

Microsoft Azure Enablement for Partners

*Microsoft Philippines Visayas Conference Room
8th Floor 6750 Ayala Office Tower, Ayala Avenue, Makati City, 1200*

Day 1: March 17, 2018

Time	Topic
9:00 to 9:30 AM	Reception and Welcome
9:30 to 10:00 AM	Introduction and Azure Intro
10:00 to 10:30 AM	Managing Azure
10:30 to 10:45 AM	Break
10:45 to 11:00 AM	IAAS – Intro
11:00 to 11:45 AM	IAAS - Virtual Machines
11:45 AM to 1:00 PM	Lunch and & Networking
1:00 PM to 2:00 PM	IAAS - Virtual Networks
2:00 PM to 2:15 PM	Break
2:15 PM to 3:15 PM	Hands on Labs Deploying IAAS Solution
3:15 PM to 4:00 PM	Open Q&A

Day 2: March 24, 2018

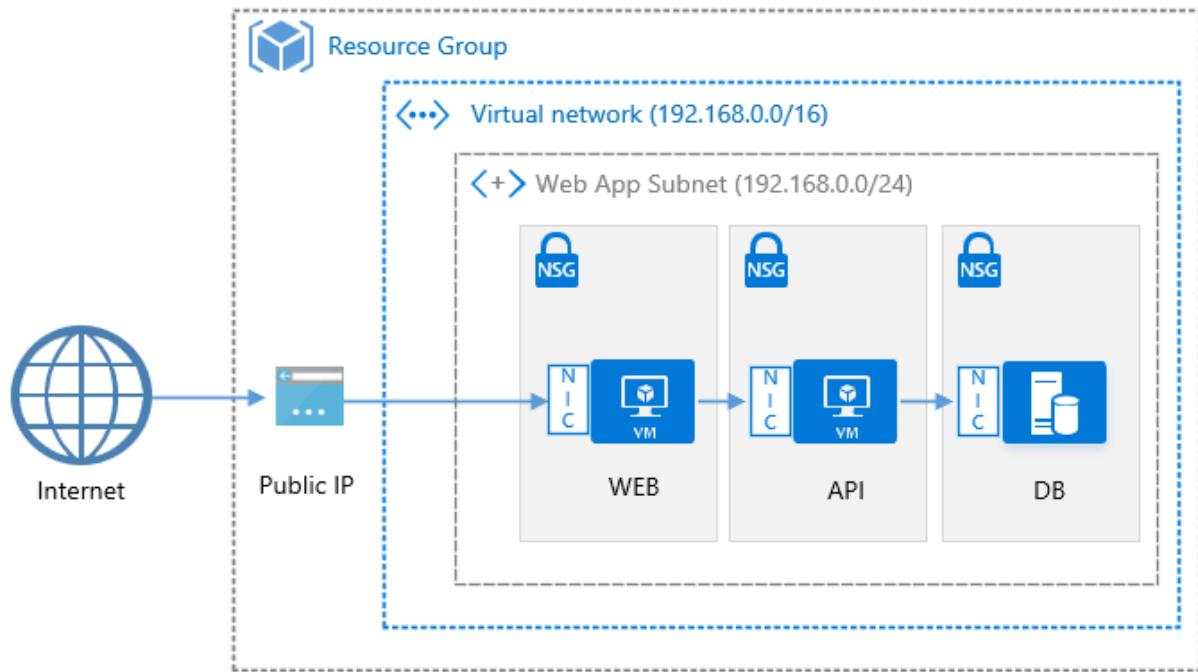
Time	Topic
9:00 to 9:30 AM	Reception and Welcome
9:30 to 10:00 AM	PAAS - Intro
9:30 to 10:30 AM	PAAS - Web Apps
10:30 to 10:45 AM	Break
10:45 to 11:00 AM	PAAS - SQL Server
11:00 to 11:45 AM	PAAS - Document DB
11:45 AM to 1:00 PM	Lunch and Networking
1:00 PM to 2:30 PM	Hands on Labs Deploying PAAS Solution
2:30 PM to 3:30 PM	Open Q&A
3:00 PM to 3:30 PM	Closing Remarks

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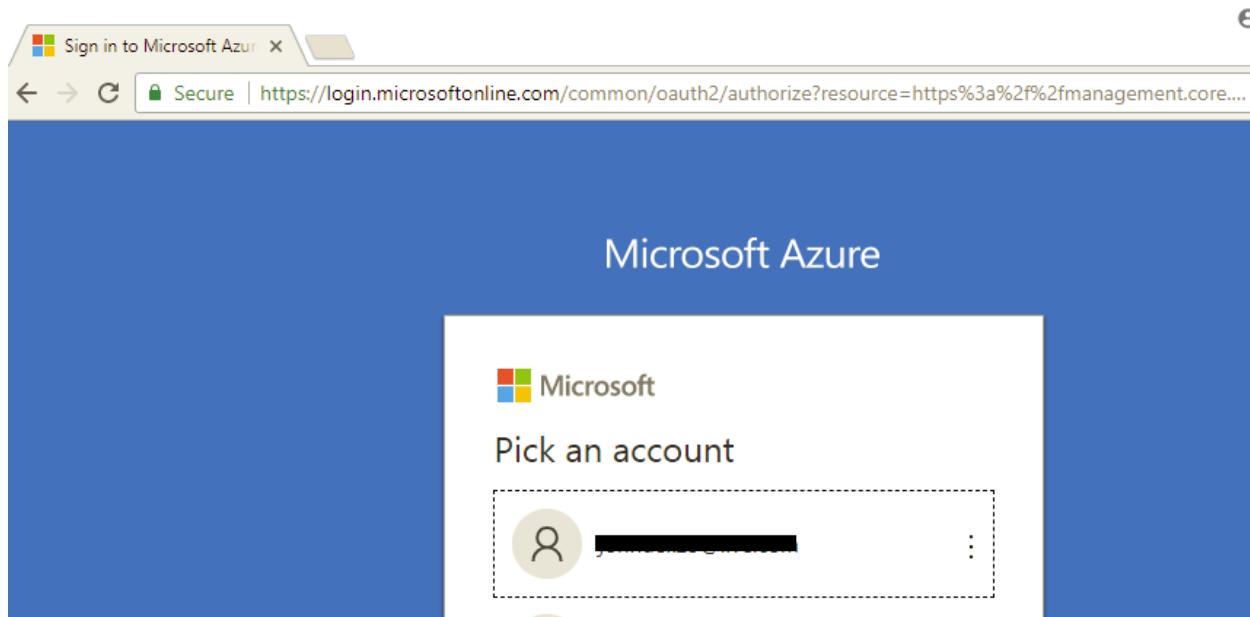
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Hands on Labs Deploying IAAS Solution

Lift and Shift Scenario Using Azure Portal.



Login to your Azure Account by going to <https://portal.azure.com/>



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On the left hand pane, click all services and search for Resource Groups.

The screenshot shows the Microsoft Azure portal interface. On the left sidebar, under 'All services', the 'Resource groups' option is selected. In the main content area, the search bar at the top has 'resource groups' typed into it. Below the search bar, a red box highlights the 'Resource groups' blade, which displays the message 'Keywords: resources'. A star icon is also visible in the top right corner of this blade.

On the resource groups, click Add.

Enter the resource group name as “**3TIER_LIFTANDSHIFT**” and choose your subscription. Make sure also that the resource group location is in “Southeast Asia”. Then click Create.

The screenshot shows the Microsoft Azure portal with the 'Resource groups' blade open. On the left sidebar, 'Resource groups' is selected. In the center, there is a list of existing resource groups. On the right, a 'Resource group' creation dialog is open. The 'Resource group name' field contains '3TIER_LIFTANDSHIFT', which is highlighted with a red box. The 'Subscription' and 'Resource group location' fields are also visible. A 'Create' button is at the bottom of the dialog.

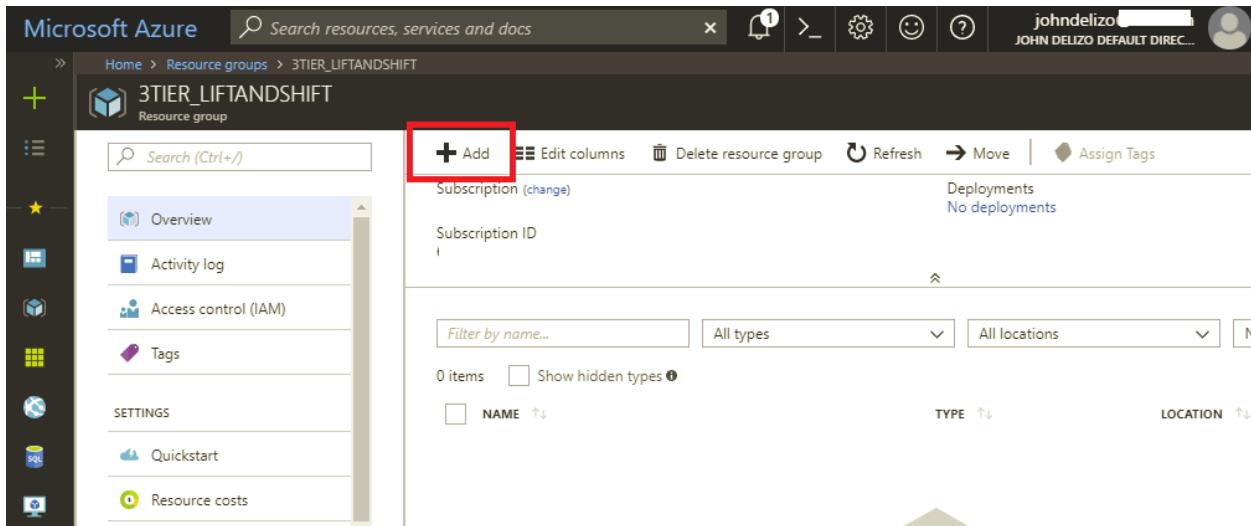
Wait for the resource group to be created and use the notification's button to navigate to the resource group. You may also use the shortcuts on the left to navigate to the newly created resource group.

The screenshot shows the Microsoft Azure portal after the resource group has been created. The 'Resource groups' blade is still open, showing the newly created '3TIER_LIFTANDSHIFT' resource group. A notification bubble in the top right corner indicates 'Resource group created' with the message 'Creating resource group '3TIER_LIFTANDSHIFT' in subscription '...' succeeded.' A red box highlights the 'Go to resource group' button in the notification. Other options like 'Pin to dashboard' are also shown in the notification.

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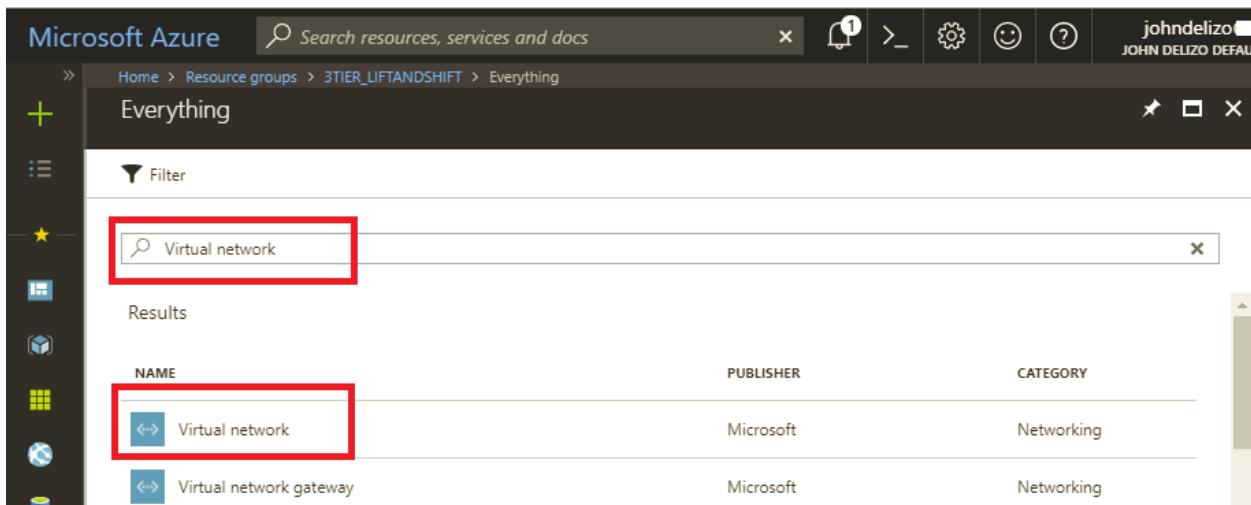
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On the “**3TIER_LIFTANDSHIFT**” resource group window, click add in the overview section .



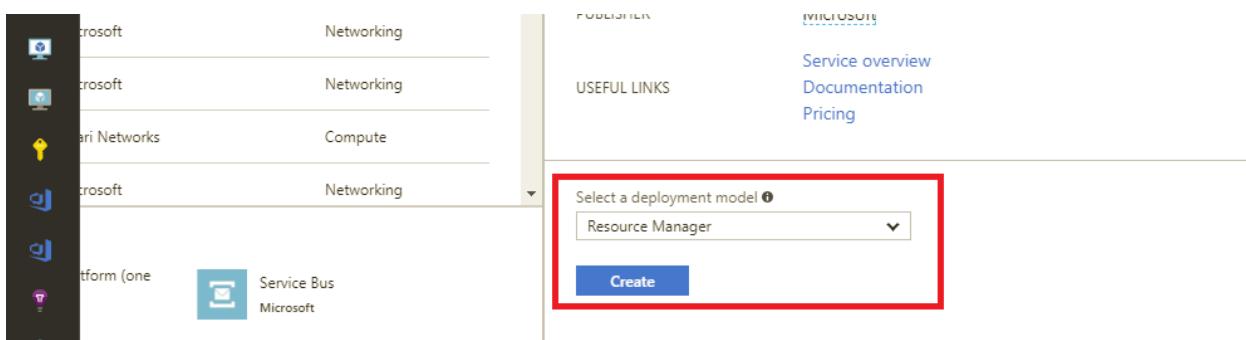
The screenshot shows the Azure Resource Groups blade for the '3TIER_LIFTANDSHIFT' resource group. The left sidebar lists options like Overview, Activity log, Access control (IAM), Tags, SETTINGS, Quickstart, and Resource costs. The main area shows the 'Overview' tab selected. At the top right, there's a 'Subscription (change)' dropdown, a 'Delete resource group' button, a 'Refresh' button, a 'Move' button, and an 'Assign Tags' button. The 'Add' button is highlighted with a red box. Below the top navigation, there's a search bar, a 'Subscription ID' input field, and sections for 'Deployments' and 'No deployments'. A 'Filter by name...' dropdown and a table with columns for NAME, TYPE, and LOCATION are also visible.

Search for Virtual Network then create using Resource Manager.



The screenshot shows the Azure search results for 'Virtual network'. The search bar at the top is highlighted with a red box. The results table has columns for NAME, PUBLISHER, and CATEGORY. Two items are listed: 'Virtual network' (published by Microsoft, Networking category) and 'Virtual network gateway' (published by Microsoft, Networking category). The 'Virtual network' item is also highlighted with a red box.

Click Create.



The screenshot shows the Azure 'Virtual network' creation blade. On the left, there's a sidebar with icons for various services. The main area shows a table of networking services. On the right, there's a 'PUBLISHER' section with links to Service overview, Documentation, and Pricing. Below that is a 'USEFUL LINKS' section. At the bottom right, there's a 'Select a deployment model' dropdown set to 'Resource Manager' and a large blue 'Create' button, which is highlighted with a red box.

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For the virtual network, specify the following details:

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Name' field is set to '3TIER_LIFTANDSHIFT_NETWORK'. The 'Address space' dropdown shows '192.168.0.0/16' selected. The 'Subscription' dropdown is open, showing '3TIER_LIFTANDSHIFT' selected. The 'Resource group' section shows '3TIER_LIFTANDSHIFT' selected under 'Use existing'. The 'Location' is set to 'Southeast Asia'. A red box highlights the 'Subnet' section, which includes a 'Name' field set to '3TIER_LIFTANDSHIFT_WEBAPP_SUBNET', an 'Address range' of '192.168.0.0/24', and a 'Service endpoints' section where 'Enabled' is selected. At the bottom right of the wizard, a large red box surrounds the 'Create' button.

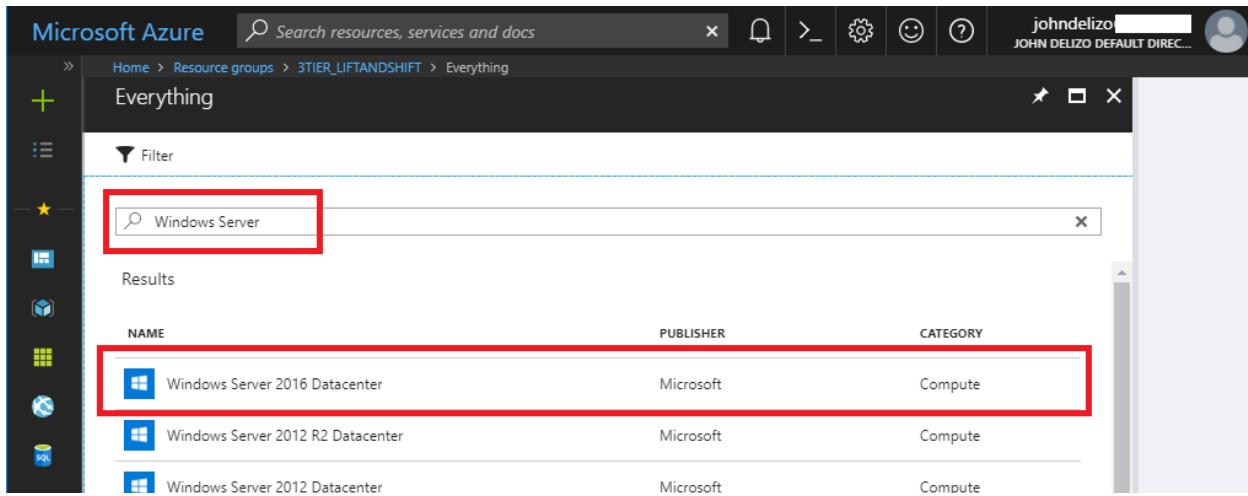
After the Virtual Network was created, add another resource.

The screenshot shows the '3TIER_LIFTANDSHIFT' resource group blade in the Microsoft Azure portal. On the left, there's a navigation menu with 'Overview', 'Activity log', 'Access control (IAM)', 'Tags', 'SETTINGS', 'Quickstart', and a search bar. On the right, there's a table with one item: '3TIER LIFTANDSHIFT NETWORK'. Above the table, a red box highlights the '+ Add' button. The top navigation bar shows the user 'johndelizo' and the location 'Southeast Asia'.

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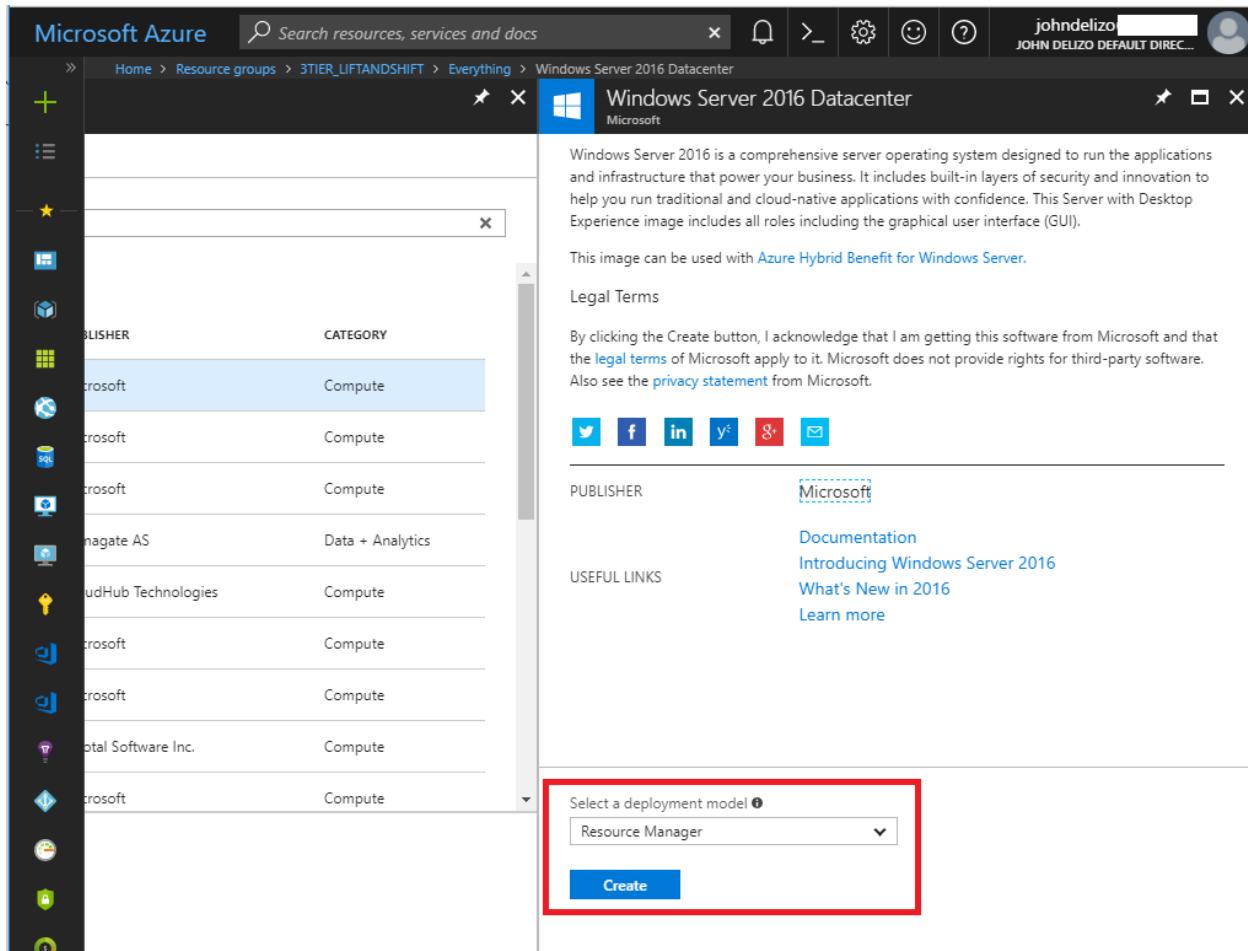
This time add a Windows Server Virtual machine.



The screenshot shows the Microsoft Azure portal interface. A search bar at the top contains the text "Windows Server". Below the search bar, a table displays search results for "Windows Server". The columns are labeled "NAME", "PUBLISHER", and "CATEGORY". Three items are listed:

NAME	PUBLISHER	CATEGORY
Windows Server 2016 Datacenter	Microsoft	Compute
Windows Server 2012 R2 Datacenter	Microsoft	Compute
Windows Server 2012 Datacenter	Microsoft	Compute

Use Resource Manager as the deployment model and then click Create.

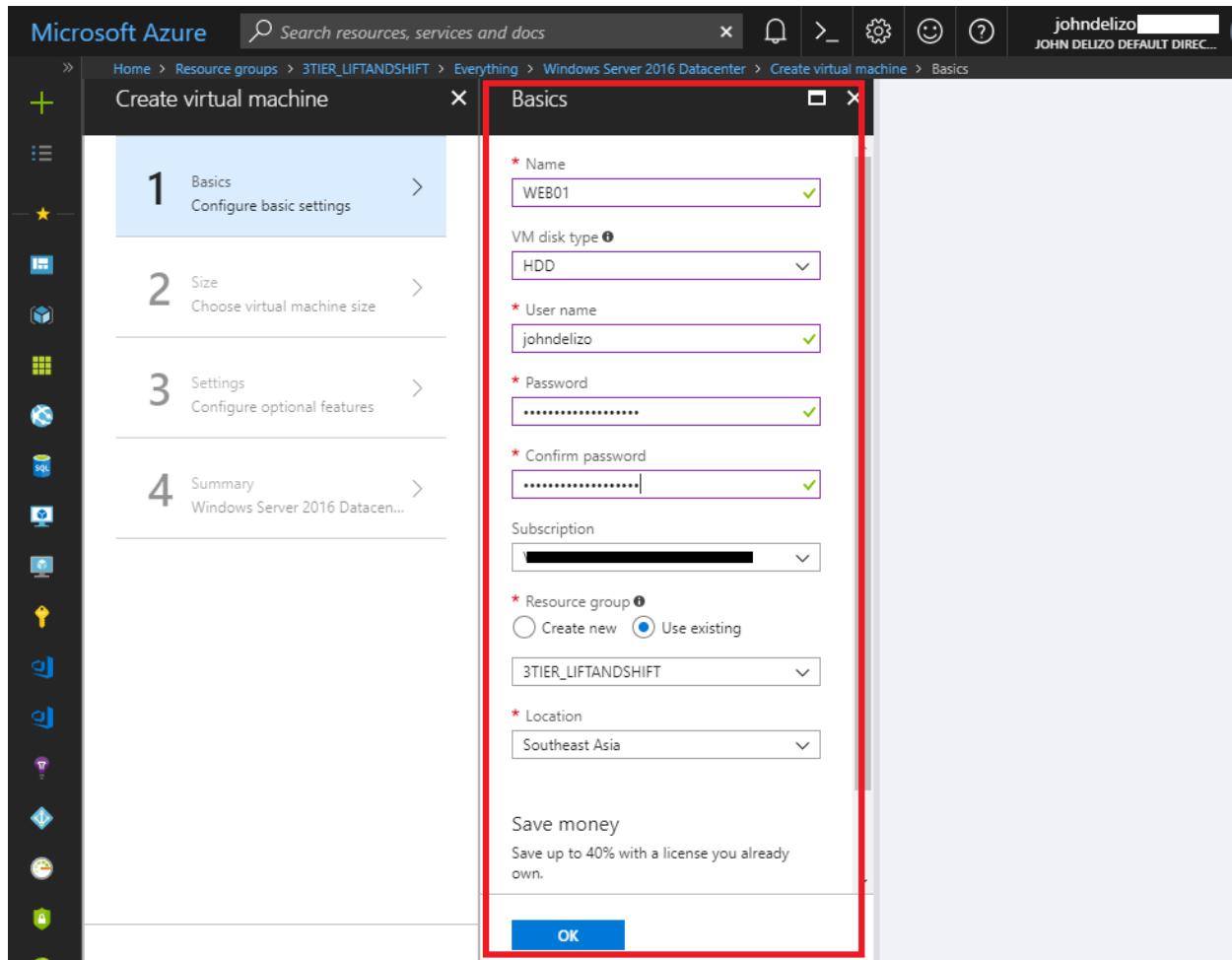


The screenshot shows the Microsoft Azure portal displaying the product page for "Windows Server 2016 Datacenter". The page includes a brief description of the server, social sharing links, legal terms, and useful links. At the bottom right, there is a section titled "Select a deployment model" with a dropdown menu set to "Resource Manager" and a "Create" button. This section is highlighted with a red box.

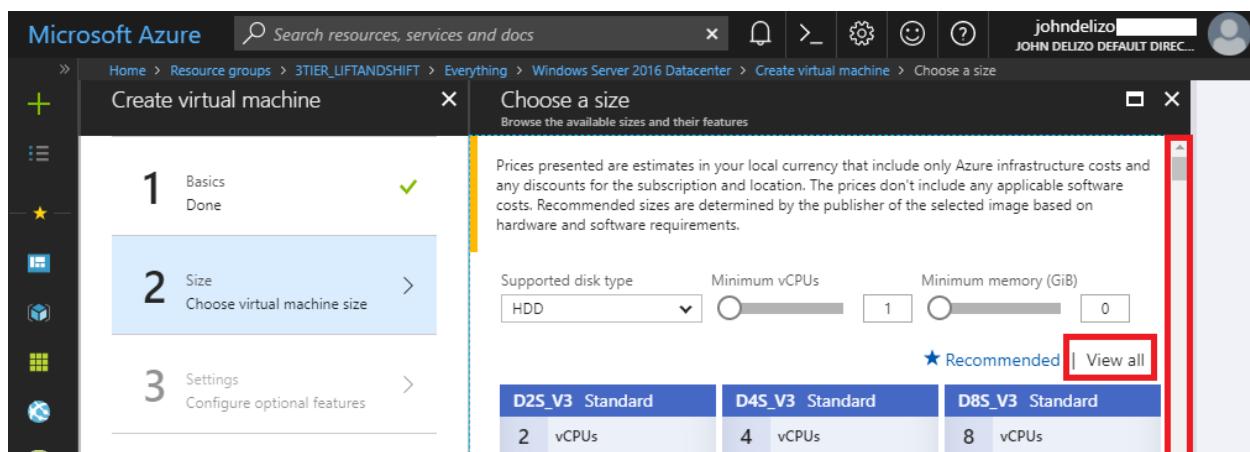
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Use the following basic information for the VM. Click OK



On the VM Size, click View all.



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Use A1 Basic for our exercise.

The screenshot shows the Azure portal interface for creating a virtual machine. The left sidebar shows 'Basics' (Done) and 'Size' (Choose virtual machine size). The main area is titled 'Choose a size' with the sub-instruction 'Browse the available sizes and their features'. A grid of VM sizes is displayed:

Size	vCPUs	Memory (GB)	Data Disks	IOPS	USD/MONTH (ESTIMATED)
A0 Basic	1	0.75	1	1x300 Max IOPS	13.39
A1 Basic	1	1.75	2	2x300 Max IOPS	22.32
A2 Basic	2	3.5	4	4x300 Max IOPS	70.68
A3 Basic	4	7	8	8x300 Max IOPS	
A4 Basic	8	14	16	16x300 Max IOPS	
D32S_V3 Standard	32	128	32	64000 Max IOPS	
			256 GB	Not Available	Premium disk support
					Load balancing

A red dashed box highlights the A1 Basic row. At the bottom of the page is a blue 'Select' button.

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Use the following defaults for the VM Settings. Click OK.

The screenshot shows the 'Settings' tab of the 'Create virtual machine' wizard in the Microsoft Azure portal. The page is titled 'Settings' and contains several configuration sections:

- High availability:** Shows an availability set named 'None'.
- Storage:** Shows 'Use managed disks' set to 'Yes'.
- Network:** Shows a virtual network named '3TIER_LIFTANDSHIFT_NETWORK' and a subnet named '3TIER_LIFTANDSHIFT_WEBAPP_SUBNET (192.168.0.0/24)'. It also lists a public IP address '(new) WEB01-ip' and a network security group '(new) WEB01-nsg'.
- Extensions:** Shows 'No extensions'.
- Auto-shutdown:** Shows 'Enable auto-shutdown' set to 'On', a shutdown time of '7:00:00 PM', and a time zone of '(UTC) Coordinated Universal Time'. It also includes a 'Notification before shutdown' toggle.
- Monitoring:** Shows 'Boot diagnostics' set to 'Enabled' and 'Guest OS diagnostics' set to 'Enabled'.

At the bottom left of the page, there is a large blue 'OK' button. This button is highlighted with a thick red border.

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Review the summary page and then click Create.

The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. The left sidebar contains various service icons. The main window title is 'Create virtual machine' with a progress bar showing steps 1 through 4, where steps 1, 2, and 3 are completed ('Done') and step 4 is the 'Summary' page ('Windows Server 2016 Datacenter...').

Offer details:

- Basic A1 by Microsoft
- [Terms of use](#) | [privacy policy](#)
- 0.0300 USD/hr [Pricing for other VM sizes](#)

Azure resource:
You may use your Azure monetary commitment funds or subscription credits for these purchases. Prices presented are retail prices and may not reflect discounts associated with your subscription.

Summary:

Basics	
Subscription	3TIER_LIFTANDSHIFT
Resource group	
Location	Southeast Asia
Settings	
Computer name	WEB01
Disk type	HDD
User name	johndelizo
Size	Basic A1 (1 vcpu, 1.75 GB memory)
Managed	Yes
Virtual network	3TIER_LIFTANDSHIFT_NETWORK
Subnet	3TIER_LIFTANDSHIFT_WEBAPP_SUBNET (192.168.0.0/24)
Public IP address	(new) WEB01-ip
Network security group (firewall)	(new) WEB01-nsg
Availability set	None
Guest OS diagnostics	Disabled
Boot diagnostics	Enabled
Diagnostics storage account	(new) 3tierliftandshiftdiag411
Auto-shutdown	On
Backup	Disabled

Terms of use:

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s), and (c)

I give Microsoft permission to use and share my contact information so that Microsoft or the Provider can contact me regarding this product and related products.

Create [Download template and parameters](#)

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You may also download and use the deploy using AzureRM template.

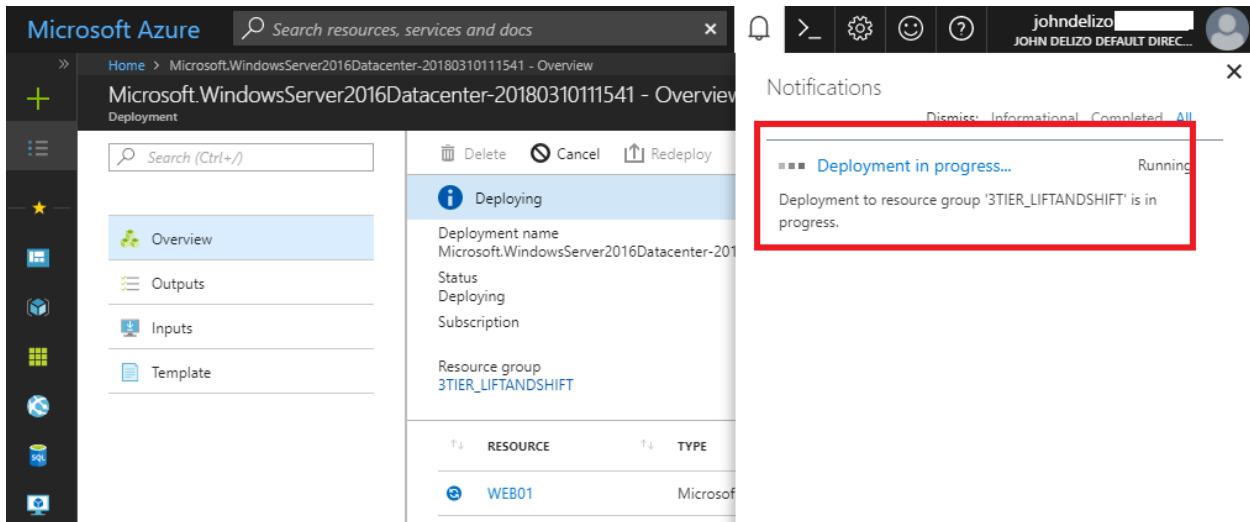
The screenshot shows the Microsoft Azure portal interface for managing a resource group named '3TIER_LIFTANDSHIFT'. The current view is 'Template'. At the top, there are three main buttons: 'Download' (highlighted with a red box), 'Add to library', and 'Deploy' (also highlighted with a red box). Below these buttons, a banner provides information about using Azure Resource Manager templates. The main content area displays the JSON template code, which defines parameters, variables, and resources for a Windows Server 2016 Datacenter virtual machine. The template includes parameters for location, virtual machine name, size, admin user, network interface, and security group, along with dependencies on storage accounts and public IP addresses.

```
1 {
2     "$schema": "http://schemas.microsoft.com/2015-01-01/deploymentTemplate.json#",
3     "contentVersion": "1.0.0.0",
4     "parameters": {
5         "location": {
6             "type": "string"
7         },
8         "virtualMachineName": {
9             "type": "string"
10        },
11        "virtualMachineSize": {
12            "type": "string"
13        },
14        "adminUsername": {
15            "type": "string"
16        },
17        "virtualNetworkName": {
18            "type": "string"
19        },
20        "networkInterfaceName": {
21            "type": "string"
22        },
23        "networkSecurityGroupName": {
24            "type": "string"
25        },
26        "adminPassword": {
27            "type": "securestring"
28        },
29        "diagnosticsStorageAccountName": {
30            "type": "string"
31        },
32        "diagnosticsStorageAccountId": {
33            "type": "string"
34        },
35        "diagnosticsStorageAccountType": {
36            "type": "string"
37        },
38        "subnetName": {
39            "type": "string"
40        },
41        "publicIpAddressName": {
42            "type": "string"
43        },
44        "multiTierAddressing": {
45            "type": "string"
46        }
47    }
48}
```

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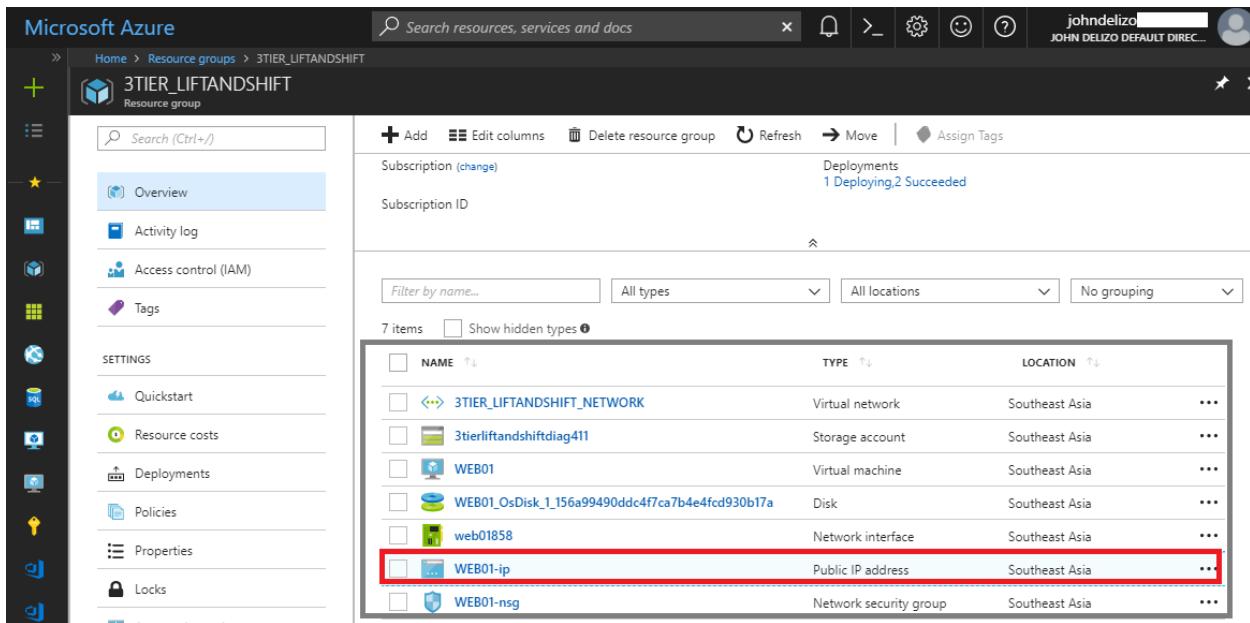
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Wait for the deployment to complete.



