

Relativity Dev VM Chef Script Documentation

[Monday, November 6, 2017]

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1 Requirements

- CPU cores: 4 cores
- RAM: 8GB
- Storage: 120GB
- Licenses
 - Windows Server 2012 R2
 - Relativity

2 Setup your Workstation

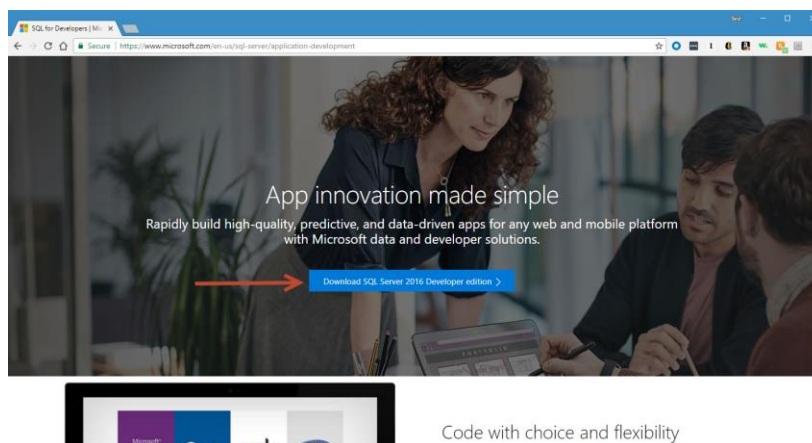
2.1 Login

- Use a Windows Administrator account to login into your workstation

2.2 Downloads

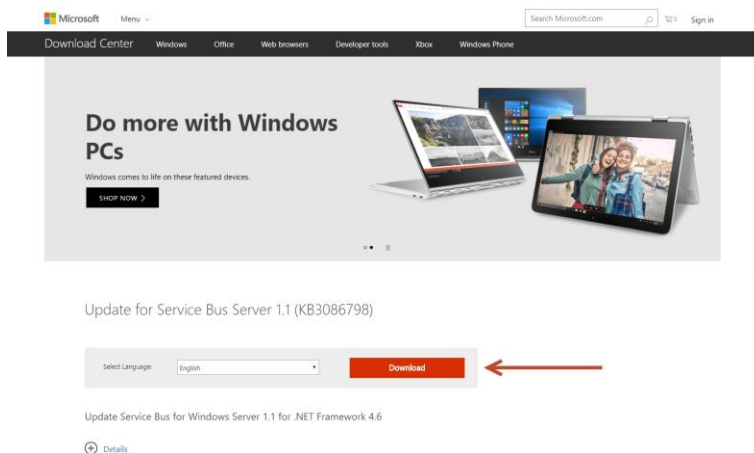
2.2.1 SQL Server 2016 Developer Edition

- You can download it at this link - <https://www.microsoft.com/en-us/sql-server/application-development>



2.2.2 Service Bus 1.1 Defect Windows Update

- You can download it at this link - <https://www.microsoft.com/en-us/download/details.aspx?id=49496>



2.2.3 Relativity Installer

- You can download the specific Relativity version from Salesforce.

2.2.4 Invariant Installer

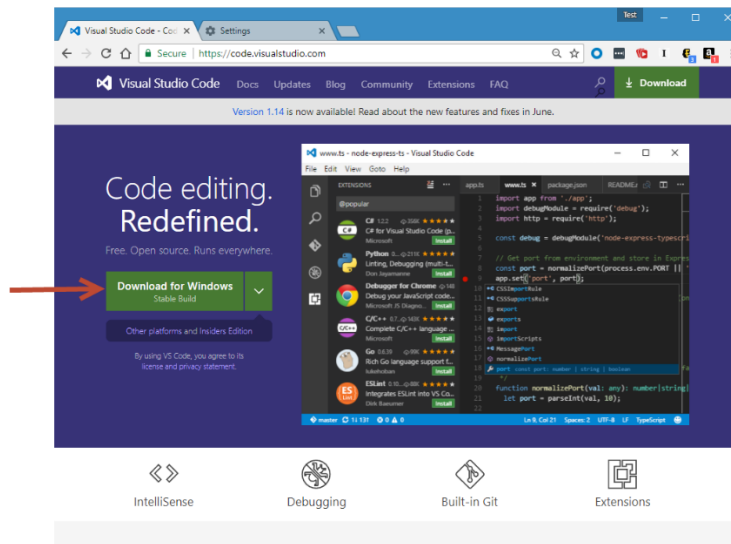
- You can download the corresponding Invariant version for the specific Relativity version from Salesforce.

2.2.5 [Fix] Windows Base Machine for Chef Test Kitchen

- Instructions will be provided later

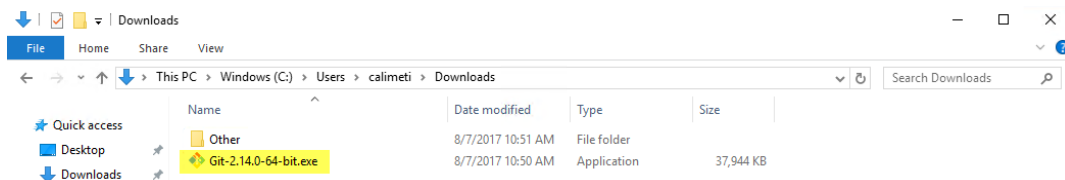
2.3 Install Visual Studio Code text editor

- Download and Install Visual Studio Code from this link [Visual Studio Code](#)



2.4 Install GIT

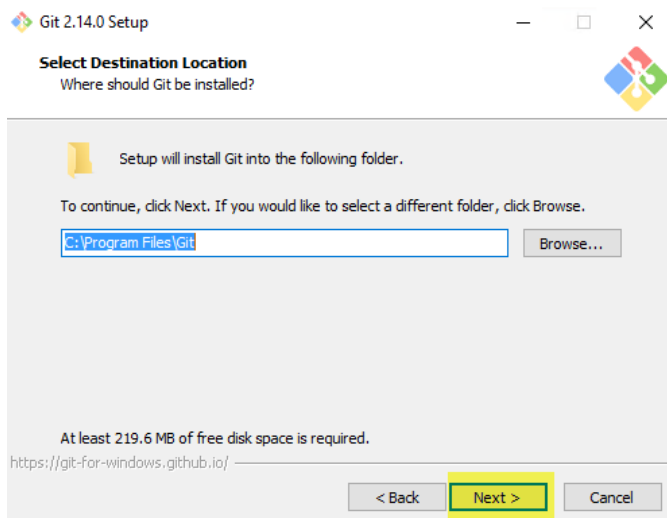
- Download Git from this link - <https://git-scm.com/download/win>
- Once downloaded double click on the Git installer file.



