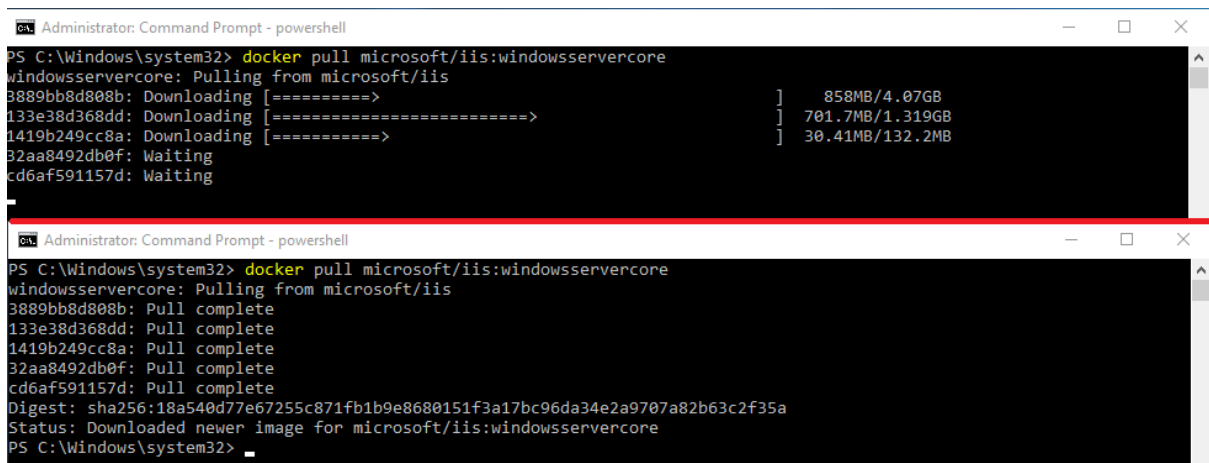


# Containers

## • Create and Prepare Containers

1. Create a VM that supports Containers
  - [Run this](#) on [Bash](#)
2. Connect to the VM.
3. Open a PowerShell console and run [Dockers.ps1](#)
4. When asked, choose option for windows containers and click download
5. When prompted, click restart.
6. Connect to the VM
7. Open a command prompt
8. Run this command on Command Prompt

***docker pull microsoft/iis:windowsservercore***



```
Administrator: Command Prompt - powershell
PS C:\Windows\system32> docker pull microsoft/iis:windowsservercore
windowsservercore: Pulling from microsoft/iis
3889bb8d808b: Downloading [=====>] 858MB/4.07GB
133e38d368dd: Downloading [=====>] 701.7MB/1.319GB
1419b249cc8a: Downloading [=====>] 30.41MB/132.2MB
32aa8492db0f: Waiting
cd6af591157d: Waiting
-

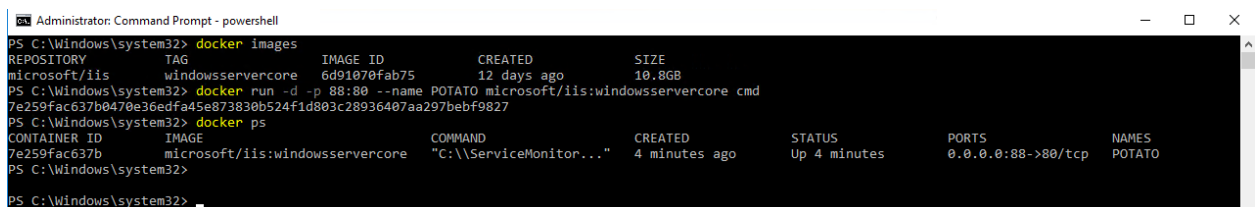
Administrator: Command Prompt - powershell
PS C:\Windows\system32> docker pull microsoft/iis:windowsservercore
windowsservercore: Pulling from microsoft/iis
3889bb8d808b: Pull complete
133e38d368dd: Pull complete
1419b249cc8a: Pull complete
32aa8492db0f: Pull complete
cd6af591157d: Pull complete
Digest: sha256:18a540d77e67255c871fb1b9e8680151f3a17bc96da34e2a9707a82b63c2f35a
Status: Downloaded newer image for microsoft/iis:windowsservercore
PS C:\Windows\system32>
```