The screenshot shows the Microsoft Azure portal interface. The left sidebar has icons for Home, Compute, Storage, Network, Functions, and more. The main area is titled 'Microsoft.WindowsServer2016Datacenter-20180310111541 - Overview'. It shows a deployment status of 'Deploying' for a deployment name 'Microsoft.WindowsServer2016Datacenter-20180310111541'. The status bar indicates 'Running'. A red box highlights the notification bar which says 'Deployment in progress... Deployment to resource group '3TIER_LIFTANDSHIFT' is in progress.'

Once completed, find the public IP address of the newly created VM under the resource group.



The screenshot shows the Microsoft Azure portal interface. The left sidebar has icons for Home, Compute, Storage, Network, Functions, and more. The main area is titled '3TIER_LIFTANDSHIFT - Resource group'. It shows a deployment status of '1 Deploying, 2 Succeeded'. The table below lists resources: NAME, TYPE, LOCATION. A red box highlights the row for 'WEB01-ip' which is a Public IP address located in Southeast Asia.

NAME	TYPE	LOCATION
3TIER_LIFTANDSHIFT_NETWORK	Virtual network	Southeast Asia
3tierliftandshiftdiag411	Storage account	Southeast Asia
WEB01	Virtual machine	Southeast Asia
WEB01_OsDisk_1_156a99490ddc4f7ca7b4e4fc930b17a	Disk	Southeast Asia
web01858	Network interface	Southeast Asia
WEB01-ip	Public IP address	Southeast Asia
WEB01-nsg	Network security group	Southeast Asia

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Run “MSTSC” from your Windows PC or search for Remote Desktop Connection. Then login to your new VM using the username and password you provided on an earlier step.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various icons. The main area shows a 'WEB01-ip' resource under 'Resource groups > 3TIER_LIFTANDSHIFT > WEB01-ip'. The 'Overview' tab is selected. In the center, there's a 'Remote Desktop Connection' window with a red border. The window has fields for 'Computer' (52.230.83.55), 'User name' (None specified), and 'Show Options' and 'Connect' buttons.

The screenshot shows two windows. The top window is 'Windows Security' titled 'Enter your credentials'. It has fields for 'User name' (johndelizo) and 'Password' (redacted). There's a 'Remember me' checkbox and a 'More choices' section with a search bar (John D. Delizo) and a 'Use a different account' button. The bottom window is 'Remote Desktop Connection' with a yellow warning bar: 'The identity of the remote computer cannot be verified. Do you want to connect anyway?'. It details certificate errors: 'Name in the certificate from the remote computer: WEB01' and 'The certificate is not from a trusted certifying authority.' At the bottom, there's a checkbox 'Don't ask me again for connections to this computer', a 'View certificate...' button, and 'Yes' and 'No' buttons, with 'Yes' also having a red border.

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Another way of logging in to the server is by using navigating to the Azure Resource groups, then to the Virtual Machine. Click overview and then click connect.

This should download an RDP file which you can use to connect to the VM.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various icons for different services like Storage, Compute, and Networking. The main area is focused on a 'Virtual machine' named 'WEB01'. The top navigation bar includes a search icon, a bell icon, a back arrow, a gear icon, a smiley face icon, a question mark icon, and a user profile for 'johndelizo'. The user profile shows 'JOHN DELIZO DEFAULT DIRE...'.

In the center, the 'Overview' tab is selected. At the top of this section, there's a 'Connect' button, which is highlighted with a red box. Below it, the status is shown as 'Creating'. The configuration details include:

- Resource group: 3TIER_LIFTANDSHIFT
- Status: Creating
- Location: Southeast Asia
- Subscription: 52.230.83.55
- Computer name: WEB01
- Operating system: Windows
- Size: Basic A1 (1 vcpu, 1.75 GB memory)
- Public IP address: 52.230.83.55
- Virtual network/subnet: 3TIER_LIFTANDSHIFT_NETWORK/3TIER_
- DNS name: Configure

Below these details, there's a time range selector for monitoring data: 'Show data for last: 1 hour' (which is selected), 6 hours, 12 hours, 1 day, 7 days, and 30 days.

On the right side, there are four performance charts:

- CPU (average):** Shows CPU usage over time. The current value is 8.97 %.
- Network (total):** Shows network traffic. Current values: NETWORK IN 22.84 MB and NETWORK OUT 172.25 kB.
- Disk bytes (total):** Shows disk usage. Current value is 0MB.
- Disk operations/sec (average):** Shows disk operations per second. Current value is 0/s.

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Once you were able to login, minimize the server manager and copy the JOHND_AspNetDeploymentConfigTemplate.xml file from your exercise files to the desktop of the virtual machine.

The screenshot shows the Microsoft Server Manager interface. The left navigation bar is visible with options like Dashboard, Local Server (which is selected), All Servers, and File and Storage Services. The main content area has two tabs: 'PROPERTIES' and 'EVENTS'. The 'PROPERTIES' tab displays various system configuration details for the server WEB01. The 'EVENTS' tab shows a list of five recent events, all of which are errors related to Microsoft Windows services.

PROPERTIES For WEB01			
Computer name	WEB01	Last installed updates	Unknown
Workgroup	Unknown	Windows Update	Unknown
		Last checked for updates	Unknown
Windows Firewall	Unknown	Windows Defender	Unknown
Remote management	Unknown	Feedback & Diagnostics	Settings
Remote Desktop	Unknown	IE Enhanced Security Configuration	Unknown
NIC Teaming		Time zone	Unknown
		Product ID	Unknown
Operating system version	Unknown	Processors	Unknown
Hardware information	Unknown	Installed memory (RAM)	Unknown
		Total disk space	Unknown

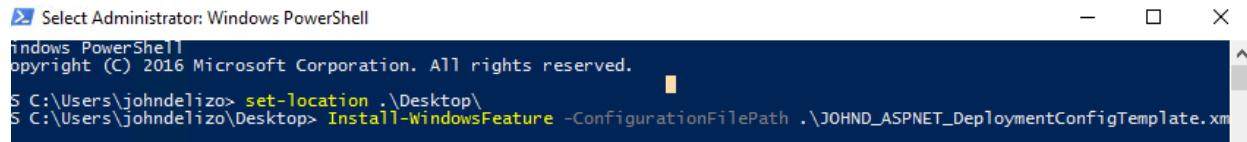
EVENTS						
All events 5 total						
Server Name	ID	Severity	Source	Log	Date and Time	
WEB01	10016	Error	Microsoft-Windows-DistributedCOM	System	3/10/2018 3:32:18 AM	
WEB01	1534	Warning	Microsoft-Windows-User Profile Service	Application	3/10/2018 3:31:52 AM	
WEB01	10010	Error	Microsoft-Windows-DistributedCOM	System	3/10/2018 3:29:57 AM	



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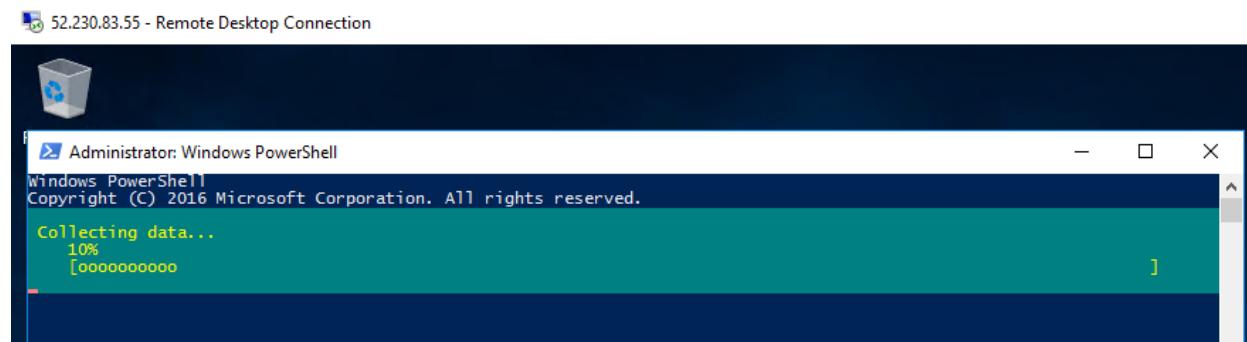
Using an elevated PowerShell, execute the Install-WindowsFeature commandlet and pass the xml file as the configuration file.



```
PS Select Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

5 C:\Users\johndelizo> set-location .\Desktop\
5 C:\Users\johndelizo\Desktop> Install-WindowsFeature -ConfigurationFilePath .\J0HND_APSPNET_DeploymentConfigTemplate.xml
```

This should would install IIS and its features to run ASP.NET.



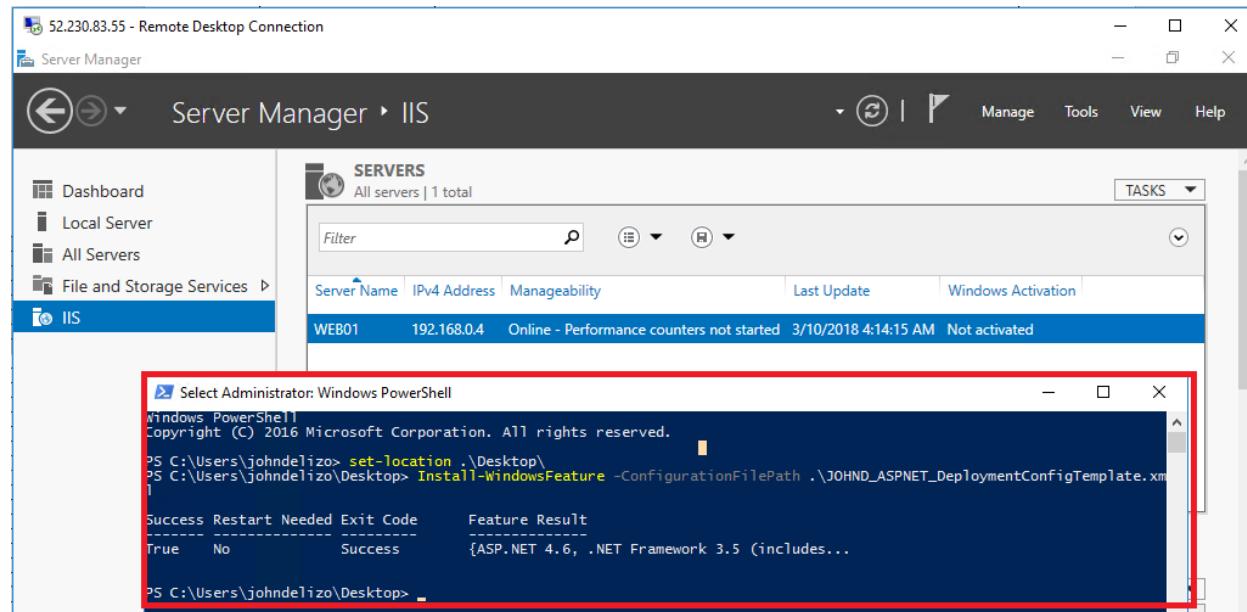
```
52.230.83.55 - Remote Desktop Connection

Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

Collecting data...
10%
[oooooooooooo]
```

Wait until the installation succeeds.

While we are here, you may need to note the internal IP of the WEB01 VM. For this instance, the IP is 192.168.0.4 and it may vary depending on your setup.



The screenshot shows the Windows Server Manager interface. On the left, there's a navigation pane with options like Dashboard, Local Server, All Servers, File and Storage Services, and IIS. The IIS option is currently selected. The main area is titled "SERVERS" and shows a table with one server entry: WEB01 (IP: 192.168.0.4). Below the table, a separate PowerShell window is open with a red border. It displays the command to install IIS features and shows the progress of the installation.

```
PS Select Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

5 C:\Users\johndelizo> set-location .\Desktop\
5 C:\Users\johndelizo\Desktop> Install-WindowsFeature -ConfigurationFilePath .\J0HND_APSPNET_DeploymentConfigTemplate.xml
1
Success Restart Needed Exit Code      Feature Result
True   No        Success           {ASP.NET 4.6, .NET Framework 3.5 (includes...}

PS C:\Users\johndelizo\Desktop>
```

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We would now allow the VM to serve websites outside of the network. To do this, we would configure our Network Security Group that has control over the traffic going in and out of the VM. Search for the inbound security rules of the WEB01 Network Security group.

The screenshot shows the Azure portal interface for managing a Network Security Group (WEB01-nsg). The left sidebar lists various resources like Overview, Activity log, Access control (IAM), Tags, and Diagnose and solve problems. Under the 'SETTINGS' section, 'Inbound security rules' is selected and highlighted with a red box. The main content area displays the 'Inbound security rules' table with the following data:

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
1000	default-allow-rdp	3389	TCP	Any	Any
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNet
65001	AllowAzureLoadBalancerInB...	Any	Any	AzureLoadBal...	Any
65500	DenyAllInBound	Any	Any	Any	Any

Below this, there is a section for 'Outbound security rules' which contains two entries:

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNet
65001	AllowInternetOutBound	Any	Any	Any	Internet

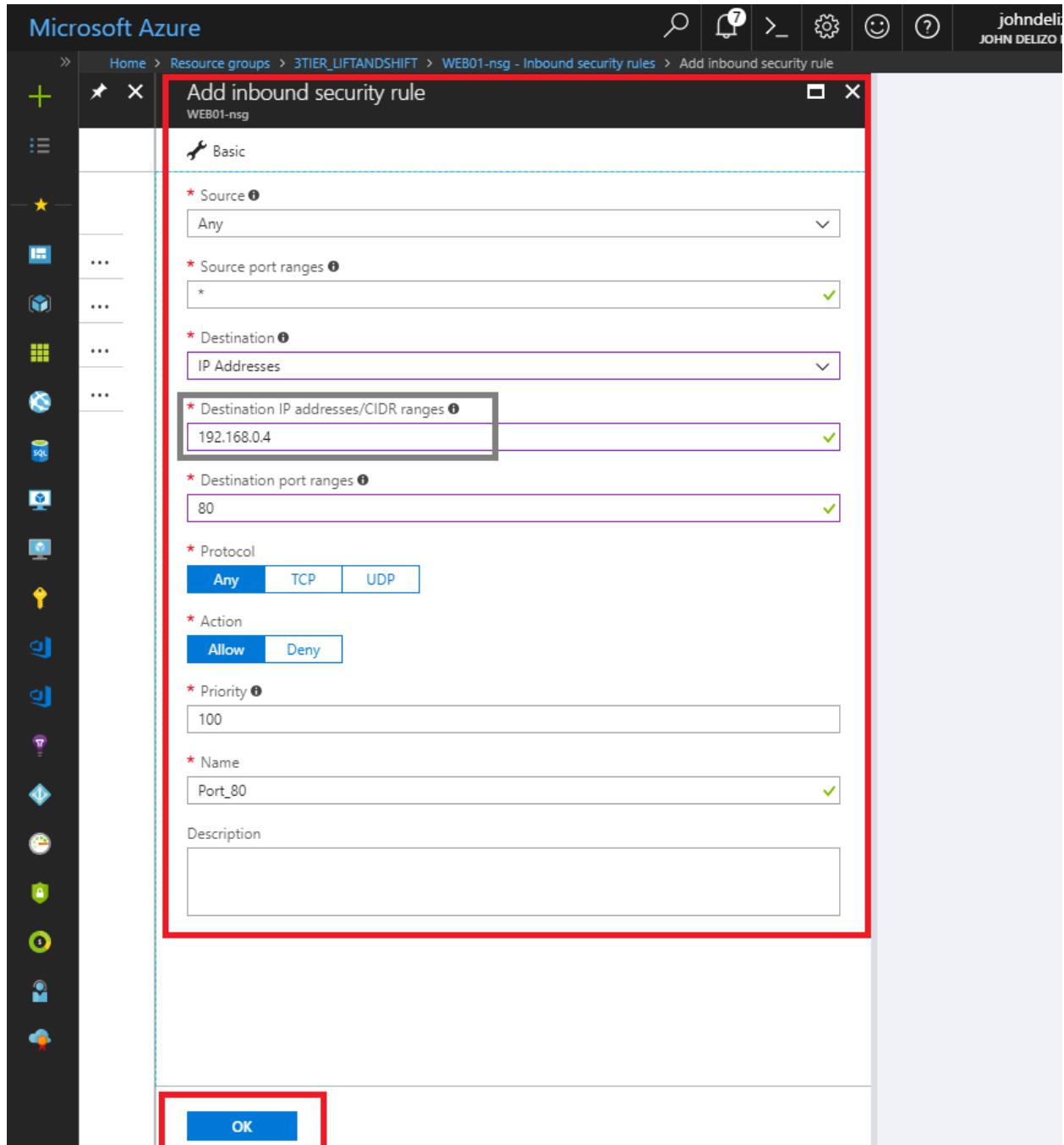
Then click Add.

The screenshot shows the 'WEB01-nsg - Inbound security rules' page. The left sidebar shows the same resource list as before. At the top right, there is a red box around the '+ Add' button. Below it, there is a 'Default rules' link. The main content area shows the same table of inbound security rules as the previous screenshot, with the last row (DenyAllInBound) being the current item being edited, indicated by a dashed blue border.

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Use the following settings for the inbound security rules. Note that the destination IP address should be the address of your VM.

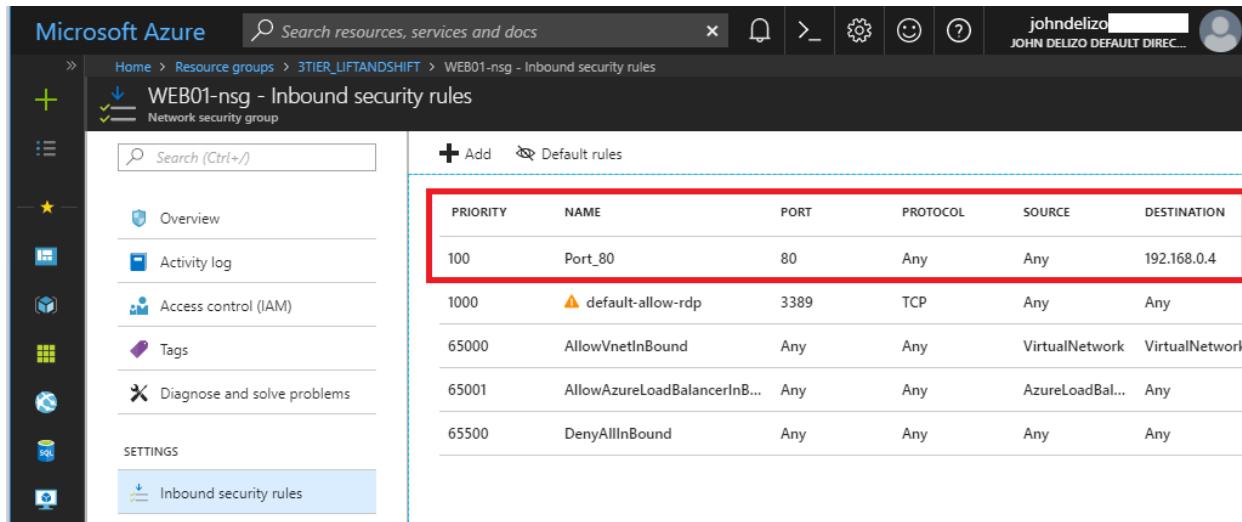


Click OK

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This should allow Port 80 (HTTP) to your VM.

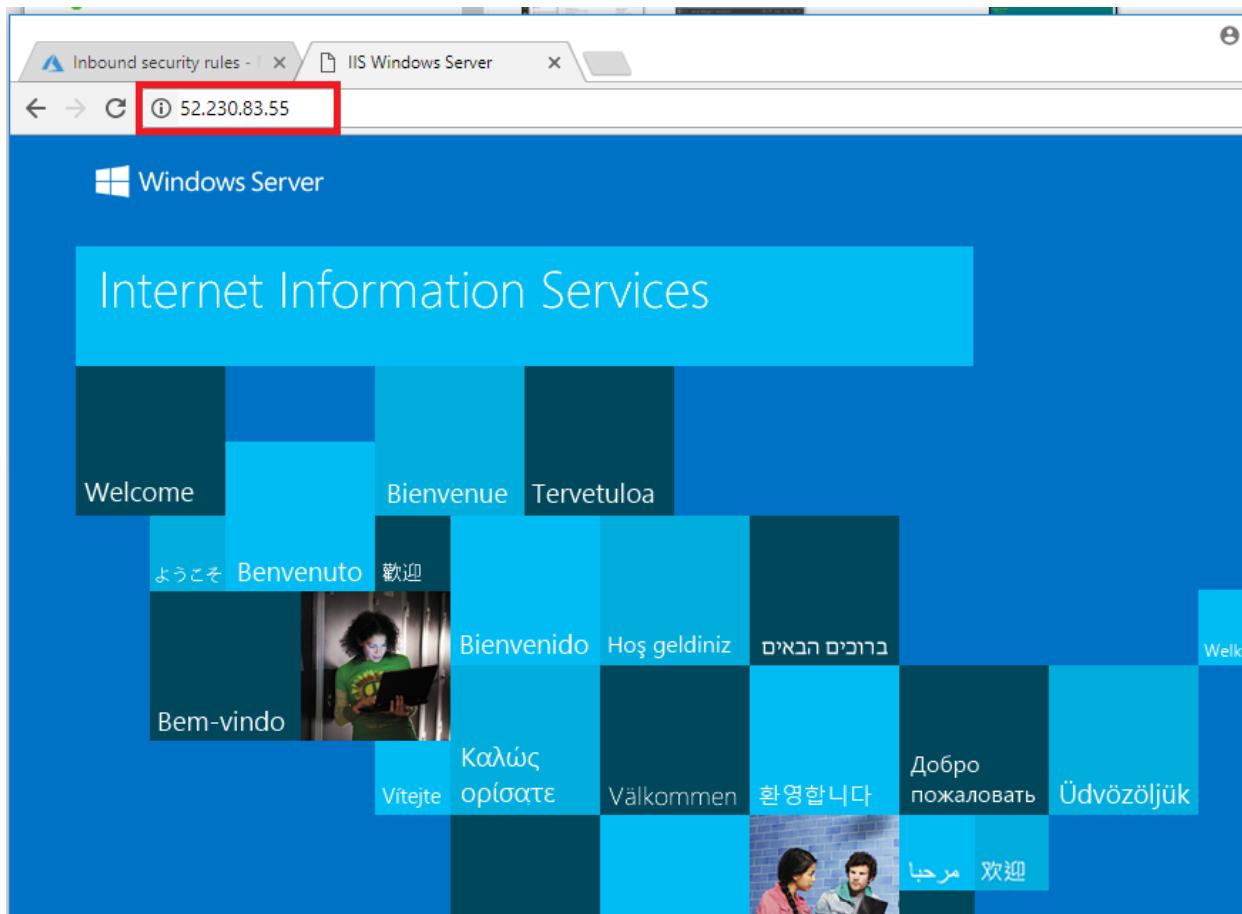


The screenshot shows the Microsoft Azure portal interface. The user is navigating through a resource group named '3TIER_LIFTANDSHIFT' to the 'WEB01-nsg - Inbound security rules' section. On the left sidebar, under 'SETTINGS', the 'Inbound security rules' option is selected. The main pane displays a table of security rules:

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
100	Port_80	80	Any	Any	192.168.0.4
1000	default-allow-rdp	3389	TCP	Any	Any
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork
65001	AllowAzureLoadBalancerInB...	Any	Any	AzureLoadBal...	Any
65500	DenyAllInBound	Any	Any	Any	Any

The row for 'Port_80' has a red border around it, indicating it is the selected or active rule.

To test this, open a browser outside of the remote desktop. Open the website using the public IP of your VM as the address.



The screenshot shows a web browser window with the URL '52.230.83.55' highlighted in a red box. The page itself is titled 'Internet Information Services' and features a large grid of welcome messages in various languages. The grid includes the following text blocks:

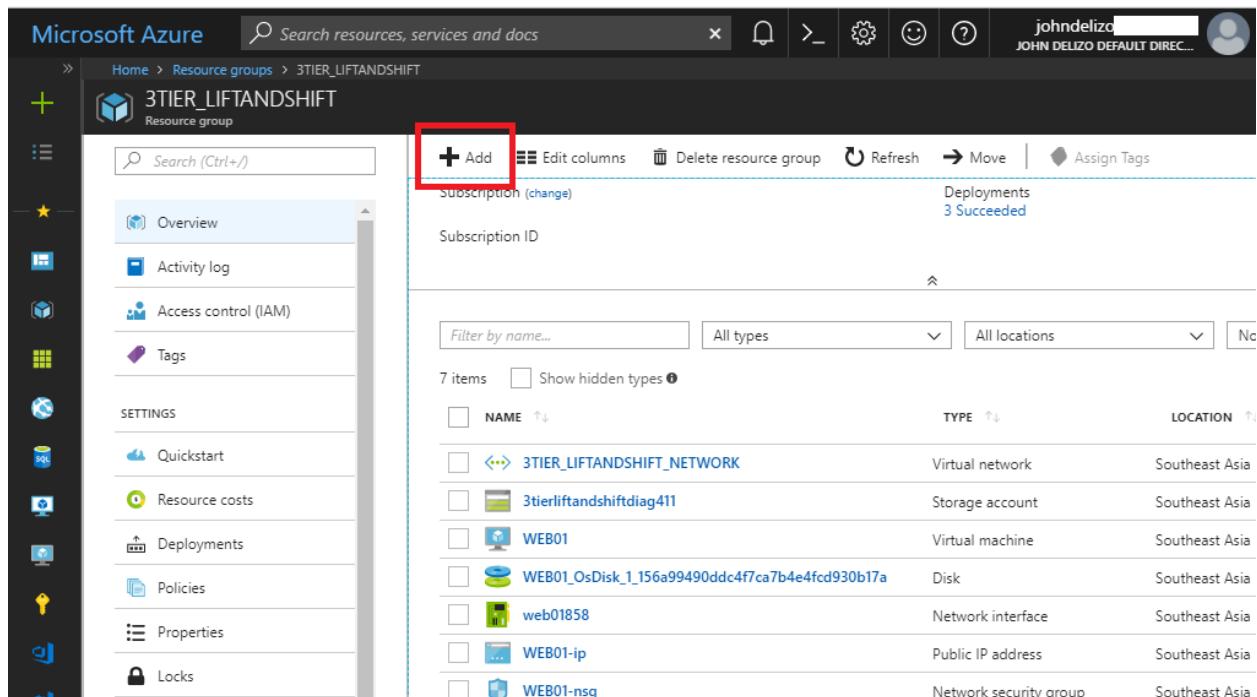
- Welcome (English)
- Bienvenue (French)
- Tervetuloa (Finnish)
- ようこそ (Japanese)
- Benvenuto (Italian)
- 歡迎 (Chinese)
- Bienvenido (Spanish)
- Hos geldiniz (Turkish)
- ברוכים הבאים (Hebrew)
- Добро пожаловать (Russian)
- Welkom (Dutch)
- Bem-vindo (Portuguese)
- Καλώς ορίσατε (Greek)
- Välkommen (Swedish)
- 환영합니다 (Korean)
- مرحبا (Arabic)
- 欢迎您 (Simplified Chinese)

The browser's address bar also shows the URL 'Inbound security rules - IIS Windows Server'.

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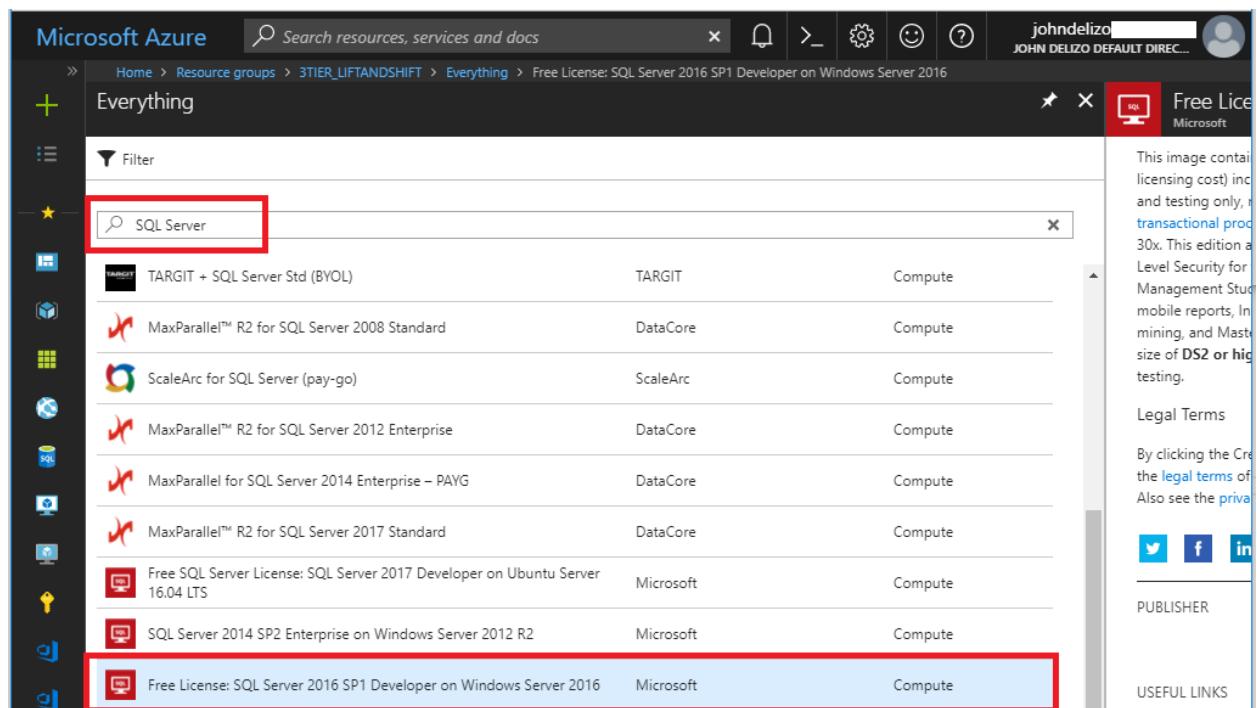
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Now let's add another Virtual Machine to our resource group.



The screenshot shows the Microsoft Azure portal interface. The left sidebar has a 'Resource groups' section with '3TIER_LIFTANDSHIFT' selected. The main area shows a list of resources under this group. At the top right, there is a '+ Add' button, which is highlighted with a red box. Below it are buttons for 'Edit columns', 'Delete resource group', 'Refresh', 'Move', and 'Assign Tags'. The resource list includes items like '3TIER_LIFTANDSHIFT_NETWORK', '3tierliftandshiftdiag411', 'WEB01', etc., categorized by type (Virtual network, Storage account, Virtual machine, Disk, Network interface, Public IP address, Network security group) and location (Southeast Asia).

This time lets search for SQL Server. Lets use the Free 2016 Developer version on Windows Server 2016.



The screenshot shows the Microsoft Azure portal interface with a search bar containing 'SQL Server'. The search results list various SQL Server editions. One result, 'Free License: SQL Server 2016 SP1 Developer on Windows Server 2016', is highlighted with a red box. The results table includes columns for Name, Publisher, and Type. A sidebar on the right provides information about the license and links to legal terms and publisher details.

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As usual, use Resource Manager as your deployment model and then click Create.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with a list of resources under 'Resource groups' (3TIER_LIFTANDSHIFT). One item, 'microsoft' under Compute, is highlighted with a blue selection bar. The main content area displays a 'Free License: SQL Server 2016 SP1 Developer on Windows Server 2016' page. This page includes a detailed description of the license, legal terms, social sharing links, publisher information (Microsoft), useful links (Documentation, SQL Server 2016 information, Support forum, Pricing details), and a prominent 'Create' button at the bottom, which is also highlighted with a red box. The top navigation bar shows the user 'john delizo' and the title 'JOHN DELIZO DEFAULT DIREC...'.

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Use the following details of your SQL VM.

Microsoft Azure

Create virtual machine

Basics

1 Basics Configure basic settings

2 Size Choose virtual machine size

3 Settings Configure optional features

4 SQL Server settings Configure SQL server settings

5 Summary Free License: SQL Server 2016 ...

Name: SQL01

VM disk type: HDD

User name: johndelizo

Password: Confirm password:

Subscription: [REDACTED]

Resource group: 3TIER_LIFTANDSHIFT

Location: Southeast Asia

When choosing a size, use Basic for now for this exercise.

