

\$project  
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\$project aims to provide an interface (Systems & Network Admin Portal) for users to create, use and delete Virtual Machines by using Microsoft Azure Portal to manage the storage and distribution of Virtual Machines to users.

## 1 Using the Project =====

### 1.1 Module Installation -----

Use a regular command line to navigate to the \$project folder and install node\_modules using this command:

- npm install

### 1.2 To run -----

Use a regular command line to start the program with any of the following commands:

- npm test      - node start

This will connect and run the program on the local server which can be accessed on a web browser using one of the following addresses:

- Localhost:8080      - 127.0.0.1:8080

Login credentials:

- Admin Username: Admin      - Admin Password: Password
- User Username: c1234567      - User Password: Password

## 2 File/Project Documentation =====

### 2.1 Microsoft Azure Subscription -----

A Microsoft Azure Subscription is needed to store and manage Virtual Machines created via the Systems & Network Admin Portal Interface. Microsoft Azure Portal:  
<https://portal.azure.com>

The current Azure Subscription is under Sharlene Von Drehnen [c3220929@uon.edu.au](mailto:c3220929@uon.edu.au)  
SubscriptionID: f849cb96-9b6a-4ac2-95ae-952b7b2aac0c

Virtual Machines using the Systems & Network Admin Portal are currently stored and managed using this account. A Resource Group [resourceGroup1] stores the Virtual Machines that are created using the interface. A Storage Account [vmProjectStorage] within the resource group contains a container (Access type = blob) where files such as VHDs are stored.

Resource Group → Storage Account → Container (Access Type = blob)

VHDs are stored inside the blob container of the storage account. See section 2.1.2 [VHDs] for creating and uploading VHDs.

See Section 3 [Using your own Microsoft Azure Subscription] in order to change the subscription and configuration to save Virtual Machines to your own Azure account.

### 2.1.1 configuration including resource groups and storage accounts

Files used for configuration:

- *config.js*

Configuration for Subscription and Resource Groups:

APP_SECRET	See Section 2.3 [Azure Classic (azurevmproject) App]*
CLIENT_ID	See Section 2.3 [Azure Classic (azurevmproject) App]*
RESOURCE_GROUP	The name of a resource groups in your subscriptions. When using the Systems & Network Admin Portal to create a Virtual Machine, Microsoft Azure creates the Virtual Machine and saves it in the specified Resource Group.
SUBSCRIPTION_ID:	The ID of your Azure subscription (Viewed in “Subscriptions” of your Microsoft Azure Portal Account) to manage/store VMs using this account
TENANT:	See Section 2.3 [Azure Classic (azurevmproject) App]*

\*App generates keys used in the configuration of the Systems & Network Admin Portal.

Configuration for Storage Accounts:

AZURE_STORAGE_ACCOUNT	The name of a storage account in the resource group.
AZURE_STORAGE_ACCESS_KEY	This is the storage account that will store VHDs. Can be accessed using your storage account on Microsoft Azure Portal. Navigate to your storage account and select “Access Keys.” Any of the access keys provided can be used.

AZURE\_STORAGE\_CONNECTION\_STRING:

'DefaultEndpointsProtocol=https;AccountName=vmprojectstorage;AccountKey=hMaAJf1ND  
PYj6TBAp3+0VWUNiAhTFS6lxdRBynfV9ttXMraZcp5HkqUyZX9pw9WVq/suroXehab/YMoU  
7zWYQA==;BlobEndpoint=https://vmprojectstorage.blob.core.windows.net/bob-the-blob;'

DefaultEndpointsProtocol=	http;
AccountName=	AZURE_STORAGE_ACCOUNT;
AccountKey=	AZURE_STORAGE_ACCESS_KEY;
BlobEndPoint=	URL to access the blob container; Can be accessed in Microsoft Azure portal by navigating to the storage account, selecting “Blobs”, selecting the blob used for this project, and selecting “properties”.

- azure\_config.json

See above for: APP\_SECRET, CLIENT\_ID, RESOURCE\_GROUP, SUBSCRIPTION\_ID, TENANT, AZURE\_STORAGE\_ACCOUNT, AZURE\_STORAGE\_ACCESS\_KEY, AZURE\_STORAGE\_CONNECTION\_STRING

WINDOWS\_DESK: The URL to access the VHD for a windows desktop. Can be accessed in Microsoft Azure portal by navigating to the storage account, selecting "Blobs", selecting the blob used for this project, and selecting the VHD of a Windows Desktop.

WINDOWS\_SERVER: The URL to access the VHD for a windows server. Can be accessed in Microsoft Azure portal by navigating to the storage account, selecting "Blobs", selecting the blob used for this project, and selecting the VHD of a Windows Server.

SUBNET:

"/subscriptions/[subscriptionName]/resourceGroups/[resourceGroupName]/providers/Microsoft.Network/virtualNetworks/[VirtualNetworkName]/subnets/[SubnetName]"

Substitute information within the [brackets] with your own details. For example:

"/subscriptions/f849cb96-9b6a-4ac2-95ae952b7b2aac0c/resourceGroups/resourceGroup1/providers/Microsoft.Network/virtualNetworks/VirtualNetwork/subnets/Subnet1"

## 2.1.2 VHDs

Downloading VHDs:

A VHD for Windows 10 Desktop can be downloaded from:  
<https://uonvmstorage.blob.core.windows.net/vhd/w10v2.vhd>

Uploading VHDs through Azure Powershell:

Install Azure Powershell here:  
<http://aka.ms/webpi-azps>

Get started with Azure Powershell cmdlets: <https://docs.microsoft.com/en-us/powershell/azureps-cmdlets-docs/>

Login to Azure using cmdlet:  
Login-AzureRmAccount

Select a default subscription, which the VHD will be uploaded to:  
Select-AzureSubscription -SubscriptionName <SubscriptionName>

Add the VHD to your blob in the storage account:  
Add-AzureVhd -Destination  
"https://<StorageAccountName>.blob.core.windows.net/<ContainerName>/<vhdName>.vhd" -LocalFilePath <LocalPathtoVHDFile>

Detailed instructions of uploading a VHD to your Azure storage Account:  
<https://docs.microsoft.com/en-us/azure/virtual-machines/virtual-machines-windows-classic-createupload-vhd> (Please skip Step 1- Completing step 1 may result in your computer hard drive being wiped)

## 2.2 mLab mongoDB

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Credentials used to login to the Systems & Network Admin Portal are created using a mongoDB. The DB was created using mLab [<https://mlab.com>] under Sharlene Von Drehnen (c3220929).

Please see Login credentials in section 1.2 [To run]. One admin account and one student account was created. Logging into the Admin account allows for extra functions on the interface:

- Admin Home
- Add User
- Upload VHD
- Lab Management
- VM Management

### 2.2.1 Using your own MongoDB

To create your own database with your own login credentials.....Add more here....

## 2.3 Azure Classic (azurevmproject) App

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Microsoft Azure Classic: <https://manage.windowsazure.com>  
The app [AzureVMProject] was created on Microsoft Azure Classic which generates keys (clientID, appSecret and tenantID) used in the configuration of the Systems & Network Admin Portal.

## 3 Using your own Microsoft Azure Subscription

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To change the Microsoft Azure subscription from [c3220929@uon.edu.au](mailto:c3220929@uon.edu.au) to your own, the details in section 2.1.1 [configuration including resource groups and storage accounts] must be changed accordingly.

Add more here....