Technical Pre-day cheat sheet

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# Tenant creation

## Consent to Windows Virtual Desktop service

Open a browser in private mode Azure portal.

In the search bar type **Azure Active Directory**, click on the result link.

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Navigate to **Properties** and copy the **Directory ID**.

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Replace the **DirectoryId** in the URL below.

[https://login.microsoftonline.com/{**DirectoryId**}/adminconsent?client\_id=5a0aa725-4958-4b0c-80a9-34562e23f3b7&redirect\_uri=https%3A%2F%2Frdweb.wvd.microsoft.com%2FRDWeb%2FConsentCallback](https://login.microsoftonline.com/%7bDirectoryId%7d/adminconsent?client_id=5a0aa725-4958-4b0c-80a9-34562e23f3b7&redirect_uri=https%3A%2F%2Frdweb.wvd.microsoft.com%2FRDWeb%2FConsentCallback)

Paste link into a browser window.

When prompted to sign in enter your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXXX@gtXXXX.onmicrosoft.com) user and click **Accept.**

*Note: if you do not see the window below credentials are not correct.*

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Make sure you see the confirmation screen:

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Next, we are going to complete consent for client app.

Replace the **DirectoryId** in the URL below.

[https://login.microsoftonline.com/{**DirectoryId**}/adminconsent?client\_id=fa4345a4-a730-4230-84a8-7d9651b86739&redirect\_uri=https%3A%2F%2Frdweb.wvd.microsoft.com%2FRDWeb%2FConsentCallback](https://login.microsoftonline.com/%7bDirectoryId%7d/adminconsent?client_id=fa4345a4-a730-4230-84a8-7d9651b86739&redirect_uri=https%3A%2F%2Frdweb.wvd.microsoft.com%2FRDWeb%2FConsentCallback)

Paste link into a browser window.

When prompted to sign in enter your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXXX@gtXXXX.onmicrosoft.com) user and click **Accept.**

*Note: if you do not see the window below credentials are not correct.*

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Description automatically generated

Make sure you see the confirmation screen:

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## Assign TenantCreator role

Navigate back to the Azure portal (if needed sign with your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXXX@gtXXXX.onmicrosoft.com)).

In the search bar type **Azure Active Directory**, click on the result link.

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Select **Enterprise applications** find the **Windows Virtual Desktop** entry.

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Select **Assign users and groups** and then select **Add user.**

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Click **Users and groups** and enter your admin username (**adminXX)** then press **Select**.

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Once **Users and groups** is populated click **Assign.**

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Please confirm your users has the **TenantCreator** role.

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## Create Windows Virtual desktop tenant

Open the Azure portal.

In the search bar type **Azure Active Directory**, click on the resulting link.

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Navigate to **Properties** and copy the **Directory ID** and store it for later access.

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Back in the search bar type Subscription, click on the resulting link.

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Click on the **Microsoft Azure** subscription and copy **Subscription ID** and store it for later access.

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Open **PowerShell ISE** as administrator.

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Windows PowerShell (x86) 
Windows PowerShell ISE (x86) 
Microsoft Azure Active Directory 
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Open the scripting pane.

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Execute each of the commands below:

|  |  |
| --- | --- |
| **Execute** | Set-ExecutionPolicy Unrestricted  *Note: if prompted to install for All.* |
| **Execute** | Install-Module Microsoft.RdInfra.RdPowershell  Import-Module Microsoft.RdInfra.RdPowershell |
| **Execute** | Add-RdsAccount -DeploymentUrl "https://rdbroker.wvd.microsoft.com" |
| **Sign in** | Use user that was assigned **TenantCreator** ([adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) account.) |
|  |  |

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|  |  |
| --- | --- |
| **Replace and Execute** (replace XX with digits from admin account, and XXXX with digits from domain name) | $tenantId = "**Directory ID** value from above step"  $subId = " **Subscription ID** value from above step"  $tenant = “admin**XX**gt**XXXX**-t”    New-RdsTenant -Name $tenant -AadTenantId $tenantId -AzureSubscriptionId $subId |

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# Create a host pool

Navigate back to the Azure portal (if needed sign with your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com)).

