal, Canada. Over 90% of the Fortune 500 is using at least one Microsoft cloud service, and over 100,000,000 users interact with Microsoft 365 every single day. In this course, you will learn the fundamental concepts of cloud computing and how they apply to Microsoft 365. Some of the major topics that we will cover include the benefits of cloud computing, Microsoft's cloud services, Microsoft 365 licensing options, and finally, the Microsoft 365 service lifecycle. By the end of this course, you will understand the different types of cloud computing, as well as how Microsoft 365 fits inside Microsoft's cloud offerings. This course is a beginner level course, so there are no prerequisites before starting it. I hope you'll join me on this journey to learn about Microsoft 365 with the Microsoft 365 Cloud Concepts course, at Pluralsight.

An Introduction to Cloud Computing

Module Introduction

Hello, and welcome to this Microsoft 365 Cloud Concepts course. My name is Vlad Catrinescu, and I will be your instructor for this course. I'm a Microsoft MVP from Montreal, Canada. And you can find

me on Twitter @vladcatrinescu or follow my blog at VladTalksTech.com. In this module, we will do an introduction to cloud computing and learn about the different options for using cloud computing services. We will first start by doing an introduction to cloud computing and even talk about how we got there while, of course, covering the advantages of cloud computing. We will then talk about the different service types we can have with cloud computing, and we will learn the differences between terms you might have heard in the past such as Infrastructure as a Service, Platform as a Service, and Software as a Service. Afterwards, we'll talk about the different types of cloud computing deployment models such as public cloud, community cloud, and more. By the end of this module, you will understand the advantages of cloud computing, as well as the different types of cloud computing deployment models available to you.

Introduction to Cloud Computing

Let's start by doing an introduction to cloud computing. If we take a trip back into the not-so-distant past, maybe 10, 20 years ago, in each company's data center, we had a ton of servers. And each server had a different purpose, maybe running on different hardware and even with different operating systems. Each new application that you installed, the vendor required that their application ran on a dedicated server. Each one of those servers had their own resources, so they had their own CPU, RAM, and hard drive, and each one of them needed enough resources for the utilization at the peak time, as this is what we needed to calculate for each server, how many resources it will need at peak time. But what this did is that on average, most servers were really underutilized, and organizations were spending a ton of money on hardware that most of the time was not even used at 10% of its capability. We then started to implement virtualization, which allowed us to run multiple virtual machines on a virtual host, so we were really able to get more usage out of our hardware and cut down on space, cooling, and of course, costs. However, even with virtualization, we still had a few disadvantages such as a high upfront cost since we needed to buy powerful virtual hosts, and then we needed to keep them for five years for the amortization of costs. We still need to pay for

space in the data center, as well as electricity and utility costs of cooling and other server needs. Furthermore, hardware maintenance is still needed as disks can break down, network cards can go bad, and so on. Don't get me wrong. Virtualization is way better than dedicated hardware, and it did solve a bunch of different problems, but there was still space for improvement, and this is where cloud computing came in. In addition to that, the way we work has also changed. Today, many employees work remotely from their houses instead of from the corporate office. Actually, I know so many people that never even stepped foot inside the company office. They only worked remotely. In addition to our full-time office staff, we now also want to connect our field workers to corporate and collaboration systems since after all, they're the ones that interact most with our clients. But many of those users don't even have access to a traditional computer device such as a desktop or laptop for work purposes. This traditional data center model with on-premises software made it really difficult to integrate those remote users into our collaboration tools and really give them a good experience where they can collaborate seamlessly with everybody else. This is where cloud computing comes in. Let's actually start with a definition that I really like. Cloud computing enables companies to consume a compute resource such as a virtual machine, storage or application as a utility just like electricity rather than having to build and maintain computing infrastructure in-house. In a cloud environment, you have the cloud provider, which owns their data center and manages all of the hardware like servers, networking, and of course, virtualization. As the cloud is fully built on the principle of virtualization, no client has direct access to the hardware simply to a virtualized environment. All of those resources are then pulled together and shared to multiple clients that all consume the shared hardware. Those clients don't need to know on what servers they run or on how many servers their different environments are running. They simply consume a service, and the cloud provider is the one making sure that there are enough shared resources to handle everything. In a cloud environment, users simply select what services they want to use with each service having a price per user or per minute of utilization of that specific resource. In a cloud infrastructure, this is mostly self-service by the user, and the provisioning is fully automated by the cloud provider, and that service is delivered in an almost instant fashion. In a cloud infrastructure, all of your

consumption is also metered from how many calls you have on an API to how many megabytes you are using in your databases and how many seconds your virtual machines were on. All of this information will show up on your invoice at the end of the month, and you're really billed on how much you use the service yourself. It might be low one month and high another month. That is the beauty of the cloud. Cost is a big topic and a big advantage of cloud computing. So let's talk a bit more about it. In a cloud model, services are built on demand by the minute or by the hour, depending on what service you are using. This on-demand billing allows organizations to create resources when needed and then stop paying for them when they don't need them anymore. This way, organizations can be more dynamic and cost-effective, as well as reduce upfront costs since the money you pay for the cloud does not get deprecated over multiple years, except resources that you use right away. So the cloud cost usually goes into operating expenses, or OpEx, instead of capital expenses, or CapEx, which really allows you to deduct costs in the current year without needing to deprecate the hardware costs over multiple years. Now, this is an IT course, not an accounting course, so I will not go deep into this, but I wanted to cover the basics of CapEx and OpEx. Capital expenditures consist of the funds that companies use to purchase major physical goods or services that the company will use for more than one year. From an accounting perspective, you cannot fully deduct the cost of this material from the fiscal year the asset was paid in, meaning that if you set up a brand-new data center, you might spend a few hundred thousand dollars today, but the company won't be able to deduct all of those expenses in the same year. Instead, a portion of the expenses will be added over the life of the asset. And in the case of servers, it can be anywhere from 3 to 5 years. On the other side, operating expenses, or OpEx, are deducted in the same year they are made, allowing you to deduct those from your revenues faster. Now, with accounting, there are always more advanced scenarios, but those are really the basics of CapEx and OpEx. So let's take a look at an example of billing, and I will take a look at an example of a virtual machine in Microsoft Azure. First of all, I need to select the specification of the virtual machine that I want. In this case, I'm selecting a virtual machine with 2 cores, 8 GB of RAM, and 50 GB of storage. You can see right away the cost would be about 20 cents an hour. I can also select the

operating system, in this case, Windows. And because Microsoft owns Windows, the cost that I pay for this virtual machine also includes the licensing for the Windows operating system it will be using. So now, I'm getting that license as a service as well. For this estimate, I can also choose how many hours I expect this virtual machine to be used per month. So if I use this VM for 730 hours, my cost would be $152 per month. And in Azure, virtual machines are billed per second, so it's really flexible. Most cloud providers will also offer you savings if you pre pay for a number of years. So if I know I will need this VM for three years to be always-on, I could save up to 57% of my computing cost, which could make sense for some servers that always need to be up and running. Another one of the big advantages of cloud services is rapid elasticity. Cloud services can easily be scaled either up or out, depending on demand, and even automatically. In this case, I have an app service plan in Azure, which is a platform in which you can host websites, for example. I could enable custom auto scale on it. This way, I can say, for example, when the CPU usage goes above 70%, add more CPUs or instances to that service. This can be really useful for, let's say, a public website or different apps because it will allow you to pay a set amount at rest when they're not used a lot. But if you have have a peak or lots of people connecting at the same time, it will automatically increase the resources only for that set amount of time, and then if it's not needed anymore, it will go back to your base amount automatically. Another big advantage of the cloud is reliability. In the cloud scenario, the cloud provider takes care of the high availability and disaster recovery of their platform. Just to go over the terms so you can see the difference between the two, high availability is usually to protect us against software and hardware failures. Those are usually very local like a rack goes down, a server loses power, a service crashes on one of the servers. On the other side, disaster recovery is something much bigger like a natural or human-induced disaster. Take, for example, a flood, a fire or an earthquake that puts the whole data center down. With cloud computing, you can also benefit from fault tolerance, which is very similar to high availability, but offers zero downtime. Now, as you can imagine, if you want to have full tolerance and disaster recovery in your own data center, the cost can grow really fast, as you would need a second data center on the other side of the country for which you need to pay servers, networking, utilities, and so on. So from a cost

perspective, the cloud can offer a much better solution for a better cost since the cloud providers already have the infrastructure, so you really benefit from the economies of scale. If we look at some examples for Microsoft Azure, there are Azure data centers in over 60 regions, allowing you to really implement full tolerance and disaster recovery, not only across multiple states or provinces, but continents. And the best part is that every year there are new regions and data centers being built.