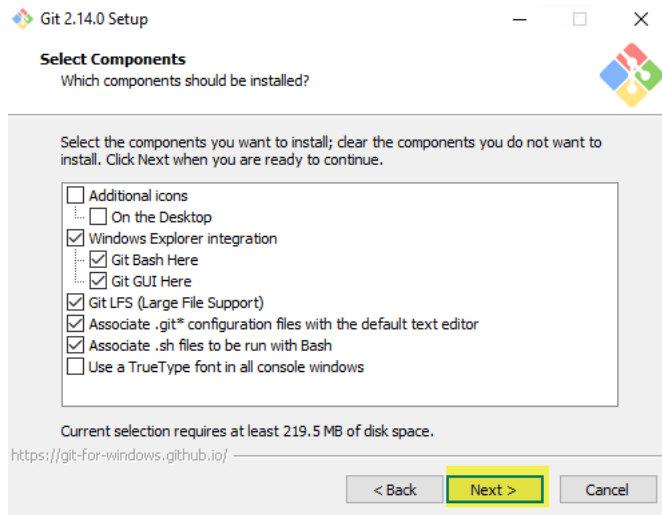
- Click **Next**



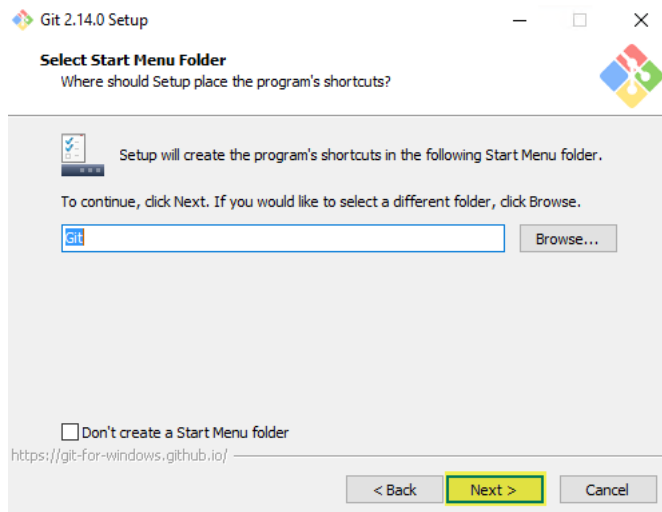
- Choose **default values** and click **Next**.



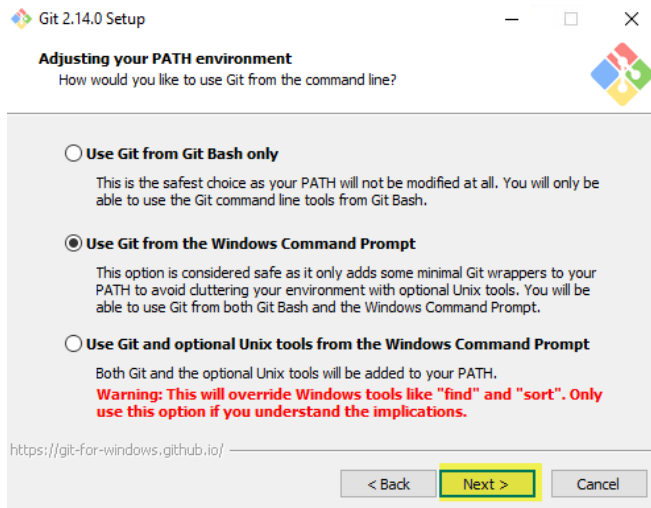
- Choose **default values** and click **Next**.



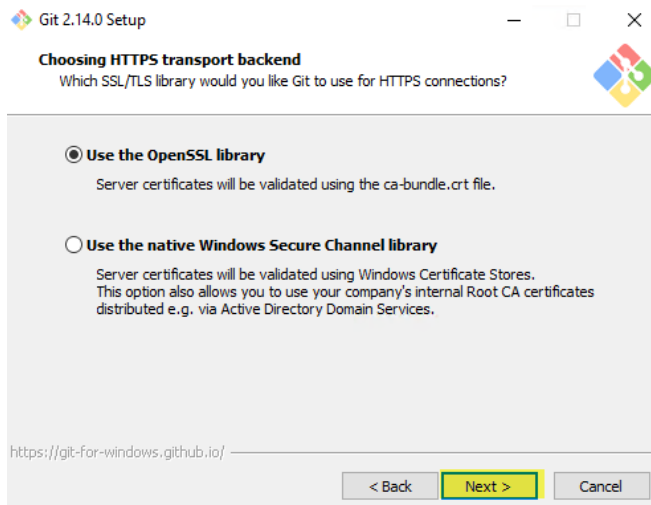
- Choose **default values** and click **Next**.



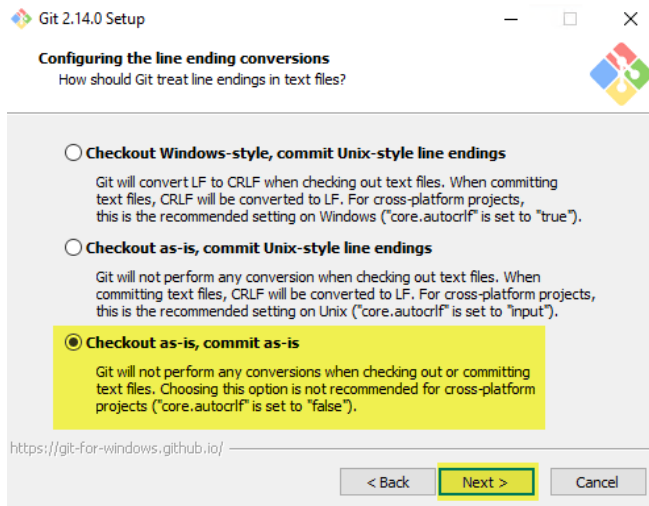
- Choose **default values** and click **Next**.



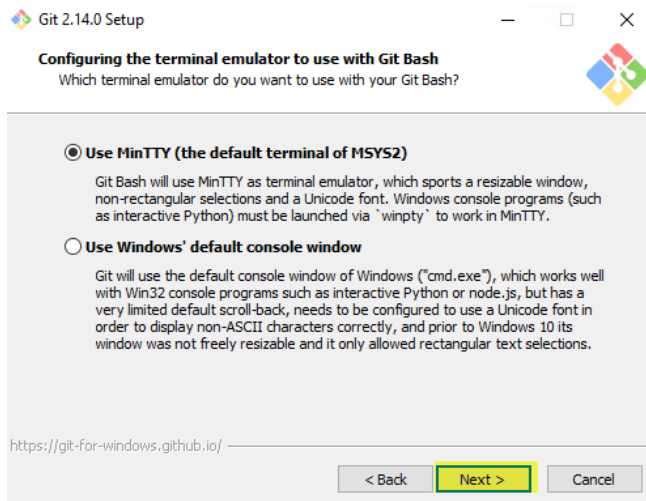
- Choose **default values** and click **Next**.



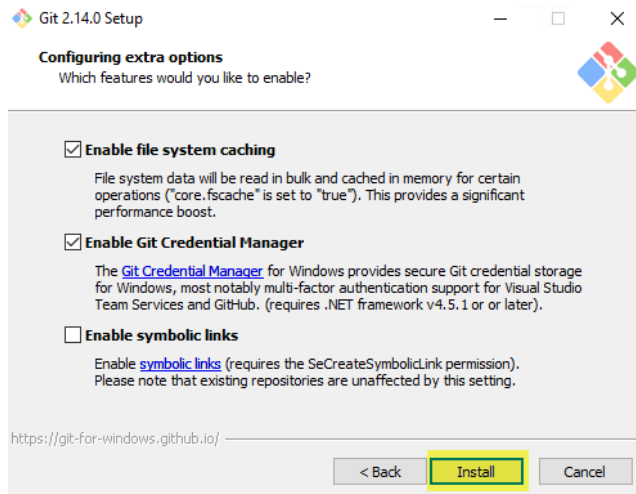
- Change to **checkout as-is, commit as-is** and click Next.