2 Size Choose virtual machine size

3 Settings Configure optional features

4 SQL Server settings Configure SQL server settings

5 Summary Free License: SQL Server 2016 ...

Size	USD/MONTH (ESTIMATED)
A6 Standard	178.56
A7 Standard	357.12
A2 Basic	200.88
A3 Basic	401.76
A4 Basic	803.52
D32S V3 Standard	70.68

A2 Basic

2 vCPUs

3.5 GB

4 Data disks

4x300 Max IOPS

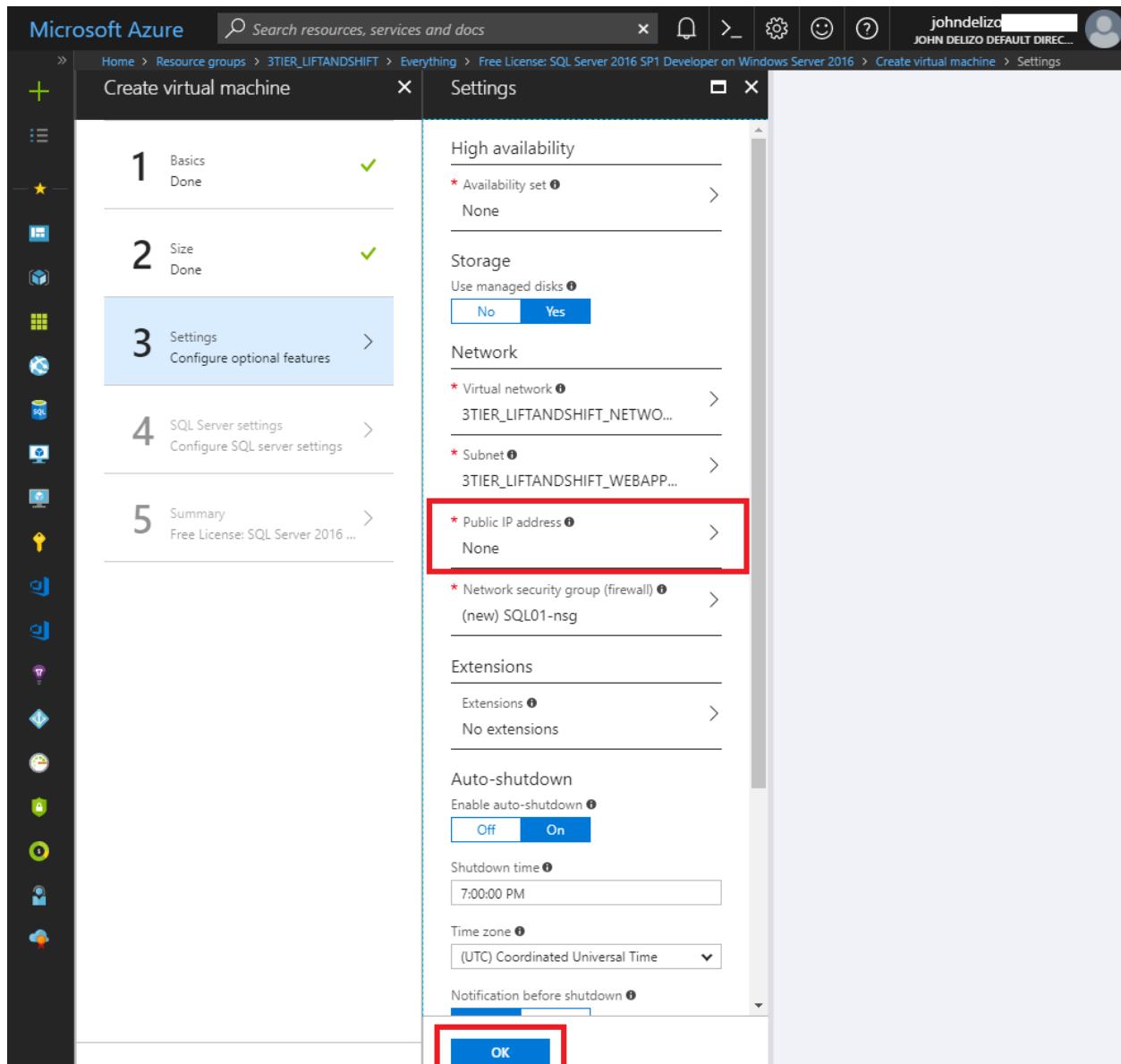
USD/MONTH (ESTIMATED) 70.68

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On the settings page. Choose None for the public IP address.

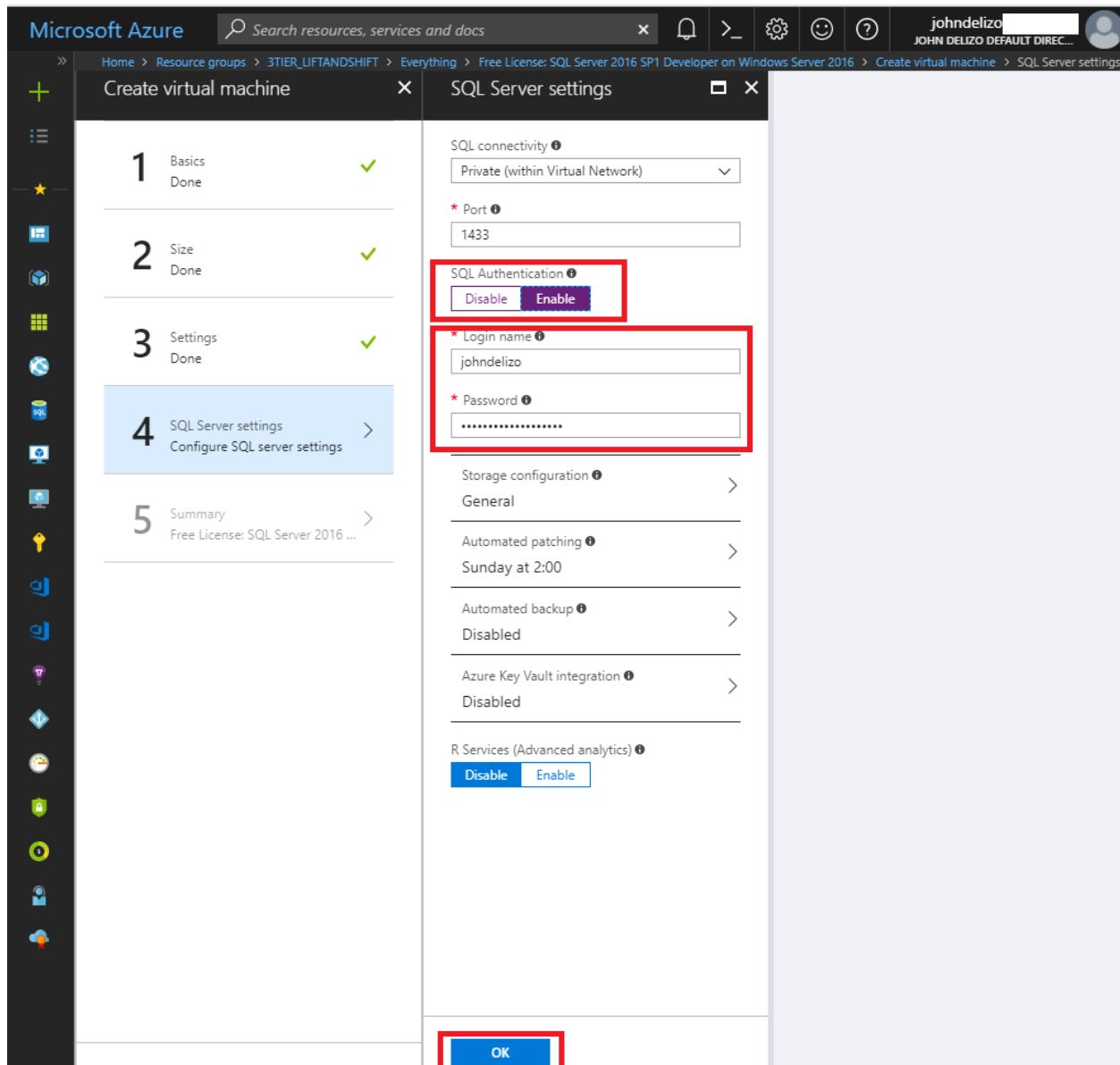
Click OK.



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On the SQL Server Settings, enable the SQL Authentication and use the following. Note of the password that you are using for this step.



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Review your offer details and then click Create..

The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. The left sidebar contains various service icons. The main window title is 'Create virtual machine'.

Step Progress:

- 1 Basics (Done)
- 2 Size (Done)
- 3 Settings (Done)
- 4 SQL Server settings (Done)
- 5 Summary (Free License: SQL Server 2016 ...)

Offer details:

- Basic A2 by Microsoft
- 0.0950 USD/hr [Pricing for other VM sizes](#)
- [Terms of use](#) | [privacy policy](#)

Azure resource:

You may use your Azure monetary commitment funds or subscription credits for these purchases. Prices presented are retail prices and may not reflect discounts associated with your subscription.

Summary:

Basics:

Subscription	Resource group	3TIER_LIFTANDSHIFT
Location		Southeast Asia

Settings:

Computer name	SQL01
Disk type	HDD
User name	johndelizo
Size	Basic A2 (2 vcpus, 3.5 GB memory)
Managed	Yes
Virtual network	3TIER_LIFTANDSHIFT_NETWORK
Subnet	3TIER_LIFTANDSHIFT_WEBAPP_SUBNET (192.168.0.0/24)
Public IP address	None
Network security group (firew...	(new) SQL01-nsg
Availability set	None
Guest OS diagnostics	Disabled

Terms of use:

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s), and (c) [View terms](#)

I give Microsoft permission to use and share my contact information so that Microsoft or the Provider can contact me regarding this product and related products.

Create [Download template and parameters](#)

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While waiting for the SQL Server VM to complete, lets add another resource.

The screenshot shows the Microsoft Azure Resource Group Overview page for a group named '3TIER_LIFTANDSHIFT'. On the left, there's a sidebar with various icons and links like Overview, Activity log, Access control (IAM), Tags, Quickstart, Resource costs, Deployments, Policies, Properties, Locks, and Automation script. The main area has a search bar at the top. In the top navigation bar, there's a '+ Add' button highlighted with a red box. Below it, there's a 'Subscription' dropdown set to 'change'. To the right of the subscription dropdown, a box highlights the 'Deployments' section which shows '1 Deploying. 3 Succeeded'. The main content area lists 12 items under 'NAME' (sorted by name), 'TYPE', and 'LOCATION'. The items include: 3TIER_LIFTANDSHIFT_NETWORK (Virtual network, Southeast Asia), 3tierliftandshiftdiag411 (Storage account, Southeast Asia), SQL01 (Virtual machine, Southeast Asia), SQL01_disk2_c434871defec4198bef0a67c5fd39d5f (Disk, Southeast Asia), SQL01_OsDisk_1_22f2b09927654fbefcb542ad675b21dc (Disk, Southeast Asia), sql01679 (Network interface, Southeast Asia), SQL01-nsg (Network security group, Southeast Asia), WEB01 (Virtual machine, Southeast Asia), and WFRB01 (Disk, Southeast Asia).

Choose another Windows Server 2016 Datacenter.

The screenshot shows the Microsoft Azure Marketplace search results for 'Windows Server'. The search bar at the top is highlighted with a red box and contains the text 'Windows Server'. Below the search bar, there's a 'Results' section with a table. The table has columns: NAME, PUBLISHER, and CATEGORY. The first result, 'Windows Server 2016 Datacenter', is highlighted with a red box. Other results listed are 'Windows Server 2012 R2 Datacenter', 'Windows Server 2012 Datacenter', and 'Windows Server OS Monitoring [Preview]'. The publisher for all results is Microsoft, except for the last one which is Lumagate AS. The category for most results is 'Compute', while the last one is 'Data + Analytics'.

NAME	PUBLISHER	CATEGORY
Windows Server 2016 Datacenter	Microsoft	Compute
Windows Server 2012 R2 Datacenter	Microsoft	Compute
Windows Server 2012 Datacenter	Microsoft	Compute
Windows Server OS Monitoring [Preview]	Lumagate AS	Data + Analytics

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Use Resource Manager as your deployment model and then click Create.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various icons and a list of publishers and categories. The main content area displays a detailed view of a Windows Server 2016 Datacenter image. At the top right, there's a user profile for 'john delizo'. Below the title, there's a description of the image: 'Windows Server 2016 is a comprehensive server operating system designed to run and infrastructure that power your business. It includes built-in layers of security to help you run traditional and cloud-native applications with confidence. This Server Experience image includes all roles including the graphical user interface (GUI)'. A note below says 'This image can be used with Azure Hybrid Benefit for Windows Server.' There are also links for 'Legal Terms' and 'By clicking the Create button, I acknowledge that I am getting this software from the [legal terms](#) of Microsoft apply to it. Microsoft does not provide rights for this image. Also see the [privacy statement](#) from Microsoft.' Below the description, there are social sharing icons for Twitter, Facebook, LinkedIn, YouTube, Google+, and Email. To the right, there's a section for 'PUBLISHER' (Microsoft), 'Documentation' (Introducing Windows Server 2016, What's New in 2016, Learn more), and 'USEFUL LINKS'. At the bottom, there's a dropdown for 'Select a deployment model' set to 'Resource Manager' with a red box around the 'Create' button.

PUBLISHER	CATEGORY
microsoft	Compute
microsoft	Compute
microsoft	Compute
magate AS	Data + Analytics
budHub Technologies	Compute
budHub Technologies	Compute
microsoft	Compute
total Software Inc.	Compute
microsoft	Compute
microsoft	Compute
microsoft	Compute
budHub Technologies	Compute
budHub Technologies	Compute
microsoft	Compute

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On the Basic Settings page, use the following settings and then click OK.

The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. The left sidebar contains various icons for different services like Storage, Networks, and Compute. The main navigation bar shows the path: ... > 3TIER_LIFTANDSHIFT > Everything > Windows Server 2016 Datacenter > Create virtual machine > Basics. The left panel lists four steps: 1. Basics (Configure basic settings), 2. Size (Choose virtual machine size), 3. Settings (Configure optional features), and 4. Summary (Windows Server 2016 Datacen...). The 'Basics' step is currently selected and expanded. A red box highlights the configuration fields in this step. The fields include:

- Name: API01
- VM disk type: HDD
- User name: johndelizo
- Password: (redacted)
- Confirm password: (redacted)
- Subscription: (dropdown menu)
- Resource group: (radio buttons) Create new (unchecked) Use existing (checked) 3TIER_LIFTANDSHIFT
- Location: Southeast Asia

Below these fields, there is a 'Save money' section with the text: 'Save up to 40% with a license you already own.' and a question: 'Already have a Windows license?'. The 'Yes' button is highlighted with a red box. At the bottom right of the 'Basics' step, there is a large blue 'OK' button, which is also highlighted with a red box.

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On the size, A1 will do for now. Click select.

The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. On the left, a vertical sidebar lists various cloud services like Compute, Storage, and Database. The main area displays a four-step wizard: Step 1 (Basics) is completed, Step 2 (Size) is selected, Step 3 (Settings), and Step 4 (Summary). To the right of the wizard is a 'Choose a size' dialog box. This dialog lists several VM sizes in three columns:

VM Size	USD/MONTH (ESTIMATED)	VM Size	USD/MONTH (ESTIMATED)	VM Size	USD/MONTH (ESTIMATED)
A7 Standard	357.12	A0 Basic	200.88	A1 Basic	401.76
8 vCPUs		1 vCPU		1 vCPU	
56 GB		0.75 GB		1.75 GB	
16 Data disks		1 Data disks		2 Data disks	
16x500 Max IOPS		1x300 Max IOPS		2x300 Max IOPS	
Load balancing					
A2 Basic	803.52	A3 Basic	13.39	A4 Basic	22.32
2 vCPUs		4 vCPUs		8 vCPUs	
3.5 GB		7 GB		14 GB	
4 Data disks		8 Data disks		16 Data disks	
4x300 Max IOPS		8x300 Max IOPS		16x300 Max IOPS	
A0 Basic	70.68	A1 Basic	172.61	A2 Basic	345.22
1 vCPU		1 vCPU		2 vCPUs	
0.75 GB		1.75 GB		3.5 GB	
1 Data disk		2 Data disks		4 Data disks	
1x300 Max IOPS		1x300 Max IOPS		4x300 Max IOPS	

A red box highlights the A1 Basic row. At the bottom of the dialog is a blue 'Select' button.

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On the settings page, make sure that there are no public IP address specified for this VM.

Click OK.

The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. On the left, a sidebar lists various services like Storage, Compute, Network, and Security. The main area shows a step-by-step wizard for creating a virtual machine:

- Step 1: Basics** (Done)
- Step 2: Size** (Done)
- Step 3: Settings** (Configure optional features) - This step is currently selected and highlighted in blue.
- Step 4: Summary** (Windows Server 2016 Datacenter)

In the **Settings** tab, several configuration options are listed:

- High availability:** Availability set (None)
- Storage:** Use managed disks (No)
- Network:**
 - Virtual network (3TIER_LIFTANDSHIFT_NETWO...)
 - Subnet (3TIER_LIFTANDSHIFT_WEBAPP...)
 - Public IP address:** (None) - This field is highlighted with a red box.
 - Network security group (firewall) (new API01-nsg)
- Extensions:** No extensions
- Auto-shutdown:** Enable auto-shutdown (Off)
- Shutdown time: 7:00:00 PM
- Time zone: (UTC) Coordinated Universal Time
- Notification before shutdown: 10 minutes

A large red button labeled **OK** is located at the bottom right of the settings panel.

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Review the details of this VM and then click Create.

The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information (johndelizo, JOHN DELIZO DEFAULT DIREC...). The main title is "Create virtual machine" with a "Create" button. On the left, there's a sidebar with various icons for services like Storage, Compute, and Network. The main content area is titled "Offer details" for "Basic A1 by Microsoft". It shows the price as 0.0300 USD/hr and provides links for "Pricing for other VM sizes", "Terms of use", and "privacy policy". Below this is a "Summary" section with two tabs: "Basics" and "Settings". The "Basics" tab displays resource group (3TIER_LIFTANDSHIFT), location (Southeast Asia), and a summary of the selected VM configuration. The "Settings" tab lists detailed settings: Computer name (API01), Disk type (HDD), User name (johndelizo), Size (Basic A1 (1 vcpu, 1.75 GB memory)), Managed (Yes), Virtual network (3TIER_LIFTANDSHIFT_NETWORK), Subnet (3TIER_LIFTANDSHIFT_WEBAPP_SUBNET (192.168.0.0/24)), Public IP address (None), Network security group (firew... (new) API01-nsg), Availability set (None), and Guest OS diagnostics (Disabled). At the bottom, there's a "Terms of use" section with a checkbox for giving Microsoft permission to use and share contact information. The "Create" button at the bottom is highlighted with a red box.

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Wait for both of the deployment to complete.

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes a search bar, a notification icon with 2 notifications, a back button, a gear icon, a smiley face icon, a question mark icon, and a user profile for 'john delizo'. The main title is 'Microsoft.WindowsServer2016Datacenter-20180310132333 - Overview'. Below the title, there's a 'Deployment' section with a progress bar labeled 'Deploying'. The deployment name is 'Microsoft.WindowsServer2016Datacenter-20180310132333'. The status bar shows 'Last modified 3/10/2018, 1:23:36 PM' and 'Duration'. On the left sidebar, there are icons for Home, Microsoft Windows Server 2016 Datacenter, Overview, and Outputs.

Once the deployment is completed, go to the API01 VM.

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes a search bar, a notification icon with 2 notifications, a back button, a gear icon, a smiley face icon, a question mark icon, and a user profile for 'john delizo'. The main title is 'Home > Resource groups > 3TIER_LIFTANDSHIFT'. The left sidebar shows a list of resources: Overview, Activity log, Access control (IAM), Tags, SETTINGS, Quickstart, and Resource costs. On the right, there is a 'Notifications' panel with two entries: 'Deployment succeeded' at 1:44 PM and another 'Deployment succeeded' at 1:33 PM. Both notifications mention the deployment of 'Microsoft.WindowsServer2016Datacenter-20180310132333' to the resource group '3TIER_LIFTANDSHIFT'. Buttons for 'Go to resource' and 'Pin to dashboard' are available for each notification.

Under networking, get the Private IP address of this VM.

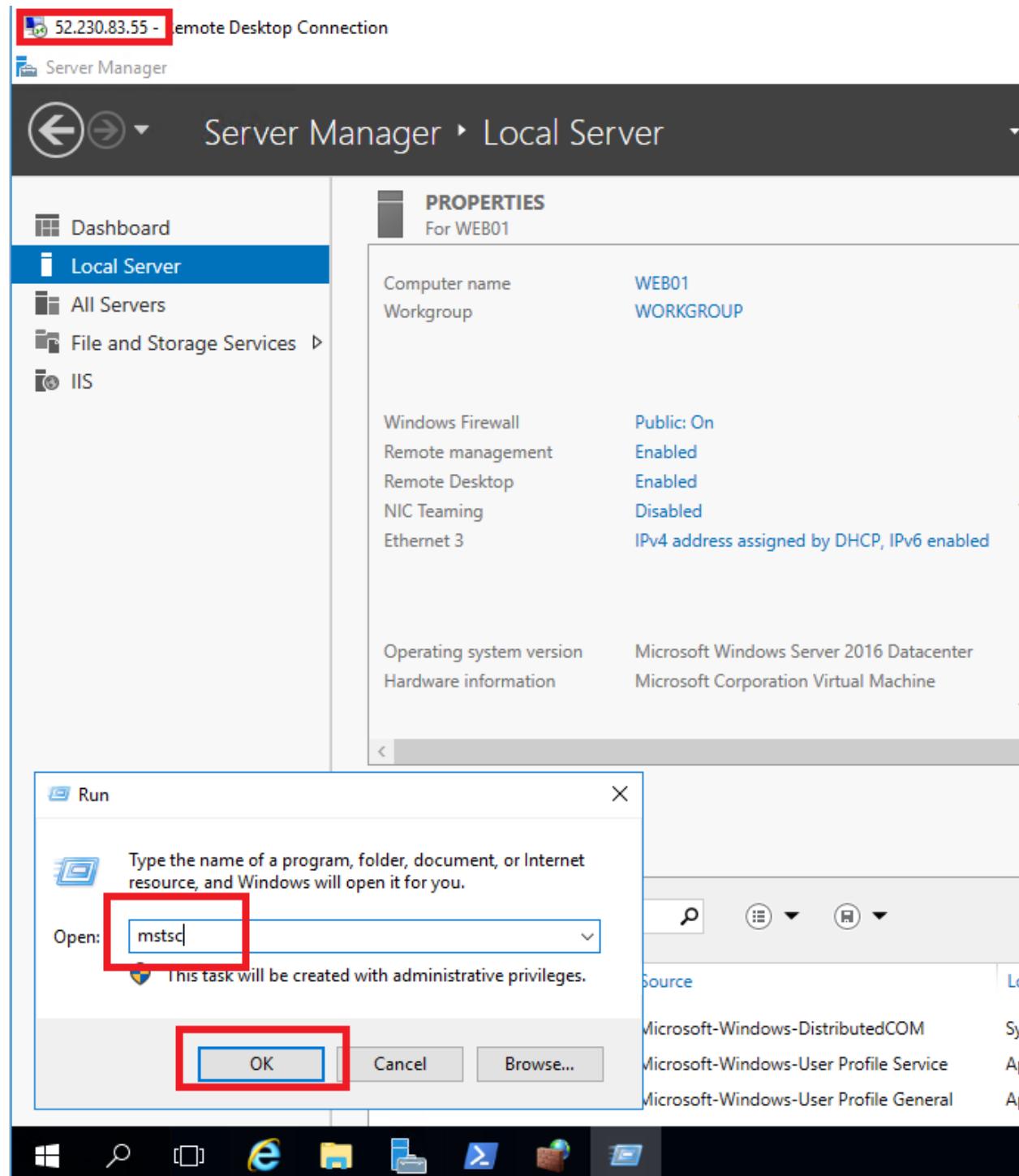
The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes a search bar, a notification icon with 2 notifications, a back button, a gear icon, a smiley face icon, a question mark icon, and a user profile for 'john delizo'. The main title is 'Home > Resource groups > 3TIER_LIFTANDSHIFT > API01 - Networking'. The left sidebar shows a list of resources: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, SETTINGS, and Networking. On the right, the 'Network Interface: api01402' section is displayed. It shows the virtual network subnet '3TIER_LIFTANDSHIFT_NETWORK/3TIER_LIFTANDSHIFT_WEBAPP_SUBNET' and the private IP address '192.168.0.6'. The 'INBOUND PORT RULES' section shows one rule: 'Network security group API01-nsg (attached to network interface: api01402)'. The 'Add inbound port' button is visible. A table below lists the inbound port rule details:

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
1000	default-allow-rdp	3389	TCP	Any	Any	Allow ..

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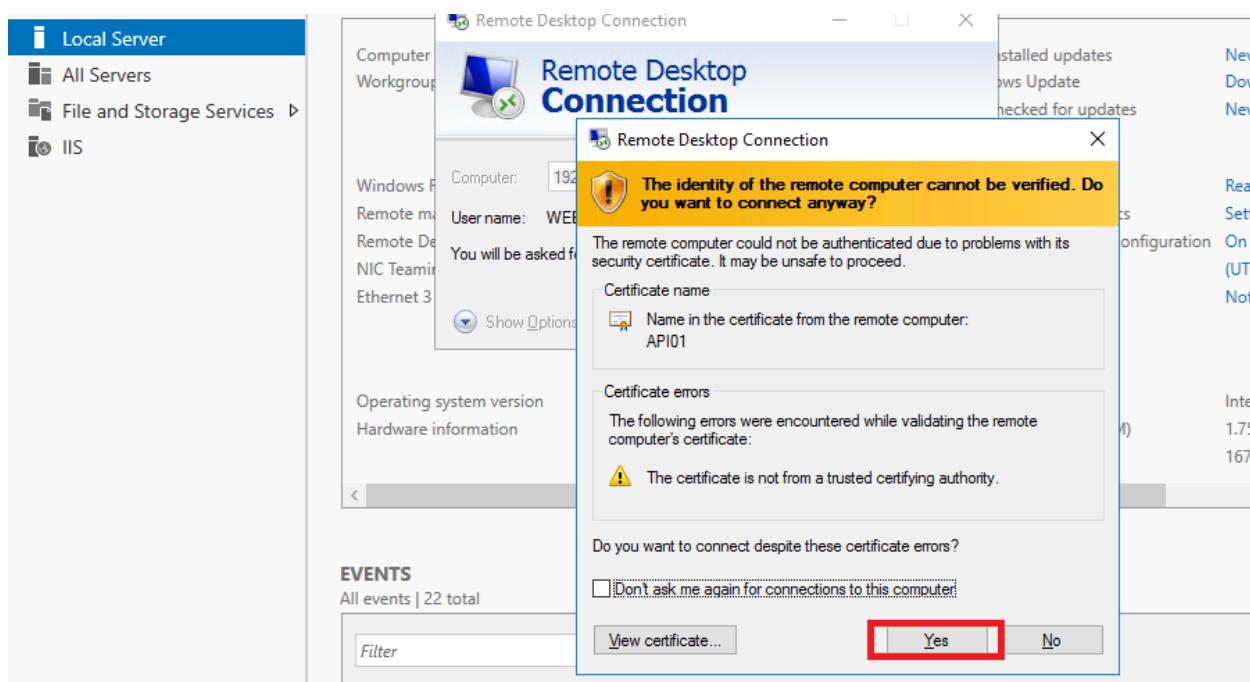
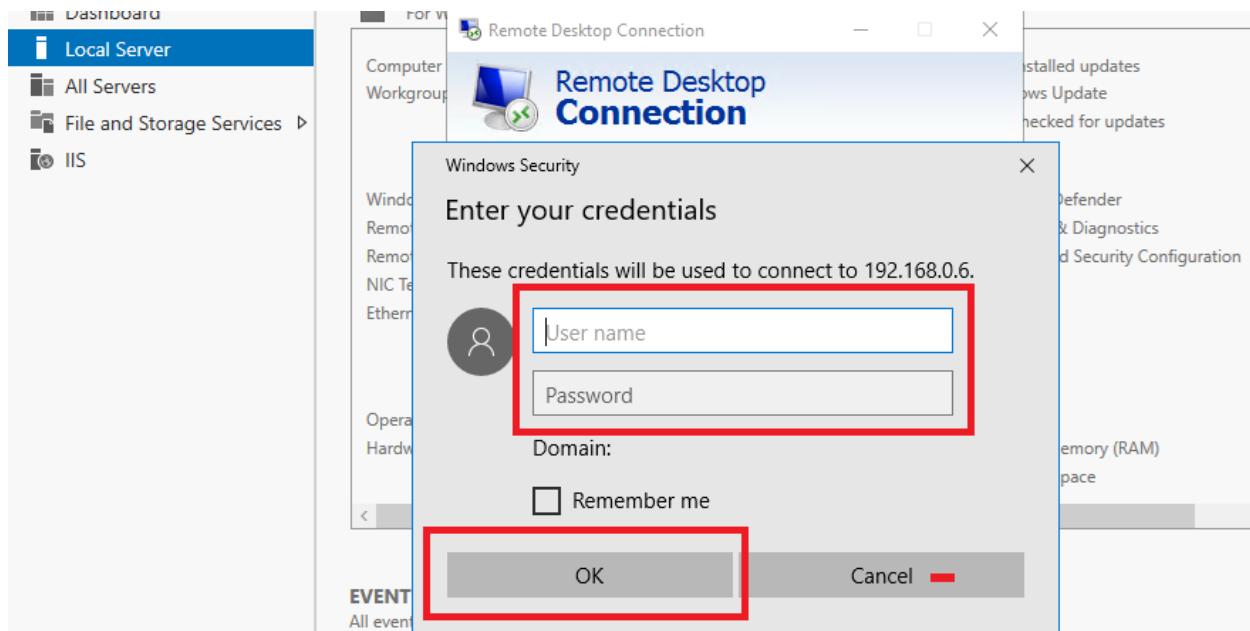
Go back to the Remote Desktop Connection of the WEB01 VM and from there, launch another remote desktop session.



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Connect to APP01 using the username and password you provided during the setup and the IP address from the networking settings.



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While the RDP Session is being connected, go back to the Azure Portal and get the IP Address of SQL01.

The screenshot shows the Azure portal interface for a virtual machine named SQL01. In the left sidebar, under the 'SETTINGS' section, the 'Networking' option is selected. On the main page, the 'Network Interface' section is highlighted, showing the private IP address 192.168.0.5. Below this, the 'INBOUND PORT RULES' table is shown, containing one rule:

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
1000	default-allow-rdp	3389	TCP	Any	Any	Allow

Repeat the process of connecting thru RDP using WEB01 as your jump server.

The screenshot shows the Windows Server Manager interface. Two Remote Desktop Connection sessions are listed in the center pane: one for '52.230.83.55 - Remote Desktop Connection' and another for '192.168.0.5 - Remote Desktop Connection'. Both sessions are highlighted with red boxes.

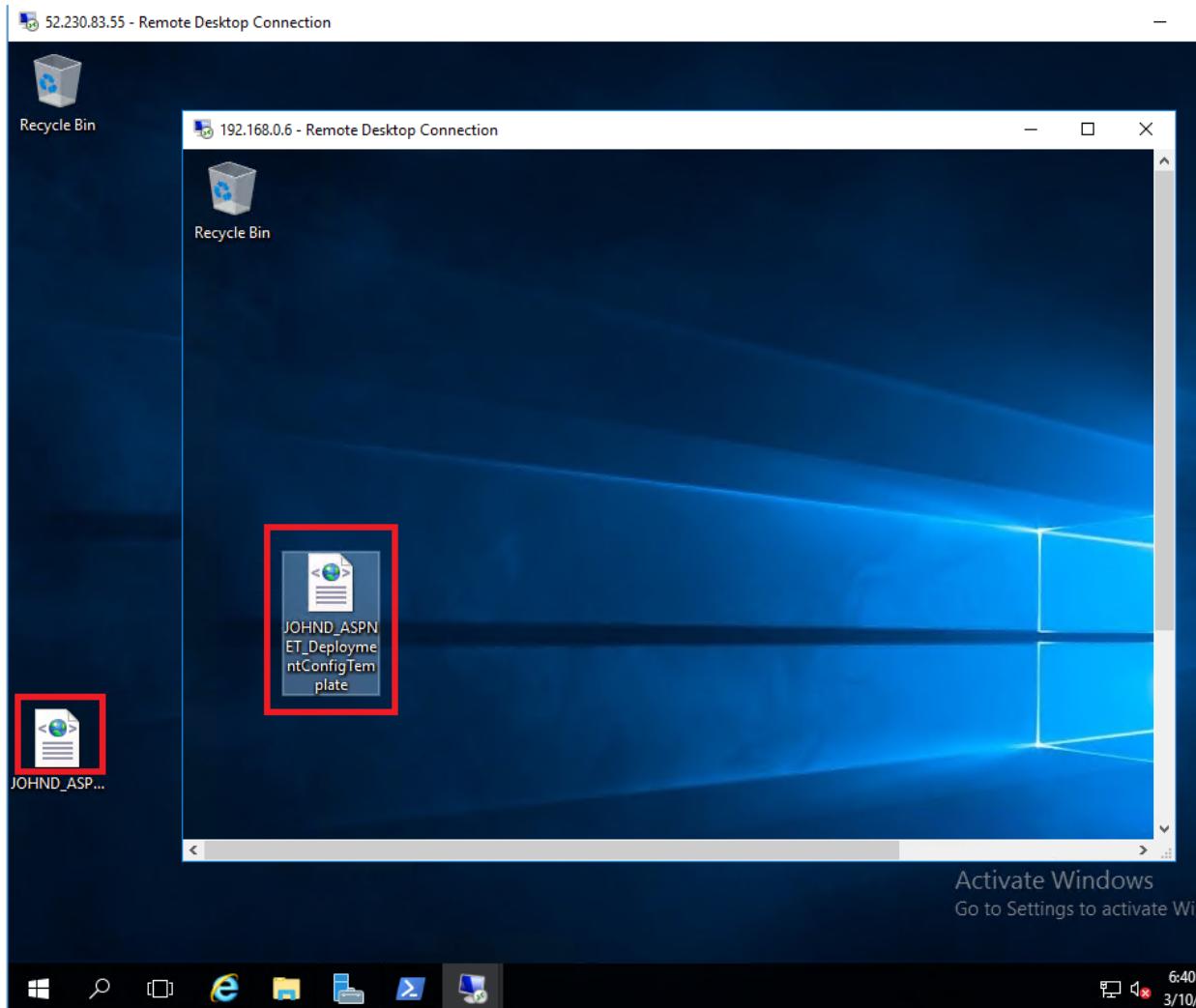
"Typically in this setup, a Jump server is used to RDP internally. The jump server may have its own public IP and can only connect thru RDP whereas the public IP of the web VM is either reserved for a network load balancer or associated only in the VM network interface."

We will use WEB01 as our Jump Server. Check if you can already connect to both SQL01 and API01.