Cloud Computing Service Types

Now that we know the basics and advantages of cloud computing, let's talk about the different types of services that you can get. There are three main types of cloud computing services, Infrastructure as a Service, Platform as a Service, and Software as a Service. Let's take a look at what the differences are. What really differs between those types of computing services is how much you manage versus how much the cloud vendor manages. Let's start with on-premises where it's pretty easy. You're the one that manages everything from storage to the data center to networking, virtualization, and applications on top of it. Infrastructure as a Service delivers cloud computing infrastructure to organizations, including things such as servers, network, operating systems, and storage through the virtualization technology. You, as the client, will still manage the operating system, the applications, and the data. Next up, a Platform as a Service computing solution provides cloud components to certain software while being used mainly for applications. Platform as a Service provides a framework for developers so they can build upon and use it to create customized applications. All the servers, storage, and network is managed by the third-party provider, while the developers can still maintain management of the applications. Our last option is Software as a Service, in which you simply enjoy the service, pay a fee, but you don't manage anything at all. Everything is managed by the vendor. The majority of Software as a Service applications are run directly through the web browser and don't even require any downloads or installations on the client side. While this might seem a bit complicated to grasp at first, let's take a look at the same model, but from a different perspective. Let's compare our cloud computing services to everybody's favorite

food, pizza. Our on-premises model would be similar to making pizza at home from scratch, You make your own dough, you cut your own toppings, you put it in your own oven, and you eat it at your own table. Our Infrastructure as a Service model is similar to getting frozen pizza from the supermarket and cooking it at home. You pay for part of the service, the pizza dough, tomato sauce, toppings, cheese, but you still cook it yourself, and you eat it at your own table. The Platform as a Service is similar to pizza delivery where the pizza comes to you already made and hot. You simply need to pour the drinks and then eat it at your own table. And finally, the Software as a Service is like dining out. You don't have to bring or make anything, Everything is taken care of by the vendor. You simply pay the bill for what you consume. Hopefully, this quick comparison with pizza allows you to better view the differences between the cloud computing service types. Let's take a look at some example cloud vendors and services in each category. For Infrastructure as a Service, some of the big players are Microsoft Azure, Amazon Web Services, or AWS, Google Compute Engine, and Rackspace. In the Platform as a Service space, some big players are Heroku, Amazon Elastic Beanstalk, and Azure Logic Apps. In the Software as a Service category, we're looking at Microsoft 365, Google Workspace, Salesforce, and Dropbox. Of course, those are just a few of the more popular ones, but there are hundreds, if not thousands, of examples of cloud providers, with the Software as a Service probably the most popular one.

Cloud Computing Deployment Models

Now that we know about the different types of services, let's also talk about the different cloud computing deployment models. There are multiple types of cloud deployment models out there. The first one and probably the most popular is the public cloud where you have a cloud vendor that provides cloud services to multiple clients. All of the clients securely share the same hardware in the back end. The private cloud, on the other hand, is when the hardware is only used by a single company, which most of the time, but not necessarily always, also owns the hardware and data center. This is very close to the traditional data center model that we always had. But in a private

cloud, most of the time, the IT team that manages the data center builds the different departments for the services that they use. Next, we have a hybrid cloud, which is a combination of both a public and a private cloud with automation and orchestration between the two. And the last option is the community cloud, which is a shared infrastructure between several organizations with common security, compliance, and jurisdiction concerns. We often see the example of community clouds for governments, for example, especially when they set up a shared services division that hosts all of the IT for government. Now, if we talk a bit more about each one, most cloud offerings that you see are in the public cloud. Actually, it's pretty safe to say that for any cloud service, unless otherwise mentioned, it will be in the public cloud deployment model. Now for private and hybrid cloud. Cloud providers have started offering services, allowing organizations to manage their private cloud using the same tools, experiences, and app models in your own on-premises or hybrid data centers. Some industry examples can be Azure Stack, as well as AWS Outposts. A big advantage is that they allow you to easily transfer workloads to the public cloud in the future if you decide to do so. Lastly, probably the most popular type of community clouds are for the government. Microsoft, Amazon Web Services, and most cloud providers have dedicated cloud services that can handle data that is subject to specific government regulations or requirements such as FedRAMP, DOD, CJIS, and more. Another example, community cloud, can be an offering that is specific to a certain country. For example, Microsoft offers Office 365 China, a version of Office 365 operated by 21Vianet designed to meet the regulations of running the Microsoft cloud services in China. Those cloud services are deployed in that country and often separated from the rest of the global cloud infrastructure of that vendor, therefore ensuring that the data only lives in that specific country. So those sovereign clouds are also part of the community cloud deployment model.

Module Conclusion

Before finishing up this module, let's review what we have learned. We have first done an introduction to cloud computing, which allows organizations to consume computing services as a

utility. The cloud brings us multiple benefits such as rapid elasticity of resources when needed. And since the services are billed per second, minute or hour, depending on the service, you only pay for the services only when you need them. We have then deep dived into cloud computing and learned the different types of cloud computing services. And we have learned about Infrastructure as a Service, Platform as a Service, and Software as a Service. After that, we have talked about the different cloud computing deployment models, and we have learned the differences between public cloud, private cloud, hybrid cloud, and community cloud deployment models. This is it for this introduction to cloud computing model. Now that we know the general concepts of cloud computing, in the next module, we will start focusing on Microsoft and talk about Microsoft's cloud services.

Overview of Microsoft's Cloud Services

Module Introduction

Hello, and welcome to this Microsoft 365 Cloud Concepts course. In this module, we will do an overview of Microsoft's cloud services. We will start this module by taking a look at all of the different cloud services that Microsoft offers, what they each do and where Microsoft 365 fits inside Microsoft's portfolio of services. Afterwards, we will see where all those services fit inside the cloud service types that we have learned about in the previous modules such as infrastructure, platform, and Software as a Service. By the end of this module, you will understand all the different cloud services that Microsoft offers, as well as where they fit inside the service types.

Introduction to Microsoft Cloud Services

Let's start by doing an introduction to Microsoft's cloud services. Microsoft as a company is known for many products. One of the most popular one might be Windows, the famous operating system that you might be using to watch this course right now. Another very popular product is Microsoft 365 Apps, previously called Microsoft Office, which contains Word, Excel, PowerPoint, and more. If we get more in enterprise-only services, we also have Office 365 and Microsoft Azure services used by

millions of users daily, as well as Microsoft Dynamics, Microsoft's customer relationship management solution. Microsoft doesn't only do work stuff. They're also known for some fun products as well such as their Xbox console and games. So really, Microsoft is in every market out there for both enterprise and consumer. Now, if we zoom in more on the enterprise, if we really look at the Microsoft cloud portfolio, Microsoft has four cloud platforms, each with their own goal. Let's do a quick overview before we're looking in depth at all of them. The first one is Microsoft Azure, which contains over 200 products to help you build your solutions on top of Azure. Next up we have Microsoft 365, which is the productivity cloud designed to help you achieve more. Third, the third cloud platform is Dynamics 365, a suite of multiple products for ERP and CRM. And lastly, the fourth cloud platform is the Power Platform, a suite of products that enables users to create powerful apps without writing a single line of code. Now that we did the overview, let's take a look at all of them in detail. Let's start with Microsoft Azure. Azure is really an Infrastructure as a Service and Platform as a Service cloud platform, allowing you to host your workloads and build your solutions on top of it. If we look at some of the most popular services on Azure, we have things such as creating virtual machines in the cloud, buying cloud storage, using databases for your data. Azure can also host web apps with a ton of features, allowing you to automatically scale up when needed as an example. Azure is also the hub for creating your machine learning and artificial intelligence solutions. Now let's move on to Dynamics 365. Dynamics 365 is a suite of multiple business applications that help you manage your business. You really have multiple products to help you manage things such as sales operations, customer service, human resources, finance and operations all the way to supply chain management. So really, there is a different Dynamics 365 service specialized for each area of the business. Next up, the Power Platform is a cloud suite of products to enable each business user to create awesome solutions without any line of code. The Power Platform is made of five main products. First of all, Power BI, which enables users to create business intelligence reports and dashboards. We then have Power Automate, allowing anyone to create workflows to automate business processes and even robotic process automation. Our third product is Power Virtual Agents, which makes it easy to create chatbots, and we also have Power Apps, which allows users to create