Open Azure Marketplace.

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Search for **windows virtual desktop** in the search box.

Select the Marketplace entry called **Windows Virtual Desktop – Provision a host pool.**

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Click **Create.**

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## Blade 1 – Basic

Create new resource group name **adminXX-RG** (replace XX with digits from admin account).

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|  |  |
| --- | --- |
| **Region** | East US |
| **Host pool name** (replace XX with digits from admin account) | Admin**XX**-hp |
| Click | **Next: Configure virtual machine >** |

## Blade 2 - Configure virtual machine

|  |  |
| --- | --- |
| **Usage Profile** | Light |
| **Total users** | 10 |
| **Virtual machine size** | Click **Change size**  Select **Standard\_B1ms** |
| **Virtual machine name prefix** (replace XX with digits from admin account) | host**XX** |
| **Click** | **Next: Virtual machine settings >** |

## Blade 3 – Virtual machine settings

|  |  |
| --- | --- |
| **Image OS version** | Windows 10 Enterprise multi-session with Office 365 ProPlus |
| **Disk type** | Standard SSD |
| **AD domain join UPN** (replace with admin account) | [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) |
| **Specify domain or OU** | No |
| **Virtual network** | adVNET |
| **vmSubnet** | adSubnet |
| Click | **Next: Windows Virtual Desktop information** |

## Blade 4 – Windows Virtual Desktop information

|  |  |
| --- | --- |
| **Windows Virtual Desktop tenant group name** | Default Tenant Group |
| Windows Virtual Desktop tenant name (replace XX with digits from admin account, and XXXX with digits from domain name) | admin**XX**gt**XXXX**-t  *Note: Must match what provided in the PS command that created the tenant.* |
| UPN | [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) |
| Click | **Next: Review + create >** |

## Blade 5 – Review + create

|  |  |
| --- | --- |
| Click | **Create** |

# Deploy management GUI

In a browser navigate to <http://aka.ms/managementUI>.

Click **Deploy to Azure.**

Make sure that the Azure portal opens in the context of your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) user. If it does not repeat steps in private mode.

This will open the **Custom deployment** ARM template.

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|  |  |
| --- | --- |
| Subscription | Microsoft Azure |
| Resource Group (replace XX with digits from admin account) | Click **Create new** and type admin**XX**manui-rg. |

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|  |  |
| --- | --- |
| Location | East US |
| Azure AD User Principal Name (replace with admin account) | [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) |
| Application Name (replace XX with digits from admin account, and XXXX with digits from domain name) | manui**XX**GT**XXXX**app  *Note: if the name is not globally unique deployment will fail.* |
| Click checkbox | **I agree to the terms and conditions stated above** |
| Click button | **Purchase** |

Once deployment is completed navigate to the resource group create in the previous step (admin36manui-rg).

Click on the first app service and in the top right-hand corner and copy the **URL** for later reference.

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Description automatically generated

Open the link in a new browser window.

If prompted sign in and consent.

*Note: if the page loads without showing image below refresh until you get the* ***Permission requested*** *dialog. If issue persist, try closing browser and opening in private mode.*

Click thecheck box **Consent on behalf of your organization.**

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Once the management UI is loaded enter **Default Tenant Group** under **Tenant Group**.

Once selected click **Save.**

*Note: if you do not see the drop-down open management UI in a private mode.*

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Under **Tenants** there should be the tenant created in the **Create Windows Virtual desktop tenant**.

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# Deploy diagnostics GUI

If not already open, start **PowerShell ISE** as administrator.

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PowerShell C 
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Run as administrator 
Open file location 
Pin to Start 
Pin to taskbar 
Windows PowerShell 
Windows PowerShell (x86) 
Windows PowerShell ISE (x86) 
Microsoft Azure Active Directory 
Module for Windows PowerShell 
Search the web 
p powershell - see web results 
Settings (3) 
Websites (1) 
p powershell 
Feedback 
Windows PowerShell ISE 
App 
Open 
Run as administrator 
Open file location 
Pin to Start 
Pin to taskbar 

Open the scripting pane.