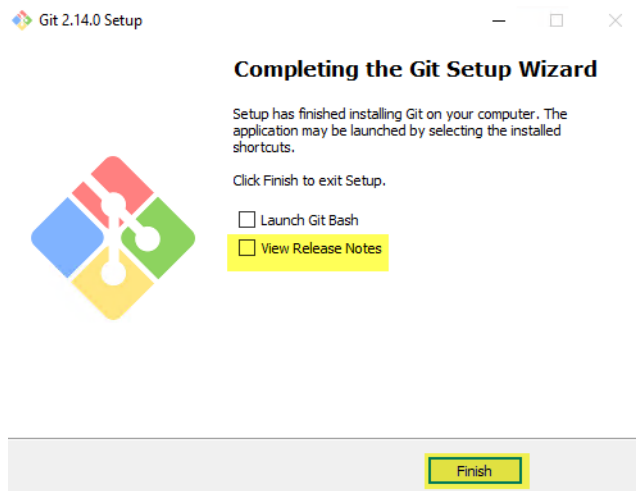
- Choose **default values** and click Next.



- Choose **default values** and click **Install**.



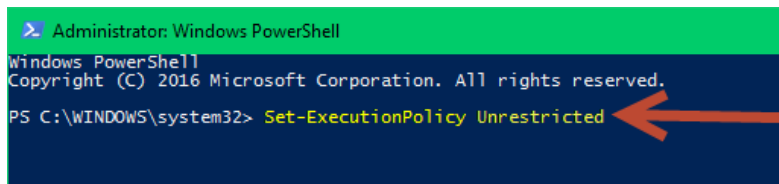
- Uncheck **View Release Notes** and click **Finish**.



2.5 Install Chef Development Kit

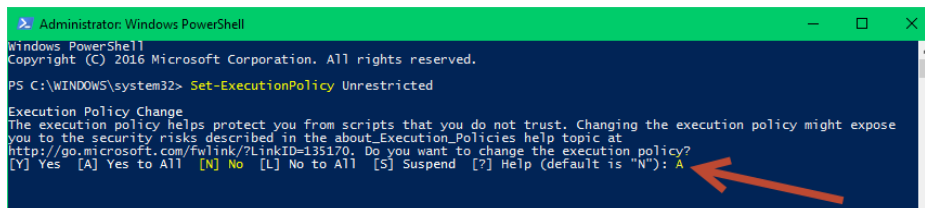
- Set PowerShell **Execution policy** to **Unrestricted** to allow online software installation. Run the following command in PowerShell to modify the execution policy. If prompted for confirmation Type **A** and press enter.

Set-ExecutionPolicy Unrestricted



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

PS C:\WINDOWS\system32> Set-ExecutionPolicy Unrestricted
```



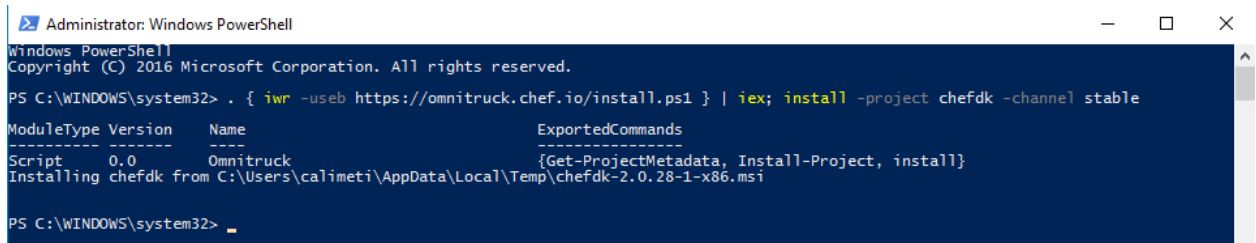
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\WINDOWS\system32> Set-ExecutionPolicy Unrestricted

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the execution policy might expose
you to the security risks described in the about_Execution_Policies help topic at
http://go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): A
```

- Run the following command in PowerShell to install Chef DK.

`. { iwr -useb https://omnitruck.chef.io/install.ps1 } | iex; install -project chefdk -channel stable -version 2.0.28`



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

PS C:\WINDOWS\system32> . { iwr -useb https://omnitruck.chef.io/install.ps1 } | iex; install -project chefdk -channel stable

ModuleType Version Name ExportedCommands
-----
Script 0.0 Omnitruck {Get-ProjectMetadata, Install-Project, install}
Installing chefdk from C:\Users\calimeti\AppData\Local\Temp\chefdk-2.0.28-1-x86.msi

PS C:\WINDOWS\system32>
```

- Once installed, a **Chef Development Kit** icon will be created on your desktop. Double click to open it.



- You can verify Chef DK installation by running the following command in PowerShell

`chef --version`

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> chef --version
Chef Development Kit Version: 2.0.28
chef-client version: 13.2.20
delivery version: master (17c1b0fed9be4c70f69091a6d21a4cbf0df60a23)
berks version: 6.2.0
kitchen version: 1.16.0
inspec version: 1.31.1
PS C:\WINDOWS\system32>
```

2.6 Install Chef Kitchen Hyper-V driver

- Run the following command in PowerShell window.

`chef gem install kitchen-hyperv`

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> chef gem install kitchen-hyperv
Fetching: kitchen-hyperv-0.5.0.gem (100%)
WARNING: You don't have c:\users\calimeti\appdata\local\chefdk\gem\ruby\2.4.0\bin in your PATH,
gem executables will not run.
Successfully installed kitchen-hyperv-0.5.0
Parsing documentation for kitchen-hyperv-0.5.0
Installing ri documentation for kitchen-hyperv-0.5.0
Done installing documentation for kitchen-hyperv after 1 seconds
1 gem installed
PS C:\WINDOWS\system32>
```

2.7 Enable Windows Hyper-V feature

- Run the following command in PowerShell window.

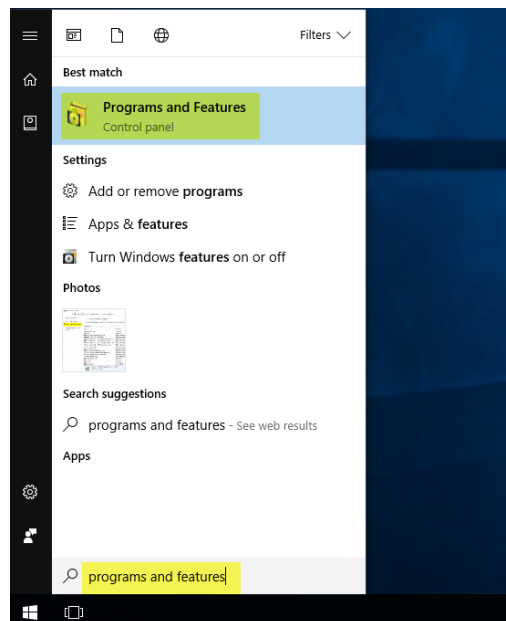
`Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All`

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All
```

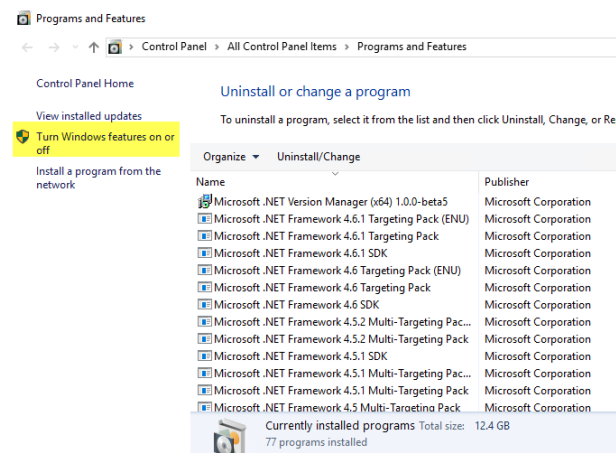
- If you get the following warning, select **Y**

