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Microsoft Azure Virtual Desktop

Service Description

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EXECUTIVE SUMMARY

Azure Virtual Desktop (AVD) is a cloud-based virtual desktop solution that allows employees to access company managed desktops, files and applications securely through the cloud, without requiring customers to invest in an on-premises estate. It however is not to be confused with another service offering called Microsoft Windows 365 (Cloud PC).

Service Overview

As organisations adapt to hybrid and remote working environments the management, delivery, consistency and ultimately security of the end user devices has become paramount.

Azure Virtual Desktop allows for the delivery of both desktop and applications to a user based anywhere and, on any device, whilst still maintaining the integrity and security of the company data.

Azure Virtual Desktop delivers this by segregating the end user's device and the computer or application host which accesses the company data, much like a traditional Remote Desktop environment but also provides a significantly more scalable and robust solution. Deployment Process

Investigate costs and licensing requirements:

Before considering a rollout of Azure Virtual Desktop we need to determine the number of users, hours of operation. The use of the Azure Calculator will be used to determine the costs based on peak and off-peak usage. Then determine that the current Microsoft 365 licensing will cover the use of Windows in the Azure Virtual Desktop environment. This is covered by a Virtual Desktop Application (VDA) license. Presently this can be any of the following:

+ Windows 10/11 Enterprise E3/E5 per user license.

+ Windows 10/11 Enterprise E3/E5 per user add-on license.

+ Windows 10/11 Education A3/A5 license.

+ Windows VDA license

+ Microsoft 365 Business Premium

+ Microsoft 365 A3/A5

+ Microsoft 365 F3/E3/E5

If the customer and user base have one or a mixture of the above, then they meet the licensing requirements. However, if they do not use any of the above, please ensure the cost of the licensing uplift or additions are considered thoroughly. At this point we also need to ensure all applications which are in use are licensed for a multi-user environment. Do not assume that because the customer is coming from another multi-user environment such as Citrix or Remote Desktop that they have the appropriate licensing.

Inventory applications and confirm compatibility:

Determine at this stage which applications the Azure Virtual Desktop with the customer to ensure that they are covered under the licensing agreements and will operate under current licensing agreements in a Virtual Desktop environment.

Once this has been determined ensure that current version of the software is compatible with working in an Azure Virtual Desktop Environment and within an FSLogix profile container.

Determine end user experience objectives:

There are 3 ways to deliver an Azure Virtual Desktop experience:

+ Single Session – each user gets a single desktop from the available pool. 1 user per desktop. They do not get assigned an individual machine.

+ Multi-session – each user is logged into a multi-session host from the pool. Multiple users per desktop.

+ Personal – each user is assigned a specific desktop. 1 user per desktop.

You can also provision an Azure Virtual Desktop as a RemoteApp session host which is delivers the remote executed applications rather than presenting the end user with a desktop experience, this can be advantageous for those who want a specific set of applications delivered.

We need to consider the number of users to we are going to be moving across to ensure the new environment is sized such as size of desktop hosts, number of desktop hosts and the number of sessions per desktop host. You may want to consider a larger number of smaller hosts or a smaller number of hosts with more sessions per host if you're using a larger host.

Determine testing plan:

Ensuring that thorough testing is done is paramount in such deliveries as Azure Virtual Desktop owing to the potential user impact. Ensuring the testing encapsulates a wide spectrum of use cases across multiple departments is key. A testing plan will capture this to ensure that due considerations are made regarding the solution.

Configuration of Landing Zone:

A Landing Zone is a base set of resources that the solution will reside upon. These include the connectivity, backups, networking, policies and other elements of the base resources that are required. This will also include all of the storage accounts for FSLogix profile management.

Typically, we deploy Azure Virtual Desktop onto a separate subscription to allow for separated billing and greater segregation of duties.

Configuration of Scale Plans:

Scale plans allow for a scheduled increase/decrease in the Azure Virtual Desktop environment. Typically, customers have core business hours, Azure Virtual Desktop allows for the increase or decrease of available desktop sessions based on time of the day. Consideration during this phase will be for the peak usage times, when to start scaling up, when to start scaling down and if we're going to force users off scaled out hosts or wait for them to log off. Forcing users can be done with warning and a message to the user themselves.

Configuration and of User Profile Environment:

During this stage we will configure the FSLogix profile management environment, specifically the group policies for the new environment to point new desktops and users to their new FSLogix profile.