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Execute commands below:

|  |  |
| --- | --- |
| **Execute** | Install-Module Az.Accounts  Import-Module Az.Accounts  *Note: if prompted to install for All.* |
| **Execute** | Login-AzAccount  Login in with your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) credentials. |

*Note: if asked select IT admin created account.*

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|  |  |
| --- | --- |
| **Execute** | Connect-AzureAD  Login in with your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) credentials. |

A screenshot of a cell phone

Description automatically generated

Confirm the **TenantId** in the output matches the tenant id from tenant creation step. (use Login-AzAccount -Tenant <TenantId>).

## Create an Azure Active Directory app registration

In a browser navigate to <https://aka.ms/diagnosticsUI>.

Open **CreateADAppRegistrationforDiagnostics.ps1** by clicking on it.

The click **Raw** and copy the content in the scripting pane.

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Description automatically generated

Back in **PowerShell ISE** paste the raw content of the scripts.

Save the files as **CreateADAppRegistrationforDiagnostics.ps1**.

*Note: change your PowerShell to point to the folder where file was created via CD <folder>*

From the PowerShell command prompt run .\**CreateADAppRegistrationforDiagnostics.ps1**.

There will be several prompts:

|  |  |
| --- | --- |
| **AppName** (replace XX with digits from admin account, and XXXX with digits from domain name) | diagui**XX**GT**XXXX**app |
| **SubscriptionId** | Subscription id from early step. |
| **Credentials (if requested)** | Login in with your [adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com) credentials. |

Once script is successfully completed a **Client ID** and a **Client Secret Key** should be visible as the last two lines of the output.

Capture those for later.

A close up of a sign

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## Configure your Log Analytics workspace

Navigate to <https://aka.ms/diagnosticsUI>.

Open **CreateLogAnalyticsWorkspaceforDiagnostics.ps1** by clicking on it.

The click **Raw** and copy the content in the scripting pane.

Save the files as **CreateLogAnalyticsWorkspaceforDiagnostics.ps1.**

From the PowerShell command prompt run .\**CreateLogAnalyticsWorkspaceforDiagnostics.ps1**.

There will be several prompts:

|  |  |
| --- | --- |
| **ResourcegroupName** | admin**XX**law-rg |
| **LogAnalyticsworkspaceName** (replace XX with digits from admin account, and XXXX with digits from domain name) | law**XX**GT**XXXX**app  *Note: if the name is not globally unique deployment will fail.* |
| **Location** | EastUs |
| **SubscriptionId** | Subscription id from early step. |

Note: *you may need to sign in again.*

Once script is successfully completed capture the log analytics workspace id for later user.

A close up of a sign

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## Diagnostics tool ARM template

Navigate to <https://aka.ms/diagnosticsUIdeploy> and click **Deploy to Azure.**

|  |  |
| --- | --- |
| **Subscription** | Microsoft Azure |
| **Resource group** (replace XX with digits from admin account) | admin**XX**diagui-rg |
| **Location** | East US |
| **App Name** (replace XX with digits from admin account, and XXXX with digits from domain name) | admin**XX**GT**XXXX**diagui-app  *Note: if the name is not globally unique deployment will fail.* |
| **Client Id** | Result from running **CreateADAppRegistrationforDiagnostics.ps1** |
| **Client Secret** | Result from running **CreateADAppRegistrationforDiagnostics.ps1** |
| **Log Analytics Workspace Id** | Result from running **CreateADAppRegistrationforDiagnostics.ps1** |
| Click checkbox | I agree to the terms and conditions stated above |
| Click button | Purchase |

Once deployment completes.

### Set the Redirect URI

Navigate back to the Azure portal and type **App Service** in the search bar and click on the result.

A screenshot of a cell phone

Description automatically generated

Find the application that was just created (admin**XX**GT**XXXX**diagui-app) and copy the URL for the diagnostics GUI and save it for later.