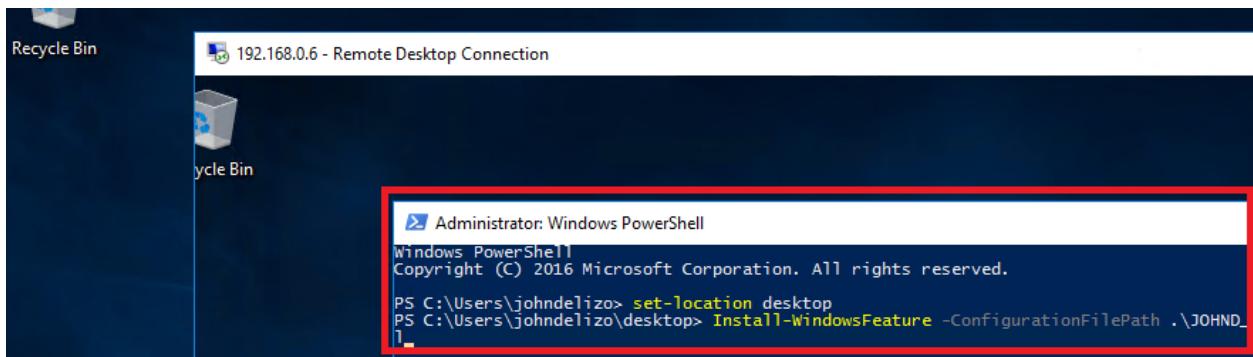
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Lets configure APP01. Install IIS and ASP.NET using the deployment configuration template that you used for WEB01. From WEB01 copy the XML file to the desktop of API01's the RDP session



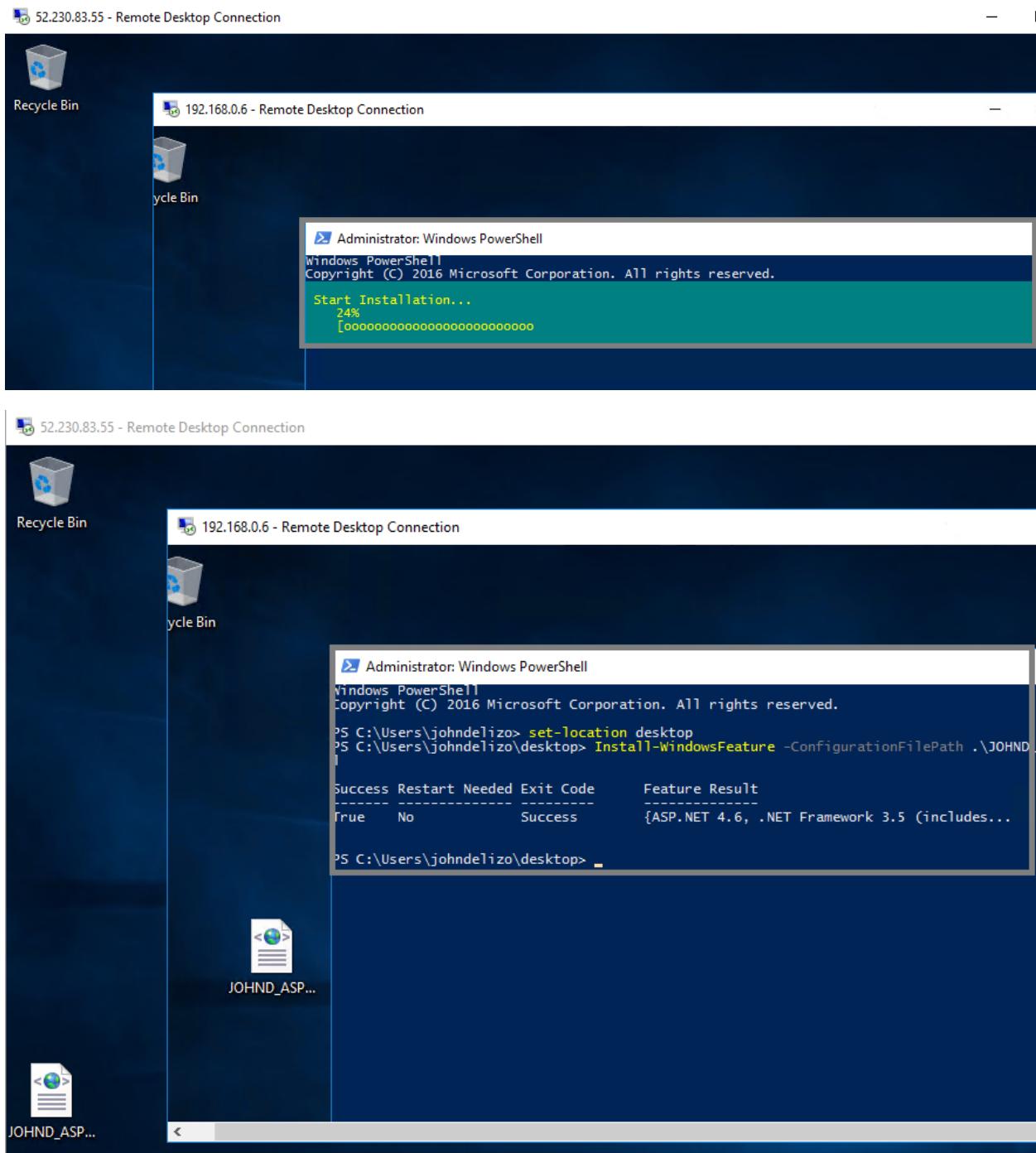
Execute the same command Install-WindowsFeature.



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Wait for the installation to complete.



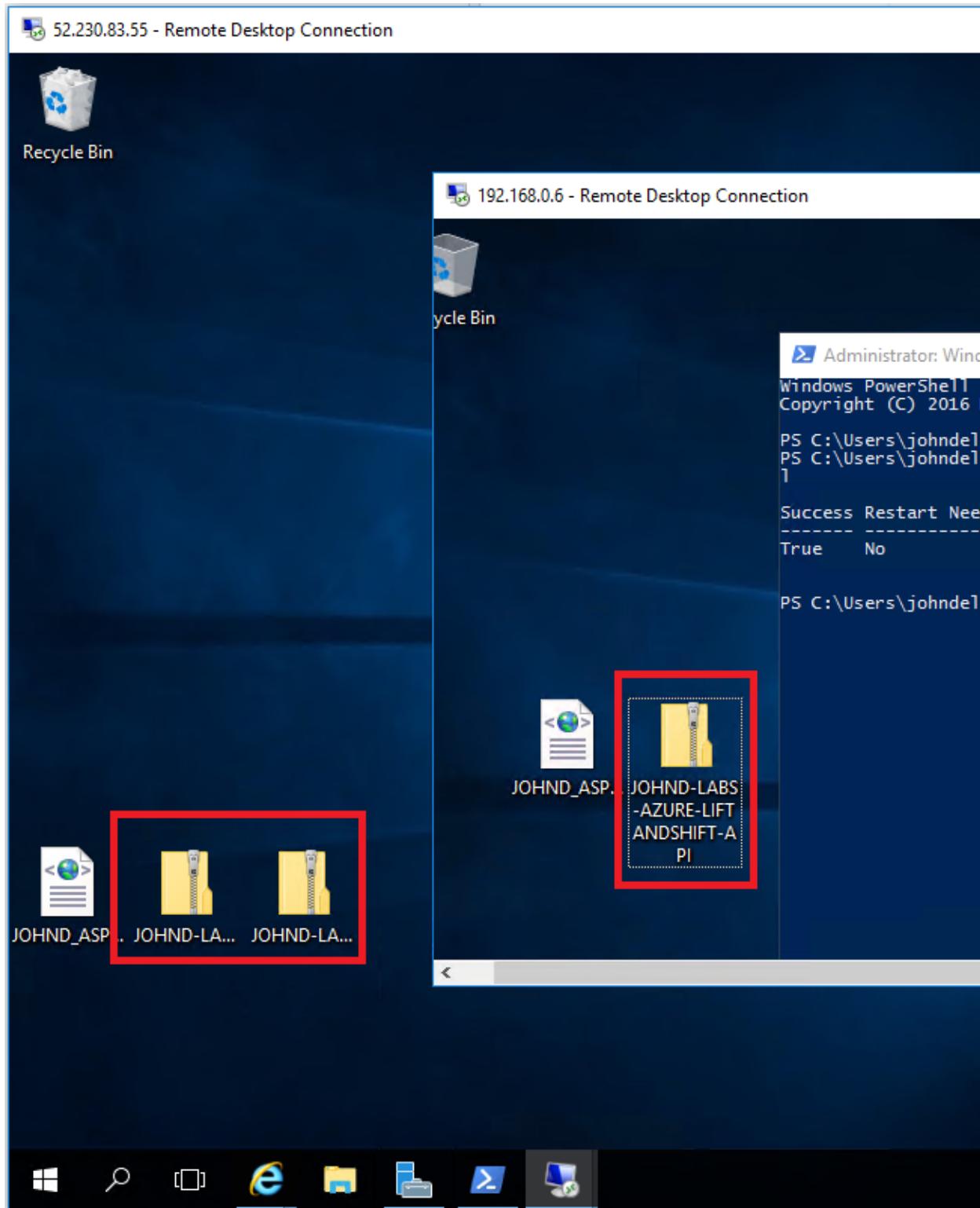
Now copy 2 files from the exercise files to the desktop of WEB01.

- JOHN-LABS-AZURE-LIFTANDSHIFT-WEB.zip
- JOHN-LABS-AZURE-LIFTANDSHIFT-API.zip

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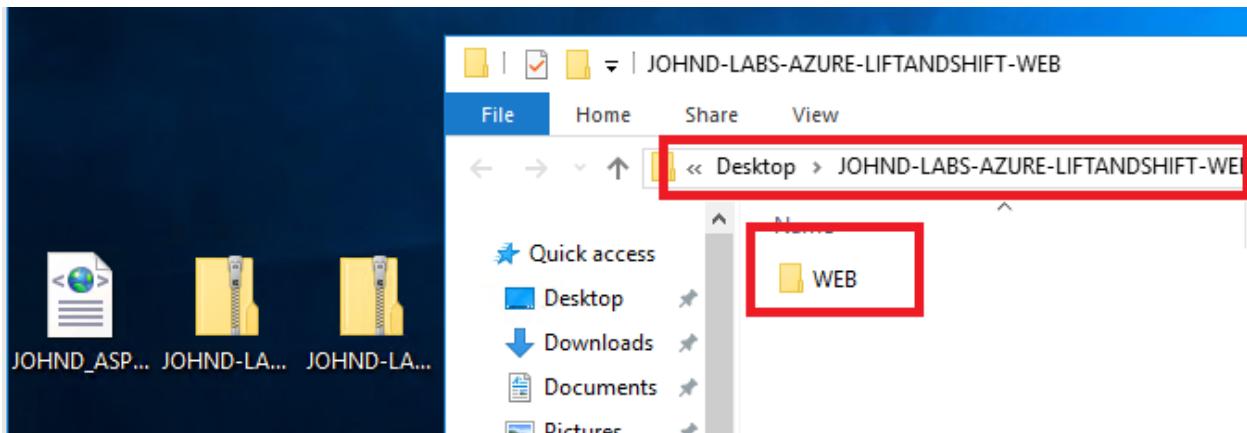
Then copy the JOHN-LABS-AZURE-LIFTANDSHIFT-API.zip from WEB01 Desktop to API01's desktop.



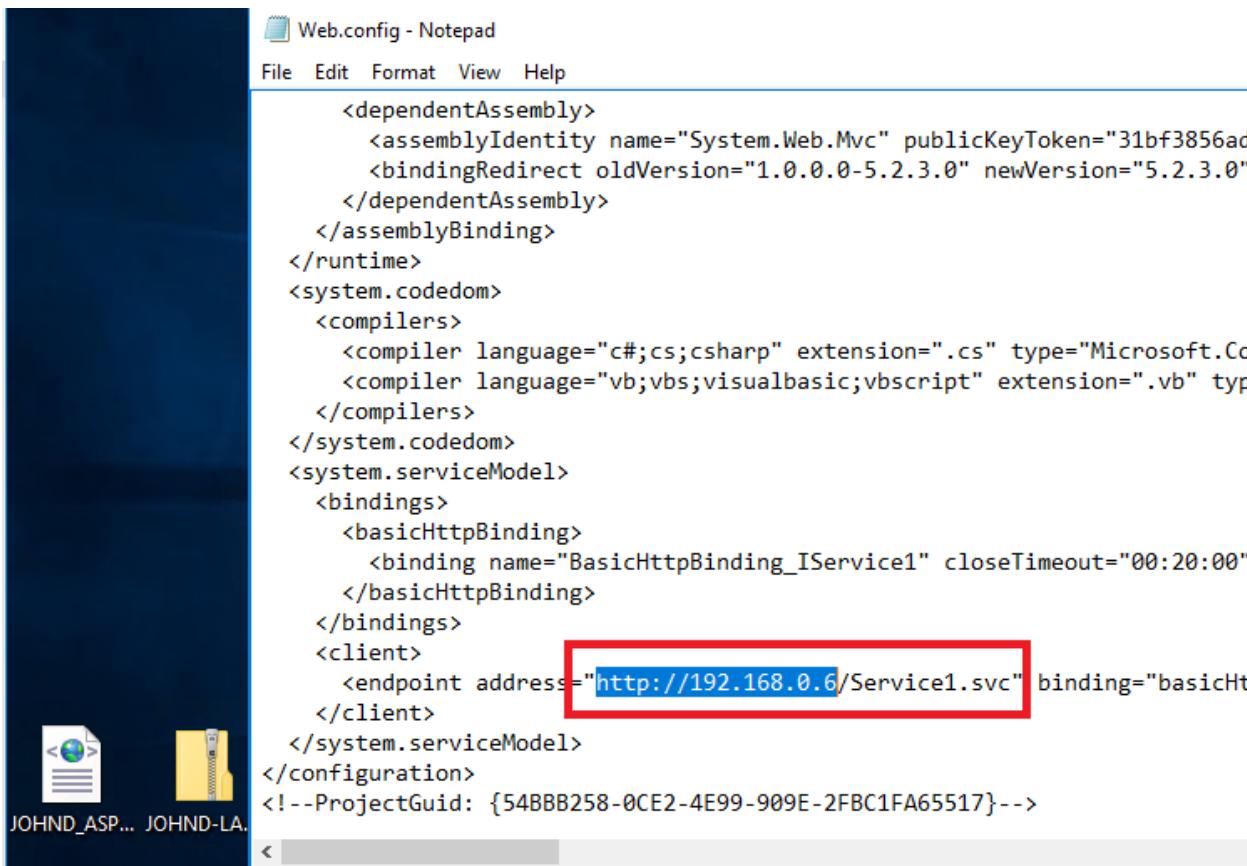
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Go back to WEB01's desktop and unzip the JOHN-LABS-AZURE-LIFTANDSHIFT-WEB.zip. Open the WEB folder and the web.config file using notepad.



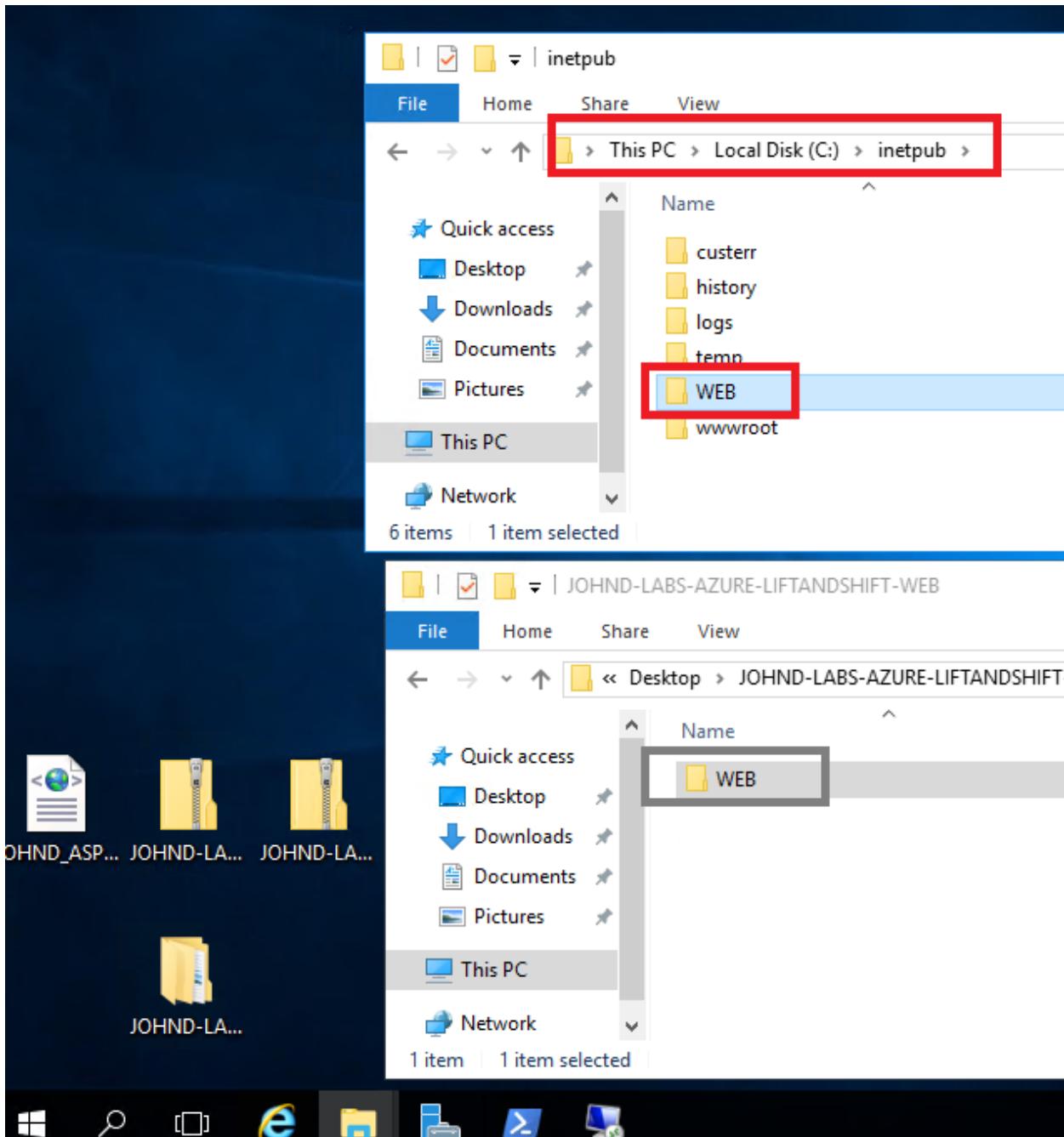
Find the client endpoint address and change the value of the IP address to the IP address of API01. Save and close notepad.



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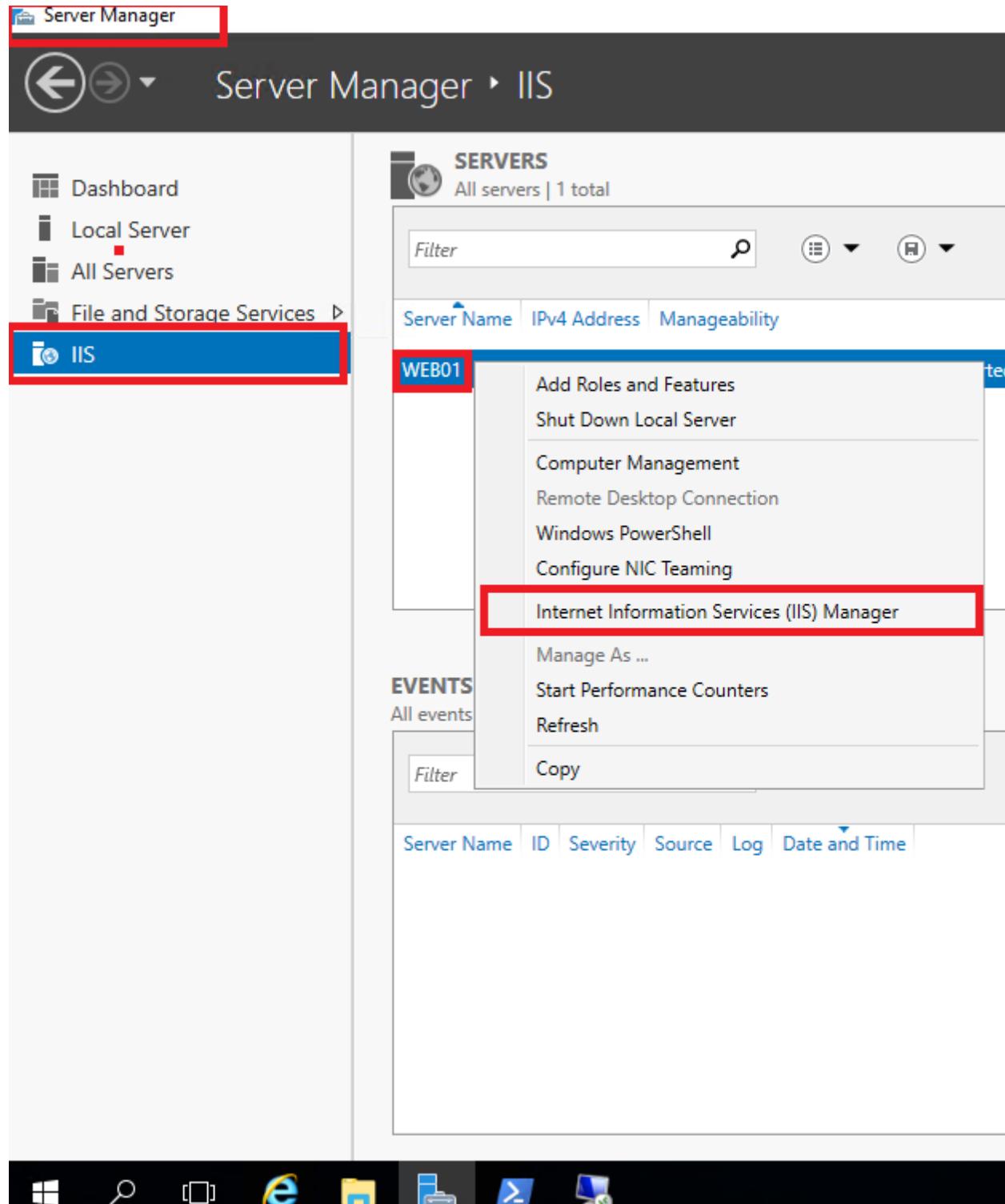
Copy the entire WEB folder to C:\inetpub of WEB01.



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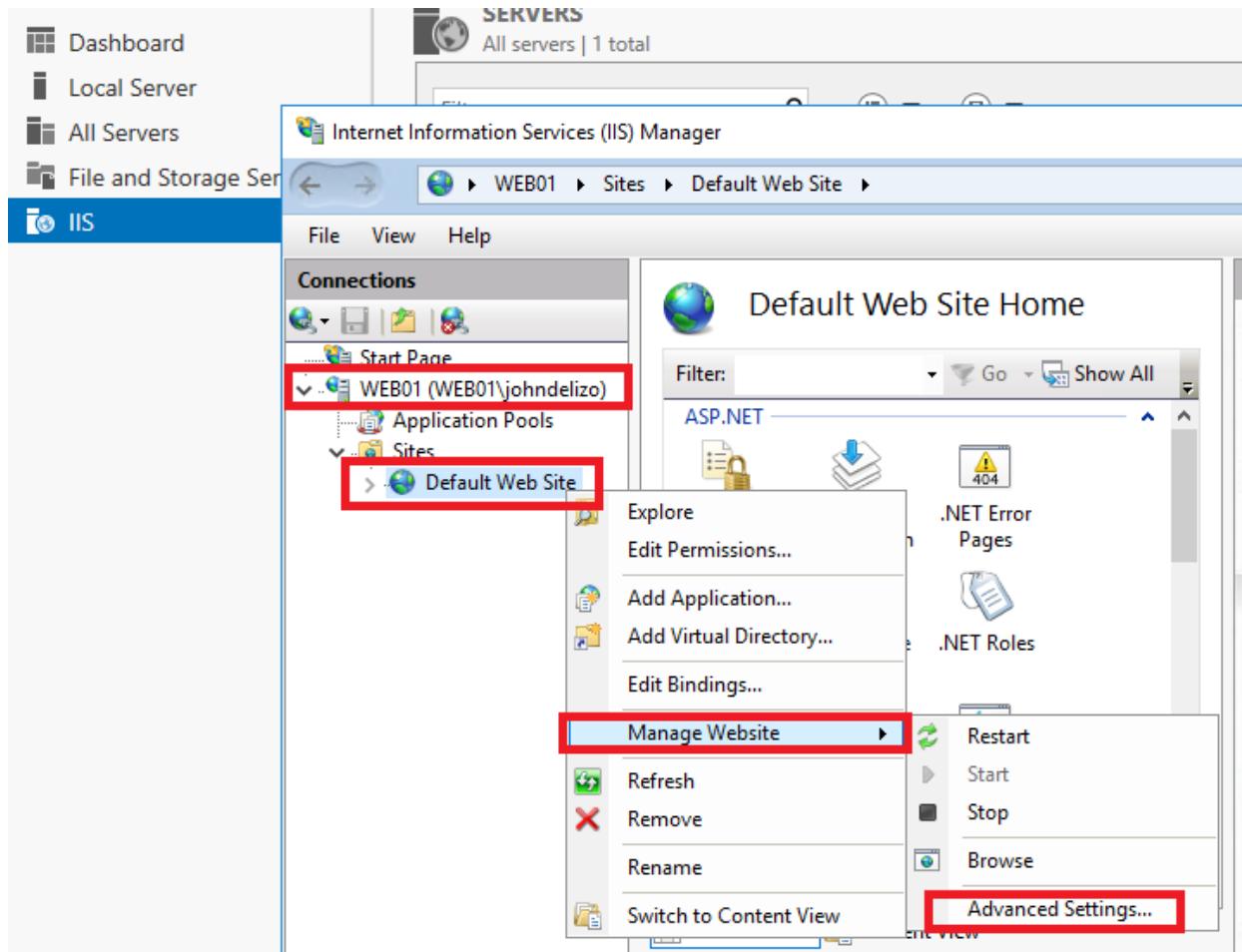
Then open the server manager of WEB01, navigate to IIS then right click the server name and launch Internet Information Services (IIS) Manager.



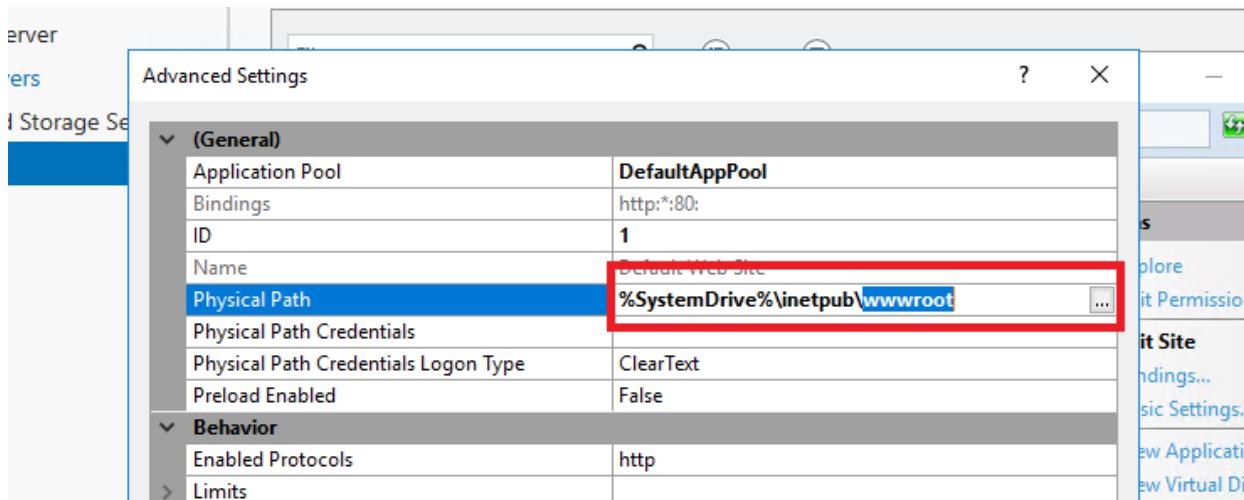
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On the IIS manager, Expand Sites, Default Web Site and then Manage Website. Click Advanced Settings.



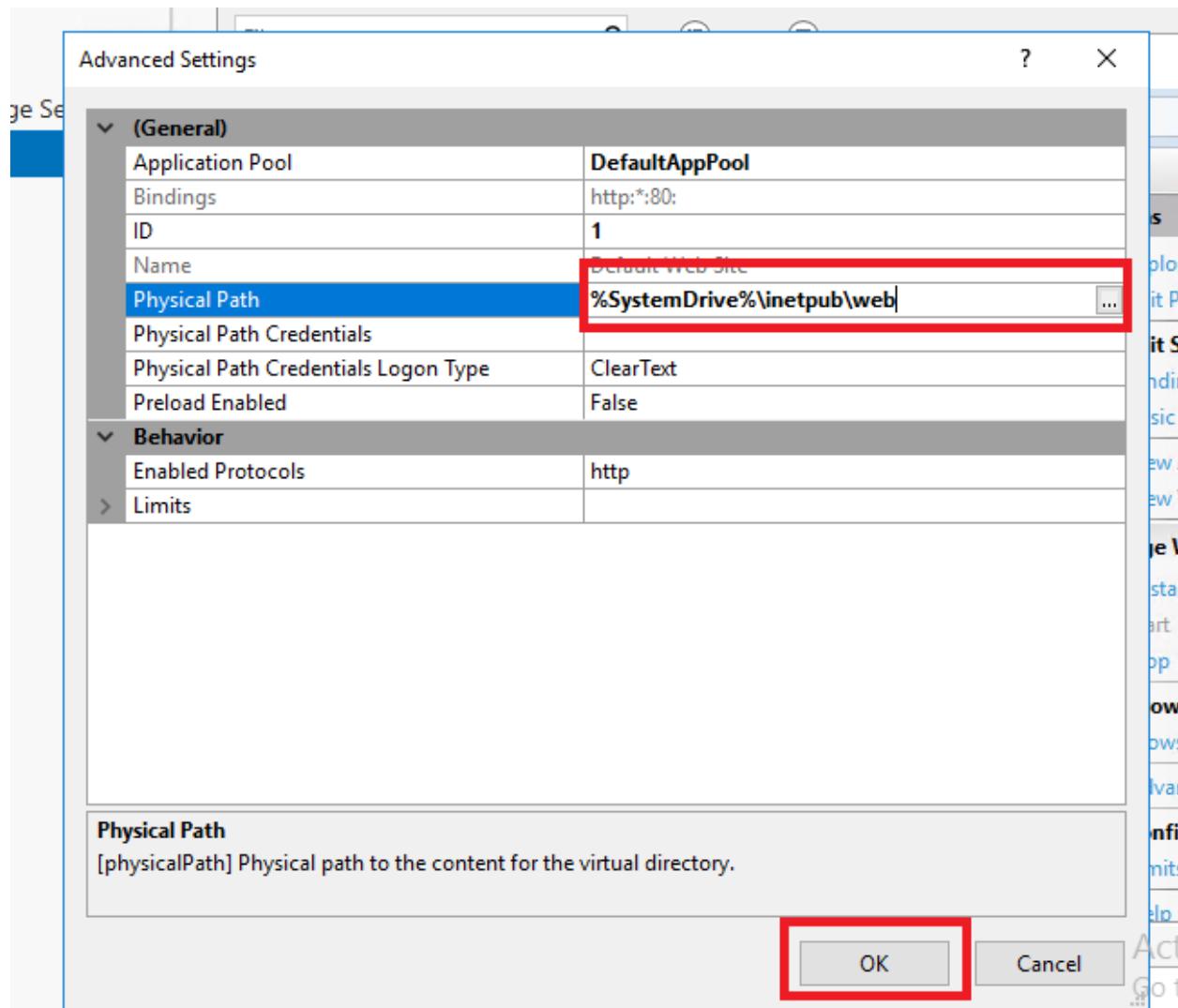
On the advanced settings window. Replace the wwwroot folder with WEB.



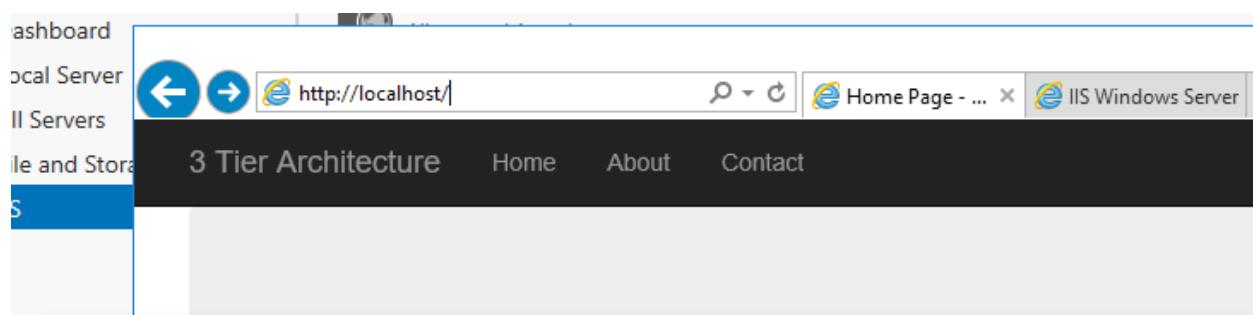
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Click OK.



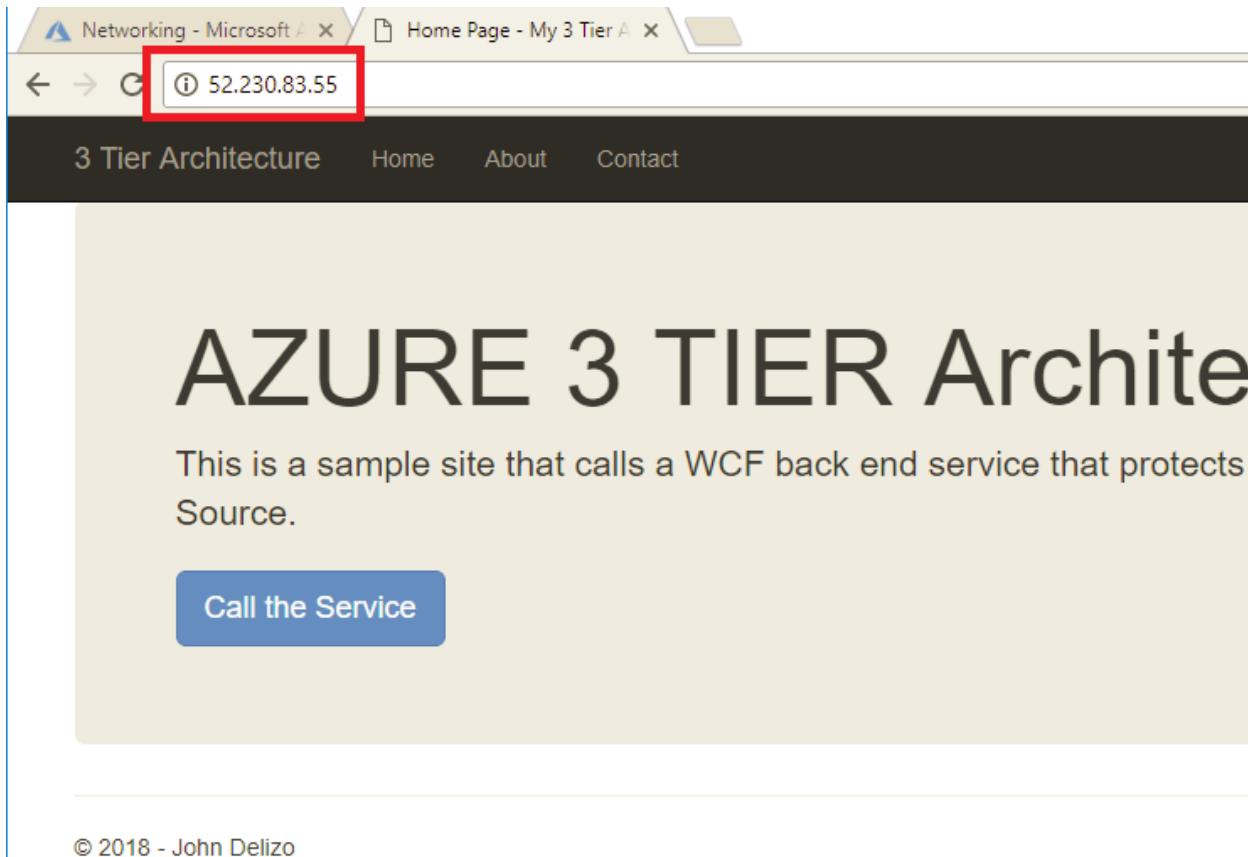
On WEB01 open IE and navigate to the <http://localhost> website. You should be able to see the newly hosted application.