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All
Do you want to restart the computer to complete this operation now?
[Y] Yes [N] No [?] Help (default is "Y"): Y
```

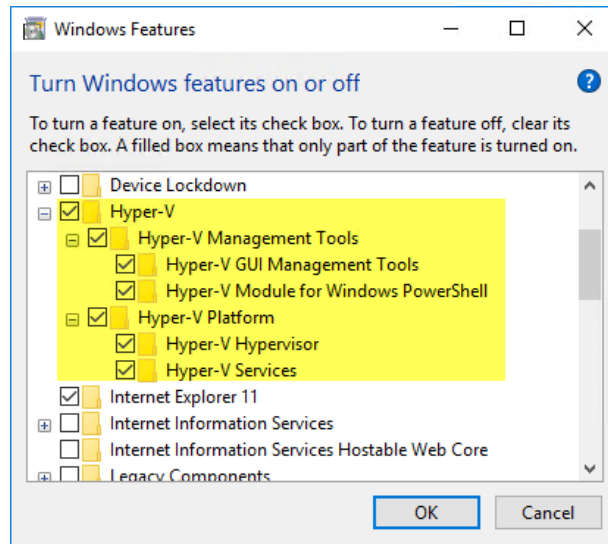
- Verify Windows Hyper-V feature installation
 - During the process of installation, the computer will restart. Once restarted, Go to **Programs and Features**



- Click on **Turn Windows features on or off**

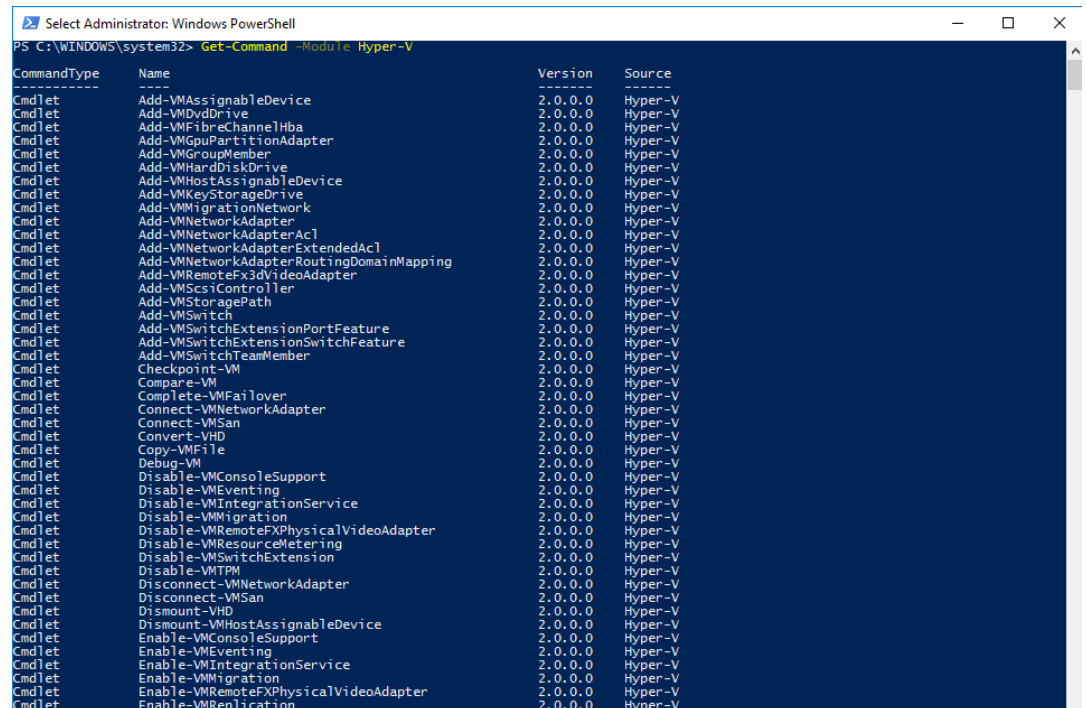


- Verify if Hyper-V is checked as shown in the below screenshot



- You can also verify Hyper-V installation via PowerShell
 - Run the following command in PowerShell window. You should see results as shown in the below screenshot.

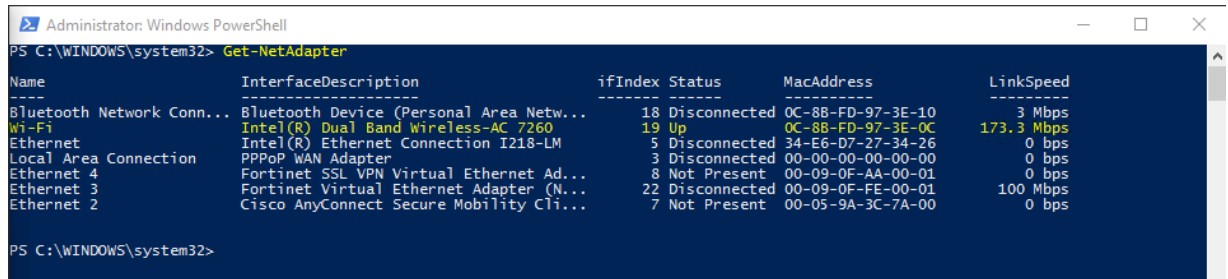
Get-Command -Module Hyper-V



2.8 Create Virtual Switch for Internet Access

- Identify the current network adapter with status **Up**. Run the following command in PowerShell.

`Get-NetAdapter`



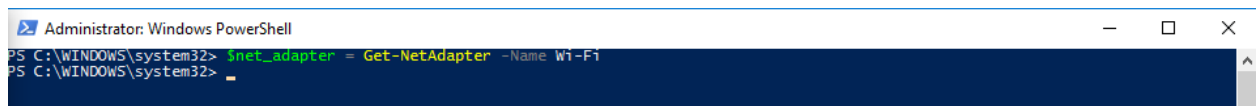
```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-NetAdapter

Name                           InterfaceDescription           ifIndex Status      MacAddress           LinkSpeed
-----
Bluetooth Network Conn... Bluetooth Device (Personal Area Net... 18 Disconnected 0C-8B-FD-97-3E-10    3 Mbps
Wi-Fi                           Intel(R) Dual Band Wireless-AC 7260 19 Up          0C-8B-FD-97-3E-0C    173.3 Mbps
Ethernet                       Intel(R) Ethernet Connection I218-LM 5 Disconnected 34-E6-D7-27-34-26    0 bps
Local Area Connection         PPPoP WAN Adapter              3 Disconnected 00-00-00-00-00-00    0 bps
Ethernet 4                     Fortinet SSL VPN Virtual Ethernet Ad... 8 Not Present  00-09-0F-AA-00-01    0 bps
Ethernet 3                     Fortinet Virtual Ethernet Adapter (N... 22 Disconnected 00-09-0F-FE-00-01    100 Mbps
Ethernet 2                     Cisco AnyConnect Secure Mobility Cli... 7 Not Present  00-05-9A-3C-7A-00    0 bps

PS C:\WINDOWS\system32>
```

- In the above screenshot, the **Wi-Fi** network has the status **Up**.
- Next create a variable that refers to your public network adapter. Run the following command in PowerShell.

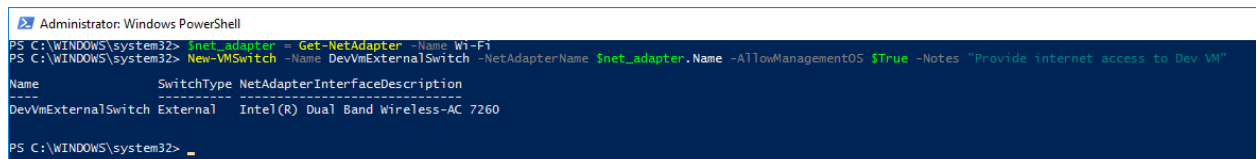
`$net_adapter = Get-NetAdapter -Name Wi-Fi`