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Back in the search bar type **App Registrations** and click on the result.

Find the application that was deployed (diagui**XX**GT**XXXX**app) and click on it.

Click **Authentication** and under **Redirect URIs** select type of **Web** and for **Redirect URI** enter the URL we just copied appended with **security/signin-callback**.

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Click **Save.**

## Access diagnostic tool

Navigate to a private window in a browser and type the URL from the previous step (https://admin**XX**gt**XXXX**diagui-app.azurewebsites.net).

If needed obtain via the steps below

In the search bar type **Resource groups** and open the link.

Click on the resource group create in the previous step (adminXXdiagui-app).

Click on the app service and in the top right corner click on the URL.

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If prompted sign in and consent.

Click **Consent on behalf of your organization.**

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Once portal loads.

Enter tenant name (admin**XX**-t) in the **Tenant Name** text box.

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Click **Save.**

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# Publish remote desktop and remote app

## Assign user to a remote desktop

Open **Azure portal** and navigate to resource group in which the management GUI was provisioned (admin**XX**manui-rg).

Click on the first app service and in the top right-hand corner find click on the URL.

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If prompted sign in and consent.

Under tenant select your host pool.

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Select **App Groups.**

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Click on **Desktop Application Group (Desktop Application Group).**

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Click **Users** and then **Add user.**

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A blade will open on the right-hand side.

Enter your administrative credentials [**adminXX@gtXXXX.onmicrosoft.com**](mailto:adminXX@gtXXXX.onmicrosoft.com)and click **Add.**

A screenshot of a cell phone

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## Create app group for Remote Apps

Select your host pool (adminXX-hp) and then select **App Groups**.

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Click on **Create App Group.**

This will open a blade on the right-hand side.

|  |  |
| --- | --- |
| **App Group Name** (replace XX with digits from admin account) | admin**XX**-ag |
| **Type** | RemoteApp |
|  | Click **Save** |

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This will create a new app group of type RemoteApp.

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Click on the new app group, click on **Users** and the then **Add User.**

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When prompted for **User Principal Name** make sure to enter your [userXX@gtXXXX.onmicrosoft.com](mailto:userXX@gtXXXX.onmicrosoft.com) credentials.

Click **Add**.

## Publish Remote apps from start menu

Select the remote app group that was created earlier (adminXX-ag).

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Click **Publish Apps from the Start menu.**

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A screenshot of a computer

Description automatically generated

Select few applications and click **Publish.**

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# FSLogix setup

*Note: Some of the operations in this section may local admin permission. If prompted or admin permissions required use “****.\adminXX****” as username with the same password as the* [*adminXX@GTXXXX.onmicrosoft.com*](mailto:adminXX@GTXXXX.onmicrosoft.com)*.*

In the management UI select the first host and click **Drain Mode**.

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Confirm **Allow New Sessions** on the selected host is set to **No**.

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Open <https://aka.ms/wvdweb>.

Sign in with your admin account ([adminXX@gtXXXX.onmicrosoft.com](mailto:adminXX@gtXXXX.onmicrosoft.com)).

There should be a remote desktop icon in your web client.

A picture containing screenshot

Description automatically generated

Click on icon and enter credentials when prompted.

Once the session has been established navigate to [https://aka.ms/fslogix\_download](https://aka.ms/fslogix_download/).

(Alternatively navigate to [\\advm\prfoiles](file:///\\advm\prfoiles) and copy agent from that location.)

This will start FSLogix download.

Save to a local folder and unzip.

Under **x64 > Release** run **FSLogixAppsSetup.exe.**

When prompted to elevate in order to install the FSLogix agent use username .\adminXX with the same password adminXX@gtXXXX.onmicrosft.com)

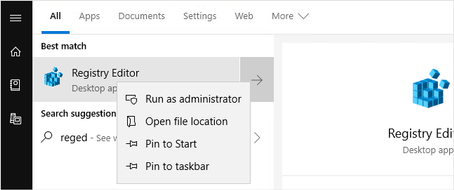
In the installation wizard check **I agree to the license terms and conditions** and press **Install**.