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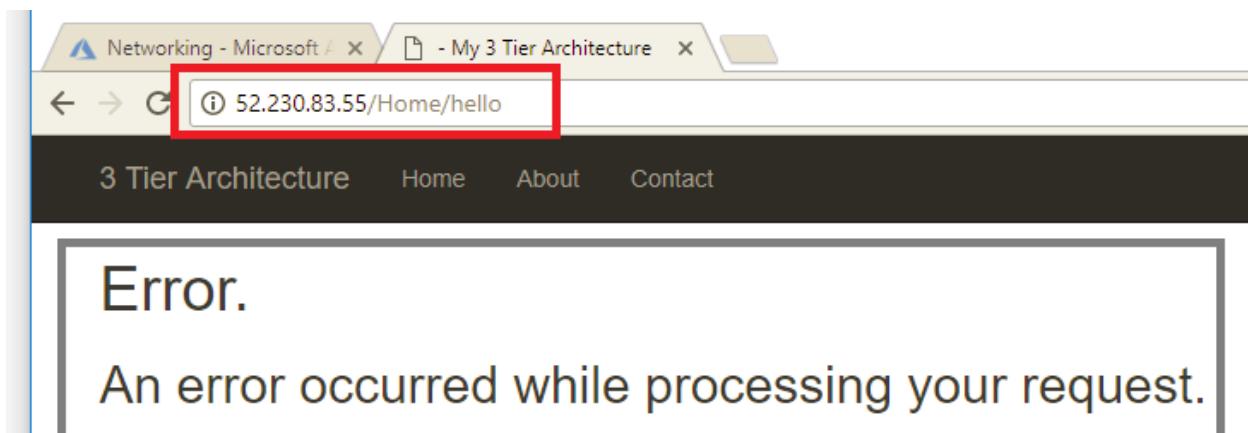
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Now go outside of the RDP session on to your desktop. Open chrome and navigate to the public IP of WEB01. You should see an identical website.



"Note that we will be using Chrome as our desktop browser and IE for server to differentiate the screens described in this Hands on lab."

Test the connectivity of WEB01 to API01 by calling the /HOME/Hello function of the website. You should receive an error for now.

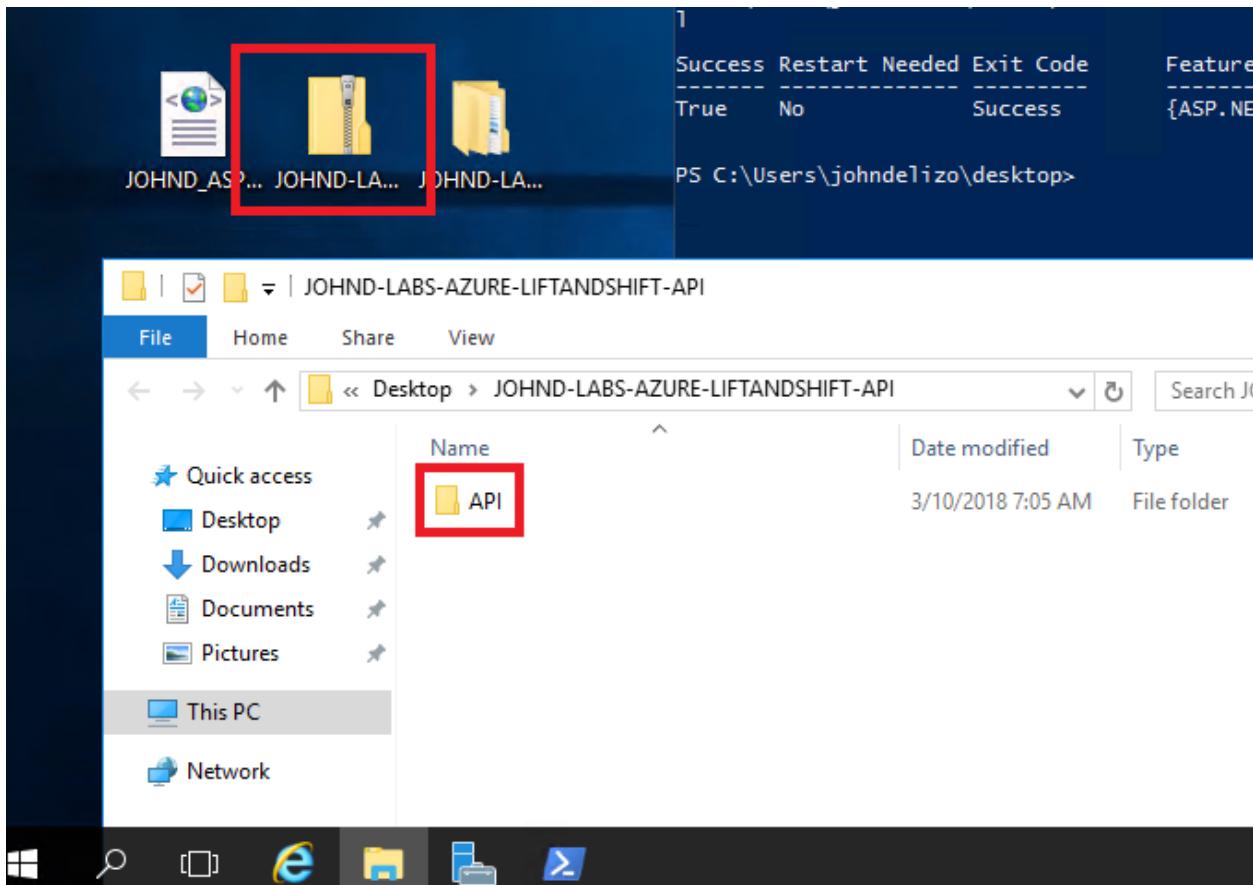


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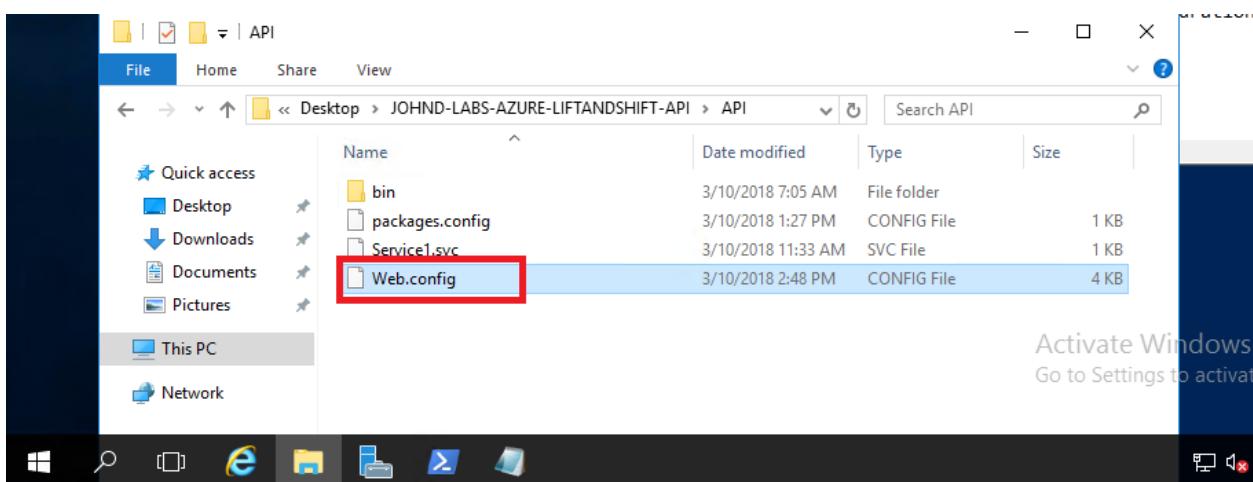
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Go back to the RDP session of API01.

Extract the JOHN-LABS-AZURE-LIFTANDSHIFT-API.zip and open the API Folder.



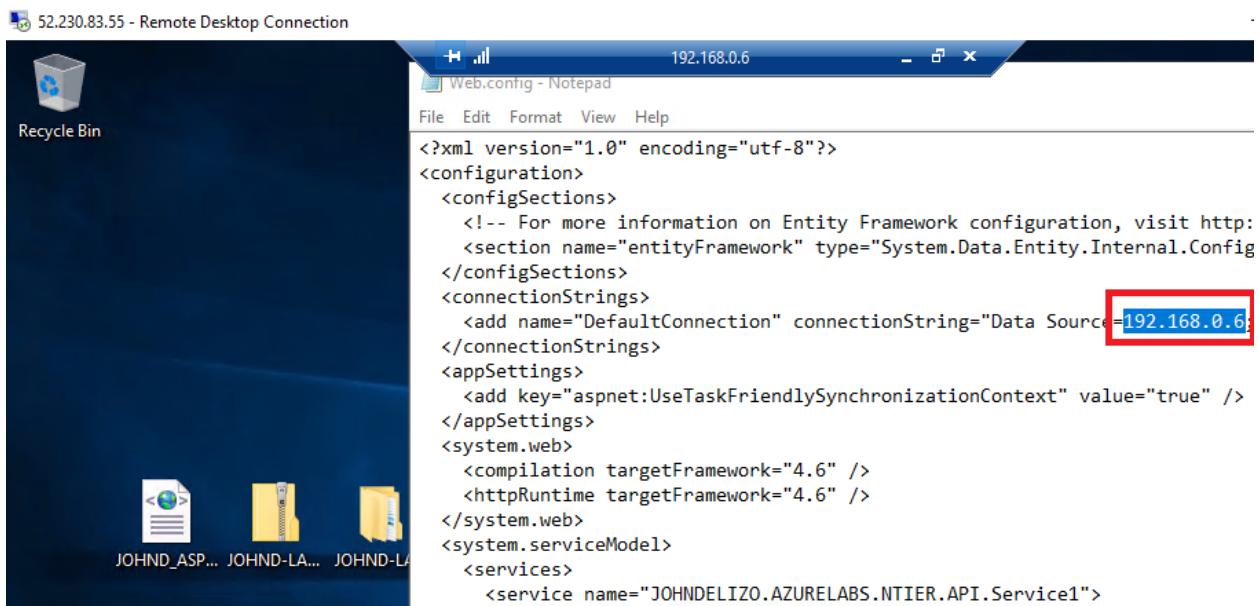
Open the Web.Config file using Notepad.



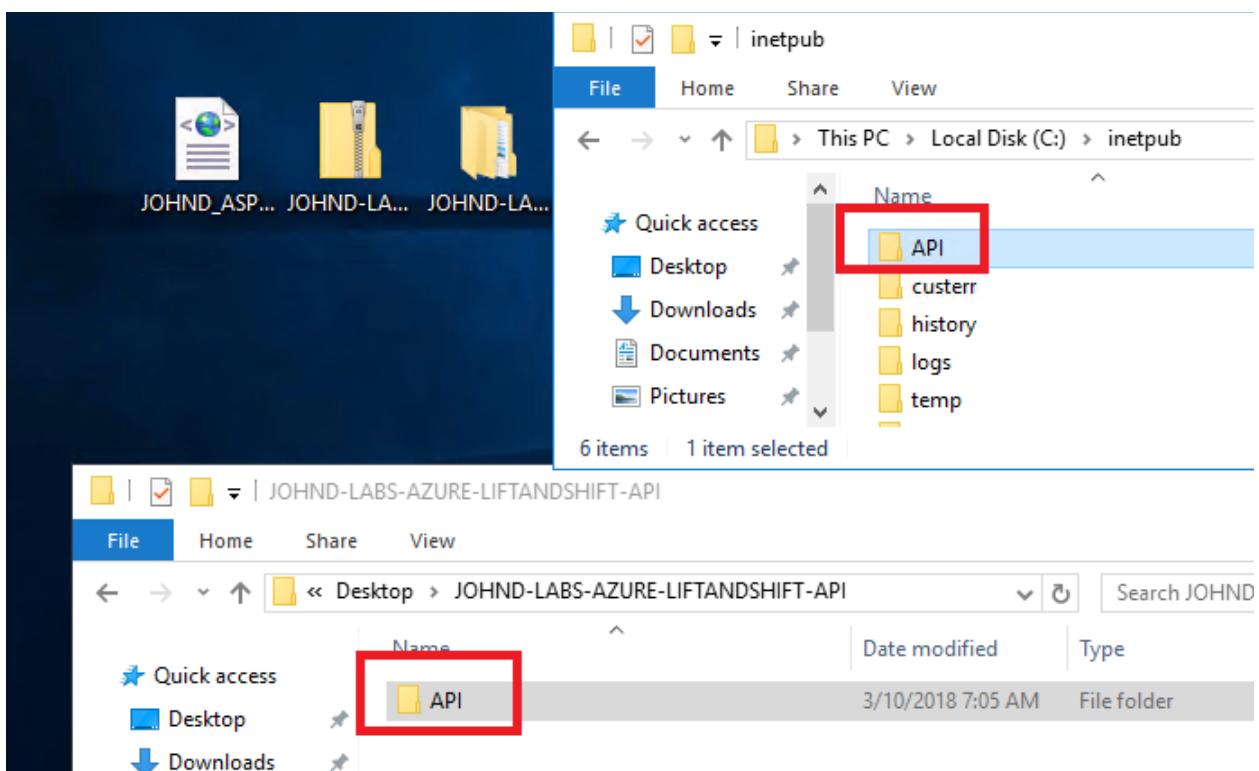
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Find the Connection Strings Section of the XML file. Change the IP address, Username and Password to the settings of the SQL01. Use the Username and Password combination from your SQL Server Authentication setup. Save and exit notepad.



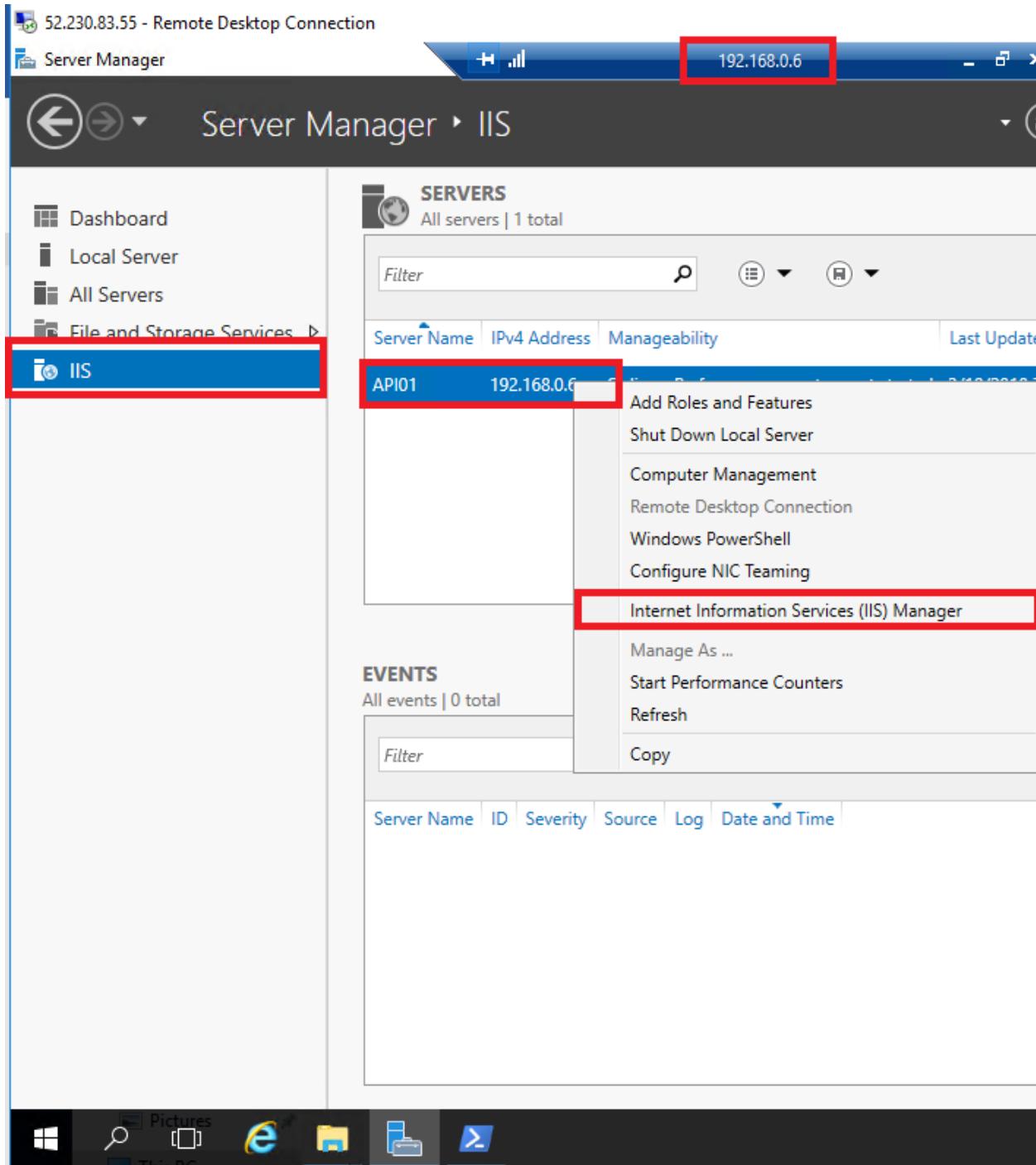
Now copy the API folder from desktop to the C:\Inetpub directory of API01.



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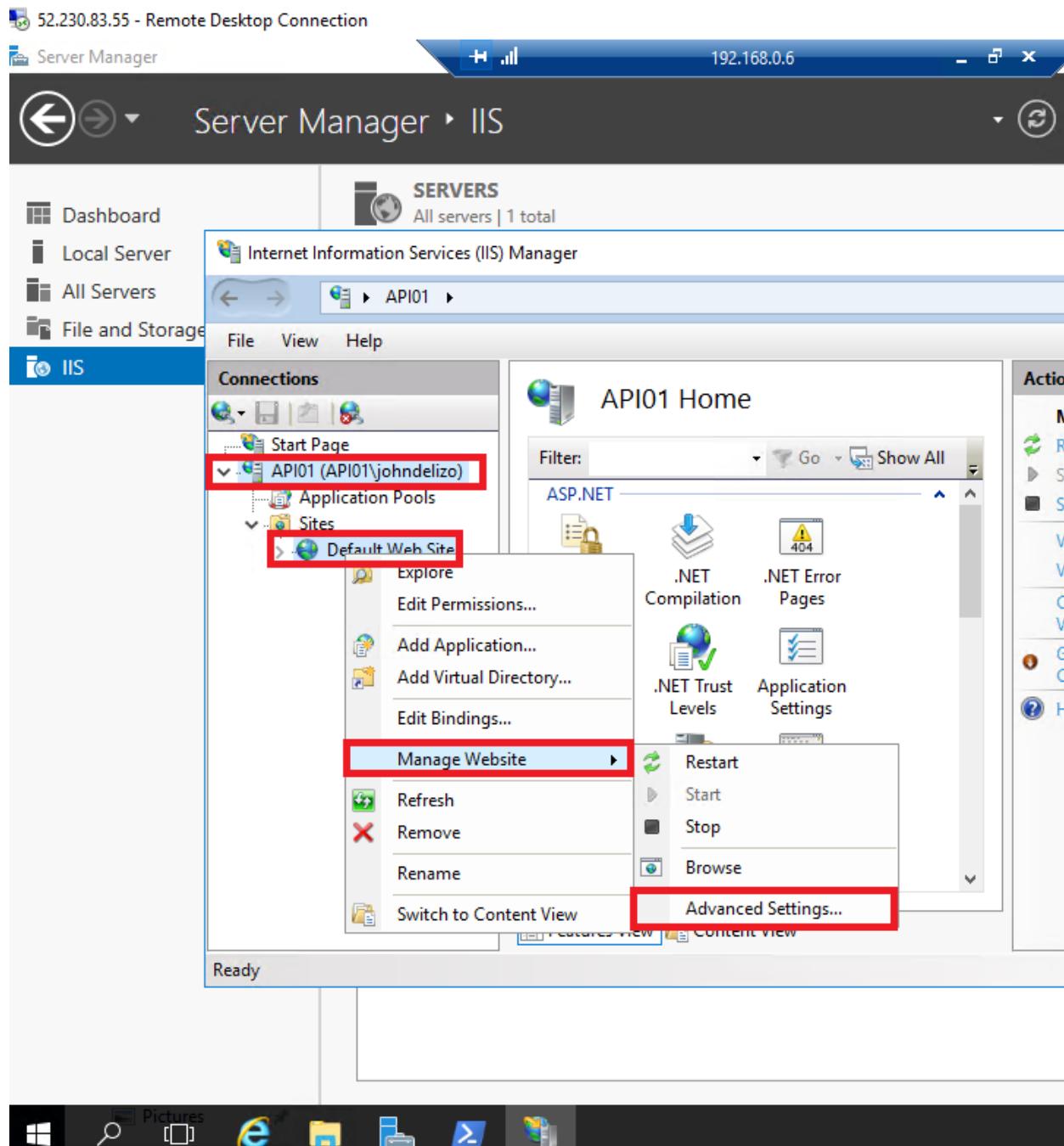
With the same way you configured IIS with WEB01, launch server manager in APP01, Expand IIS, and then Internet Information Services (IIS) Manager.



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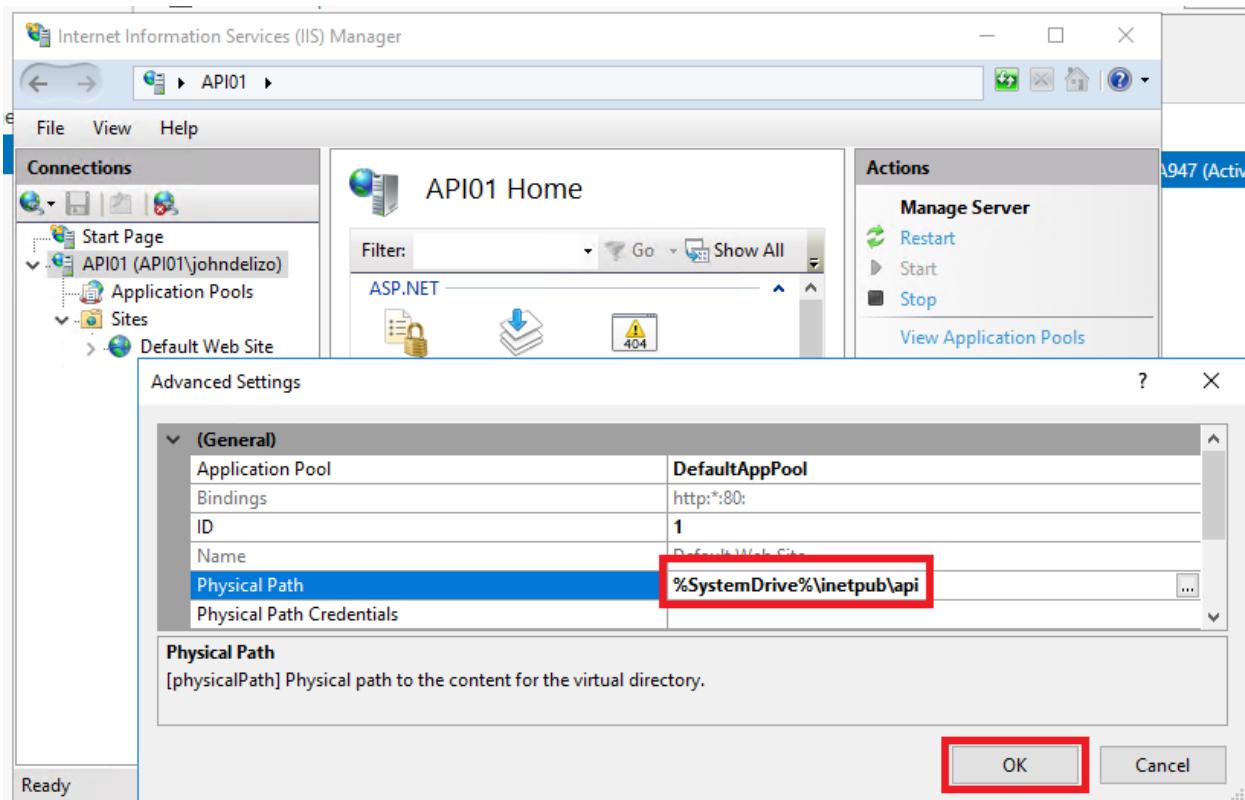
On IIS, expand Default Website, Manage and then click Advanced Settings.



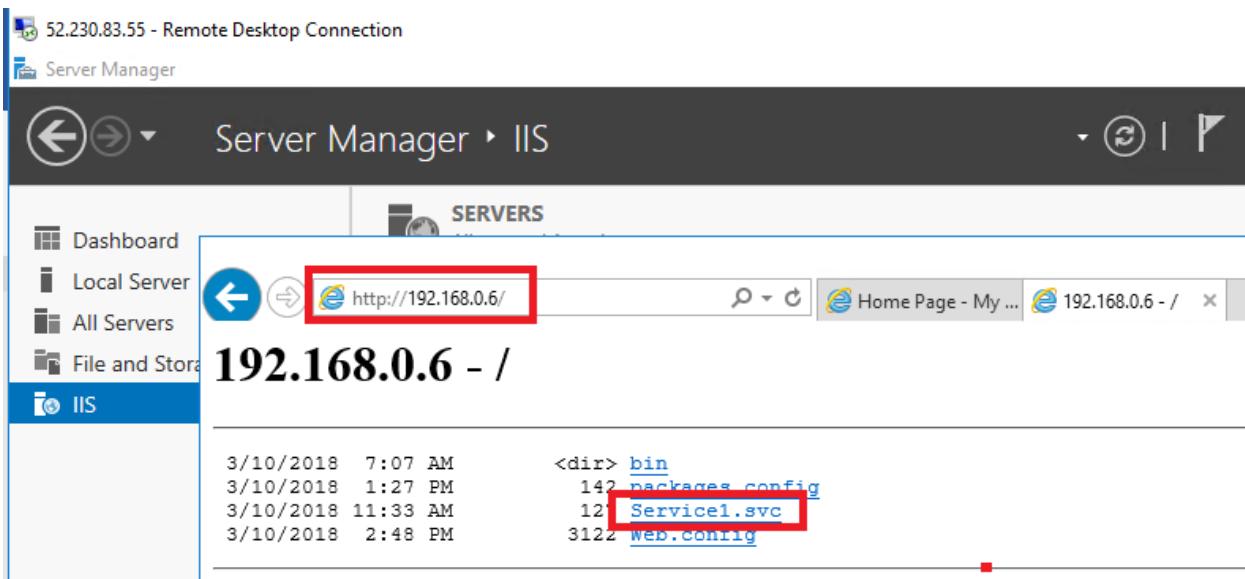
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On the advanced settings page, replace wwwroot with the API folder. Click OK.



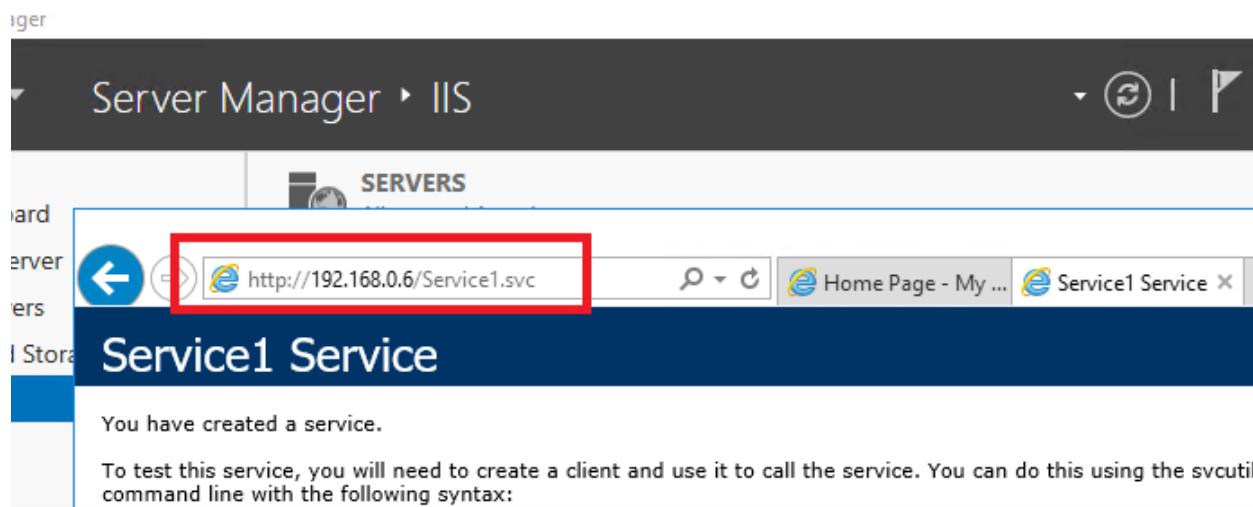
Go back to WEB01. Open IE and on the address bar, type the IP address of API01. And then click Service1.SVC.



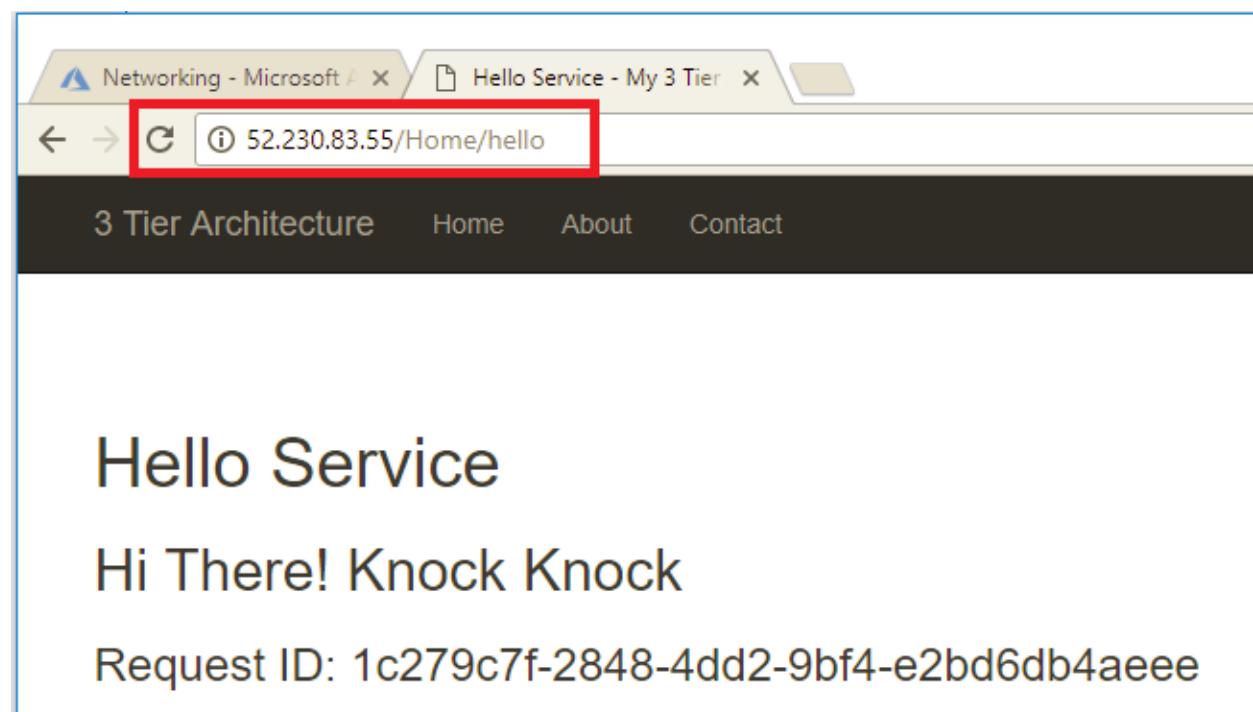
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You should be able to see the Service1 Service WCF page.



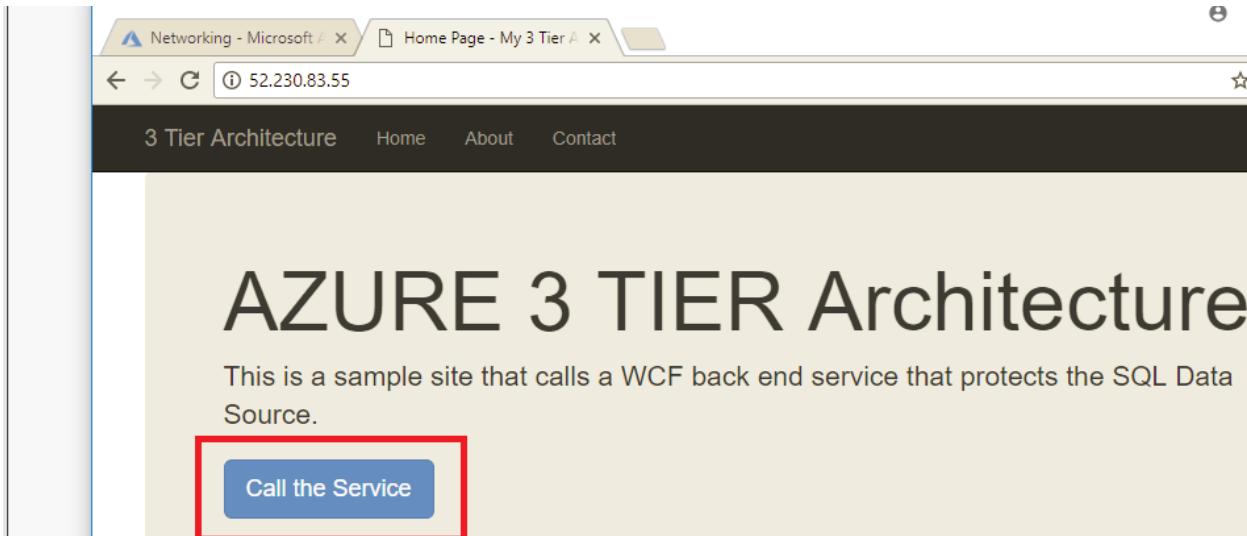
Now from your browser outside of the RDP sessions, refresh the /home/hello and you should see the knock knock response without the error that you saw earlier.



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Now click home from the website and then click the Call the Service Button.



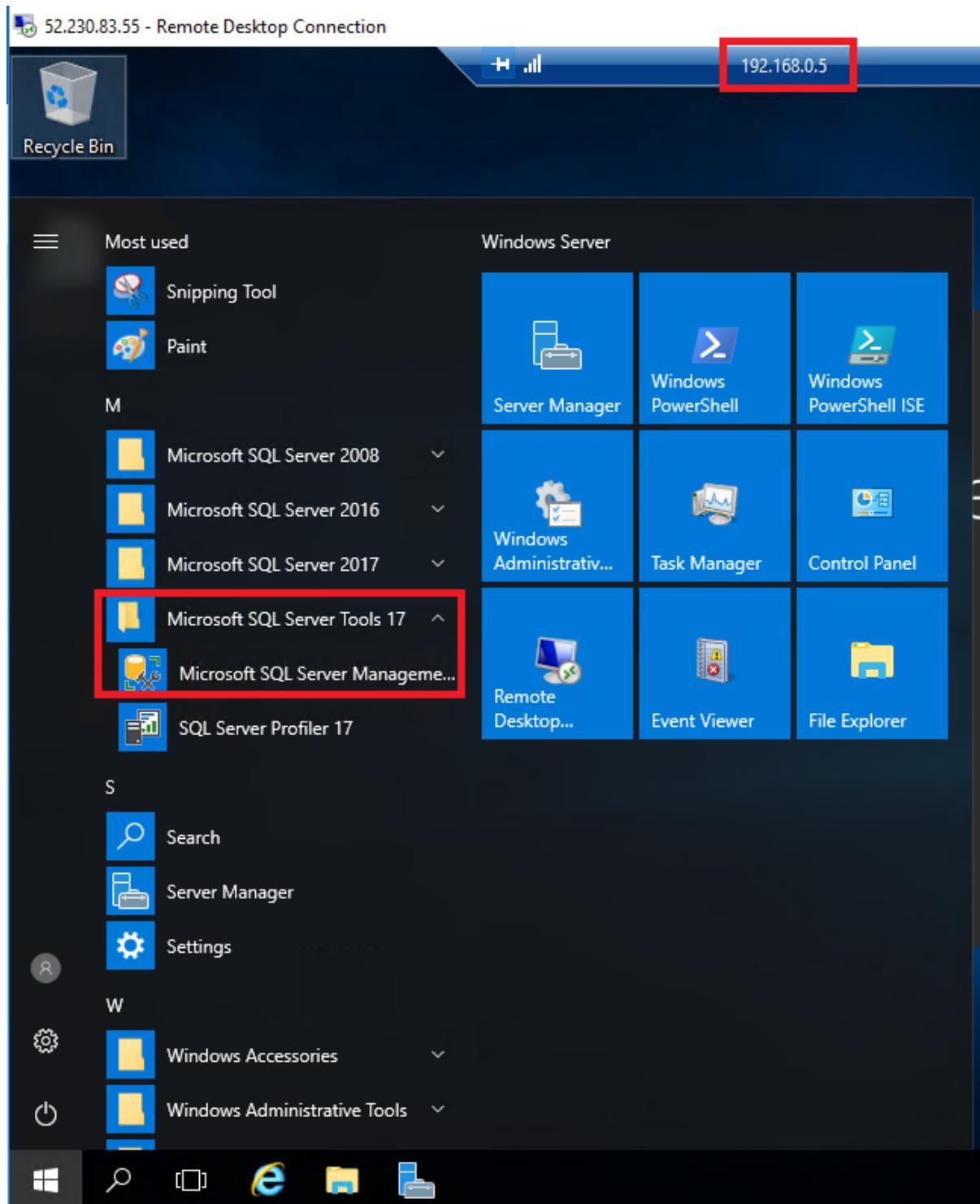
This should throw an error message. Go back to the RDP session of WEB01, try out the same message and it should show you the detailed error message.