## • Start Images

1. Run the following command to see docker images
2. To create a docker app run the following command

***Docker images***

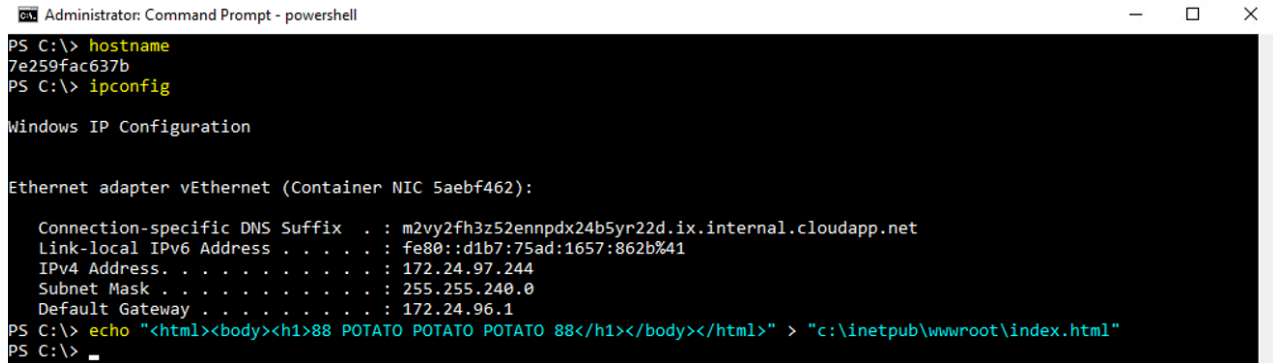
***docker run -d -p 81:80 --name <AnyName>  
microsoft/iis:windowsservercore***



```
Administrator: Command Prompt - powershell
PS C:\Windows\system32> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
microsoft/iis       windowsservercore  6d91070fab75       12 days ago        10.8GB
PS C:\Windows\system32> docker run -d -p 88:80 --name POTATO microsoft/iis:windowsservercore cmd
7e259fac637b0470e36edfa45e873830b524f1d803c28936407aa297bebf9827
PS C:\Windows\system32> docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
7e259fac637b       microsoft/iis:windowsservercore   "C:\ServiceMonitor..."   4 minutes ago      Up 4 minutes       0.0.0.0:88->80/tcp   POTATO
PS C:\Windows\system32>
```

- **Manage Content**

1. For accessing Potato command line type  
***docker exec -it Potato powershell***
2. To create an index html file with a simple content, type  
***echo "<html><body><h1>This is port 81 content</h1></body></html>" >***  
***"c:\inetpub\wwwroot\index.html"***



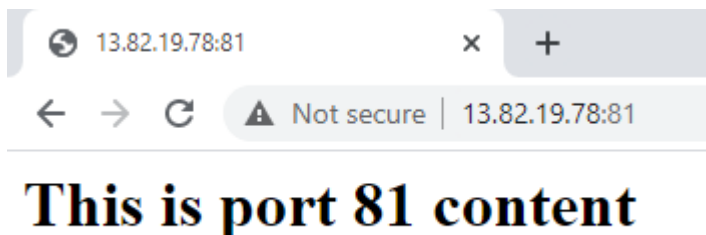
```
Administrator: Command Prompt - powershell
PS C:\> hostname
7e259fac637b
PS C:\> ipconfig

Windows IP Configuration

Ethernet adapter vEthernet (Container NIC 5aebf462):

    Connection-specific DNS Suffix  . : m2vy2fh3z52ennpdx24b5yr22d.ix.internal.cloudapp.net
    Link-local IPv6 Address . . . . . : fe80::d1b7:75ad:1657:862b%41
    IPv4 Address. . . . . : 172.24.97.244
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 172.24.96.1
PS C:\> echo "<html><body><h1>88 POTATO POTATO POTATO 88</h1></body></html>" > "c:\inetpub\wwwroot\index.html"
PS C:\>
```

3. Check for the web page content



- **Create an NLB**

1. New > Networking > Load Balancer>
  - a. Resource Group, Existing **Containers**
  - b. Name **AZNLB01**
  - c. Region **East US**
  - d. Type **Public**
  - e. SKU **Basic**
  - f. Public Ip New, static, **AZNLB01-Pip**

## Create load balancer ...

Resource group \*

Containers

Create new

Instance details

Name \*

AZNLB01

Region \*

(US) East US

Type \* ⓘ

☐ Internal ☒ Public

SKU \* ⓘ

☐ Standard ☒ Basic

Microsoft recommends Standard SKU load balancer for production workloads.