desktop and mobile applications to connect to a wide variety of data. Last, but not least, we have Power Pages, a tool that allows us to create external-facing websites, which allow users outside the organization to sign in with a wide variety of identities, create and view data in Dataverse or even browse content anonymously. Finally, for the star of our course, Microsoft 365, we have seen Azure, which hosts workloads, Dynamics 365, which is all about managing your business, Power Platform, allowing you to create apps and workflows, while Microsoft 365 is the cloud platform focused on productivity solutions and probably the cloud solution that most information workers will use daily. It contains many services, but some of the most popular ones are Microsoft 365 apps, so PowerPoint, Word, Excel, as well as Microsoft Teams, SharePoint, and OneDrive. This is why Microsoft 365 is, in my opinion, one of the most important cloud offerings, as I cannot think of a working day where I didn't check my email, take a meeting or work on a document. That's all productivity, and it's all powered by Microsoft 365. While in this course, we will focus mostly on enterprise services, I wanted to take a minute to talk about the fact that Microsoft offers many services that initially started in Microsoft 365 for Enterprise, but for individuals and branded a bit differently. Think at outlook.com, which you might use for your personal email. Microsoft Lists, which initially started in Microsoft 365, but now it's also available for individual use with a Microsoft account. Microsoft Teams is another service that started as enterprise only and is now available for personal you and even included by default with Windows 11. Another service that you might be using is OneDrive to store your personal files, and, of course, Microsoft 365 apps such as PowerPoint, Excel, and Word. By being able to use the same services for both personal and professional use, you'll be more productive in both, as the concepts are really the same.

Demo: Infrastructure as a Service

Now that we have learned about the different Microsoft enterprise cloud services, let's take a look at them from a service type angle. In the last module, we have learned about the different types of cloud computing services, Infrastructure as a Service, Platform as a Service, and Software as a

Service. Now, let's dive a bit deeper into those categories with a specific focus on Microsoft cloud services. Let's start with Infrastructure as a Service. Infrastructure as a Service is, first of all, perfect for test and development scenarios, as it allows you to turn on and off dev and test machines only when needed. You don't need to pay for the hardware full time. Storage and backup is also a great scenario for Infrastructure as a Service, as the pricing to keep backups in cold storage is very advantageous. Next up, high performance computing and big data analysis, which are often things you need only for small periods of time, but require very powerful computers. So this can be a great way to use Infrastructure as a Service, as you only pay for what you need when you need it. In the Microsoft portfolio, you will find most Infrastructure as a Service services in Microsoft Azure. Now, let's go to the lab and see how we can create a virtual machine, which is an Infrastructure as a Service workload inside Microsoft Azure. I am now in the lab environment, and let me open up the browser over here where I already logged in inside Azure. From here, I can see all the resources I have, as well as create new ones. Let me go into Virtual machines. You will see right now I have three virtual machines. Only one of them is running, the one in the middle here, and the cool part is I'm not paying for the ones that are shut down. I'm only paying for the one that is running right now, and that's the beauty, really, of Infrastructure as a Service. But let's go create a new one, so I'll go at the top left here, click on Create, and I will select an Azure virtual machine. It will, first of all, ask me, of course, for what subscription, so how will I be paying for this? Because even if it's cheaper than on-premises, we still have to pay. So I will just pick let's do Visual Studio Premium with MSDN, and I can either create a new resource group or select one that I already have. Great! Now let's give it a name. I will call it Azure-Vm-Demo, and then I can also pick where will this virtual machine be deployed, into what data center? I have, for example, France Central, Germany West, Norway East, Switzerland North, and then I also have, of course, Canada, USA, Asia Pacific. Let's do Canada East. That's the closest one to me right now. Next up, I also have availability options. So, for example, I can do a virtual machine scale set where I can distribute virtual machines across zones and fault domains at scale, but you know what? For this one, it's a demo VM. I don't need any of that. For the Security type, I will leave it as Standard, but there's quite a few settings you can do. If

you dive deeper really into Azure, then we can select the operating system. And as you can see, even if it's a Microsoft-owned service, we still have a ton of options such as Ubuntu Server, Red Hat, Oracle, Linux, and of course, Windows. Let's pick Windows 11 for this demo, and then it will ask me for the size. I will have some of the most popular ones over here. And you can see right away, if I select this one, Standard_D2s_v3, it will give me 2 CPUs and 8 GB of memory. And if I leave it running the whole month, it would cost me $103 per month. But I can always go and check out all the different sizes, and then I can choose the one that I want. For example, I can go in the E-Series. which is perfect for high memory needs, and then I can take a VM with 2 cores and 64 GB of RAM, for example. But you know what? This is just a small virtual machine, so let's go with only 2 cores, 8 GB of RAM. Now I need to give it a username, so let me type that in. Vlad is always a good username to put, and then let's put in a password here. Great! I've entered a password twice. I followed the minimum requirements, so that is perfect. Now, I can also say, do you want to allow any inbound ports or not? I will just put allow Remote Desktop. Next up, let's go check out the disks you can see right now, and let me close this edge pop-up here. I can select that I want the premium SSD, Standard SSD or Standard HDD. So really, of course, the better the hardware, the more I pay. But hey, if this is one that I won't really use that much and I don't need it to be fast, I can go and choose something cheaper, for example, and you have a ton of different options that you can do. Let's just go do Review + create. This way, we get started with creating a virtual machine. You can see that right now the validation passed, so Microsoft has all of the different information that it needs to start creating this virtual machine, so let's click on Create. Once it starts creating, we don't need to watch it anymore. So you can go, take a coffee, go for a walk or be productive and work on something else. It will usually take anywhere from 1 minute to maybe 20 minutes, depending on what you are creating. An Azure function, which we'll see a bit later in this course, will probably take only a few seconds. But if you create a virtual machine with 64 GB of RAM that has Windows Server installed, you need a few disks attached to it, then it might be longer. But what I will do now is I will pause the recording until the virtual machine is done, and then we will take a look at the result. Great! So our virtual machine just got created. You see I have the deployment succeeded. Let's go

to the resource here, and right now, it's started. So, let's go and connect. I'll connect via Remote Desktop. Let's download the file. You can configure it to have a static IP or not. By default, it will not be a static IP, so every time you connect, it will be different, but you could have a static IP. It's a tiny bit more expensive, but it makes sense in a lot of use cases. So, let me type in the username, vlad. Let me put in my password. I will say, yes, I want to connect to this computer, and there we go. We have a virtual machine in the cloud with Windows 11. That only took about 5 minutes to create and then another 2 minutes of wait time for it to be deployed. And whenever we're done, and it's the first time logging into Windows, so it will take a while, but whenever we are done using it for our test, we can always stop it or delete it even and stop paying for it. So, we are really in that mode of paying for resources when we need it and then stop paying for it when we are done using it. Let's take a look at it. It will take a bit of time to log in, as I'm sure. A lot of you have experienced the first time you log into Windows. Let's accept everything just so we can get to the Windows screen. There we go. This is a great example of Infrastructure as a Service in Microsoft Azure. Now let's head back to the slides and talk about Platform as a Service.

Demo: Platform as a Service

Now, let's talk about Platform as a Service. Platform as a Service is most loved by developers, as they can spin out a development platform and really focus on the code while the cloud provider takes care of all of the infrastructure behind to be able to run that code. In the Microsoft cloud, you'll find Platform as a Service offerings in Microsoft Azure for developers with things such as Azure Web Apps, Azure Functions, and many more. The Microsoft Power Platform is also a Platform as a Service in a way focused on low-code solutions, but it also offers integrations with Azure so that pro developers can really take solutions to the next level. Now, let's head over to Azure and see how we can create an Azure function, which is a great example of Platform as a Service. We are now back in the lab environment. Let me open up the browser here where I am in the Azure portal. Let's go create a resource, and what I will do is I will select the Function App, so let me click on Create. First