The image shows a Windows Task Manager window on the left and a web browser window on the right. The Task Manager window has a red box around the URL bar, which displays "http://localhost/Home/Service". The browser window has a red box around the address bar, which displays "52.230.83.55/Home/Service". Both windows show an error message: "Server Error in '/' Application." and "The server was unable to process the request due to an internal error. For more information about the error, either turn on IncludeExceptionDetailInFaults (either from ServiceBehaviorAttribute or from the <serviceDebug> configuration behavior) on the server in order to send the exception information back to the client, or turn on tracing as per the Microsoft .NET Framework SDK documentation and inspect the server trace logs." Below the browser window, there is a note: "Description: An unhandled exception occurred during the execution of the current web request. About the error and where it originated." and "Exception Details: The server was unable to process the request due to an internal error. For more information about the error, either turn on IncludeExceptionDetailInFaults (either from ServiceBehaviorAttribute or from the <serviceDebug> configuration behavior) on the server in order to send the exception information back to the client, or turn on tracing as per the Microsoft .NET Framework SDK documentation and inspect the server trace logs." The browser window also shows "Source Error: An unhandled exception occurred during the execution of the current web request. About the origin and location of the exception." and "Stack Trace: [FaultException: An unhandled exception occurred during the execution of the current web request. About the origin and location of the exception.]". At the bottom of the browser window, there is a copyright notice: "© 2018 - John Delizo".

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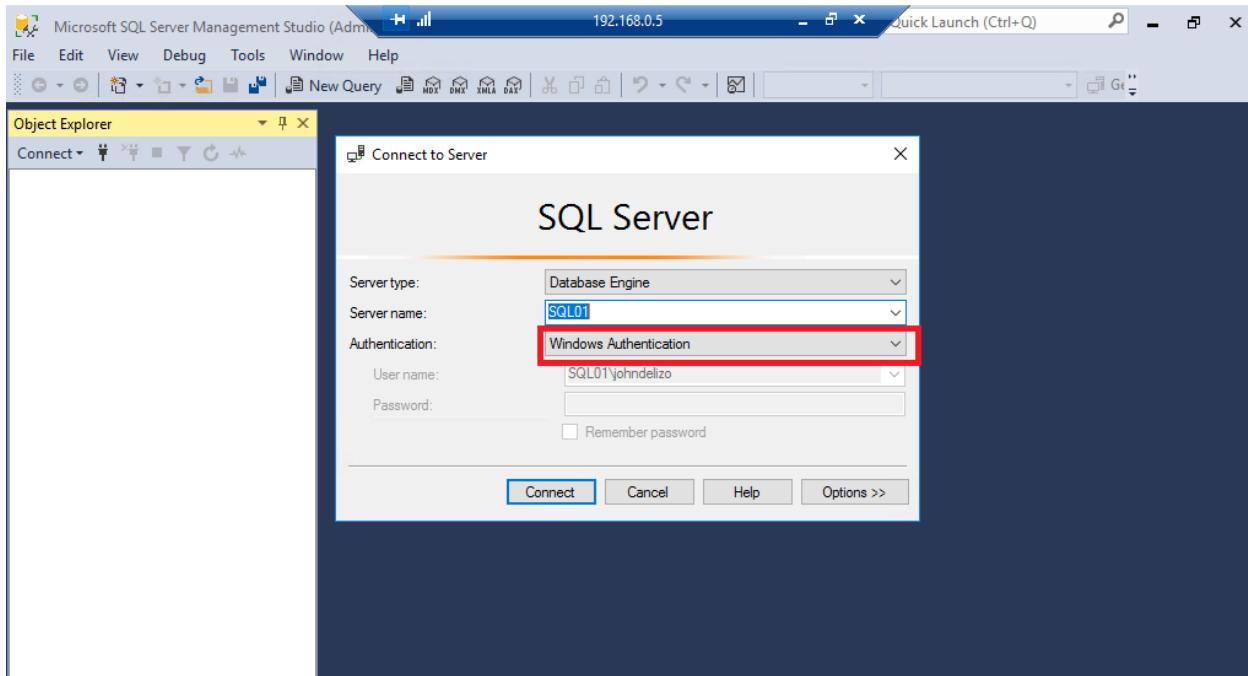
This is because the API is expecting an ability to connect to a database. Since it was not able to connect properly an error is passed to WEB01. To fix this we need to create the database for APP01. Go back to an RDP session with SQL01 thru WEB01 as a jump server and launch SQL Server Management Studio.



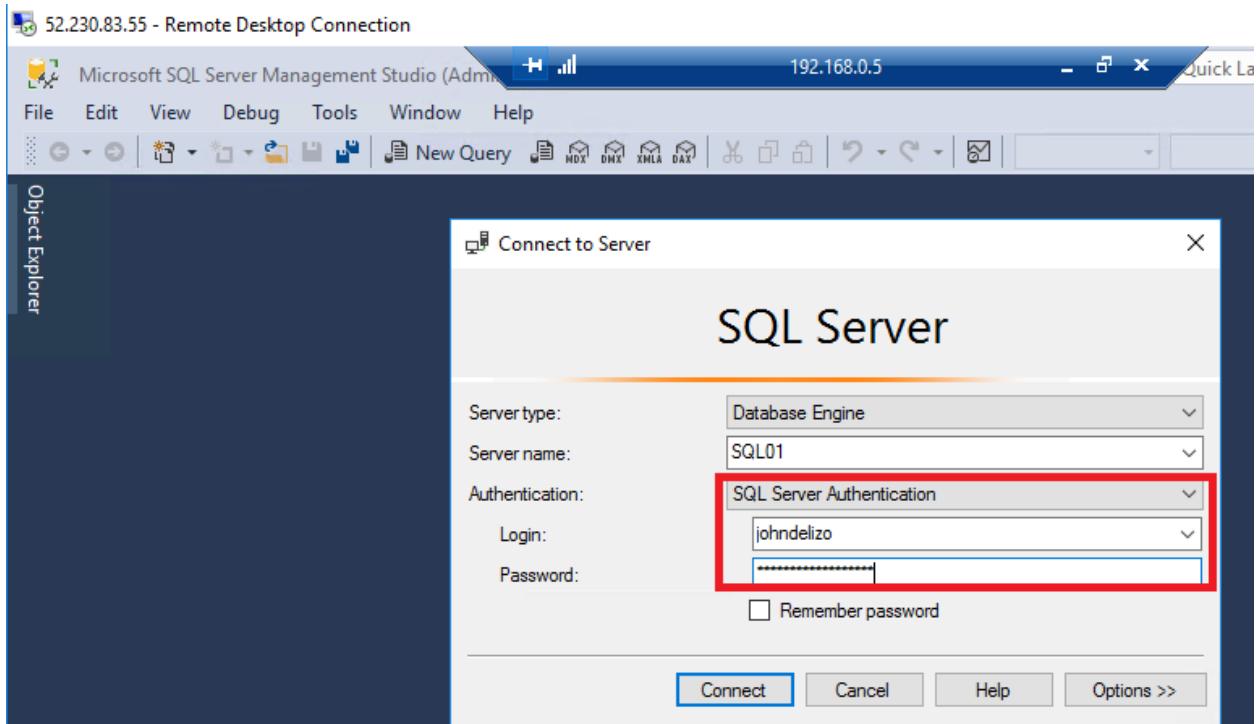
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Once the SQL Server Management Studio is launched, dropdown the Windows Authentication and use SQL Server Authentication.



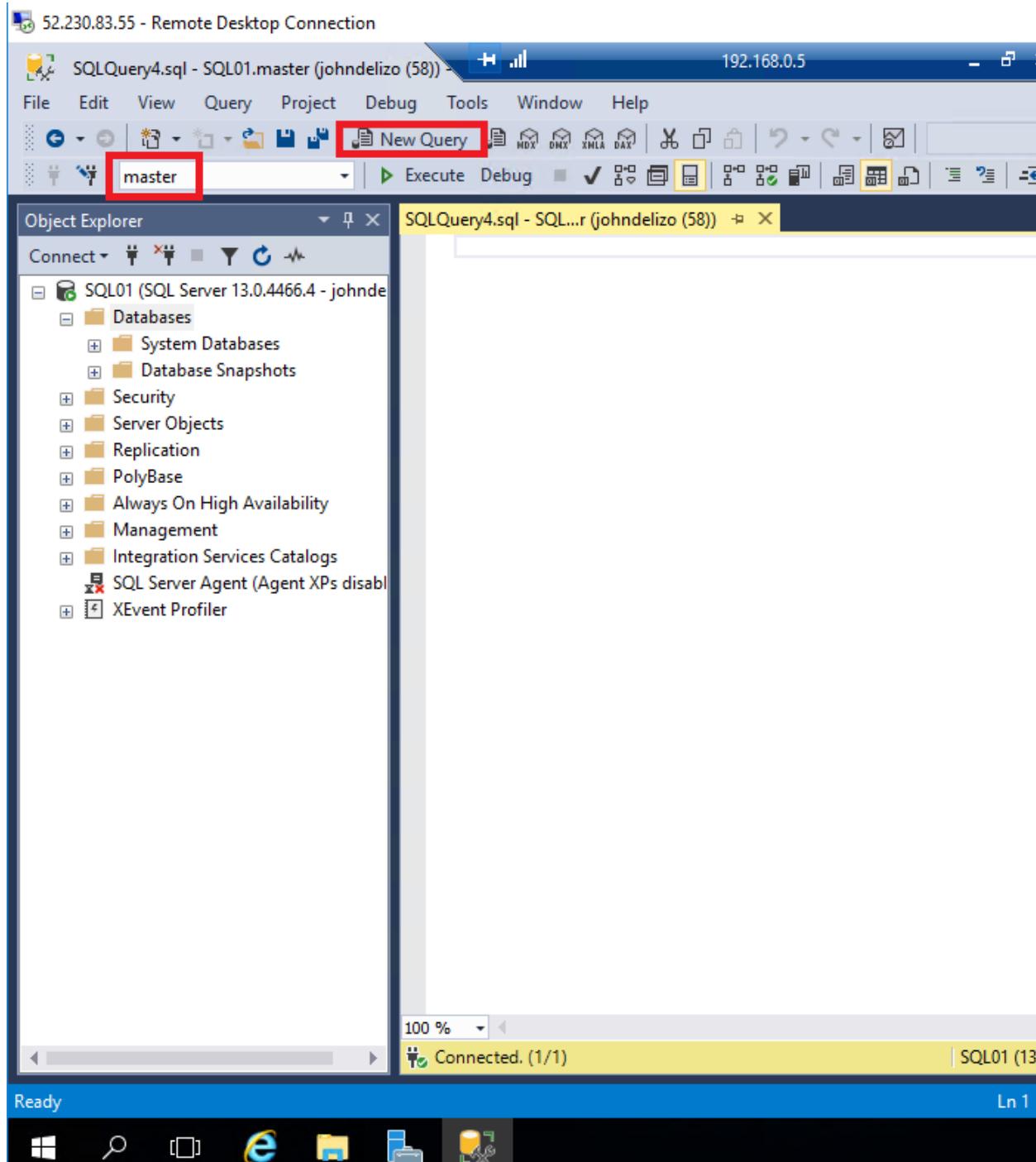
Use the username and password that you provided during SQL setup.



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Once you are inside the SQL Server, make sure that you are connected to the master database and then click New Query. A new query window should appear.



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From your HOL Files, open and copy the contents of JOHN-LABS-AZURE-LIFTANDSHIFT-SQL.txt and the paste it to the new query window.

The screenshot shows a Windows desktop environment with a Remote Desktop Connection window titled "52.230.83.55 - Remote Desktop Connection". The connection details are "192.168.0.5" and "Quick Launch (Ctrl+Q)". The main window is "SQLQuery4.sql - SQL01.master (johndelizo (58))". The Object Explorer on the left shows the database structure for "SQL01 (SQL Server 13.0.4466.4 - johndelizo)". The central pane displays a query script with several sections highlighted by red boxes:

```
ALTER DATABASE SCOPED CONFIGURATION SET LEGACY_CARDINALITY_ESTIMATION = OFF;
GO
ALTER DATABASE SCOPED CONFIGURATION FOR SECONDARY SET LEGACY_CARDINALITY_ESTIMATION = OFF;
GO
ALTER DATABASE SCOPED CONFIGURATION SET MAXDOP = 0;
GO
ALTER DATABASE SCOPED CONFIGURATION FOR SECONDARY SET MAXDOP = 0;
GO
ALTER DATABASE SCOPED CONFIGURATION FOR SECONDARY SET LEGACY_CARDINALITY_ESTIMATION = OFF;
GO
CREATE DATABASE [NTIERDB]
CONTAINMENT = NONE
ON PRIMARY
( NAME = N'NTIERDB', FILENAME = N'F:\Data\NTIERDB.mdf',
LOG ON
( NAME = N'NTIERDB_log', FILENAME = N'F:\Log\NTIERDB.ldf');
GO
ALTER DATABASE [NTIERDB] SET COMPATIBILITY_LEVEL = 130;
GO
ALTER DATABASE [NTIERDB] SET ANSI_NULL_DEFAULT OFF;
GO
ALTER DATABASE [NTIERDB] SET ANSI_NULLS OFF;
GO
ALTER DATABASE [NTIERDB] SET ANSI_PADDING OFF;
GO
ALTER DATABASE [NTIERDB] SET ANSI_WARNINGS OFF;
GO
ALTER DATABASE [NTIERDB] SET ARITHABORT OFF;
GO
ALTER DATABASE [NTIERDB] SET AUTO_CLOSE OFF;
GO
ALTER DATABASE [NTIERDB] SET AUTO_SHRINK OFF;
GO
ALTER DATABASE [NTIERDB] SET AUTO_CREATE_STATISTICS ON;
GO
ALTER DATABASE [NTIERDB] SET AUTO_UPDATE_STATISTICS ON;
```

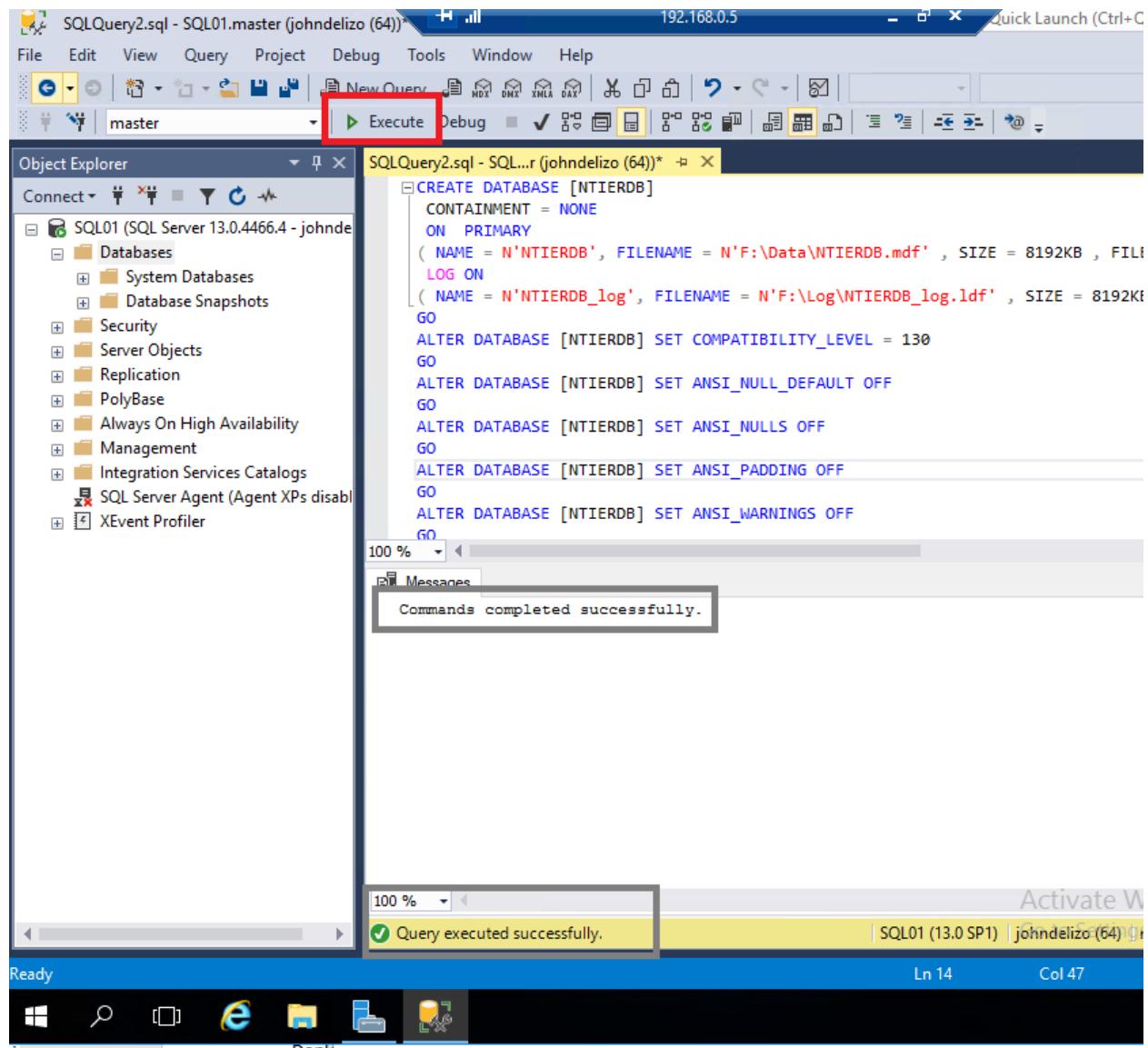
A separate window titled "JOHND-LABS-AZURE-LIFTANDSHIFT-SQL - Notepad" contains the same script, also with parts highlighted by red boxes. The status bar at the bottom of the SSMS window indicates "Connected. (1/1)".

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Make sure no query is highlighted then click the Execute button.

After executing, this should show the following message and a status message that the query executed successfully.



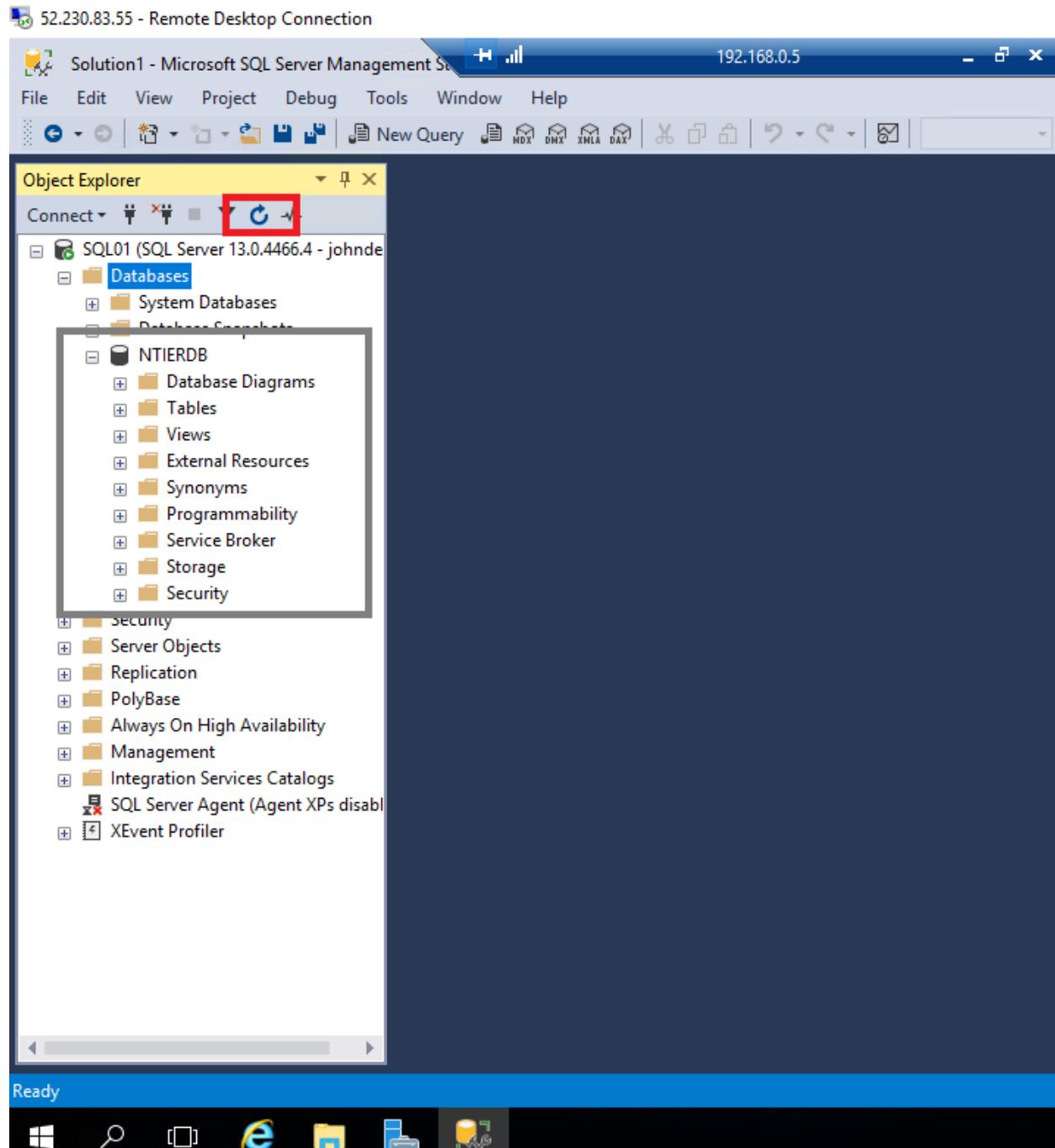
Close the new query window.

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Then on the object explorer on the left hand corner of the screen, click databases and then click refresh.

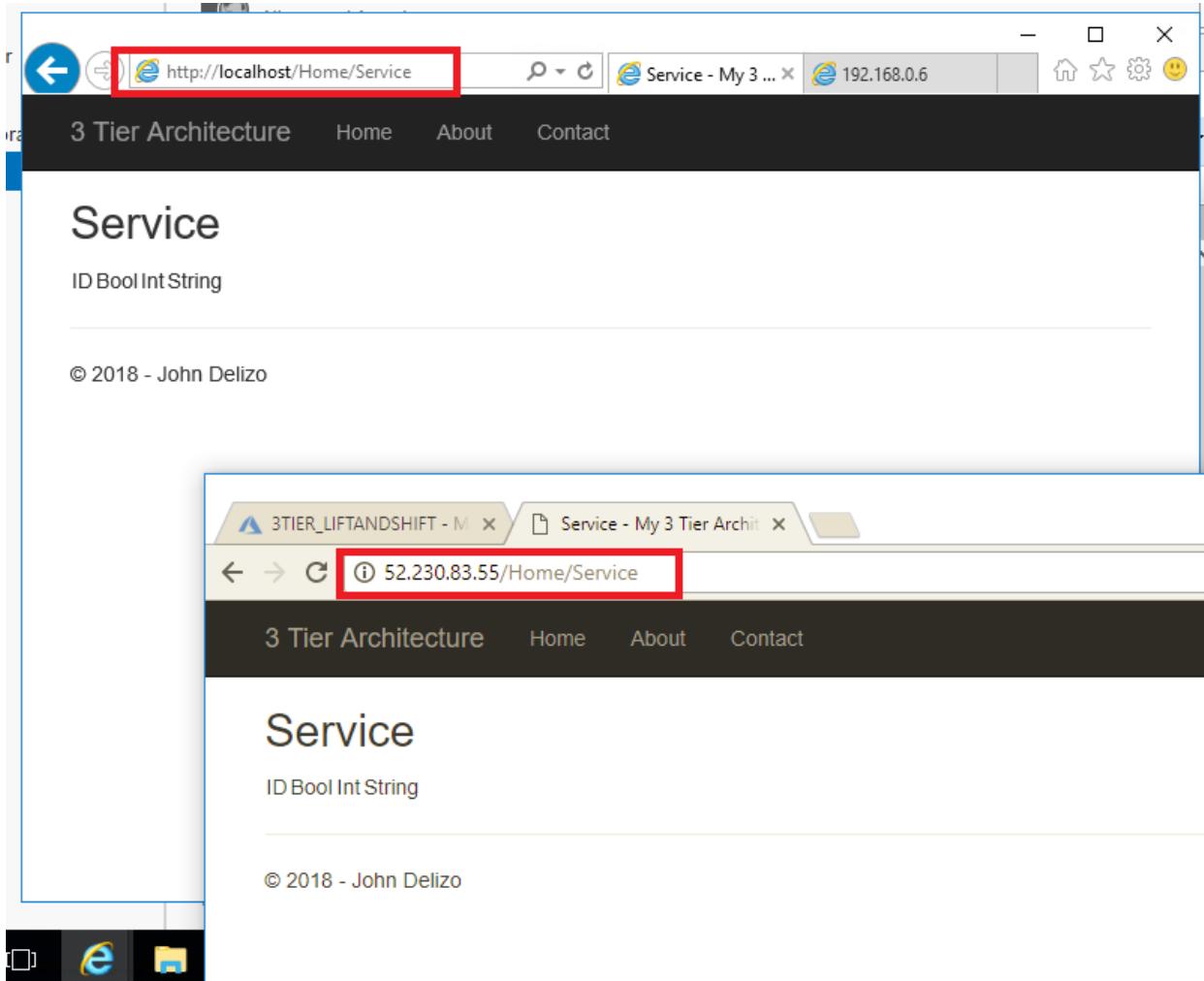
It should show NTIERDB under the databases folder.



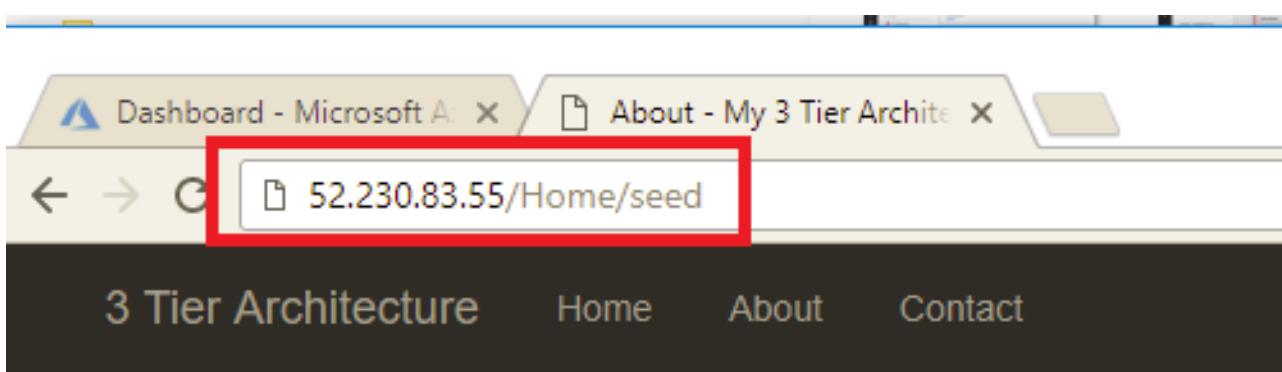
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Now Go back to either WEB01 and refresh the localhost site or outside and refresh the public IP site. It should show a clean “Service” message.



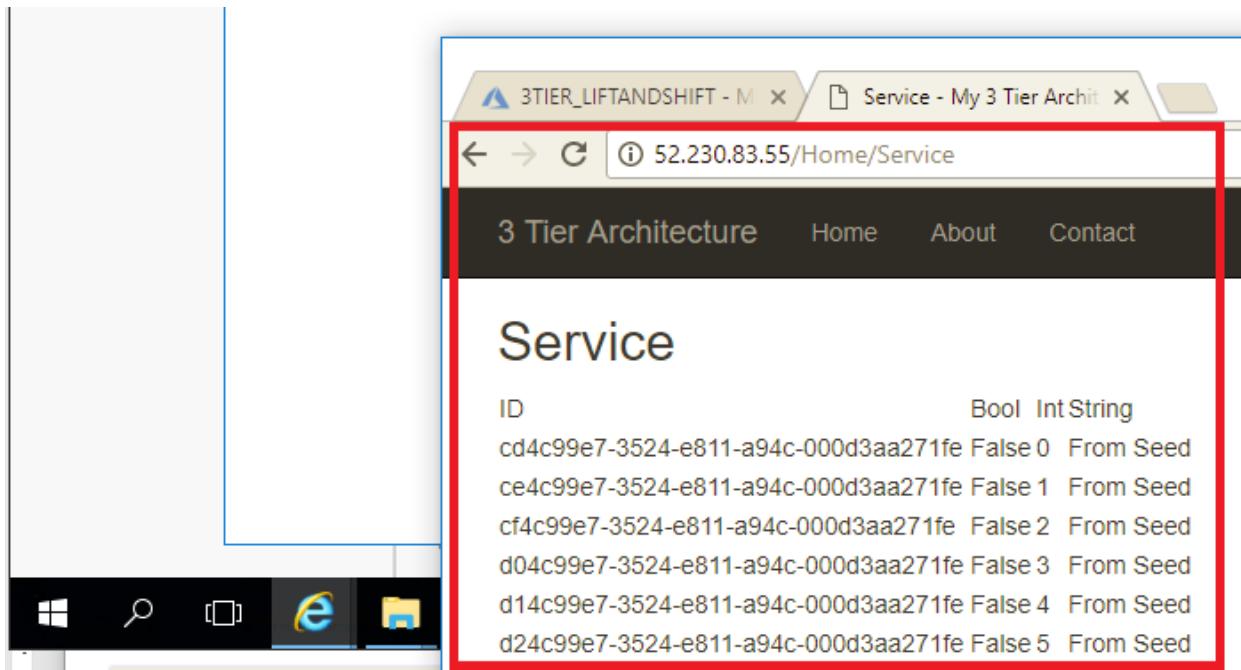
Now lets try to perform database action by calling /home/seed.



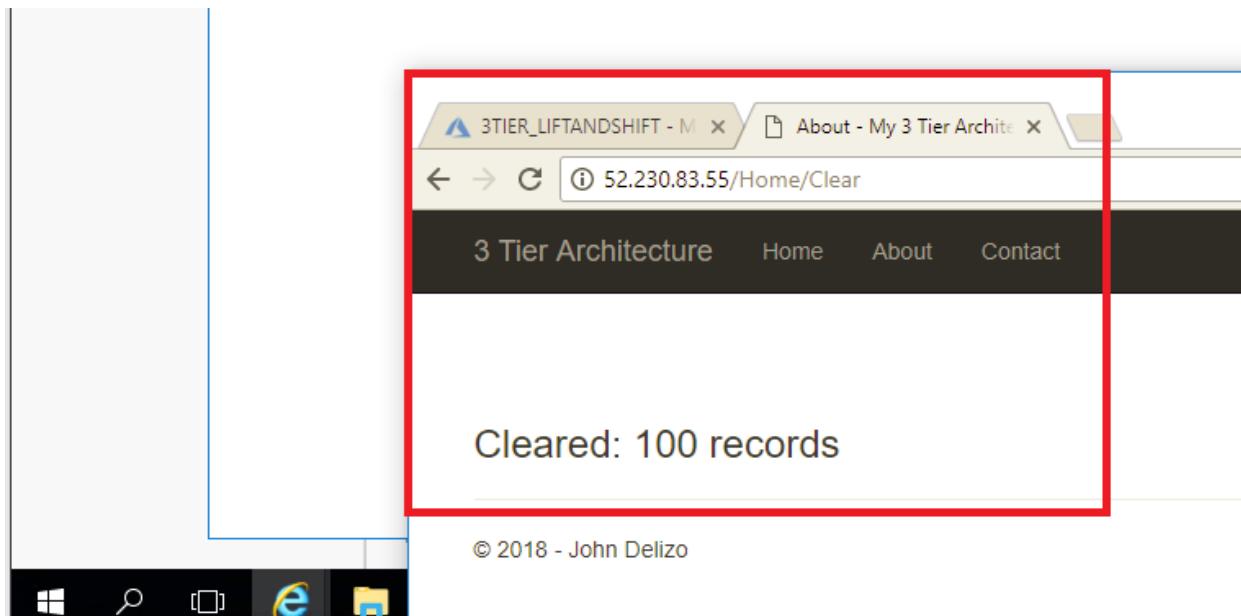
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This should navigate back to /home/service URL with new records to show. This shows that data is already flowing from the database, to the API and to the Web front end.



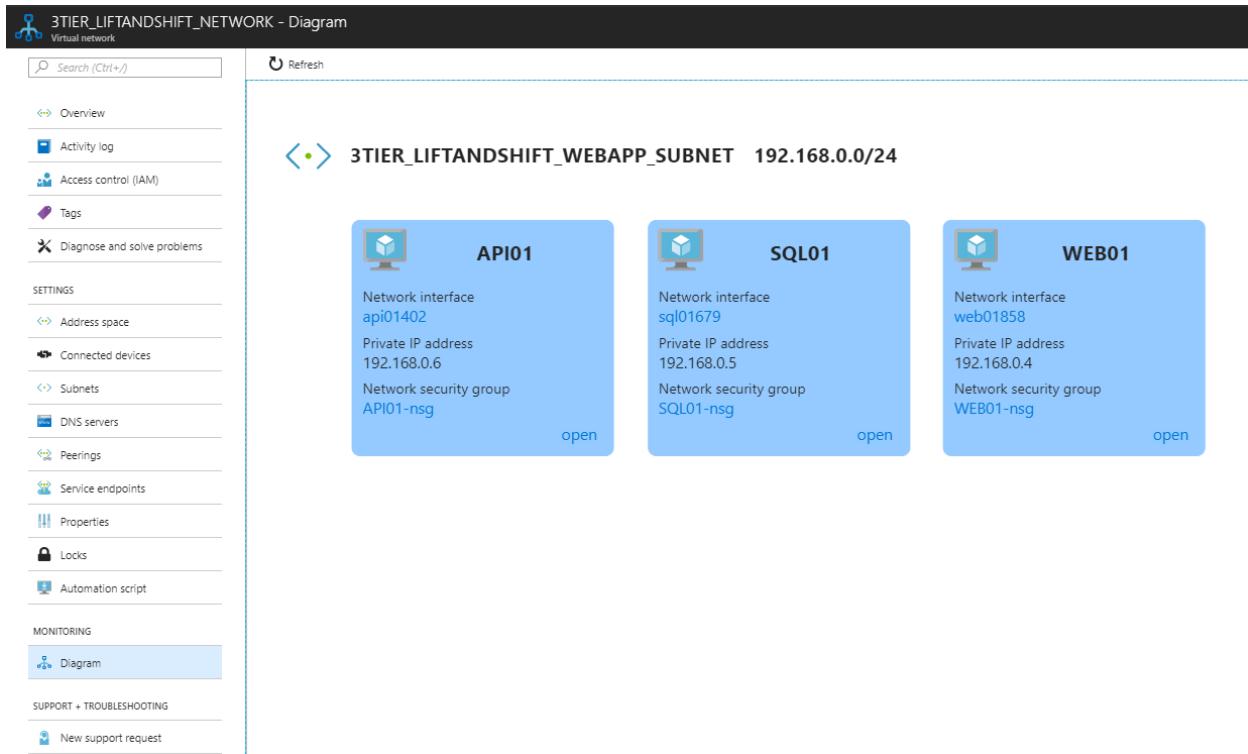
To perform clean-up, simply call /home/clear and it should show how many records has been deleted.



