**Containers**

Tested on: Windows Server 2016

In a VM (give it enough RAM and make it static – 4GB for Hyper-V containers)

Windows Server Containers

Hyper-V Containers

Docker is just a container management tool that can talk to both container types on Windows.

To install docker and containers:

Enable nested virtualization (vm must be off) in case you use hyper-v containers

Set-VMProcessor -VMName <VMName> -ExposeVirtualizationExtensions $true

Enable mac spoofing

Get-VMNetworkAdapter -VMName $vm | Set-VMNetworkAdapter -MacAddressSpoofing On

Install-WindowsFeature Containers (restart required)

Install-WindowsFeature Hyper-V –IncludeManagementTools (restart required) – if using hyper-v containers

Install docker for windows:

Extract the zip with the docker executables in the the program files folder

Expand-Archive .\docker.zip –DestinationPath $env:ProgramFiles

Add docker to the path variable (restart needed)

$newPath=$env:path + "$env:ProgramFiles\docker;"

[Environment]::SetEnvironmentVariable("PATH", $newPath,

[EnvironmentVariableTarget]::Machine)

Register dockerd as a service:

dockerd --register-service

start the service

Start-Service docker

Pull an image from the docker registry (internet required)

docker pull microsoft/windowsservercore

docker pull microsoft/nanoserver

Make an image (internet access required):

Create a file named: DockerFile (no extension)

Use the iis image as a base and modify the index.html file in it

FROM microsoft/iis

RUN echo "Hello World - Dockerfile" > c:\inetpub\wwwroot\index.html

Build the image with the created file:

docker build -t adi/iis-dockerfile c:\Build

Run the container mapping the container’s 80 port to the host (host firewall must permit 80 inbound). After that, navigating to the host’s address will show the website

docker run -d -p 80:80 adi/iis-dockerfile ping -t localhost

Delete the container:

Docker rm –f <name(id)>

Delete the image:

Docker rmi adi/iis-dockerfile

Run a container as a hyper-v container:

Add --isolation=hyperv to docker run

Save an image as archive:

Docker save –o C:\images\image Microsoft/nanoserver

Load an image on another server:

Docker load –i c:\imload\