thing it will ask me, again, is the subscription. Let me select one, and then let's go and select the resource group. It will add ask me for the name. So, let me enter CloudServicesDemoVlad. Awesome! It will ask me what are we going to publish here, Code or Docker Container? Let's stay with Code. It will ask me what will be the runtime stack? And here, you see I can select what programming language am I going to use, .NET, Node.js, Python, Java, PowerShell Core? Let's go with PowerShell Core for this one. Then I will leave it between version 7 or 7.2. Let's take the latest one. And then it will ask me what region? Let's leave it to Central US. Then, it will ask me whether I want this running on Linux or Windows. Let's select Windows for this one, and then I will leave it at Consumption or Serverless, but you also have Functions Premium, which gives you other advantages. But for the purpose of this demo, let's leave it as is. Let's go into Review + create. It will make sure that everything is good, and then we will click on Create and give it a few seconds for it to be created. Great! It just finished creating, so let's go to the resource. Awesome! Now, I will go under Functions. Let's go to Functions over here, and I will create one. Let me click the Create button. Wait a few seconds. I will say Develop in portal. That is awesome, and I'll just select an HTTP trigger. Let's go into the details. And for the Authorization level, just for this demo, I will set it to Anonymous. Let's click on Create and then give it a few seconds for this function to be created. And as you can see, it's already done. That was super fast. Now, I'll go into the code and test over here just so we can check it out. As you can see, I can actually see my PowerShell code that it gave us over here. So really, all of the development environment was ready for us. The only thing that we needed to do was to set it up. I can even get the function URL. Let's actually copy and paste this. Let's just check it out like this. We can see that the HTTP triggered successfully. I can even give it, for example, name=Vlad, and then it will give me something like Hello, Vlad. This HTTP triggered function executed successfully. But really, what Platform as a Service. And in this case, Azure Functions allows us to do is to simply provision a function. And then, as a developer, I can focus on my code. Whether that is .NET, JavaScript or PowerShell, I have this code that I can run, and I don't need to worry about any of that infrastructure in the back. It's all taken care of by the cloud provider. I can

focus again as a developer on what I love, which is writing code. This is it for this demo on Platform as a Service inside Azure. Now let's head back to the slides and talk about Software as a Service.

Demo: Software as a Service

Finally, for software as a Service, the main scenarios are getting access to sophisticated applications without the need to manage any of the infrastructure yourself. Think from a Microsoft perspective and the work required to install SharePoint Server, Exchange Server, Skype for Business Server, and all of the other different Microsoft servers versus using the same tool in the cloud in a matter of minutes. Software as a Service tools are also great for frontline workers, as they are often accessed through the browser, enabling those users who don't often have a dedicated computer to still access all the services. Now, let's head back to the lab and see how we can create a Microsoft 365 tenant that will allow us to have so many features in a matter of minutes with no real technical setup required on our side. We are now back in the lab environment. Let me open up the browser, and now there are two ways for us to set up a free Microsoft 365 tenant, and they are both very useful if you want to set up your own lab and as you study Microsoft 365 have a place where you can test different things out, play with the services, and so on. The first way is by simply setting up a trial. So right here, I'm on the Office 365 E3 page. And under the price, I can actually go and set up a free trial that will give me a 30-day trial that I can use to play with all of the different Office 365 E3 features. But now, there is another way you can do it, which is the one that I usually use personally, and it's the Microsoft 365 Developer Program. So, this program is really used to get people up to speed with Microsoft 365, whether you're a developer, an IT pro or a power user that wants to try different things out. I will make sure to have a link in the slides, so when you download them, you can simply copy/paste the link to the program. But once you log in with your personal Hotmail or outlook.com account if you want so, any Microsoft account or even an enterprise account, you can go and set up an E5 subscription. This is a Microsoft 365 E5 subscription, and you can choose whether you want an instant sandbox, which will be 90 days, or one that is configurable in

which you can choose the domain name and things like that. But since this one might take up to two days, I will just pick the Instant sandbox option. Let's click on Next. It will ask me where do I want to have this tenant hosted. I will leave it North America. Let me give it an admin username. Great! I will give it Vlad, and now let me enter the password. Awesome! This will actually also give me 16 fake users, as well as data. So, with the Developer Program, you get those 16 users, some fake data in there. So, your tenant looks alive, and you can test out different things. If you do the Office 365 trial, you don't get any of that. You have to create your own. And this is another reason why I like using the Developer Program. Great! So I've given my username, my password. Now let's click on Continue. It will ask me to enter a phone number for security that supports text messages, so I will start entering my phone number. Great! So after I put my phone number, I got a verification message. It created the actual tenant, and now I can actually log in, so it gave me the username, vlad@ the domain name it configured. I will enter my password, and now I will actually log in. And I have a full Microsoft 365 tenant that in a matter of minutes I was able to create, and then I have access to all of the different services inside Microsoft 365. That is the beauty, really, of Software as a Service. All of those different services provisioned by Microsoft, I only pay for what I use. I can add more users, substract users, and I don't need to really manage any of the infrastructure behind. I only enjoy the service. This is Is it for this quick demo on how to create a Microsoft 365 tenant with the Microsoft 365 Dev Program. This can also be very useful for you if you want to create your test environment that you can play around with as you learn Microsoft 365. Now, let's head back over to the slides and finish this module.

Module Conclusion

Before finishing up this module, let's review what we have learned. In this module, we first did an introduction to the different Microsoft cloud services, and we have talked about Microsoft Azure, Microsoft 365, Dynamics 365, as well as the Power Platform. We have looked at what each one of them does, as well as the role of Microsoft 365 as the productivity cloud platform. Afterwards, we

have looked at the different cloud service types and where we can find each one of them inside Microsoft's cloud offerings. This is it for this module on the overall view of Microsoft's cloud services. Next up, we'll focus on Microsoft 365 and talk about the different Microsoft 365 licensing options.

Microsoft 365 Licensing Options

Module Introduction

Hello, and welcome to this Microsoft 365 Cloud Concepts course. In this module, we will talk about Microsoft 365 licensing options. We will start this module by doing an overview of Microsoft 365 licensing options and learn about all the different plans for Microsoft 365. Afterwards, we will learn what are all the different options in order to buy or require a Microsoft 365 license for your organization. By the end of this module, you will understand the different Microsoft 365 licensing options, as well as how an organization can acquire Microsoft 365 licenses.

Overview of Microsoft 365 Licensing

Let's start by doing an overview of Microsoft 365 licensing. One of the benefits of Microsoft 365 licensing is really its flexibility. As Microsoft 365 is a Software as a Service offering, meaning that there is no servers to install or deploy to start using it, you simply buy the license, assign it to the user, and they can be productive right away. Microsoft 365 really offers many options, each with different things included from, of course, Microsoft 365 licenses to only Office 365. You can also buy licenses for standalone products inside the suite, and there are even add-ons that you can purchase for specific business needs. Licensing is always priced at per user / per month. However, some plans do require an annual commitment, but not all of them. Before we go deeper into the details, I want to say that I always joke that licensing for Microsoft, in general, requires a separate PhD, and that's why there are people who specialize in this. In this course, we will really cover the fundamentals, but always check with your licensing professional for any licensing questions for your own business. Okay, so now let's break down Microsoft 365 from a licensing services point of view.

Microsoft 365 is made of three main components. First of all, Office 365, which contains all your cloud productivity services, as well as Microsoft 365 apps, which remember, used to be called Microsoft Office. Microsoft 365 also includes Windows licenses for your desktop or laptops for your users, and finally, the enterprise mobility and security suite, which is a set of security, compliance, and identity features to protect your data. So those are the three main products inside Microsoft 365. I also want to clear up something right away, as the titles Microsoft 365 and Windows 365 might be a bit confusing. Microsoft 365 does not include Windows 365. Windows 365 is not an operating system. It's a virtual desktop infrastructure solution delivered in a Software as a Service mode, meaning that it's super easy to just start without a lot of prior configuration needed. Think of it as having a Windows PC in the cloud that you can connect to from any device, and that's where you get all your work done. Windows 365 is an example of an add-on license you can buy for the users that need this kind of functionality. Now, let's start getting into licenses. And first, let's talk about the different Microsoft 365 planned categories. The first type of Microsoft 365 plan is Microsoft 365 for Home, which is a Microsoft 365 plan for you to use at home with your family. While this won't be the focus of this course, as we focus on more business-related plans, I just wanted you to know it exists. Next up, we have Microsoft 365 Business, a Microsoft 365 offering for small to medium-sized organizations. Really important, Microsoft 365 Business plans are only available for organizations up to 300 users, so you need to have 300 users or less in order to have access to this plan. Next up, we have Microsoft 365 Enterprise, probably the most popular Microsoft 365 category, which is one for for enterprise-sized organizations, so over 300 users. Our next Microsoft 365 offering is for frontline workers. Frontline workers are employees who are not in the office in your usual 9 to 5. Think at retail employees, factory workers, and everybody who's an employee, but doesn't work at a computer. You still want those employees to have an account, to have an email, to have access to the intranet and business apps, but you don't necessarily want to pay a full Microsoft 365 Enterprise license for them, as they won't use Windows 11, for example. So frontline worker plans are a lot cheaper than enterprise, but they come with some limitations, of course. Next up, we have Microsoft 365 Government, which is a community cloud offering and plan for US government entities only, and