```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> $net_adapter = Get-NetAdapter -Name Wi-Fi
PS C:\WINDOWS\system32>
```

- Now run **New-VMSwitch** command to create the virtual switch. Run the following command in PowerShell window.

`New-VMSwitch -Name DevVmExternalSwitch -NetAdapterName $net_adapter.Name -AllowManagementOS $True -Notes "Provide internet access to Dev VM"`

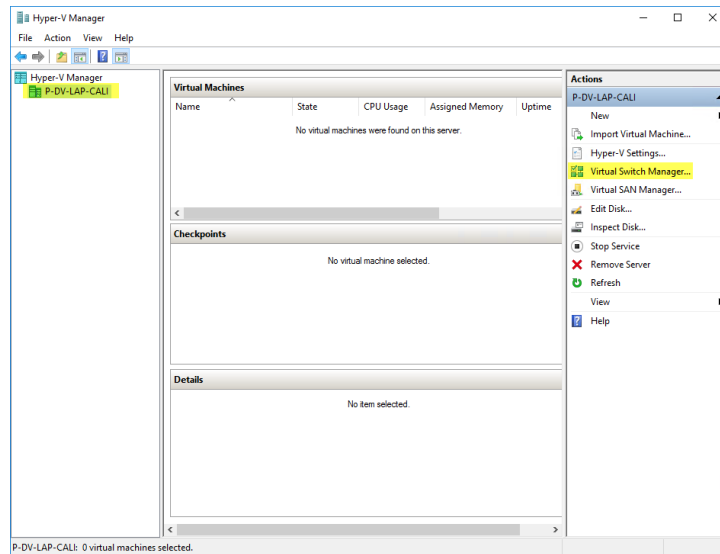


```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> $net_adapter = Get-NetAdapter -Name Wi-Fi
PS C:\WINDOWS\system32> New-VMSwitch -Name DevVmExternalSwitch -NetAdapterName $net_adapter.Name -AllowManagementOS $True -Notes "Provide internet access to Dev VM"

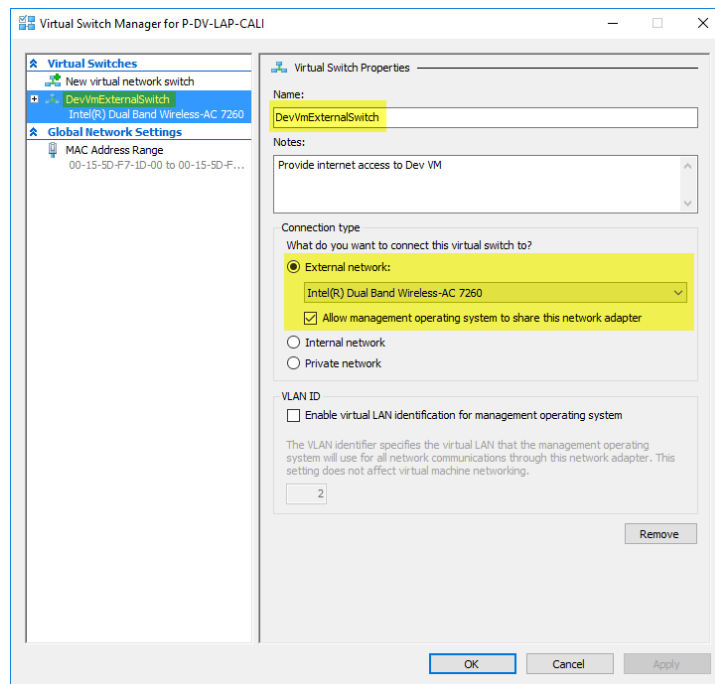
Name                           SwitchType NetAdapterInterfaceDescription
-----
DevVmExternalSwitch External   Intel(R) Dual Band Wireless-AC 7260

PS C:\WINDOWS\system32>
```

- Verify the Virtual Switch is created
 - Open **Hyper-V Manager** and go to **Virtual Switch Manager**.



- Verify your Virtual Switch **DevVmExternalSwitch** exists as shown in in the below screenshot.



2.9 Clone Relativity Dev VM repository from Github

- You can find the source for Relativity Dev VM open source project at this link - <https://github.com/RelativityDev/relativity-dev-vm>
- Switch to C drive. Run the following command in PowerShell window.

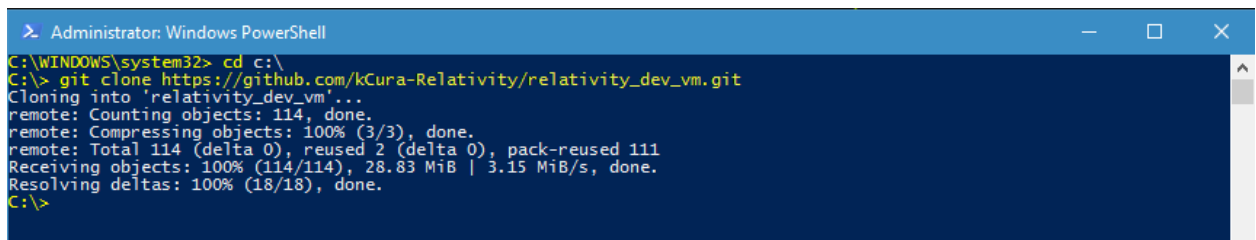
`cd c:\`



```
Administrator: Windows PowerShell
C:\WINDOWS\system32> cd c:\
C:\>
```

- Clone the Relativity Dev VM GIT repository to your workstation. Run the following command in PowerShell window.

`git clone https://github.com/RelativityDev/relativity-dev-vm.git`

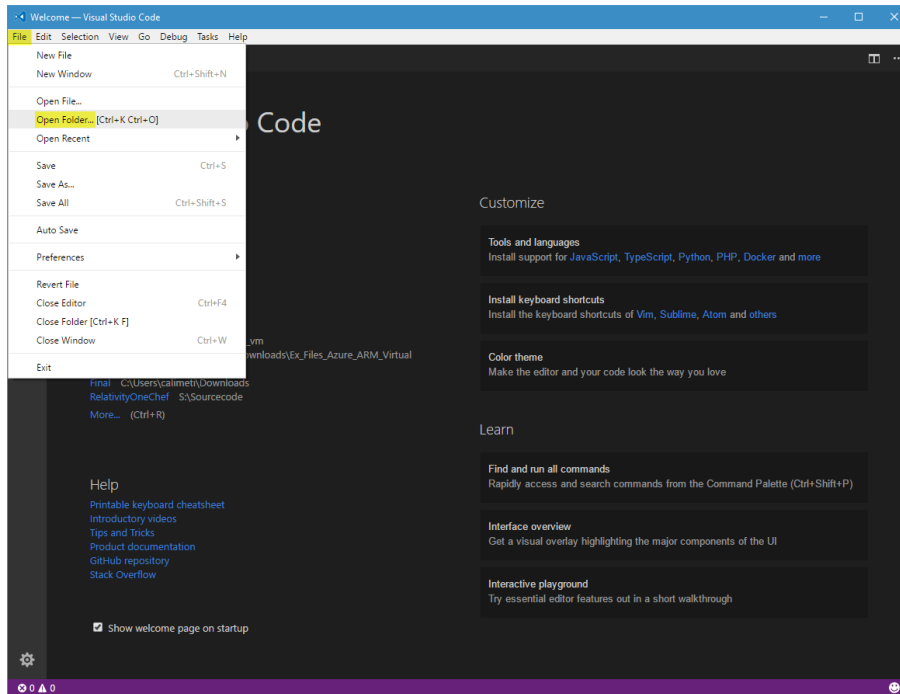