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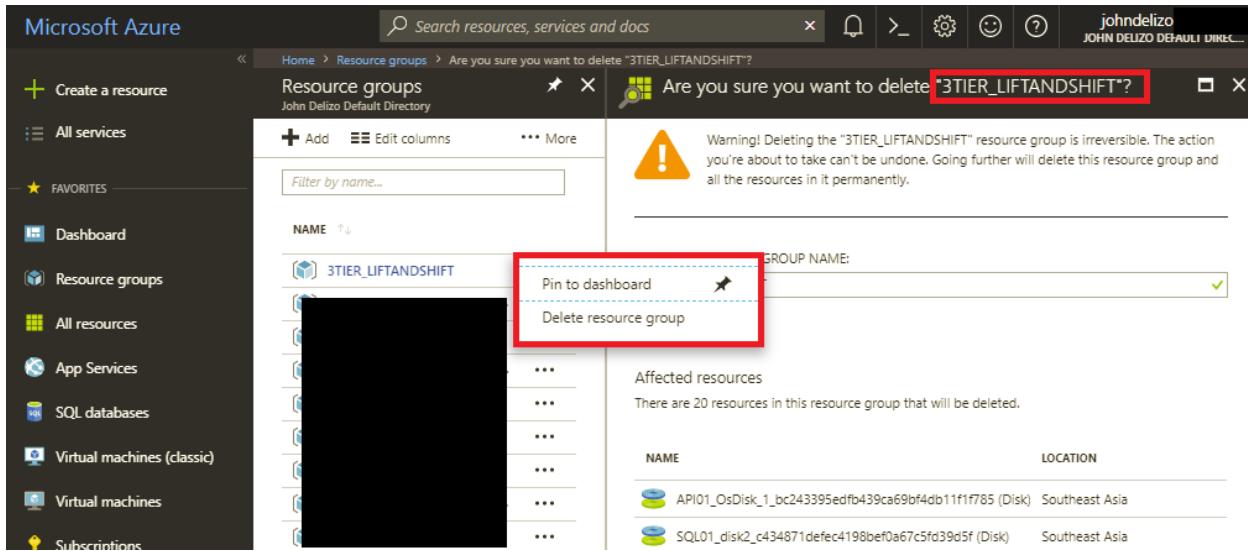
Go back to Azure Portal and go to your resource groups. Find the 3TIER_LIFTANDSHIFT_NETWORK and on the monitoring section, click the diagram. This should show the diagram of your network.



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After the Hands On Lab, make sure that you clean your resource groups. To do this, simply navigate to the Resource Group, click the ellipsis and then click Delete resource group.



Note that this action is permanent. To confirm retype the name of the resource group and then delete.

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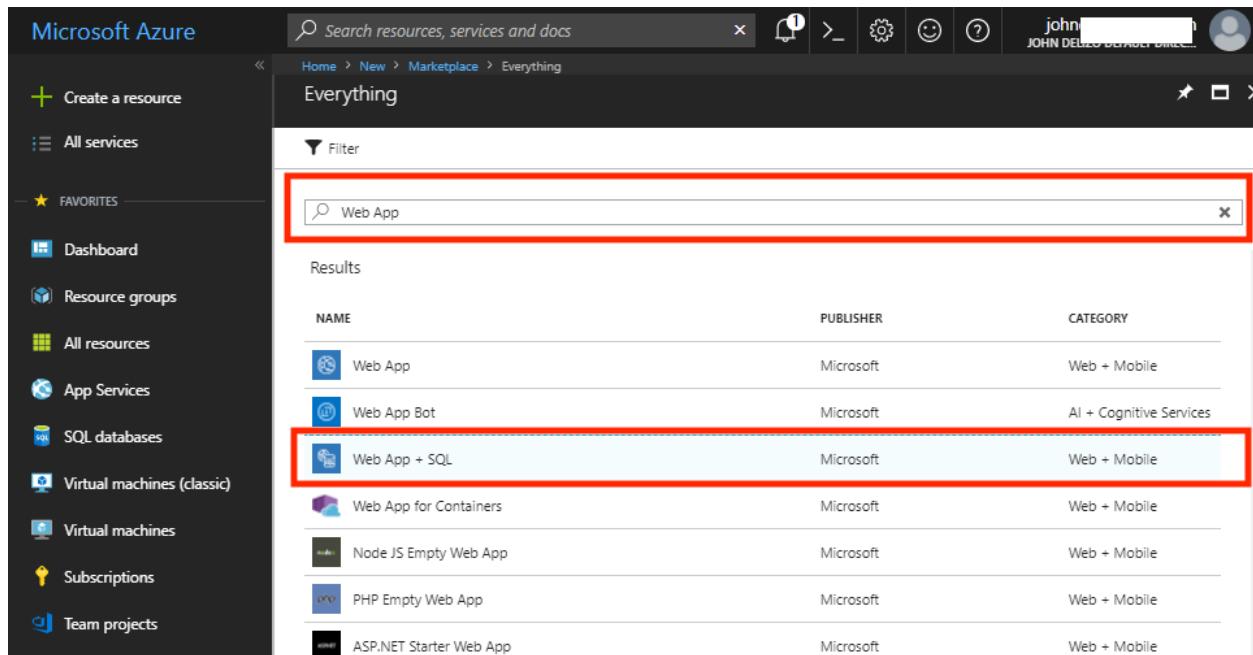
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Hands on Labs Deploying PAAS Solution

Lift and Shift Scenario Using Azure Portal.

Login to your account in the Azure portal.

In the portal click create a resource and search for Web App + SQL.



The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various navigation options like Dashboard, Resource groups, App Services, and Virtual machines. The main area has a search bar at the top with the placeholder 'Search resources, services and docs'. Below the search bar, the URL shows 'Home > New > Marketplace > Everything'. A 'Create a resource' button is visible on the left. The main content area is titled 'Everything' and contains a search bar with 'Web App' typed in. Below it, a table lists several Azure service offerings. The 'Web App + SQL' row is highlighted with a red box. The table columns are NAME, PUBLISHER, and CATEGORY. Other visible rows include 'Web App', 'Web App Bot', 'Web App for Containers', 'Node JS Empty Web App', 'PHP Empty Web App', and 'ASP.NET Starter Web App'. All listed services are published by Microsoft and fall under the 'Web + Mobile' category.

NAME	PUBLISHER	CATEGORY
Web App	Microsoft	Web + Mobile
Web App Bot	Microsoft	AI + Cognitive Services
Web App + SQL	Microsoft	Web + Mobile
Web App for Containers	Microsoft	Web + Mobile
Node JS Empty Web App	Microsoft	Web + Mobile
PHP Empty Web App	Microsoft	Web + Mobile
ASP.NET Starter Web App	Microsoft	Web + Mobile

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Click Create.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various service icons like Dashboard, Resource groups, and App Services. The main area is titled 'Web App + SQL' under 'Everything'. A search bar at the top says 'Search resources, services and docs'. Below the title, there's a brief description: 'Create and deploy web sites in seconds, as powerful as you need them'. It highlights that Azure Web Sites offers secure and flexible development, deployment, and scaling options. A list of benefits includes: Fastest way to build for the cloud, Provision and deploy fast, Secure platform that scales automatically, Great experience for Visual Studio developers, Open and flexible for everyone, and Monitor, alert, and auto scale (preview). There are social sharing icons for Twitter, Facebook, LinkedIn, YouTube, Google+, and Email. A large red box highlights the 'Create' button at the bottom right of the main content area.

Use the following details to create the Web App and create a new resource group.

This screenshot shows the 'Create' step for a 'Web App + SQL' resource. The left sidebar is identical to the previous screenshot. The main area has a heading 'Web App + SQL' with a 'Create' link below it. The form fields are outlined with a red border:

- App name:** johndelizo-liftandrun (with '.azurewebsites.net' suffix)
- Subscription:** Visual Studio Premium with MSDN
- Resource Group:** Create new (radio button selected) - 'johndelizo-liftandrun'
- App Service plan/Location:** ServicePlan686102fd-b5d5(Centr...)
- SQL Database:** Configure required settings
- Application Insights:** On (button highlighted with a red box)

At the bottom, there's a 'Pin to dashboard' checkbox and two buttons: 'Create' (highlighted with a red box) and 'Automation options'.

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Create a new App Service plan and make sure to use South East Asia as the location

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation bar includes 'Create a resource', 'All services', 'FAVORITES' (with 'Dashboard', 'Resource groups', 'All resources', 'App Services', 'SQL databases', 'Virtual machines (classical)', 'Virtual machines', 'Subscriptions', 'Team projects', and 'Team Services accounts'), and 'Application Insights'.

The main area shows a 'Web App + SQL' configuration. The 'App + SQL' tab is selected. In the 'App Service plan' section, a tooltip explains that an App Service plan is a container for your app, determining location, features, cost, and compute resources. A red box highlights the 'Create new' button.

On the right, a 'New App Service Plan' dialog box is open, titled 'Create a plan for the web app'. It contains fields for 'App Service plan' (set to 'johndelizo-liftandrun-serviceplan'), 'Location' (set to 'Southeast Asia'), and 'Pricing tier' (set to 'S1 Standard'). A red box highlights these three fields.

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Change the size of the App Service plan to Free or Shared Service plan.

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation bar includes 'Create a resource', 'All services', 'FAVORITES' (with 'Dashboard' selected), and various service icons like App Services, SQL databases, and Virtual machines. The main area displays a 'Service plan' configuration dialog. It shows the 'App Service Plan' name as 'johndelizo-liftandrun-serviceplan', the location as 'Southeast Asia', and the 'Pricing tier' as 'Standard'. To the right, a 'Choose your pricing tier' dialog is open, listing three plans: F1 Free (USD/MONTH (ESTIMATED) 0.00), D1 Shared* (USD/MONTH (ESTIMATED) 9.67), and S1 Standard (USD/MONTH (ESTIMATED) 32.74). The F1 Free plan is highlighted with a dashed blue border. At the bottom of the dialog are 'OK' and 'Select' buttons.

Click OK.

The screenshot shows the Microsoft Azure portal interface. The left sidebar is identical to the previous screenshot. The main area displays a 'New App Service Plan' dialog. It shows the 'App Service plan' name as 'johndelizo-liftandrun-serviceplan', the 'Location' as 'Southeast Asia', and the 'Pricing tier' as 'F1 Free'. A red box highlights the 'Pricing tier' section. At the bottom are 'OK' and 'Cancel' buttons.

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After creating the App Service Plan, configure the SQL Database.

The screenshot shows the Microsoft Azure portal interface. On the left, the sidebar lists various services like Dashboard, Resource groups, App Services, and SQL databases. The main area shows a 'Web App + SQL' blade with a 'Create' button. A red box highlights the 'App name' field containing 'johndelizo-liftandrun'. Another red box highlights the 'Create a new database' button in the adjacent 'Database' blade.

Create a new Database with the following details:

The screenshot shows the Microsoft Azure portal interface. The sidebar includes 'SQL databases'. The main area shows a 'SQL Database' blade with a 'Create a new database' button. A red box highlights the 'Name' field with the value 'johndelizo-liftandrun-db'. Another red box highlights the 'Target server' section with the value 'Configure required settings'. At the bottom right, there is a 'Select' button.

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This new database can be hosted on a new SQL Server. Provide the details such as the server name and note of the SQL Server Login details. Make sure that the location is also South East Asia.

The screenshot shows the Microsoft Azure portal interface. On the left, the sidebar lists various services like Dashboard, Resource groups, App Services, etc. The main area shows a search bar and breadcrumb navigation: Home > New > Marketplace > Everything > Web App + SQL > Web App + SQL > Database > SQL Database > Server > New server. A modal window titled "Create a new server" is open, prompting for "Server name" (johndelizo-liftandrun-dbserver), "Server admin login" (johndelizo), "Password", "Confirm password", "Location" (Southeast Asia), and a checkbox for "Allow azure services to access server". The "Location" field is highlighted with a red border.

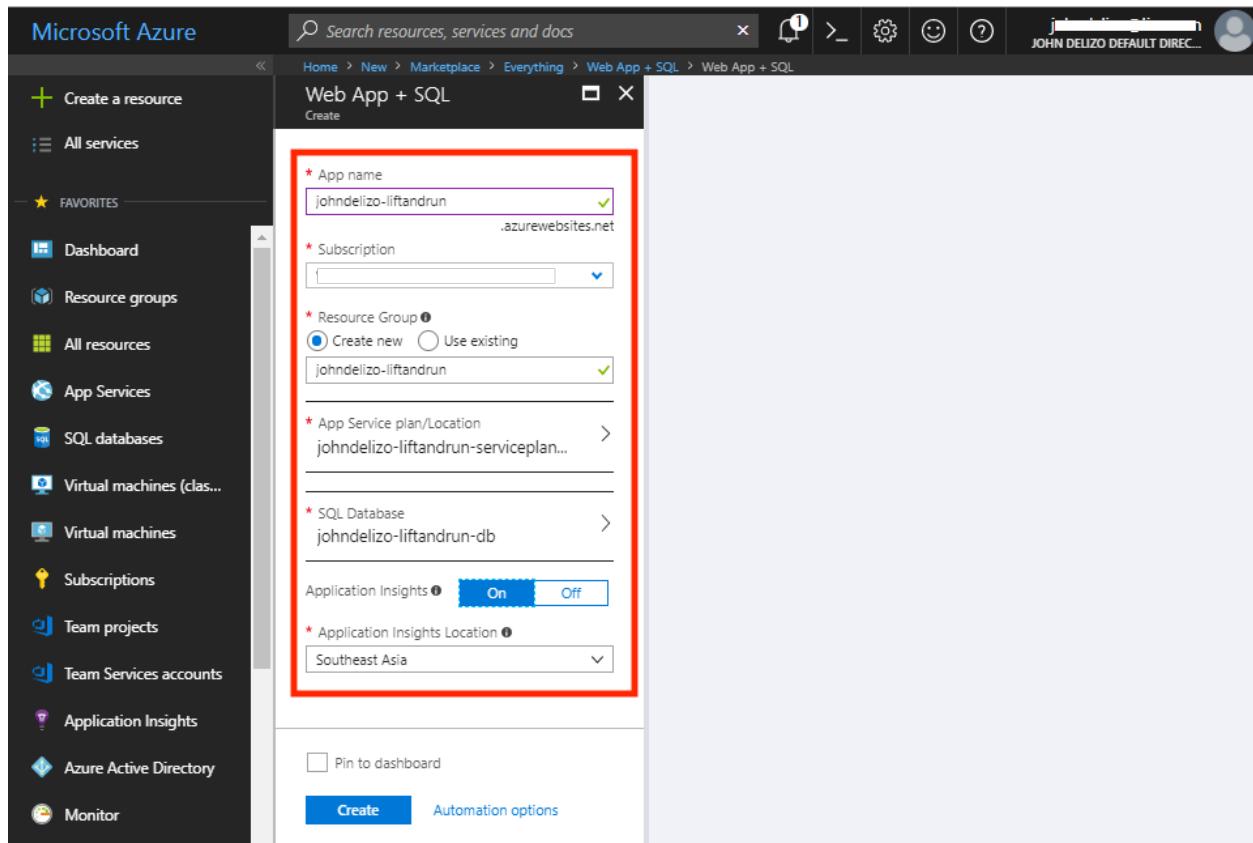
You can choose the Free pricing tier for now.

The screenshot shows the Microsoft Azure portal interface. The sidebar includes "All services" and "SQL databases". The main area shows a search bar and breadcrumb navigation: Home > New > Marketplace > Everything > Web App + SQL > Web App + SQL > Database > SQL Database. A modal window titled "Create a new database" is open, prompting for "Name" (johndelizo-liftandrun-db), "Target server" (johndelizo-liftandrun-dbserver), "Pricing tier" (Free: 5 DTU, 32 MB), and "Collation" (SQL_Latin1_General_CI_AS). The "Pricing tier" field is highlighted with a red border.

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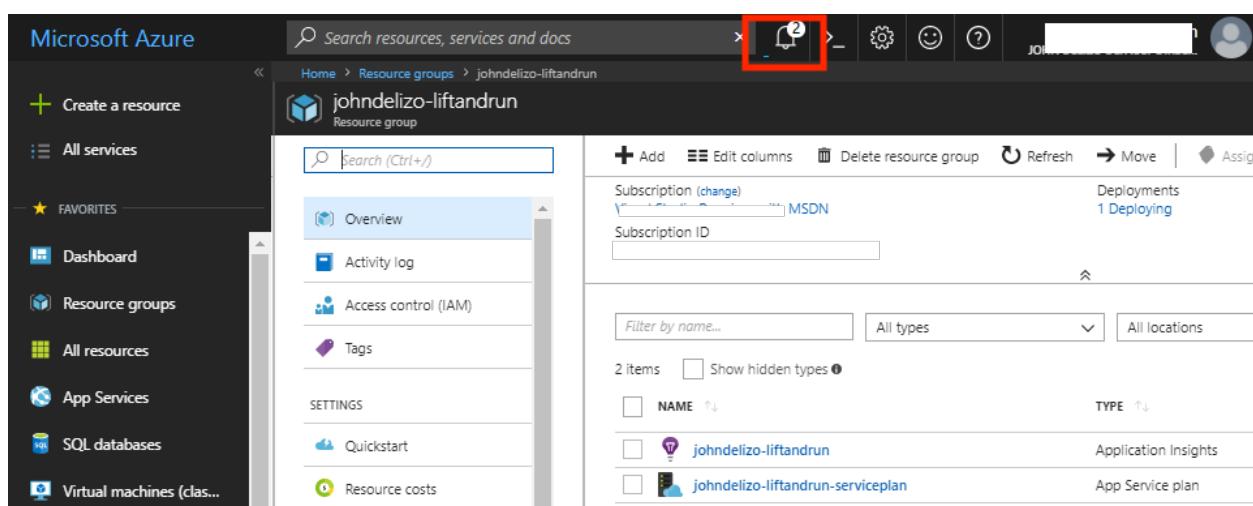
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Now that we have the configuration for our Web App + SQL, click create.



The screenshot shows the Microsoft Azure portal interface for creating a 'Web App + SQL'. The left sidebar lists various services like Dashboard, Resource groups, App Services, etc. The main area is titled 'Web App + SQL' with a 'Create' button. A red box highlights the 'App name' input field, which contains 'johndelizo-liftandrun'. Other fields include 'Subscription' (dropdown), 'Resource Group' (radio buttons for 'Create new' or 'Use existing', with 'Create new' selected), 'App Service plan/Location' (dropdown), 'SQL Database' (dropdown), 'Application Insights' (switch set to 'On'), and 'Application Insights Location' (dropdown). At the bottom are 'Create' and 'Automation options' buttons.

Wait for the deployment to complete.

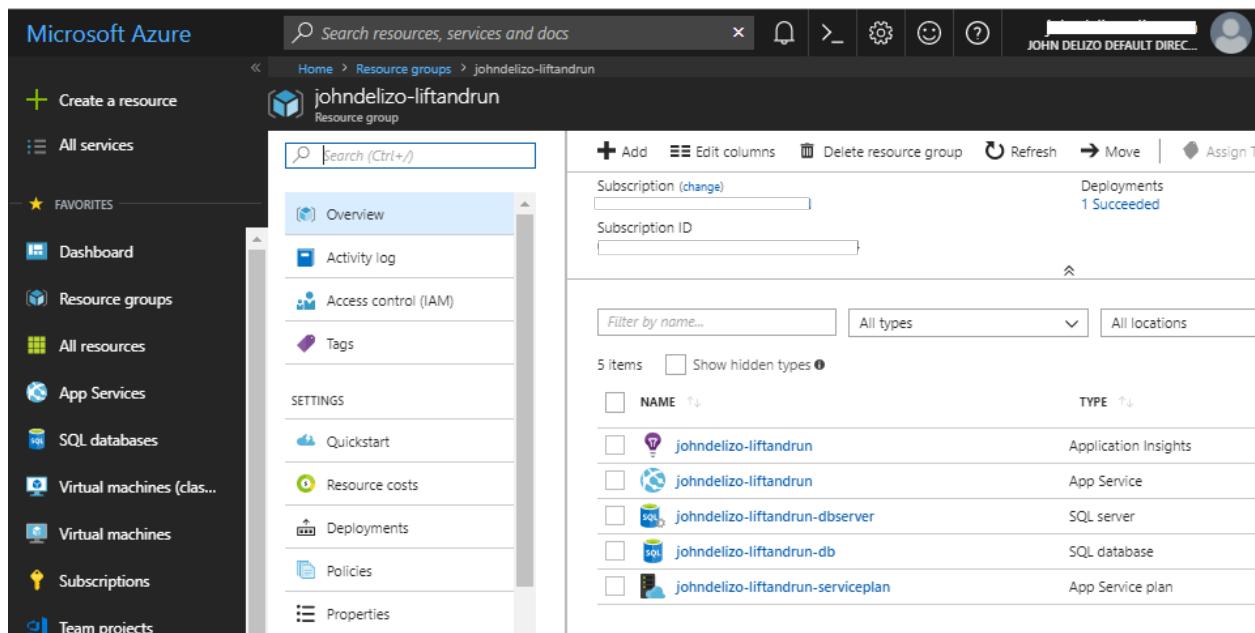


The screenshot shows the Microsoft Azure portal interface for the 'johndelizo-liftandrun' resource group. The left sidebar lists various services like Dashboard, Resource groups, App Services, etc. The main area shows the 'Overview' tab for the resource group. A red box highlights the notification bell icon in the top right corner of the header bar. The header also shows the resource group name 'johndelizo-liftandrun' and the user 'JOHN DELIZO DEFAULT DIRE...'. The main content area shows the resource group details, including 'Subscription (change)' set to 'MSDN', 'Deployments 1 Deploying', and a list of resources: 'johndelizo-liftandrun' (Application Insights) and 'johndelizo-liftandrun-serviceplan' (App Service plan).

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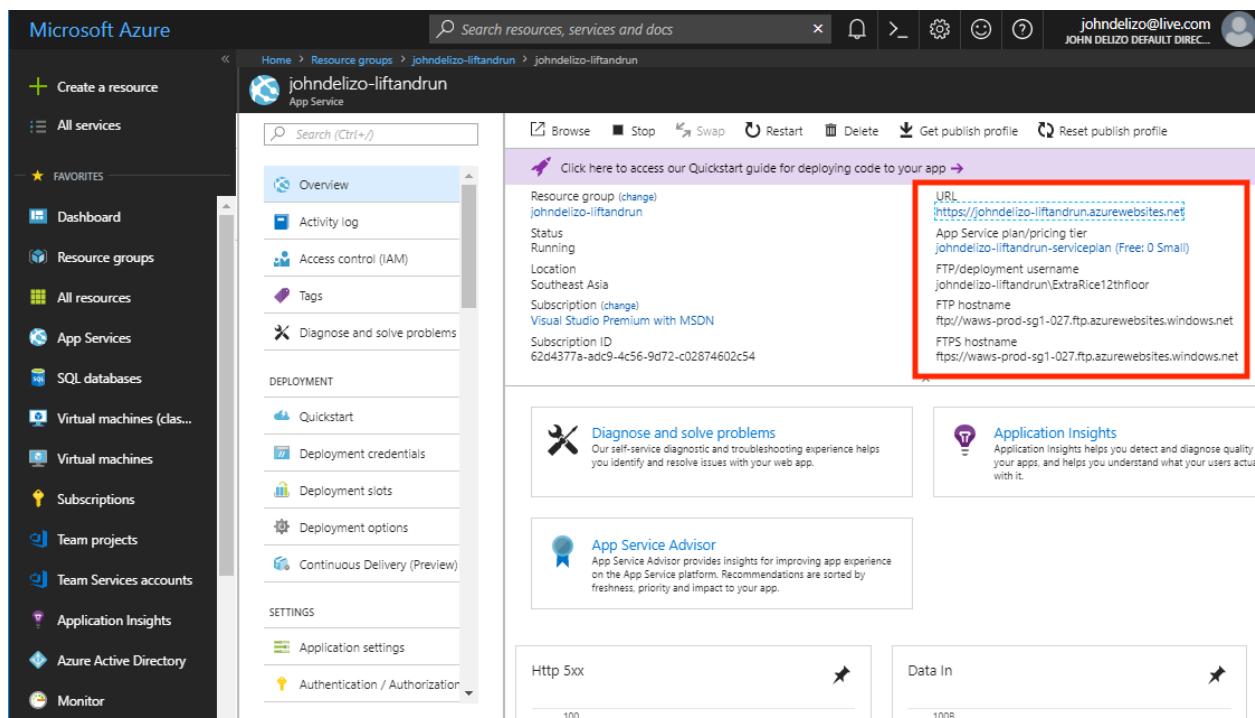
Once the deployment is completed, click the App Service that we just created to view its overview.



The screenshot shows the Microsoft Azure portal interface. On the left, the navigation bar includes 'Create a resource', 'All services', 'FAVORITES' (Dashboard, Resource groups, All resources, App Services, SQL databases, Virtual machines (classic), Virtual machines, Subscriptions, Team projects), and 'johnodelizo-liftandrun' (Resource group). The main content area is titled 'johnodelizo-liftandrun' (Resource group) and shows the following details:

- Subscription (change):
- Deployment: 1 Succeeded
- Filter by name...: All types: All locations:
- 5 items: Show hidden types
- NAME: TYPE:
- johnodelizo-liftandrun: Application Insights
- johnodelizo-liftandrun: App Service
- johnodelizo-liftandrun-dbserver: SQL server
- johnodelizo-liftandrun-db: SQL database
- johnodelizo-liftandrun-serviceplan: App Service plan

On the overview settings, click the URL to open it on a new window.



The screenshot shows the Microsoft Azure portal interface, specifically the 'Overview' section for the 'johnodelizo-liftandrun' App Service. The left sidebar includes 'Create a resource', 'All services', 'FAVORITES' (Dashboard, Resource groups, All resources, App Services, SQL databases, Virtual machines (classic), Virtual machines, Subscriptions, Team projects, Team Services accounts, Application Insights, Azure Active Directory, Monitor), and 'johnodelizo-liftandrun' (App Service).

The main content area displays the following information:

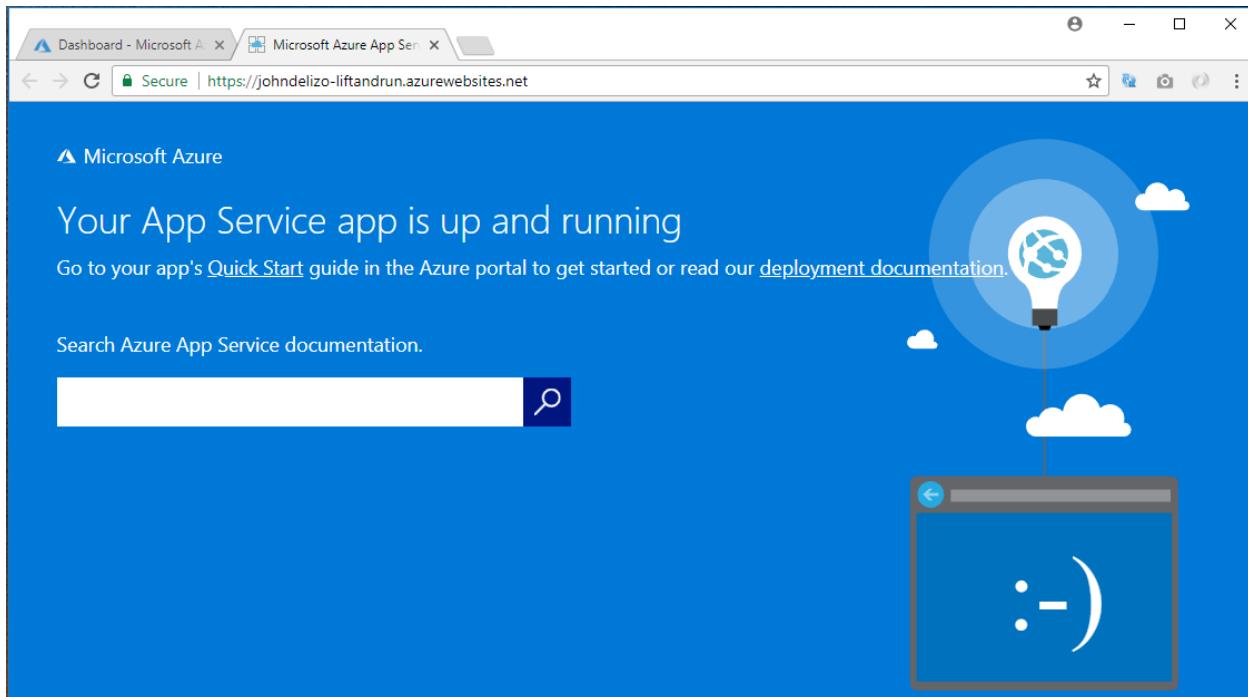
- Click here to access our Quickstart guide for deploying code to your app →
- Resource group (change): johnodelizo-liftandrun
- Status: Running
- Location: Southeast Asia
- Subscription (change): Visual Studio Premium with MSDN
- Subscription ID: 62d4577a-adc9-4c56-9d72-c02874602c54
- URL: <https://johnodelizo-liftandrun.azurewebsites.net> (highlighted with a red box)
- App Service plan/pricing tier: johnodelizo-liftandrun-serviceplan (Free: 0 Small)
- FTP/deployment username: johnodelizo-liftandrun\ExtraRice12thfloor
- FTP hostname: ftp://waws-prod-sg1-027.ftp.azurewebsites.windows.net
- FTPS hostname: https://waws-prod-sg1-027.ftp.azurewebsites.windows.net

Below the URL, there are sections for 'Diagnose and solve problems', 'Application Insights', 'App Service Advisor', 'Http 5xx' (100), and 'Data In' (1008).

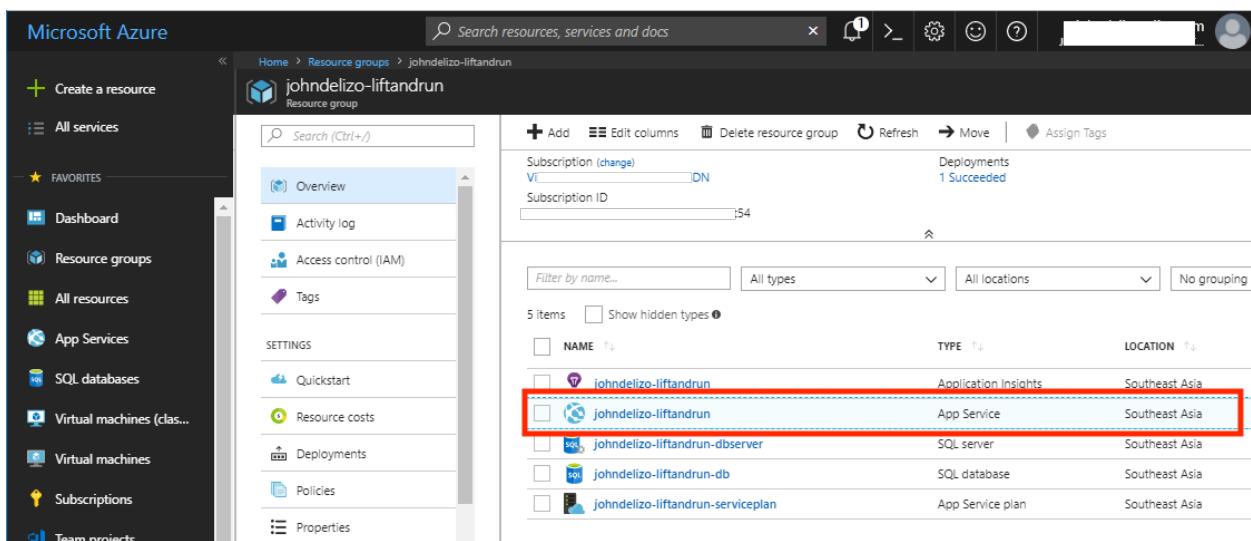
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Your placeholder website should already be running.



Now go back to your App Service and click deployment credentials



NAME	TYPE	LOCATION
johndelizo-liftandrun	Application Insights	Southeast Asia
johndelizo-liftandrun	App Service	Southeast Asia
johndelizo-liftandrun-dserver	SQL server	Southeast Asia
johndelizo-liftandrun-db	SQL database	Southeast Asia
johndelizo-liftandrun-serviceplan	App Service plan	Southeast Asia

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Add an FTP Username and enter your password twice. Then click Save.

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu includes 'Create a resource', 'All services', 'Favorites' (Dashboard, Resource groups, All resources, App Services, SQL databases, Virtual machines (classic), Virtual machines, Subscriptions, Team projects, Team Services accounts, Application Insights), and 'Application Insights'. The main content area is titled 'johndelizo-liftandrun - Deployment credentials' under 'App Service'. A sidebar on the right lists 'DEPLOYMENT' options: Quickstart, Deployment credentials (selected), Deployment slots, Deployment options, and Continuous Delivery (Preview). Under 'SETTINGS', it lists Application settings, Authentication / Authorization, Managed service identity, Backups, and Custom domains. The 'Deployment Credentials' section contains fields for 'FTP/deployment username' (johndelizoftpuser), 'Password' (redacted), and 'Confirm password' (redacted). These fields are highlighted with a red border. At the top right, there are 'Save' and 'Discard' buttons.

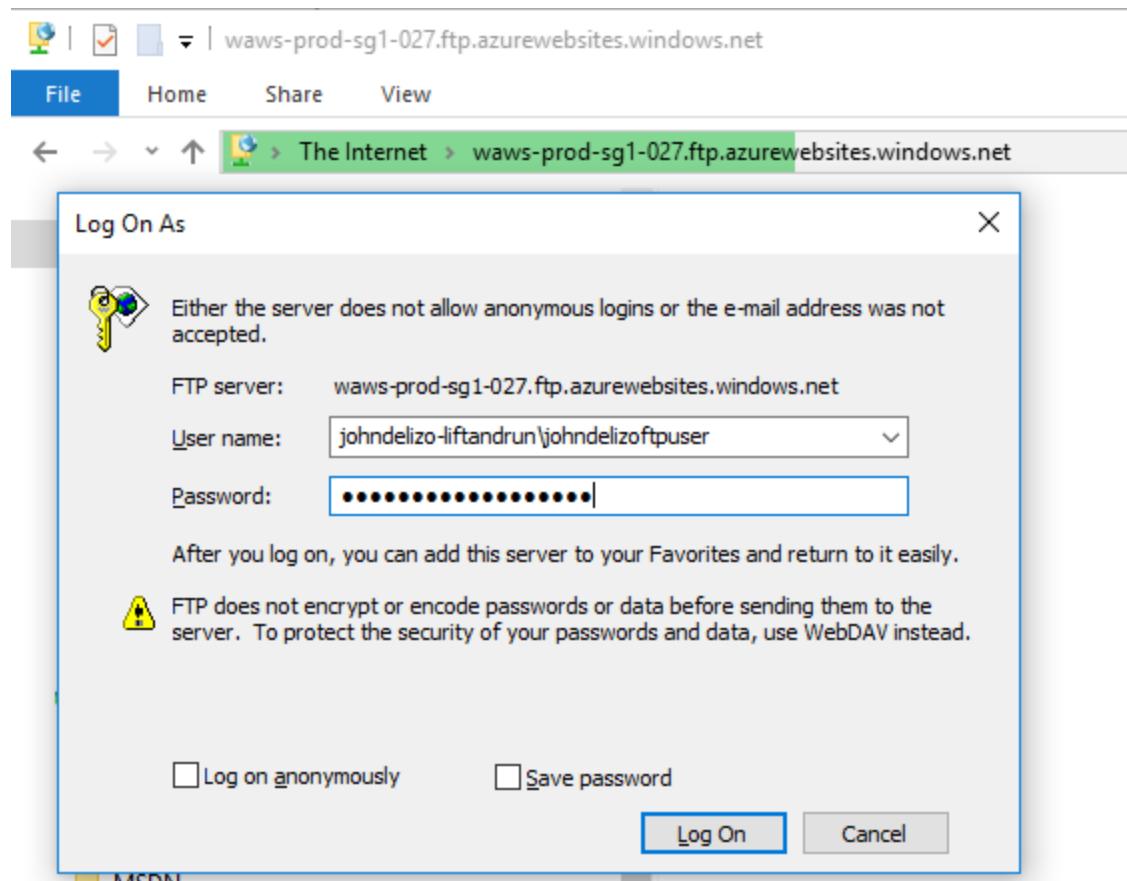
Going back to the overview settings would show the FTP hostname. Copy that and open with a windows explorer window.