you actually need to be approved before having access to those to make sure that you are indeed a government organization. Last, but not least, we have Microsoft 365 Education, a Microsoft 365 offering for educational institutions that has plans for both students, as well as teachers, faculty, and staff. Okay, now that we know the plans, let's talk about how do we read those licenses or decode them, as I like to say it? There are so many Microsoft 365 licensing combinations, it's impossible to know all of them by heart. However, there are a few tips and tricks to know what services it probably has inside. First of all, the first letter in the plan will usually tell you the plan category. So if it starts with an E, it's an enterprise license, for example, Microsoft 365 E3. If it starts with an A, it's an education license. So, for example, Microsoft 365 A1. If it starts with a G, it's a government plan, so Microsoft 365 G5, for example. And lastly, if it starts with an F, it's a field worker plan, so Microsoft 365 F1, for example. Now after the letter, there will be a number like in the examples above, which will tell you the license level. The higher the number, the more services that license includes. So, for example, an E5 is better than an E3 and, of course, more expensive than an E3 as well. Also note the Microsoft 365 Business plans have a fully different naming convention such as Business Basic, Business Standard, and Business Premium. Now if we look at some examples with pricing, the top enterprise license at the time of recording this course is Microsoft 365 E5, which at the time of recording this course in August 2022 is $57 per user / per month. It includes Office 365 E5, Windows 11 E5, and Enterprise Mobility + Security E5. We also have Microsoft 365 E3, which is cheaper, but only contains the E3 version of each product. Remember when I said this can get a bit complicated? Each one of the three products in Microsoft 365 also has multiple versions, each with different services and capabilities. Okay, now those two, the E3 and E5, are the main offerings for information workers that work at a computer, but remember we talked about field workers as well who are not at the PC all day, and they start with an F. The first one is Microsoft 365 F3, which goes down all the way to only $8 per user per month. This includes Office 365 F3, which is a version of Office 365 that still has access to all of the Office 365 services, but more limitations. So for example, you cannot install Microsoft 365 apps on a PC, only on a mobile device. Your mailbox limit is only 2 GB and so on, so really focus on what a field worker might need. Lastly, the cheapest one is Microsoft 365 F1,

which is only $2.25 per user per month, which gives you access to some limited Office 365 services. So users can still, for example, access the intranet on SharePoint. They can view documents, but not edit them. They still have a OneDrive for Business, but it's limited to only 2 GB. So we're really talking about the basics for a user that will have access to everything they need, but not necessarily take as many resources or edit documents, but at a very, very attractive price point. Okay, now I know that I mentioned Office 365 E5 Enterprise Mobility suite all of that, and many of you might know exactly the services inside. But if you do not or you want to learn more about those, it's actually covered in two other courses, part of the Microsoft 365 fundamentals learning path on Pluralsight. Those courses are the Microsoft 365 Services and Concepts, as well as the Microsoft 365 Security, Compliance, and Identity Concepts course. Now back to our licensing plans. We talked about enterprise and field workers, but other plan categories also have their own versions. So government has Microsoft 365 G3 and G5 while education has A1, A3, and A5. Something to remember, which for me shows where the real flexibility comes to play, is that not everybody in the company needs the same license. You can mix and match from the Microsoft 365 licenses, or you can only get an Office 365 license for some users, as they might not need Windows, for example, they only work from their mobile phones. And even then, Office 365 has multiple versions that are similarly named E1, E3, E5, and F3. As you analyze your company needs and what each group of users needs to be productive, you can buy different licenses for each department from as low as $2.25 per user / per month to as high as $57 per user / per month. Remember that licensing always changes, and Microsoft always updates the options and services in each one. So I wanted to make the slide with some links where you can go to see the latest available information at the time of listening to this course. And remember from the Exercise Files tab on Pluralsight, you can download the slides. This way, you can easily copy/paste the links.

Demo: Exploring Microsoft 365 Licensing

Now that we have talked about the theory, let's go and explore some of those licenses and look at the Microsoft 365 Enterprise plans, as well as explore some Microsoft 365 add-ons. We are now back in the lab environment. Let me open up the browser where I'm on the Microsoft 365 Enterprise licensing page, one of the links that was in the previous slide. On this page, we actually see the three most popular subscriptions, Microsoft 365 E3, E5, and F3, the prices for each one of them, and then we can scroll down lower and see what exactly is included. So we can see for Microsoft 365 Apps, they are all included, Email and calendar, all included, but here's an example where for E3 and F3, we don't have the full check mark. We can then go and look at the details, so we can see that all three of them have Microsoft Teams. However, for the F3, there might be some limitations because it says see terms over here. However, only the E5 includes Phone System and Audio Conferencing. Same thing for the other sections as we go lower here. Device and app management, we can see that Windows Autopatch might not be included or is only partially included in the F3 subscription. If we scroll lower, we might have others such as analytics. Let's take a look at this one. We can see that for Viva Insights in E3 and E5, it includes Personal insights. It's not included with F3, and then Power BI Pro is only included with E5. You can, of course, scroll to the bottom of the page to take a look at all of the differences, but you can also go back to the top, and you can download the full comparison table, which will open up a PDF where you can really see all of the different information in detail here for Microsoft 365, Office 365, Enterprise Mobility + Security, Windows 11, as well as the different frontline worker plans. You're not expected to know all of them by heart, especially because Microsoft keeps changing them. However, it's important to take a look at them, especially if you plan to get certified. This way, you get a higher level understanding on how licensing works and where you would find some of Microsoft's biggest products and solutions. Now if we talk about add-ons, a great add-on that I'm going to talk about is Microsoft Viva. We have already seen that Viva is partially included with some Microsoft 365 plans, but that is not always the case. So if we take a look, there's actually a nice comparison for Microsoft Viva, what is included in Microsoft 365 plans, and what you need to pay extra for as an add-on per user / per month. For this example, we can see that, hey, Viva Connection is included with Microsoft 365 E5. Viva Learning and Viva

Insights are only partially included while Viva Topics and Viva Goals are not included at all. You need to pay for the Viva suite or that specific product in order to get access to those feature. Right now, as you can see, you can either buy the full Viva suite for $9 per user / per month, or if we scroll down lower here, you can only buy one specific product such as Viva Topics for $4 per user / per month. This is just one of the many add-ons that you can purchase on top of Microsoft 365 for more specialized features or security and compliance needs. This is it for this quick demo on the Microsoft 365 licensing page and how to consume this content. Again, you have links, for example, for government as well, and you have a ton of different places where you can go and compare what's included in each plan. But now, let's go back to the slides and learn how we can buy Microsoft 365 licenses for the enterprise.

Buying Microsoft 365 Licenses

Now that we have covered the licenses, how do we acquire those licenses for our enterprise? There are three main ways to acquire Microsoft 365 licenses for your organization. The first one being to actually buy it yourself directly from Microsoft from the admin portal. You can also buy it from a Cloud Solution Provider, also called a CSP, which is a Microsoft partner and authorized cloud services seller, or finally, through a Microsoft Enterprise Agreement. Let's dive deeper into each one of those options. Let's start with probably the most basic way, which is buying it direct from Microsoft. You can open a Microsoft 365 account yourself. Right now if you want to, you can select what licenses you want and then just put them on your credit card if you wish. Depending on the licenses you choose, they require different commitments. Some of them only require a monthly commitment, meaning that you can easily cancel it after only a month, while some might require a yearly commitment. Even if some require yearly commitments, you can still choose whether you want it to be billed every month or only once per year. If you go that route, you can easily manage your licenses from the Microsoft 365 admin center, which allows you to add or remove any type of license from your tenant and then assign it to your users so they can use those services. Next up,

we have the Cloud Solution Provider model. Cloud Solution Providers is a Microsoft partner program that provides the expertise and services you need from an expert partner. Not only do they sell licenses, but they can also provide billing and even technical support and often at very attractive prices. Of course, Cloud Solution Providers get a commission on the licenses they sell, so they often offer different perks for getting your licenses through them. A local CSP here in Montreal actually offers 24/7 support and a free migration of your content from on-premises to online if you get your licenses through them, just to give you an example. The Cloud Solution Provider partner can have direct admin access to your tenant for fast support and any billing help, as well as through their portal and any billing help as well through their portal, so that can also be very useful. Another big benefit of the cloud solution partner program is they provide a true pay-as-you-go subscription model where you can get licenses per user / per month without a yearly commitment, which can really allow you to scale up or down, depending on how your business needs change. So if you have a lot of, let's say, students coming in to work for the summer, you don't want to pay the licenses for the full year, you just pay for the months that they work, and then cancel them, and you stop paying for those licenses. Last, but not least, we have the Microsoft Enterprise Agreement. The Enterprise Agreement method is designed for organizations that want to license software and cloud services for a minimum 3-year period, and it's really targeted at organizations with more than 500 users or licensed devices. With Software Assurance, which you can also include, you get multiple benefits directly from Microsoft such as free training for your IT team, technical support, and even planning, adoption, and migration services for your organization.