```
Administrator: Windows PowerShell
C:\WINDOWS\system32> cd c:\
C:\> git clone https://github.com/kCura-Relativity/relativity_dev_vm.git
Cloning into 'relativity_dev_vm'...
remote: Counting objects: 114, done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 114 (delta 0), reused 2 (delta 0), pack-reused 111
Receiving objects: 100% (114/114), 28.83 MiB | 3.15 MiB/s, done.
Resolving deltas: 100% (18/18), done.
C:\>
```

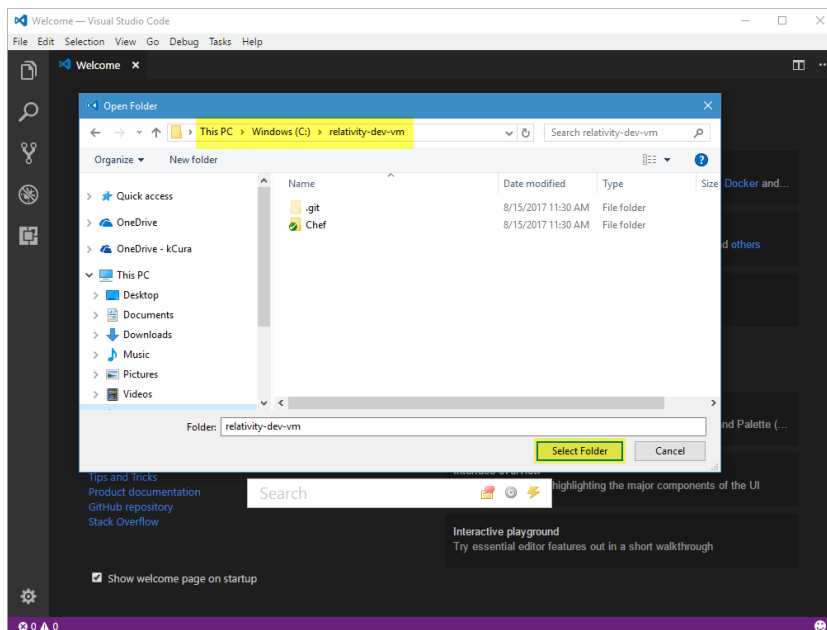
3 Run Test Kitchen commands to create Relativity Dev VM

3.1 Open relativity-dev-vm repository in Visual Studio Code.

- Open **Visual Studio Code** application, click on **File** option and select **Open Folder**.

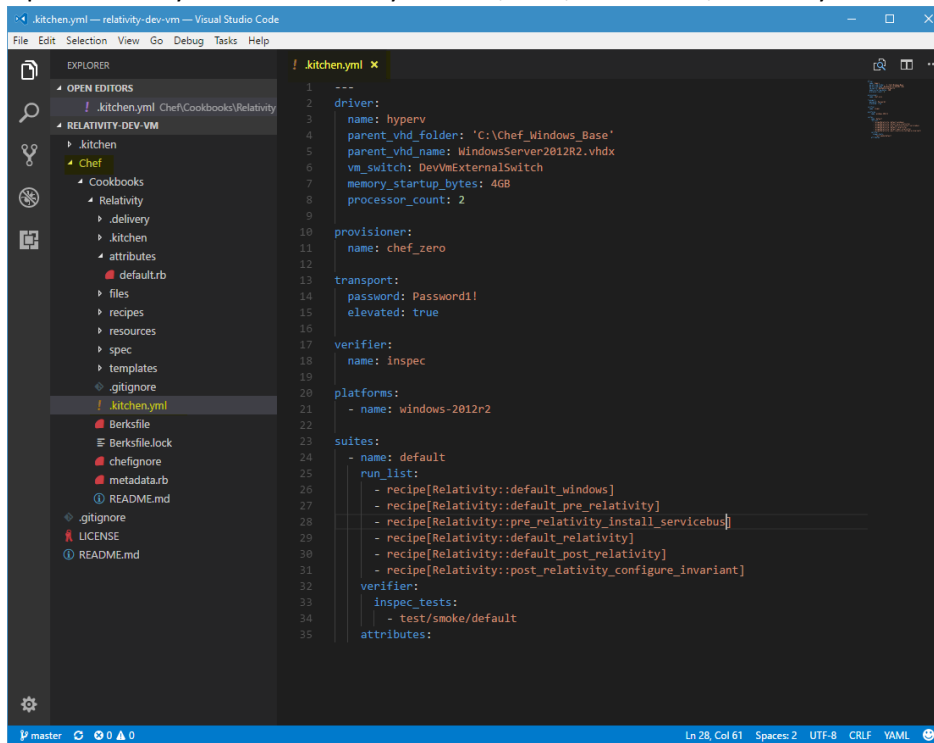


- Select **relativity-dev-vm** folder you previously cloned in your C drive and click **Select Folder**.



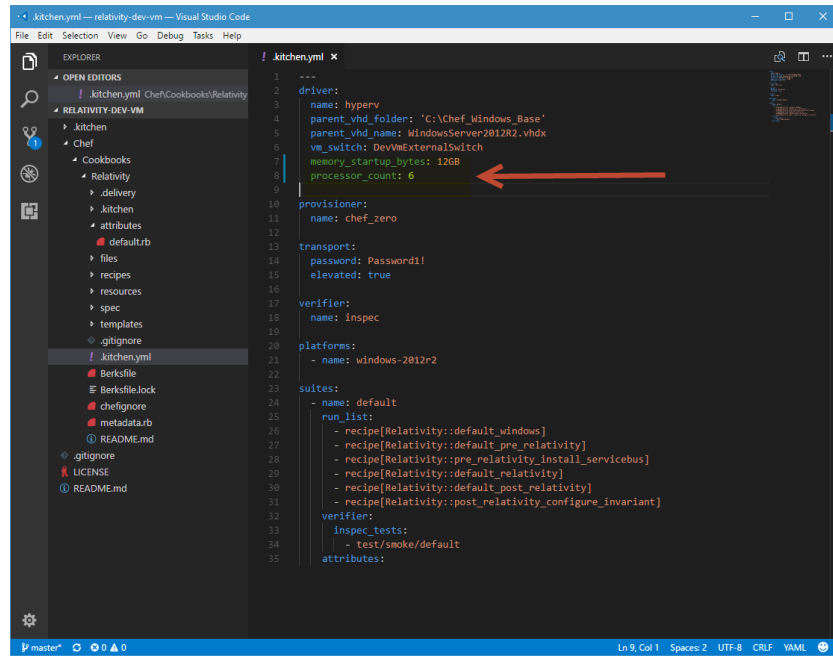
3.2 Update kitchen.yml file for any resource changes

- Open kitchen.yml file in relativity-dev-vm/Chef/Cookbooks/Relativity folder.