Depending on how user profiles are stored currently, there needs to be ample consideration made on how we will migrate the data. The current profile storage we typically see are, roaming profiles, folder redirection and Citrix UPM profiles. There can also be more than one of these configured. The customer may want in some circumstances to not migrate the current profiles and instead opt for a new profile, if this is the case ensure the correct considerations and communications are made before the User Acceptance Testing is undertaken.

Configuration of golden image:

Consider at this point:

The golden image is a fully prepared and generalised image with all the applications and settings deployed within the image itself. All of the applications should be checked to confirm they're compatible with being part of a golden image (being generalized).

There are some applications such as some Anti-virus applications which have been known to cause issues. Alternative application delivery methods such as RemoteApp can be investigated or in some circumstances specific applications may require personal desktops for either compatibility or licensing reasons.

Once the golden image is appropriately configured, it will then be prepared for deployment.

User Acceptance Testing:

During this phase the test plan determined earlier on in the project will be invoked and the users identified by the customer will be invited to test the new environment to ensure it meets their requirements on accessibility, performance and that any issues are documented in an issue tracker.

This phase will also be used to ensure profile migration methods are tested, repeatable and scalable (does it work, does it work all the time and can I do it for multiple users at the same time).

Migration of the users during this testing will be completed in such a way to not affect their live environment should they need to revert.

During this phase the creation of new users will also be tested and documented to avoid any issues with non-migrated users.

User Migrations:

Once the user acceptance testing phase has been completed, we will then plan the migration of the remaining users and the appropriate communication.

The issue log will still be updated to track any previously unknown or new issues relating to the Azure Virtual Desktop environment.

The new environment will be considered live and all new user accounts created will be created on the new environment.

The service desk documentation will be updated to reflect this including how to resolve known issues, links to the previous issue tracker so any new users experiencing known issues can have these resolved and the user creation process will be updated to reflect the new environment.

The service desk will receive handover from the engineer completing the work

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Project deliverables

Project planning and discovery:

+ Ensure prerequisites have been met and are in line with project objectives.

+ Ensure licences are adequate for the new environment both for Microsoft 365 and all intended products are adequately licenced.

+ Prepare a test plan for the products and environment with a decent representation from around the business but not more than 10 users. Creating the issue tracker as well as communication plans.

+ Agree testing period.

+ Document infrastructure requirements such as networking.

+ Document current user profile management.

+ Discuss usage of scale plans.

+ Document applications to be included as part of the new environment.

Prepare the environment:

+ Create new subscription

+ Deploy Landing Zone.

+ Configure Networking.

+ Deploy FSLogix storage containers

+ Configure Active Directory Organisation Units for Azure Virtual Desktop Environment.

+ Configure Group Policies for FSLogix.

+ Configure Group Policies for Azure Virtual Desktop.

+ Configure Scale Plans.

Configuration of Golden Image:

+ Creation of the virtual machine to be used as the golden image.

+ Installation of products as per planning stage.

+ Generalisation of the image

+ Deployment of Desktop Session Hosts from golden image.

+ Systems Acceptance Testing

User Acceptance Testing:

+ Deployment of the Azure Virtual Desktop Workspace to agreed test users.

+ Deployment of Microsoft Remote Desktop client.

+ Migration of the user profiles

+ Documentation and fixing of issues noted by the test users.

+ Communications to the customer regarding UAT.

+ Document migration steps required and amended timescales for User Migration phase if required.

Additional options

Configure conditional access

Azure Virtual Desktop can be configured to use Conditional Access Policies. This will be an additional requirement.

Access via Web Browser

Access to the Azure Virtual Desktop Environment can be configured to be via a HTML5 browser, this is especially useful for environments where the Remote Desktop agent cannot be updated/installed. Such as 3rd party devices where the customer has no access or users home devices.

Prerequisites

Azure Requirements:

+ An Azure Subscription or the ability to create one.

+ Owner and Global Administrator permissions to the subscription

Microsoft 365 Requirements:

A licence that includes Virtual Desktop Application such as:

+ Windows 10/11 Enterprise E3/E5 per user license.

+ Windows 10/11 Enterprise E3/E5 per user add-on license.

+ Windows 10/11 Education A3/A5 license.

+ Windows VDA license

+ Microsoft 365 Business Premium

+ Microsoft 365 A3/A5

+ Microsoft 365 F3/E3/E5