Demo: Managing Microsoft 365 Licenses

Now that we have seen the theory, let's head over to the lab and check out how we can manage licenses from the Microsoft 365 admin center. We are now back in the lab environment. Let me open up the browser where I am in the Microsoft 365 admin center. What I will do now is I will go under Billing on the left, and then let's explore the Purchase services category. Here is where I can directly

buy cloud services from Microsoft. I can have Microsoft 365 licenses, for example, Business Premium, month to month. I can also buy just Microsoft 365 Apps for business, for example. And if we take a look at all of them, as an example, I could buy Microsoft 365 E3, E5, and more. So really, as an admin, I can go in here, put in the credit card, and just buy licenses for my company. Once you purchase the licenses, they will show up under Licenses over here. And right now, this is a demo tenant, so it has a bunch of different licenses in here. Depending on the size of your company, you might only have one license or maybe as many as I have in here depending on your needs because remember, this is the beautiful thing with the flexibility of Microsoft 365. Not everyone needs the same license. Here, I have licenses for Power Apps Plan 2 Trial, for Viva Insights, Viva Learning, Viva Topics, Office 365 E3. If we take a look, let's go in Office 365 E3, you can see right now I have 25 that are purchased, 16 are assigned, then I can see the users that have licenses assigned here at the bottom, and that means I have 9 available that I can assign to users. Once the license is purchased and available, I can go to a user. Let me go to the Users tab here. Let's pick Alex Smith, which right now the user exists, but it's unlicensed. I can go in the user, then I will go under Licenses and apps, and then I can, for example, assign an Office 365 E5 license to this user. So this is a great example on how we can go buy a license, we can see our available licenses, and then assign licenses to our users. This way, they can start using services. This is it for this quick demo on how to manage licenses from the Microsoft 365 admin center. This is also the last demo of this module, so let's head back to the slides and finish off the module.

Module Conclusion

Before finishing up this module, let's review what we have learned. In this module, we first did an introduction to Microsoft 365 licensing, and we talked about what's included in Microsoft 365, the different Microsoft 365 plans such as Microsoft 365 for Home, Microsoft 365 Education, Microsoft 365 Government, Microsoft 365 Business, Microsoft 365 Enterprise, and finally, Microsoft 365 for frontline workers. We also learned how to decode the Microsoft plan by looking at the first letter and

the number. Afterwards, we talked about how we can acquire Microsoft 365 licenses, and we learned the difference between self-service, direct billing, Cloud Solution Providers, and the Enterprise Agreement. And, of course, we looked at the advantages of each. This is it for this module about Microsoft 365 licensing. Next up, we will talk about Microsoft 365 Service Lifecycle and Support.

Microsoft 365 Service Lifecycle and Support

Module Introduction

Hello, and welcome to this Microsoft 365 Cloud Concepts course. In this module, we will talk about Microsoft 365 Service Lifecycle and Support. We will start this module by talking about Microsoft 365 service lifecycle, a very important aspect to understand since as we go to the cloud, the way we manage updates is very different. Next up, we will talk about Microsoft 365 support offerings. How do we get support in a cloud environment, especially with Software as a Service? By the end of this module, you will understand how a feature goes from development to your tenant and how to get support from Microsoft if something isn't working as it should.

Microsoft 365 Service Lifecycle

Let's start by learning about the Microsoft 365 service lifecycle. How does the feature go from dev to your tenant? The service lifecycle is a big change in strategy and methodology from on-premises to the cloud, mainly because on-premises, we could basically decide when we apply a certain update or when we migrate to the next version of the tool or whenever we make any change to a software that we use. Now, as we move to the cloud, especially with Software as a Service, we'll lose a lot of that control since the provider deploys the objects to the service, and really, they control the schedule when they do it. So you can't usually say no to an update, so how do we manage that? There are two main ways we can still remain in control of changes to our applications. The first one is to understand the feature lifecycle for Microsoft 365, and the second one is to keep up to date with

the different Microsoft announcements, and that's what we'll learn about in this module. Let's start by talking about the typical lifecycle for a Microsoft 365 feature. The feature will, of course, be developed by Microsoft, and once they are ready, they will usually announce it to the world. Afterwards, depending on the feature or product, Microsoft will do a private preview with selected companies to make sure that this feature fits their need. And next up, the feature will go into public preview where everyone that wants to will be able to try it out. After public preview, the next step is for the feature to go in general availability where it will slowly start appearing in tenants across the globe. Let's dive deeper into the four main stages. First, we have the development stage where Microsoft works on a feature internally until it's ready to be used by customers. The feature might not be 100% ready and complete yet. Not everything might be implemented, but it's reached the stage of development where they need customer input or validation before they can finish it. Afterwards, Microsoft will select a group of interested organizations to try the feature out in private preview. Microsoft might either set up a call for interested parties to submit a form, or they might reach out to customers directly based on their usage and will enable the feature for their tenants. In this stage, the customers usually do not pay for that feature yet. And since it's not complete, customers usually have direct contact with the product team and engineering for any issues and questions around the feature. Also, companies in private preview often have a non-disclosure agreement with Microsoft, so they cannot, let's say, publish information about this feature. After the feature passes private preview, which can last anywhere from 2 months to 15 months, which is one of the longest that I have seen in my experience, it will go into public preview. This is where anyone who is interested in trying out the feature can enable it inside their tenant. It's important to know that in public preview, the feature might not yet be fully published, and there might still be bugs or things that are not polished. You can use the feature; however, there is no SLA if there is a bug in production, so most of the time, you might not want to have any business-critical processes running on features that are in public preview. Also, if the feature requires an extra licensing, usually it's not charged while the feature is in public preview. It's important to understand that up until this point, the feature is not yet confirmed and not part of the service, but most of the time after public preview, the next step is to go

in general availability. The reason why I said the previous sentence is that I have seen features make it all the way to public preview, but then because of customer feedback, that feature got canceled or went back into development because of customer feedback. So, there is no guarantee that that feature will make it to general availability. But once that feature is part of general availability, this is where the feature becomes part of the service with normal support, SLA, and ready for production use. At this point, if the feature requires extra licensing, you will have to start paying for it. So as you can see, before a feature actually reaches production, you have quite a few stages to try it out and create training and plan for its usage inside your organization. But remember, until the feature hits general availability, Microsoft might change it or decide not to ship it based on all of the feedback up until public preview. So it's important to not have any business-critical processes running on public preview features. Now that we know about the feature or service lifecycle, let's talk about the release preferences. As an organization, you can configure the release preferences for your tenant, and you have multiple options. First option being standard release for everyone, meaning that the entire organization will only get new features when they hit general availability. You can also configure your tenant to have targeted release for everyone, meaning that everyone from your company will get updates and new features early. The third and last option is to have targeted release for select users. Here, you can pick some people, let's say your IT department, to get updates early. However, it's important to know that not all of the features will work with this option. With everything we have talked about so far for the service lifecycle, this is the reason why many organizations actually have two tenants, one of them for production in which they have the release preferences set to standard release, so everything that is supported for production, and another tenant that isn't targeted release for everyone, which they use for QA. Of course, not everyone has access to the QA tenant, only the IT team and other users who need to try out new features for adoption and training. We talked about the general service lifecycle, but how do we keep up to date with features that Microsoft is working on? We have two main tools, the first one being the Microsoft 365 roadmap. The Microsoft 365 roadmap is the central roadmap for all of the features in the Microsoft 365 service, and it can be found on the web at the link in the slides, or you can simply

search for Microsoft 365 roadmap in your favorite search engine. Features on the roadmap will go through several stages, so you can really follow progression. First of all, they are shown as in development, then go into rolling out, and finally, into launch once they are available into each and every tenant. If you want to make it easier to follow, you can also subscribe to the RSS feed of the roadmap and then follow it in your favorite RSS reader. Next up is the Microsoft 365 message center. The Microsoft 365 message center can be found in your Microsoft 365 admin portal, and this is where Microsoft will publish all the changes coming to your tenant, whether it's retirements, new features or changes to some timelines. Messages are tagged with multiple categories, allowing you to filter by the type of notification, product, and more. Another useful feature is that you can actually sync messages to Microsoft Planner, allowing you to create a task list that you can review at your change management meetings or assign messages to certain people, depending on what services they own.