```
1 ---
2 driver:
3   name: hyperv
4   parent_vhd_folder: 'C:\Chef_Windows_Base'
5   parent_vhd_name: WindowsServer2012R2.vhdx
6   vm_switch: DevVmExternalSwitch
7   memory_startup_bytes: 4GB
8   processor_count: 2
9
10 provisioner:
11   name: chef_zero
12
13 transport:
14   password: Password!!
15   elevated: true
16
17 verifier:
18   name: inspec
19
20 platforms:
21   - name: windows-2012r2
22
23 suites:
24   - name: default
25     run_list:
26       - recipe[Relativity::default_windows]
27       - recipe[Relativity::default_pre_relativity]
28       - recipe[Relativity::pre_relativity_install_servicebus]
29       - recipe[Relativity::default_relativity]
30       - recipe[Relativity::default_post_relativity]
31       - recipe[Relativity::post_relativity_configure_invariant]
32
33 verifier:
34   inspec_tests:
35     - test/smoke/default
36
37 attributes:
```

- If you have additional resources on your workstation, you can update the processor core and RAM values in the kitchen.yml file.
 - You can change the value of **processor_count** to set the number of processor cores the VM should have.
 - You can change the value of **memory_startup_bytes** to set the amount of RAM the VM should have.

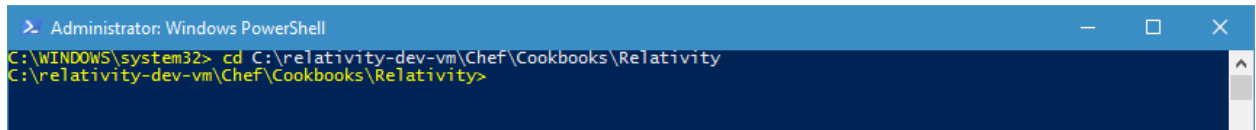


3.3 Create a Hyper-V with Relativity installed

3.3.1 Create Hyper-V VM

- Move to the repository directory. Run the following command in PowerShell window.

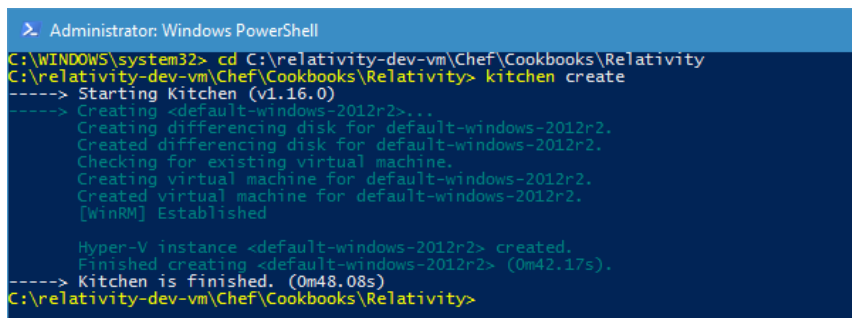
```
cd C:\relativity-dev-vm\Chef\Cookbooks\Relativity
```



```
Administrator: Windows PowerShell
C:\WINDOWS\system32> cd C:\relativity-dev-vm\Chef\Cookbooks\Relativity
C:\relativity-dev-vm\Chef\Cookbooks\Relativity>
```

- Create a Hyper-V VM using test kitchen. Run the following command in PowerShell window.

```
kitchen create
```

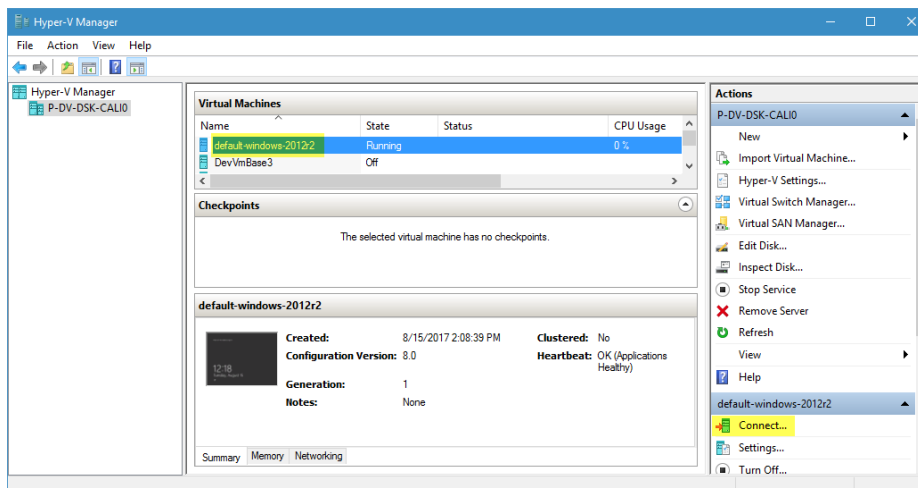


```
Administrator: Windows PowerShell
C:\WINDOWS\system32> cd C:\relativity-dev-vm\Chef\Cookbooks\Relativity
C:\relativity-dev-vm\Chef\Cookbooks\Relativity> kitchen create
-----> Starting Kitchen (v1.16.0)
-----> Creating <default-windows-2012r2>...
Creating differencing disk for default-windows-2012r2.
Created differencing disk for default-windows-2012r2.
Checking for existing virtual machine.
Creating virtual machine for default-windows-2012r2.
Created virtual machine for default-windows-2012r2.
[WinRM] Established