[Learn more about pricing differences between Standard and Basic SKU](#)

Tier

☒ Regional ☐ Global

Public IP address

Public IP address \* ⓘ

☒ Create new ☐ Use existing

Public IP address name \*

AZNLB01-Pip

Public IP address SKU

Basic

IP address assignment \*

☐ Dynamic ☒ Static

Add a public IPv6 address ⓘ

No

Yes

Review + create

Next : Tags >

[Download a template for automation](#)

### • Configure NLB

1. Navigate to Inbound NAT rules
2. Click Add
  - a. Name **Rule01**
  - b. FrontEndIp **LoadBalancerFrontEndIp**
  - c. Service **Http**
  - d. Port 80
  - e. Target VM **Container**
  - f. Network Ip Configuration **10.206.1.4**
  - g. Port Mapping **Custom**
  - h. Target Point **81**

## Rule01 ...

**i** An inbound NAT rule forwards incoming traffic sent to a selected IP address and port combination to a specific virtual machine.

Name	Rule01
Frontend IP address * <b>i</b>	LoadBalancerFrontEnd (52.179.97.167) <b>v</b>
IP Version <b>i</b>	IPv4
Service *	HTTP <b>v</b>
Protocol	<input checked="" type="radio"/> TCP <input type="radio"/> UDP
Idle timeout (minutes) <b>i</b>	<input type="range"/> 4 <b>Max: 30</b>
Port *	80
Target virtual machine	Container (Containers) <b>v</b>
Network IP configuration <b>i</b>	ipconfigContainer (10.206.1.4) <b>v</b>
Port mapping <b>i</b>	<input type="radio"/> Default <input checked="" type="radio"/> Custom
Floating IP <b>i</b>	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Target port *	81

**<** **>** **↺** **⚠** Not secure | 13.82.19.78:81

# This is port 81 content

- Access via IIS Manager

1. Open a command prompt with admin permissions
2. Run **PowerShell** to turn that window into a *PowerShell prompt*
3. Run the following command to access to Docker image PowerShell command line

***docker exec -it Potato powershell***

4. Run the following command to install Web Service Management tools

***Install-WindowsFeature -Name Web-Mgmt-Service***

5. Run the following command to configure registry settings of the Docker image

***New-ItemProperty -Path HKLM:\SOFTWARE\Microsoft\WebManagement\Server -Name EnableRemoteManagement -Value 1 -Force***

6. Run the following command to start the service

***Get-Service -Name WMSVC | Start-Service***


7. Run the following command to add a user and assign a password to that user

***net user <your UserName Here> <Password here> /ADD***

8. Run the following command to assign admin permissions to the user you created

***net localgroup administrators <user on the previous line> /ADD***

9. Run ipconfig to get the Docker image ip Address. Copy ip address
10. Open IIS manager. Right click and connect to another server
11. Paste the container ip address and click Next
12. Provide the user name and password you created on step 7 and click Next
13. Click YES for the Certificate prompt
14. Confirm the ip address and click Next

 Administrator: Command Prompt - powershell

```
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Windows\system32>powershell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> docker exec -it POTATO powershell_
```

```

Administrator: Command Prompt - powershell
PS C:\> Install-WindowsFeature -Name Web-Mgmt-Service

Success Restart Needed Exit Code      Feature Result
-----
True     No             Success      {ASP.NET 4.6, Management Service, Manageme...

PS C:\> hostname
7e259fac637b
PS C:\> New-ItemProperty -Path HKLM:\SOFTWARE\Microsoft\WebManagement\Server -Name EnableRemoteManagement -Value 1 -Force
EnableRemoteManagement : 1
PSPath                  : Microsoft.PowerShell.Core\Registry::HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WebManagement\Server
PSChildName              : Server
PSDrive                  : HKLM
PS C:\> Get-Service -Name WMSVC | Start-Service
PS C:\> net user cem 1q2w3e4r5t6y* /ADD
The command completed successfully.
PS C:\> net localgroup administrators cem /add
The command completed successfully.
PS C:\> ipconfig
Windows IP Configuration

Ethernet adapter vEthernet (Container NIC 5aebf462):

   Connection-specific DNS Suffix  . : m2vy2fh3z52ennpdx24b5yr22d.ix.internal.cloudapp.net
   Link-local IPv6 Address . . . . . : fe80::d1b7:75ad:1657:862b%41
   IPv4 Address. . . . . : 172.24.97.244
   Subnet Mask . . . . . : 255.255.240.0
   Default Gateway . . . . . : 172.24.96.1
PS C:\>

```