The screenshot shows the Microsoft Azure portal interface for the 'johndelizo-liftandrun' app service. The left sidebar includes 'Overview', 'Activity log', 'Access control (IAM)', 'Tags', 'Diagnose and solve problems', 'Deployment' (Quickstart, Deployment credentials, Deployment slots, Deployment options, Continuous Delivery (Preview)), and 'SETTINGS'. The main content area shows the app's details: Resource group (johndelizo-liftandrun), Status (Running), Location (Southeast Asia), Subscription (johndelizo-liftandrun-serviceplan (Free: 0 Small)), URL (https://johndelizo-liftandrun.azurewebsites.net), and FTP/deployment username (johndelizo-liftandrun\johndelizoftpuser). The 'Deployment credentials' section also lists the FTP hostname (ftp://waws-prod-sg1-027.ftp.azurewebsites.windows.net) and the HTTPS hostname (https://waws-prod-sg1-027.ftp.azurewebsites.windows.net). These two hostnames are highlighted with a red border. Below the details, there are sections for 'Diagnose and solve problems', 'Application Insights', and 'App Service Advisor'.

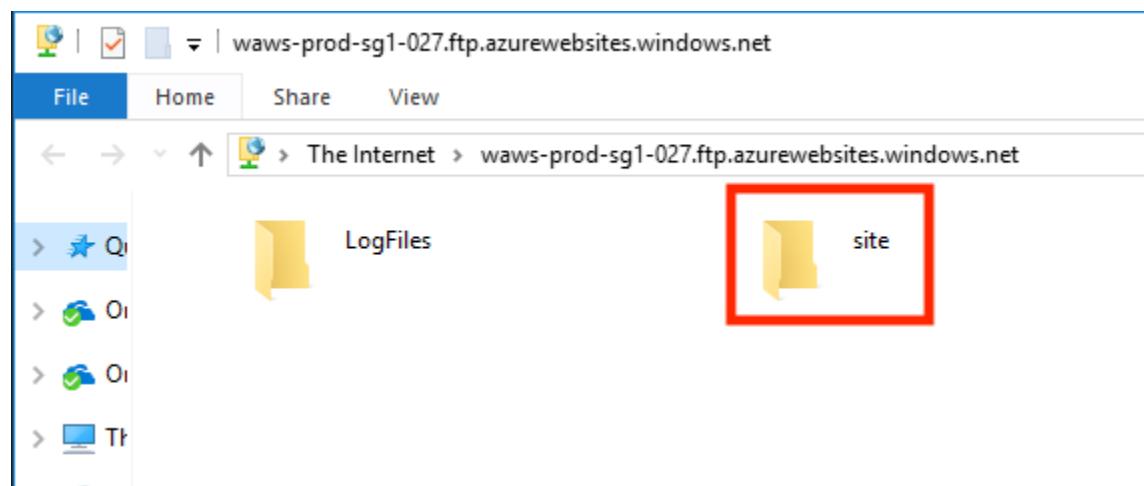
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Use the FTP credentials that you created on the earlier step.



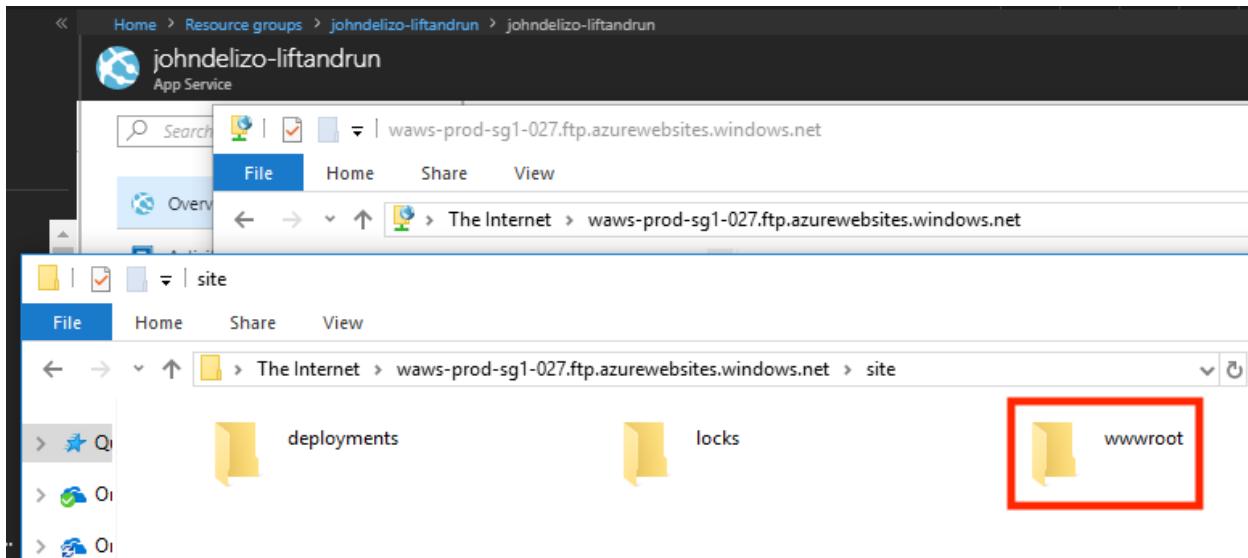
Once logged in, navigate to the Site folder and then to wwwroot.



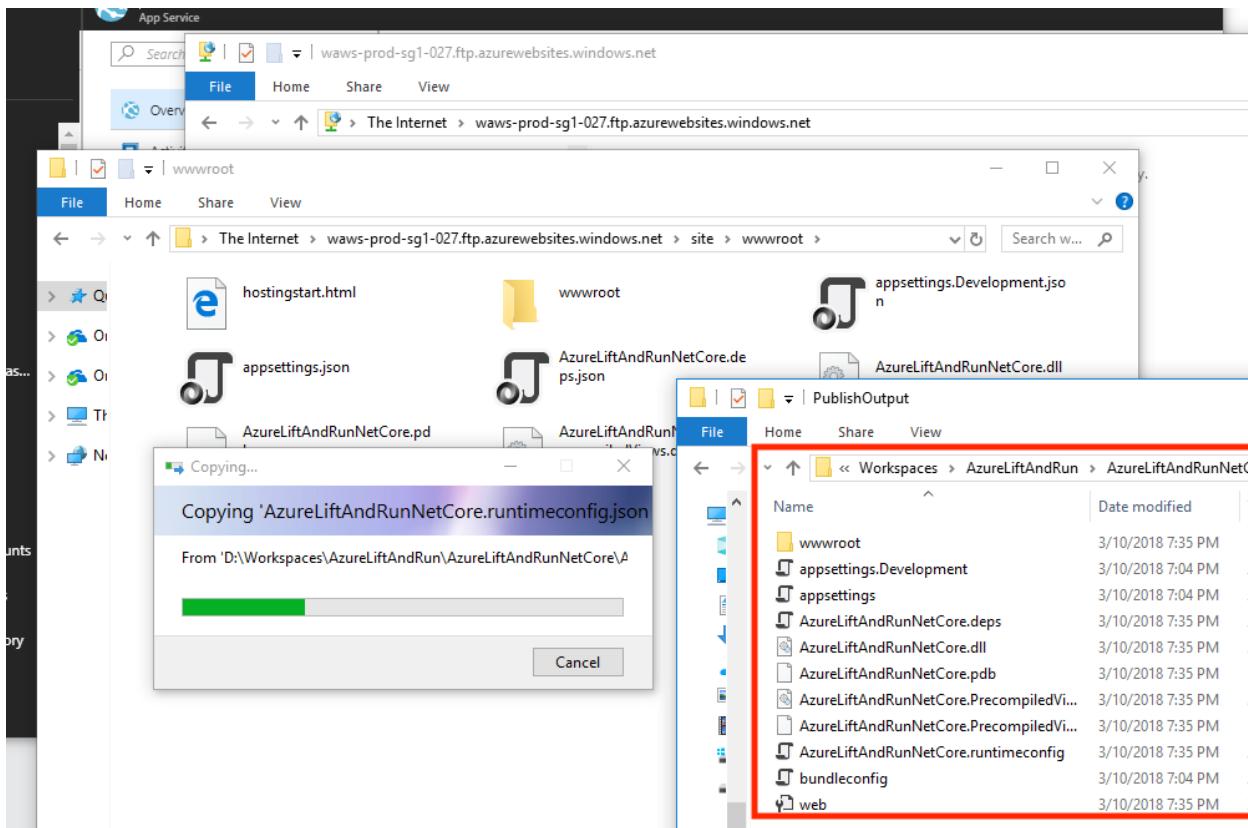
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Open the wwwroot folder.



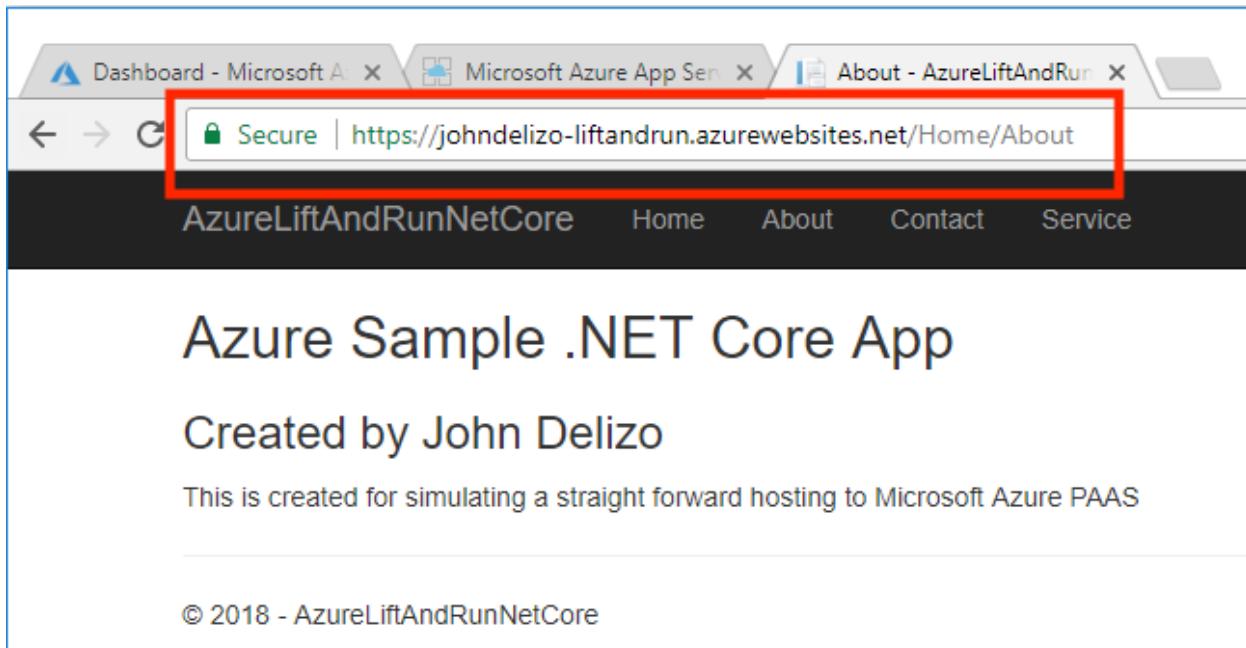
Copy the contents of the AzureLiftAndRunNetCore-Release.zip to this location.



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Once copied, refresh the page of the app service from your browser and you should see the new web app running. Click About and Contact to see if the other pages are working.



The screenshot shows a Microsoft Edge browser window with three tabs open: 'Dashboard - Microsoft A...', 'Microsoft Azure App Ser...', and 'About - AzureLiftAndRun...'. The current tab is 'About - AzureLiftAndRun...' with the URL <https://johndelizo-liftandrun.azurewebsites.net/Home/About>. The page content is as follows:

Azure Sample .NET Core App

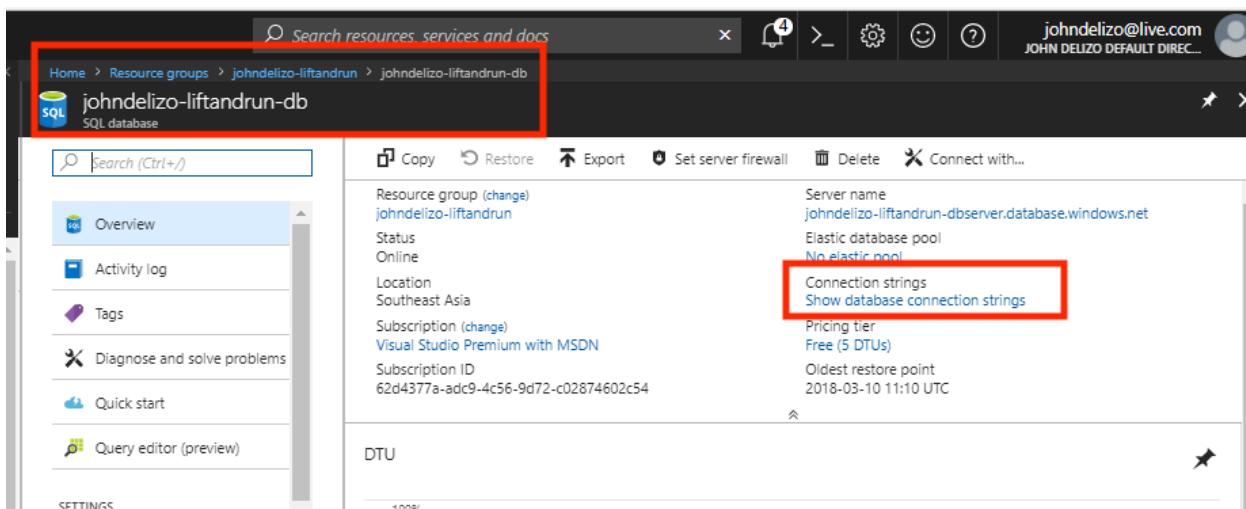
Created by John Delizo

This is created for simulating a straight forward hosting to Microsoft Azure PAAS

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To integrate with our database, go back to your Resource group and open the database.

Once on the SQL Database instance overview settings, click Show database connection strings.



The screenshot shows the Azure portal interface for the 'johndelizo-liftandrun-db' SQL database. The top navigation bar shows the resource group path: Home > Resource groups > johndelizo-liftandrun > johndelizo-liftandrun-db. The left sidebar has options: Overview, Activity log, Tags, Diagnose and solve problems, Quick start, and Query editor (preview). The main content area shows the database details:

- Resource group (change): johndelizo-liftandrun
- Status: Online
- Location: Southeast Asia
- Subscription (change): Visual Studio Premium with MSDN
- Subscription ID: 62d4377a-adc9-4c56-9d72-c02874602c54
- Server name: johndelizo-liftandrun-dbserver.database.windows.net
- Elastic database pool: No elastic pool
- Pricing tier: Free (5 DTUs)
- Oldest restore point: 2018-03-10 11:10 UTC

Under the 'Connection strings' section, there is a link: [Show database connection strings](#), which is highlighted with a red box.

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Copy the following text from ADO.NET (SQL Authentication). Note that the UserID and Password are replaced with a placeholder. You need to specify the username and password you provided on the creation of the database on to the next step.

The screenshot shows the Azure Portal interface. The left sidebar has a search bar and links for Overview, Activity log, Tags, Diagnose and solve problems, Quick start, and Query editor (preview). The main area shows a resource group named "johndelizo-liftandrun" with a database named "johndelizo-liftandrun-db". Under "Connection strings", the ADO.NET tab is selected. A red box highlights the connection string details:

```
Server=tcp:johndelizo-liftandrun-dbserver.database.windows.net,1433;Initial Catalog=johndelizo-liftandrun-db;Persist Security Info=False;User ID=[your_username];Password=[your_password];MultipleActiveResultSets=False;Encrypt=True;TrustServerCertificate=False;Connection Timeout=30;
```

Go back to the contents of the zip file. Open appsettings.json with notepad.

Replace the DefaultConnection value with the new connection strings you copied from Azure Portal.

The screenshot shows a Notepad window with the file "appsettings - Notepad". The left sidebar lists files: wwwroot, appsettings.Development, appsettings, AzureLiftAndRunNetCore.csproj, AzureLiftAndRunNetCore.csproj.lock, AzureLiftAndRunNetCore.csproj.xml, AzureLiftAndRunNetCore.csproj.user, AzureLiftAndRunNetCore.csproj.bak, AzureLiftAndRunNetCore.csproj.suo, bundleconfig, and web. The main content of the Notepad shows the JSON configuration file:

```
{
  "ConnectionStrings": {
    "DefaultConnection": "Server=tcp:johndelizo-liftandrun-dbserver.database.windows.net,1433;Initial Catalog=johndelizo-liftandrun-db;Persist Security Info=False;User ID=[your_username];Password=[your_password];MultipleActiveResultSets=False;Encrypt=True;TrustServerCertificate=False;Connection Timeout=30;"
  },
  "Logging": {
    "IncludeScopes": false,
    "LogLevel": {
      "Default": "Warning"
    }
  }
}
```

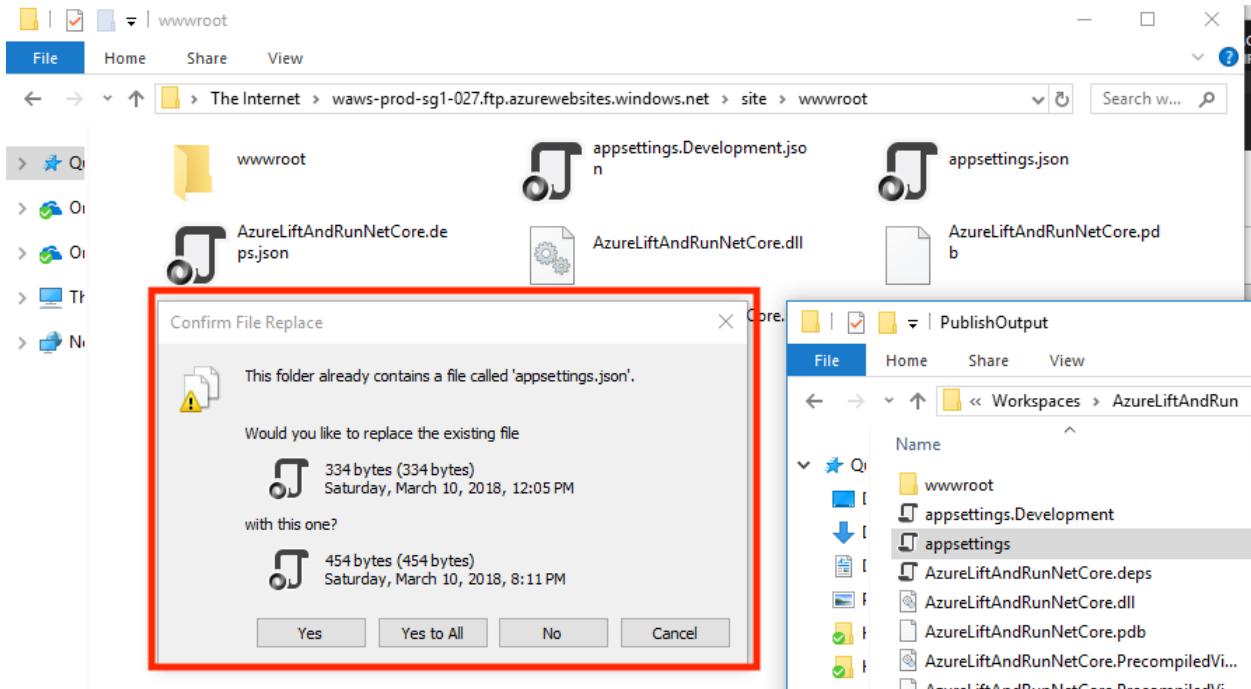
A red box highlights the "DefaultConnection" value in the JSON code.

Save your changes.

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After saving the changes to the appsettings.json, re-upload the file to the FTP location and overwrite the existing file.



Go back to Azure portal and open the SQL database again. Use the Query editor.

Login with the username and password you provided during setup.

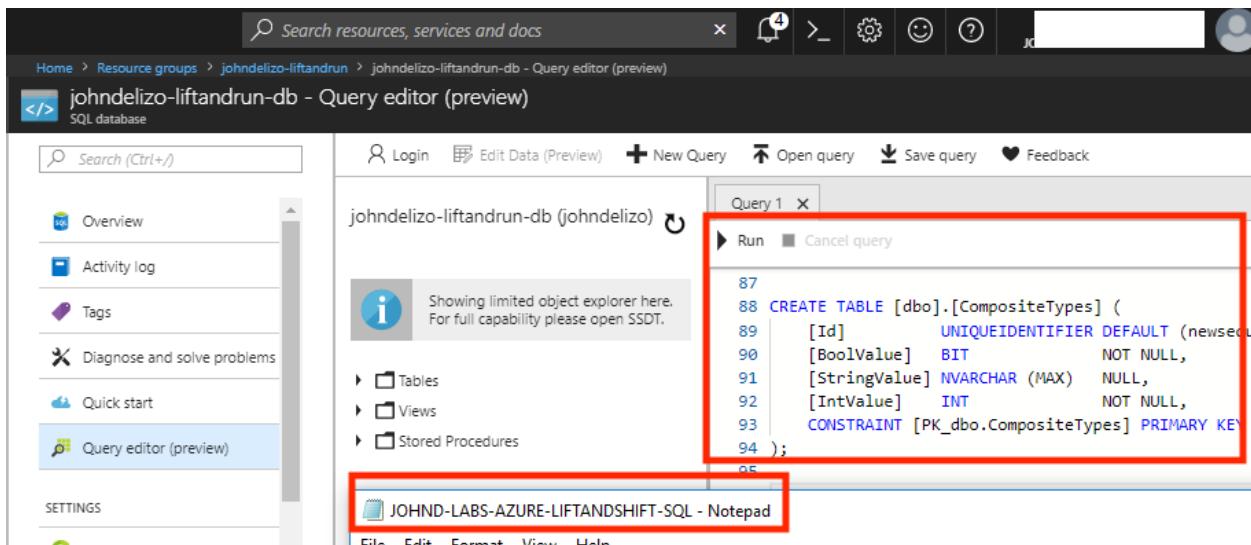
A screenshot of the Azure portal showing the 'johndelizo-liftandrun-db - Query editor (preview)' page. On the left, a sidebar lists 'Overview', 'Activity log', 'Tags', 'Diagnose and solve problems', 'Quick start', and 'Query editor (preview)', with 'Query editor (preview)' highlighted with a red box. At the top, there's a 'Login' button and a 'Login' dialog box. The dialog box contains fields for 'Authorization type' (set to 'SQL server authentication'), 'Login' (set to 'johndelizo'), and 'Password' (represented by a series of dots). Both the 'Login' button and the 'OK' button in the dialog are highlighted with red boxes. The status bar at the bottom right says 'Welcome to SQL Server Data E'.

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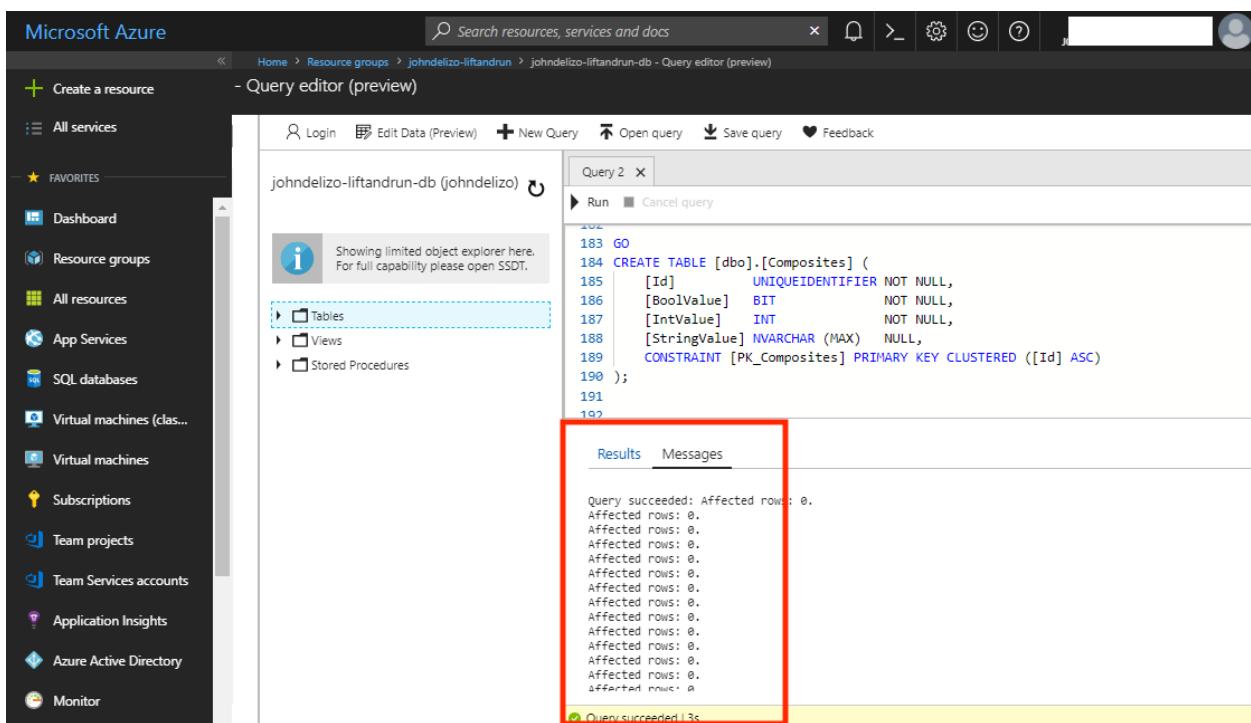
Click new query.

A copy of the required SQL tables is in your Hands-On files (JOHND-LABS-AZURE-LIFTANDSHIFT-SQL.txt). Copy its content and paste it on the new query window.



Execute the query by clicking run.

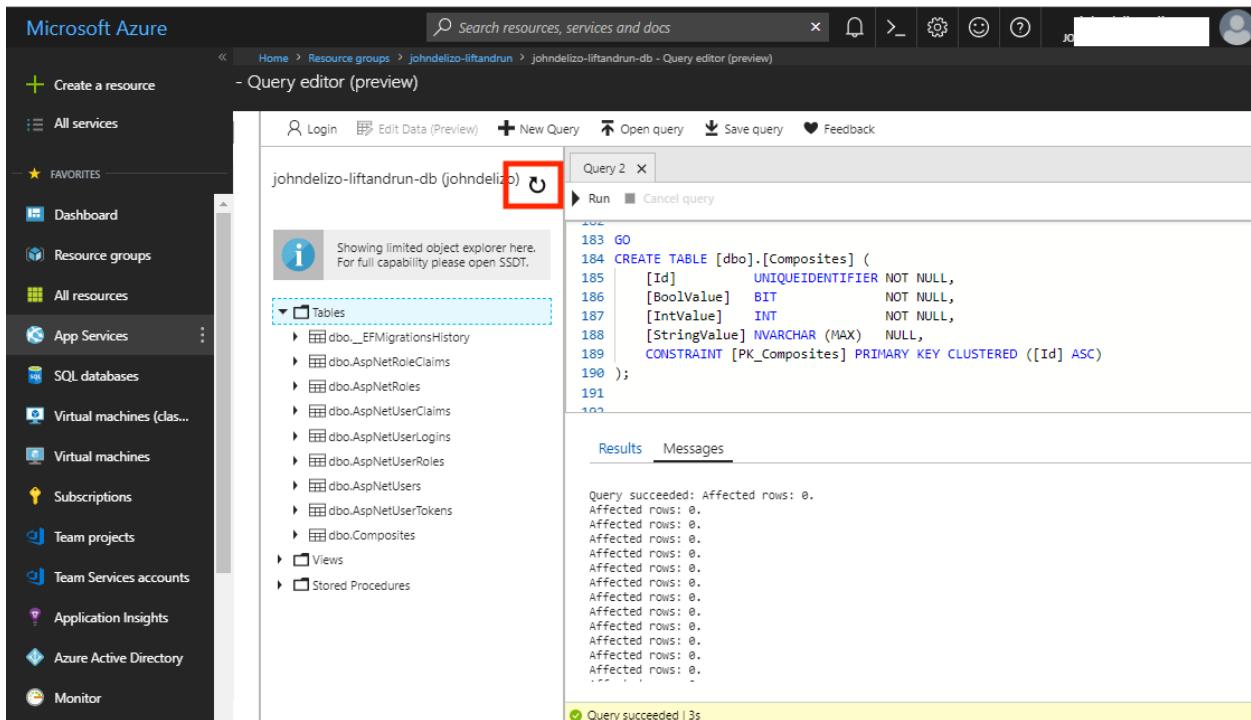
There should be no errors and there must be a query successful prompt.



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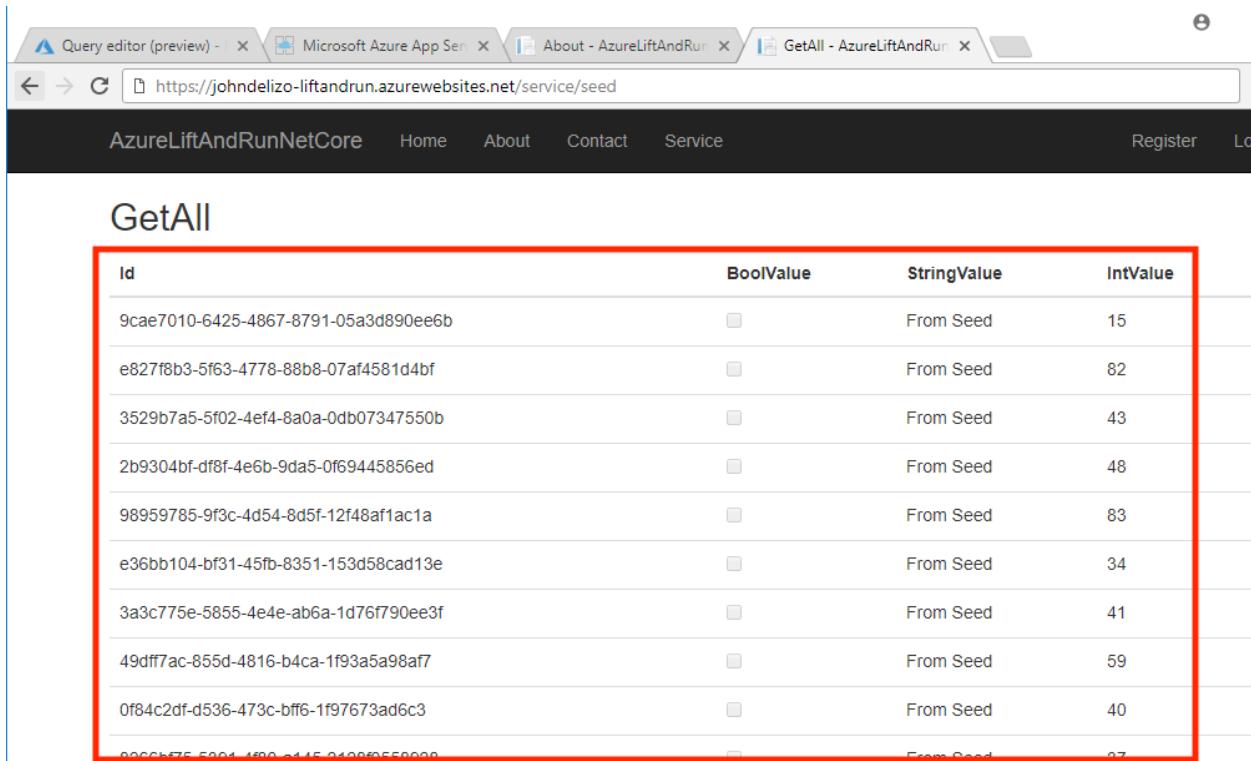
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Refresh the tables to see if the tables has been created.



The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is visible with options like All services, Favorites, Dashboard, Resource groups, All resources, App Services, SQL databases, Virtual machines (classic), Virtual machines, Subscriptions, Team projects, Team Services accounts, Application Insights, Azure Active Directory, and Monitor. The main area is titled "Query editor (preview)" and shows a query being run against the database "johndelizo-liftandrun-db". The query creates a table named "Composites" with columns [Id] (uniqueidentifier), [BoolValue] (bit), [IntValue] (int), and [StringValue] (nvarchar(max)). A red box highlights the "Run" button. The results section shows the query succeeded with 0 affected rows.

Now on a new browser tab, navigate to your site adding /services/seed to the URL.



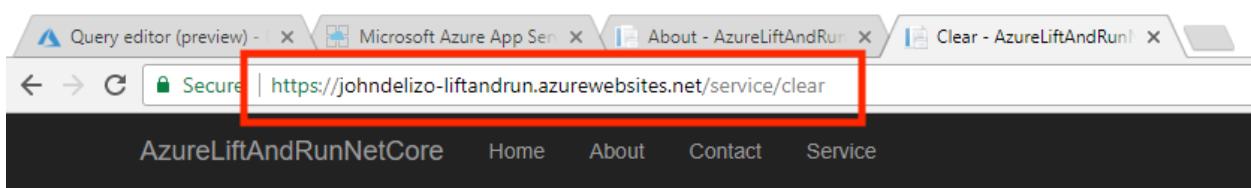
The screenshot shows a browser window with multiple tabs. The active tab is "GetAll - AzureLiftAndRun" and the URL is "https://johndelizo-liftandrun.azurewebsites.net/service/seed". The page content is titled "GetAll" and displays a table with four columns: Id, BoolValue, StringValue, and IntValue. The table contains ten rows of data, each with a unique Id and corresponding values for BoolValue, StringValue, and IntValue. A red box highlights the entire table area.

Id	BoolValue	StringValue	IntValue
9cae7010-6425-4867-8791-05a3d890ee6b	<input type="checkbox"/>	From Seed	15
e827f8b3-5f63-4778-88b8-07af4581d4bf	<input type="checkbox"/>	From Seed	82
3529b7a5-5f02-4ef4-8a0a-0db07347550b	<input type="checkbox"/>	From Seed	43
2b9304bf-df8f-4e6b-9da5-0f69445856ed	<input type="checkbox"/>	From Seed	48
98959785-9f3c-4d54-8d5f-12f48af1ac1a	<input type="checkbox"/>	From Seed	83
e36bb104-bf31-45fb-8351-153d58cad13e	<input type="checkbox"/>	From Seed	34
3a3c775e-5855-4e4e-ab6a-1d76f790ee3f	<input type="checkbox"/>	From Seed	41
49dff7ac-855d-4816-b4ca-1f93a5a98af7	<input type="checkbox"/>	From Seed	59
0f84c2df-d536-473c-bfff-1f97673ad6c3	<input type="checkbox"/>	From Seed	40
9866b475-5031-4f90-a145-04200f555000	<input type="checkbox"/>	From Seed	27

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To clear the data, use /service/clear as part of your URL.



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This concludes your simple straight forward Azure PAAS deployment!

Good luck!