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Description automatically generated

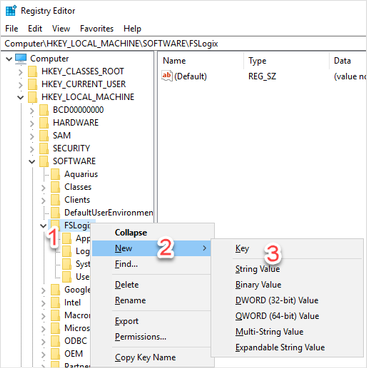
A screenshot of a cell phone

Description automatically generated

Run **Registry Editor (RegEdit)** as an administrator, when prompted for credentials use username **.\adminXX** with the same password adminXX@gtXXXX.onmicrosft.com.  
  


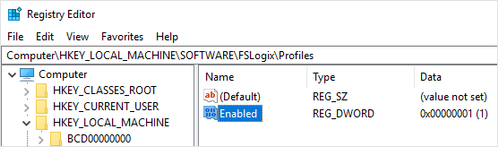
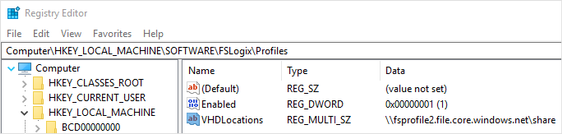
Navigate to **Computer\HKEY\_LOCAL\_MACHINE\software\FSLogix**, right click on **FSLogix**, select New, then Key.

Create a new key named **Profiles**.



Create the following values for the **Profiles** key:

|  |  |  |
| --- | --- | --- |
| Enabled | DWORD | 1 |
| VHDLocations | Multi-StringValue | \\advm\profiles\admin**XX** |
| DeleteLocalProfileWhenVHDShouldApply | DWORD | 1 |

Restart the VM via Azure portal.

Log back in as [adminXX@gtXXXX.onmicroft.com](mailto:adminXX@gtXXXX.onmicroft.com).

Note: *may take a little longer to create the profile to the network storage.*

Once session is connected. Open command prompt as administrator, when prompted for credentials use username **.\adminXX** with the same password [adminXX@gtXXXX.onmicrosft.com](mailto:adminXX@gtXXXX.onmicrosft.com).

From command prompt run **diskmgmt.msc** and confirm a profile is loaded.

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Description automatically generated

Open **File explorer** and navigate to [\\ADVM\profiles\adminXX](file:///\\ADVM\profiles\adminXX) to locate the folder containing the profile VHD.

A screenshot of a cell phone

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# Troubleshoot

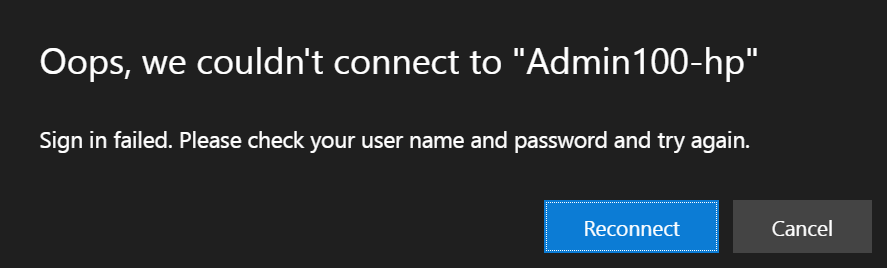
Open <https://aka.ms/wvdweb> and sign in with [adminXX@GTXXXX.onmicrosoft.com](mailto:adminXX@GTXXXX.onmicrosoft.com) account.

Start the remote desktop.

Once the prompt below for credentials appears enter an **incorrect** password.

A screenshot of a cell phone

Description automatically generated



Open the diagnostics tool (<https://adminXXgtXXXXdiagui-app.azurewebsites.net/>) and if needed sign in.

In the **Search activity feed** enter the adminXX UPN and click **Search**.

Enter User UPN that failed to login.

A screenshot of a computer

Description automatically generated