Demo: Microsoft 365 Roadmap and the Message Center

Now that we have talked about the theory, let's head over to the lab and explore the Microsoft 365 roadmap, as well as the message center. We are now in the lab environment, and let me open up the browser where I have already navigated to the Microsoft 365 roadmap. You can either download the slides from the exercise files and then copy/paste the link from the slides or simply search Microsoft 365 roadmap in your favorite search engine. Now that we are on the roadmap page, first of all, at the top, you have a search functionality if you know the feature ID or you're looking for something in particular. You also have many different filters. You can filter by product, and here you can see all of the different products in Microsoft 365 and filter by them. You can also filter by release phase from preview, general availability, targeted release, and so on. You can also filter by platform. So is it an update about Android, Desktop, Education, Mobile, and so on? And if you are in the public cloud, you would probably select Worldwide (Standard Multi-Tenant). However, if you're in a GCC, GCC High, or DoD tenants, which are community cloud, you can filter by those specific instances.

So you really see only the things that apply to you. Lastly, if you only want to see the recent changes, you can only show the changes that are new within the last week or new within the last month, or you can also see the ones that have changed within the last week or the last month. If we take a look at one of them, let's take a look at the first one, Microsoft Teams: Breakout Room pre-meeting room creation and participant assignment for DoD. We can see right away that this will go into general availability in December 2022. And if we didn't see it from the title, this applies to the DoD cloud instance, and we also have other details such as this is both for Teams Desktop and Teams Web. You can always also filter by simply going to see all of the ones in development by simply clicking the checkbox for all of the ones rolling out if this is what you're interested in. Finally, you also have the option to go to the RSS feed. If you like to use RSS feeds, you can simply copy and paste this link in your favorite RSS reader and keep up with the roadmap this way. Great! This is it for the Microsoft 365 roadmap. Now let's talk about the message center. The message center can be accessed from the Microsoft 365 admin center. Now some of you might have it here on the left, but I don't right now because by default it's hidden in this view. So what you have to do if you don't see it, click on Show all at the bottom, then you will see all of the different categories in the left navigation, and then you will find Message center under the Health category. So let's go here. And remember, in the message center is where we will find all of the different changes that are coming to our tenant. Let's take a look at the latest one here, Get Adobe PDF experience in Microsoft Teams. We can have the message ID, when it was published. We can see the service and the monthly active users this impacts. Now, of course, this is my test tenant, but we can see that this applies to Microsoft Teams, and I have three active users inside my tenant for Teams. Of course, in your organization, you will probably have more, but what I love about this feature is as an admin as you read it, you might not have an idea of how many users are maybe using Planner to do or Microsoft bookings. So this will let you know if this change impacts a product that has a high usage or low usage inside your organization. After that, we also have a tag. So we can see this has an admin impact, and it's also classified as a new feature. We then have the Message Summary. So this one says now you can see Adobe Acrobat as the default app to view and edit PDF files in Microsoft

Teams, as well as more details. We can also see that this message is associated with Microsoft 365 Roadmap ID 95128. So a lot of the times in the message center, you will see the ID of the feature in the Microsoft 365 roadmap. Then, we will see when will this happen? We can see that this is now available in public preview, and it will begin rolling out early in September 2022 for standard release. And Microsoft expects it to be complete, so roll out to really all of the tenants worldwide by the end of September 2022. Now, how will this affect your organization? And this is probably why it has an admin impact because an admin will need to go, and, of course, if they want to for the organization, do some changes, in this case, in the admin center in order to make use of this feature. So this is a great example. And as you can see, we have admin impact and new feature. We also sometimes have a user impact, so this will not have an impact on the admins, but on the users, which in my opinion still means an admin impact because we need to communicate and train users, but this is the tag we get. You might also have retirements and things like that, but this is the message center. This is really where you should go daily, if not max weekly, as an admin to keep up with all of the latest changes, whether it's new features, retirements, and things like that that are happening to your tenant. Great! Now that we know how to keep up to date, let's go back in the slides and talk about the different Microsoft 365 support offerings.

Microsoft 365 Support Offerings

Next up for this module, let's talk about Microsoft 365 support offerings. The way that we get support for our apps and services has also changed with the cloud. On-premises, we always turn to the application administrators who had full control to the application. They could log onto the server to troubleshoot the problem. They could reboot the service or the server, or as we joke often, they could kick the server to get it back on track. But with Software as a Service, we don't manage servers. We don't have access to them. So what do we do when something goes wrong? First of all, there are two types of things that can happen. First, it can be a general service outage, so something that is wrong on the Microsoft side for everyone, or it can be a problem in your tenant. If

something is happening in your tenant that shouldn't or you cannot access the service, the first place that you should check is the Service Health Dashboard. The Service Health Dashboard is the single location where you can view the status of all your Microsoft 365 services, and you can find it inside the Microsoft 365 admin center, so it's really an admin tool. There are three possible options available for services, either everything is healthy and everyone is happy, or you might have an advisory. If a service has an advisory shown, Microsoft is aware of a problem that is affecting some users, but the service is still available. In an advisory, there is often a workaround to the problem, and the problem may be intermittent or is limited in scope and user impact. The next one is an incident. If the service has an active incident shown, it's a critical issue, and the service or a major function of the service is unavailable. For example, users may be unable to send email or receive email or unable to sign in. Incidents will have noticeable impact to users. When there is an incident in progress, Microsoft will provide updates regarding to the investigation, mitigation efforts, and confirmation of resolution in the Service Health Dashboard. As a recommendation, the Service Health Dashboard is really the first place where you should go check if you have multiple users reporting the same errors, as if it's really a service health issue, there is not much that you can do as an administrator unless there is a workaround posted. But what if we cannot even log into Microsoft 365 or we cannot get to the admin center? Well, Microsoft has another site, which you can find at status.office.com, which really only displays information if the admin center is down. If not, it will either just display that everything is good with the admin center or a message telling you about the site like right now in the screenshot. Now, if you have a problem, but everything looks good in the Service Health Dashboard, you might need to open a support ticket. In Microsoft 365, administrators with the right roles can open tickets from the Microsoft 365 admin center. When you open a ticket, you will be contacted by phone, and you have an estimated wait time until you get called, usually it's very fast. The next steps really depend on what the problem is and what debugging options are available. I have had tickets solved in a day by the support engineer just running a script on the back end, and I had a ticket that was open for three months until we had the resolution. So while that's probably an edge case, after the initial phone call, your experience will really depend greatly on the

problem. Now something that might happen is that a feature is actually working the way that it's designed, but it's not working the way that you would like it to work. In this case, you can submit a feature suggestion to Microsoft, whether it's for a new feature or updates to an existing one, and you can do that from the Microsoft feedback portal. Each Microsoft 365 product has its own category in which you can submit feedback to Microsoft on, and it's public, and other users can upvote your idea to show Microsoft that's something that more people would find useful, and, of course, you can vote on other users ideas as well.

Demo: Microsoft 365 Health Dashboard

Now that we have seen the theory, let's head over to the lab and check out the Service Health Dashboard, as well as how to open up a support ticket and finally the Microsoft feedback portal where we can submit user suggestions. We are now back in the lab environment. Let me open up the browser here where I'm in the Microsoft 365 admin center. Most likely, you might have this Service health as a widget in your admin center. If not, you can add it. And right away, you can see that some services are disrupted, and currently there is one incident and three advisories. If you do not have it here, under left navigation, under Health, you have Service health here, which will bring you to the exact same location. Now by default, you will be on the current active issues. Right now we see we have four different active issues. So the first one is an incident. Let's click on it. Some users may be unable to sign in Microsoft 365 desktop applications and encounter errors. This applies to Exchange Online, Microsoft 365 Apps, Microsoft Teams, and OneDrive for Business. We see that Microsoft discovered it, we have the user impact, and we can also see different updates. So we can see the latest update was on August 18 at 6:58 PM, and maybe if we scroll down, we might see the other updates previous to this one. And really important, especially when it's an incident, Microsoft will keep updating it quite often in order for you to have an answer for users on what is done and when you'll be able to have more news. Great! So this is the incident. Let's take a look at some of the advisories. Users are unable to view gateway connection lists within the Maker Portal

and Flow Portal. So again, latest update was actually on August 15, so 3 days ago here, so we can take a look at what is happening. Also sometimes in the description, you will see when will Microsoft do the next update? So, in the description over here, let me just highlight it so you see where to look at. We estimate that this solution will reach all affected users by Sunday, August 21. So chances are that on Sunday, August 21, we will either have an update, or this will be closed. So again, if something happens, your users are experiencing something, it's always good to go and check, is Microsoft aware of this issue? Are they already working on it? Is there any workaround available for you to tell your users until it's officially fixed? And you can also go and take a look by service. Exchange Online right now, for example, has one incident and three advisories, but most of them are healthy, and we have the green check mark. Now if everything is going good here, but your users are still having trouble, you can always go and open up a support ticket. On the left navigation under Support, we can have a new service request. Let's do an example here, Cannot upload documents in OneDrive. By default, it will try to actually give you self-help solutions, so links to Microsoft documentation, as well as give you some troubleshoot tips in order for you to troubleshoot this issue yourself and maybe get it fixed without even having to wait for support. But sometimes this might not fix it, so then we can go and contact support. Then, you can add a Title for your support request, add a Description, confirm your phone number where the support personnel will reach you, confirm the email address of the authorized contacts, and you can select the Preferred contact method, either by phone, so they will call you back within 22 minutes, or you can schedule a callback maybe tomorrow when you're back in the office because this might not be super urgent. And you can also attach a file, this way you can maybe add some screenshots, add some logs for the support person to take a look at so they can better understand the problem before they even call you. As we talked about in the slides, what happens after you open up the support ticket will greatly depend on what the problem is. Most likely, a support person will call you via phone, and then you will do a screen share session with them so you can show them the problem. They might give you some troubleshooting tips and tricks. They might say hold on, I'll run some scripts on the back end, or they might ask you to send them some logs and things like that so they can troubleshoot it on their side. It

will really depend on what the problem is. Great! So now that we have talked about support, our final topic for this demo is the Microsoft feedback portal. Here is where you can send suggestions to Microsoft that will hopefully make it into features in the future. Let me zoom in a tiny bit so we see better. And as we have talked about in the slides, we really have one category per product here. So, depending on what product you want to submit a feature for, make sure you go into the right one. Let's go into Microsoft Teams, for example. And by default, it will filter by the most votes. So this way, the most popular ones will be at the top. And remember, you can vote on other users' suggestions. This way you tell Microsoft that this is important. You can see that the first one we have right now is Enable user to reply to specific messages in the conversation on the desktop client. We also have the official Microsoft response to say like, hey, we are thrilled to share that this top request became available last year in the Teams Desktop app. Then if we go to the next one here, Enable usage of multiple Teams accounts at the same time. We see a small description. We can see that right now the status is we're working on this, and we have a fairly recent answer from Microsoft. Hey, thank you for your continued feedback and patience. It's a top priority, and we're working on making it happen. Right now, those have a huge number of votes, 36,500. But again, some of them might start at the bottom, and this is where you can use your social media, use your contacts. Ask people to get votes to say, hey, this is important, Microsoft. Please take a look at implementing it. Awesome! This is it for this quick demo in which we have covered the Service Health Dashboard, opening up a support ticket, and the Microsoft feedback portal. Now let's head back over to the slides and finish off this module.

Module Conclusion

Before finishing up this module, let's review what we have learned. In this module, we have first talked about the Microsoft 365 service lifecycle and how a feature goes from private preview to public preview. And finally, if everybody loves it and it's ready for production, it goes into general availability. We have also learned how you can keep up to date with features coming up by using the

Microsoft 365 roadmap. Afterwards, we have talked about how to get support for your Microsoft 365 services, and we have learned about the Service Health Dashboard, which is where you should check if there is a widespread issue with a certain service. We have learned how to open support tickets, and finally, we have learned about the feedback portal where you can submit your feature suggestions and vote on other people's ideas as well for Microsoft to consider. This is it for this module, which is almost the last module of this course. But before we're done, we have a small conclusion module in which we will review everything that we have learned and also offer more resources to help you learn more about Microsoft 365.

Course Conclusion

Course Conclusion

Hello, and welcome to the final module of this Microsoft 365 Cloud Concepts course. In this course conclusion module, we will do a quick review of everything that we have learned and share other courses, which might be interesting for you to learn more about Microsoft 365. We have started this module by really taking a step back and looking at data centers in the past and the problems they had such as high upfront costs and often underutilization due to the fact that each app had its own server, and we had to plan for peak usage. We have then introduced cloud computing, which enables companies to consume a compute resource just when they need it and only pay for the services they use. We have looked at how in a cloud environment, you have the cloud provider, which owns their data center and manages all of the hardware like servers, networking, and virtualization, and that is shared with multiple clients that use the resources they need, but they only pay for what they need and what they use. They don't need to manage any of the electricity, any of the hardware, any of that. We have then learned the three main types of cloud computing services, Infrastructure as a Service, Platform as a Service, and Software as a Service. And we have learned what the differences are between those, which is mainly around how much you manage versus how much the cloud vendor manages for a certain application. We have also looked at the four types of

cloud computing deployment models and learned the differences between the public cloud, the private cloud, the hybrid cloud, and finally, the community cloud model. We have looked at the differences between them and also looked at some industry examples for each. Afterwards, we have started focusing on Microsoft technologies and looked at the four cloud platforms for the enterprise, which are Microsoft Azure, Microsoft 365, Dynamics 365, and the Power Platform. And we learned where they fit in the different types of cloud computing services. And we started to focus on the star of the course, which is Microsoft 365, the Software as a Service offering that is focused on productivity and probably the Microsoft service that most users interact with daily, as it includes popular apps such as Microsoft Teams, SharePoint, OneDrive, and more. Microsoft 365 contains three major components, Office 365 where most of your cloud services are, Windows, the operating system, and finally, the Enterprise Mobility + Security suite, which makes sure that you can use the previous two securely and respect your compliance standards. We have then started talking about licensing and learned about the different Microsoft 365 plan categories, depending on the type of organization, the size of your organ realization, and if, for example, you have field workers that you want to give different licenses for. And we have also talked about how to decode the different Microsoft 365 plans, how the first letter tells us the plan category, and the number will tell us the level, so the number of features inside. And the higher the number, the more services are included. But remember, one of the biggest advantages is flexibility. Not every user in the company needs the same license. Some users might only have an Office 365 license even and not the full Microsoft 365 one, and you have licenses between $2 a month to almost $60 a month for every user, so you can really pick and choose to maximize the value you get depending on your usage. With the types of licenses covered, we then learned the three main ways to acquire them, either self-service from Microsoft, from a cloud solution provider or from Microsoft through an Enterprise Agreement, which is a contract that lasts for at least three years. After licensing, we learned the Microsoft 365 feature lifecycle and how a feature goes from private preview to public preview, and finally, if everybody loves it it and it's ready for production, it goes into general availability. We also learned how to keep up to date with new features by following the Microsoft 365 roadmap, as well as the message center,

and we have learned how to consume both of them. Finally, we have learned what to do when some things go wrong, as it can happen sometimes. We have learned how to consume the Service Health Dashboard to see if the issue we have is maybe a widespread issue that is affecting everyone, or if it's something specific to us, we have learned how to create a support ticket. Now with this course done, what's next? This course is part of the Microsoft 365 Fundamentals path on Pluralsight, so you can keep learning about Microsoft 365 by checking out the Microsoft 365 Services and Concepts course, as well as the Microsoft 365 Security, Compliance, and Identity Concepts course on Pluralsight. You can also get Microsoft 365 certified. If you want to take your Microsoft 365 skills to the next level, you can study towards a Microsoft certification, and the first one that I would recommend is the Microsoft 365 Certified: Fundamentals certification. It's a fundamental-level certification where you prove that you understand the options available in Microsoft 365 and the benefits of adopting cloud services, the Software as a Service cloud model, and implementing Microsoft 365 cloud services. The exam number is MS-900, and you can find more information about the exam on Microsoft Learn at the link in the slides, and there is a certification path on Pluralsight dedicated to this certification. Finally, I would like to introduce you to a really nice feature on Pluralsight. You can now follow authors. If you have enjoyed this course and want to get a notification when I create new content, please go to my profile and click on Follow. On the last note, I just want to say a huge thank you for listening to this course. I really hope you having enjoyed listening to it as much as I enjoyed creating it. You have my Twitter, LinkedIn, and blog here on the screen. Please connect with me. I do my best to share interesting stuff, and make sure to check my author page to see all of the different courses that I have on Pluralsight. If you ever see me speak at one of the conferences you're attending, please don't be a stranger and come say hi. Thank you very much, again, for listening to this course.