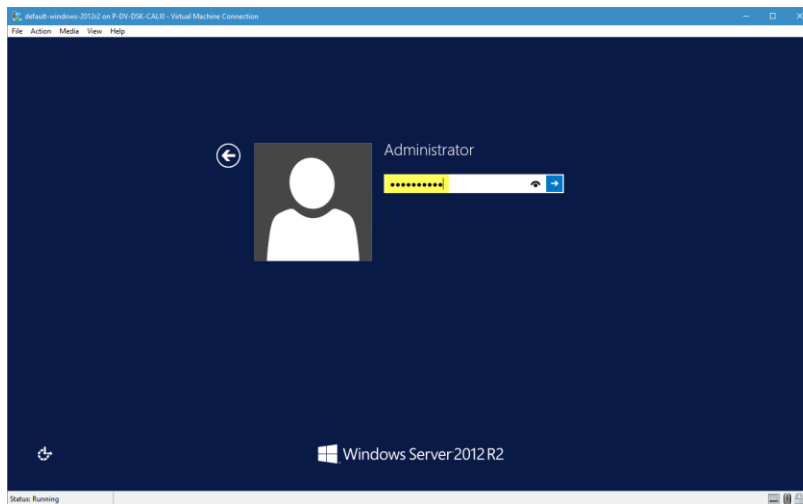
Hyper-V instance <default-windows-2012r2> created.
Finished creating <default-windows-2012r2> (0m42.17s).
-----> Kitchen is finished. (0m48.08s)
C:\relativity-dev-vm\Chef\Cookbooks\Relativity>
```

3.3.2 Copy installation files to Hyper-V VM

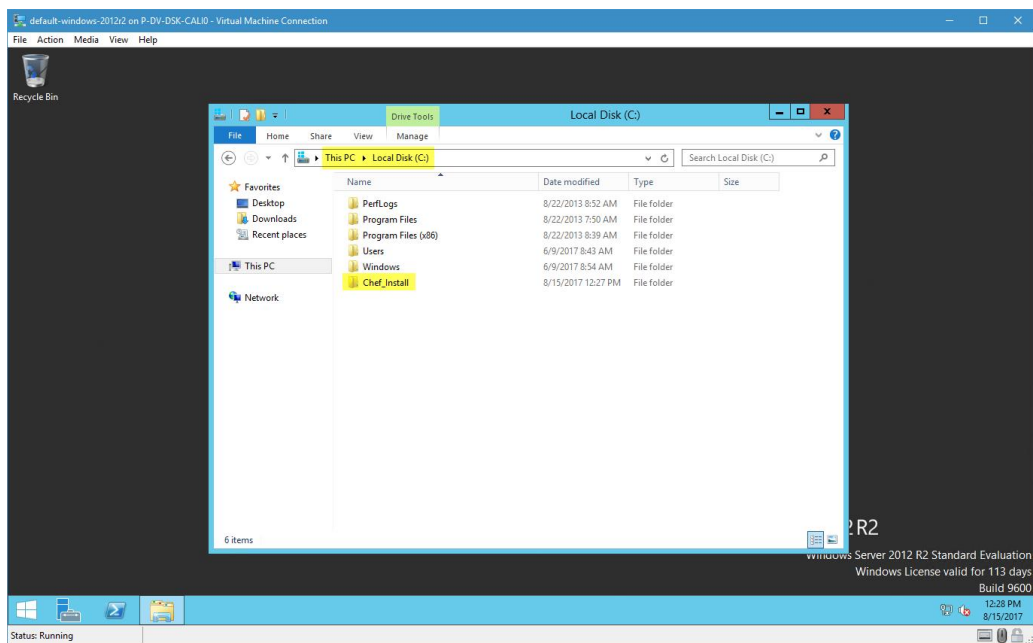
- Connect to your Hyper-V VM from Hyper-V Manager



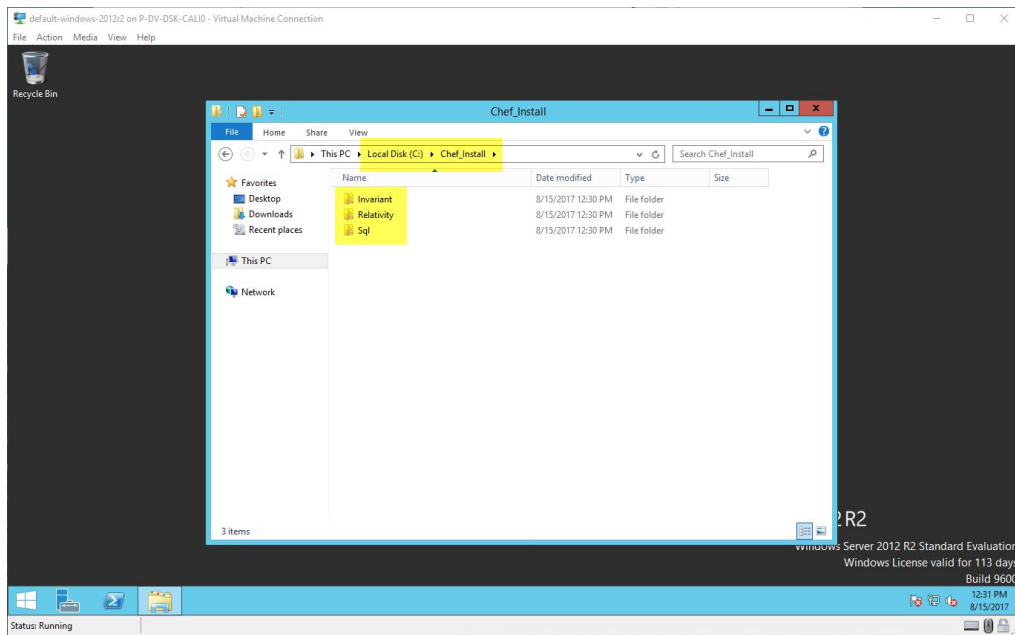
- Enter the password(**Password1!**) for the **Administrator** account and press **Enter**.



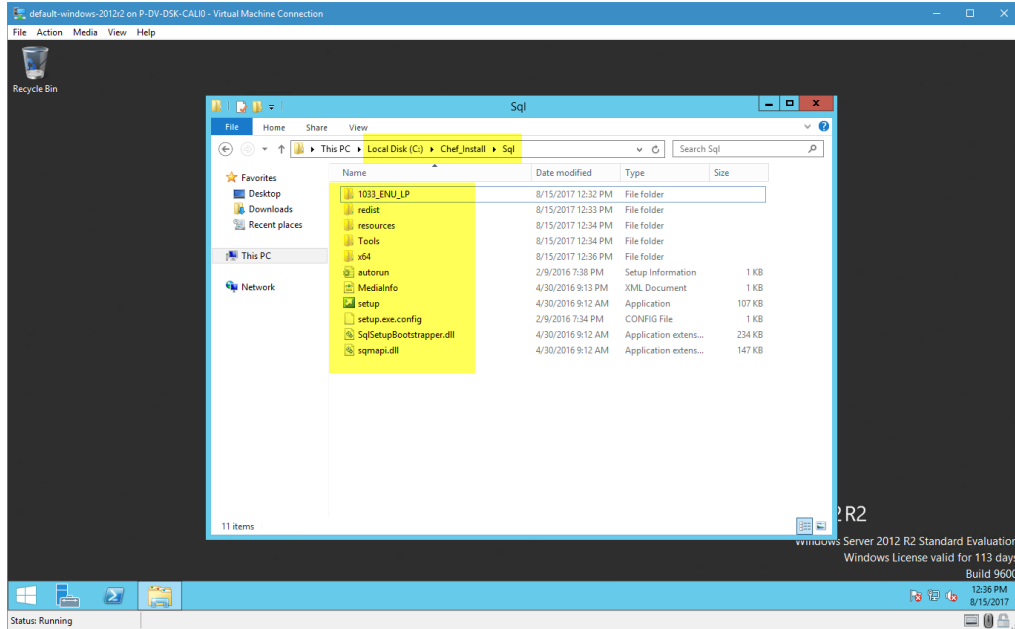
- On your VM, go to C drive and create a folder named **Chef_Install**



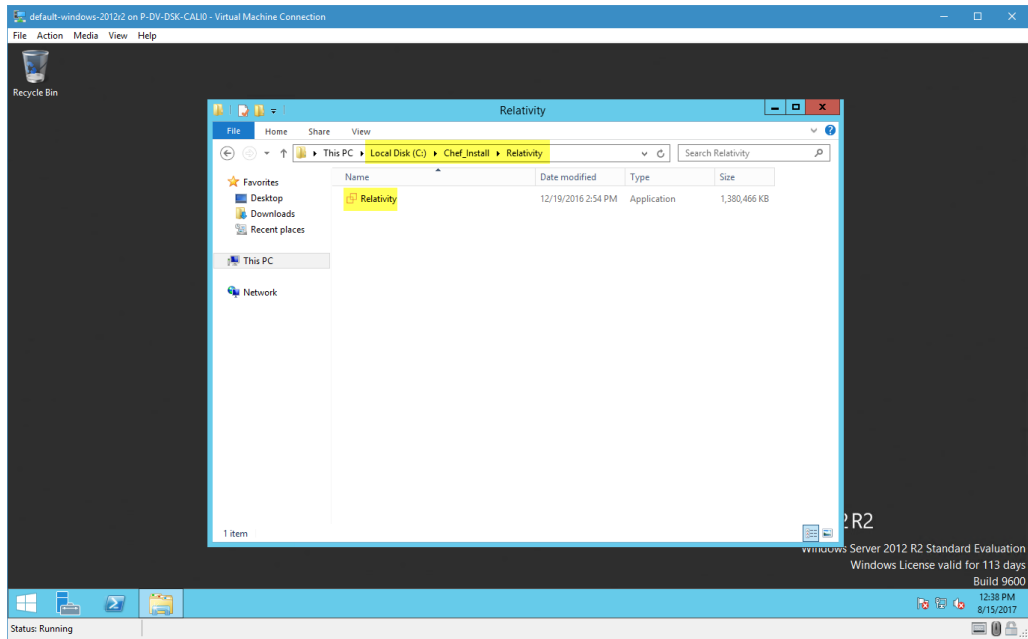
- Create folders named **Sql**, **Relativity** and **Invariant** inside the **Chef_install** folder.



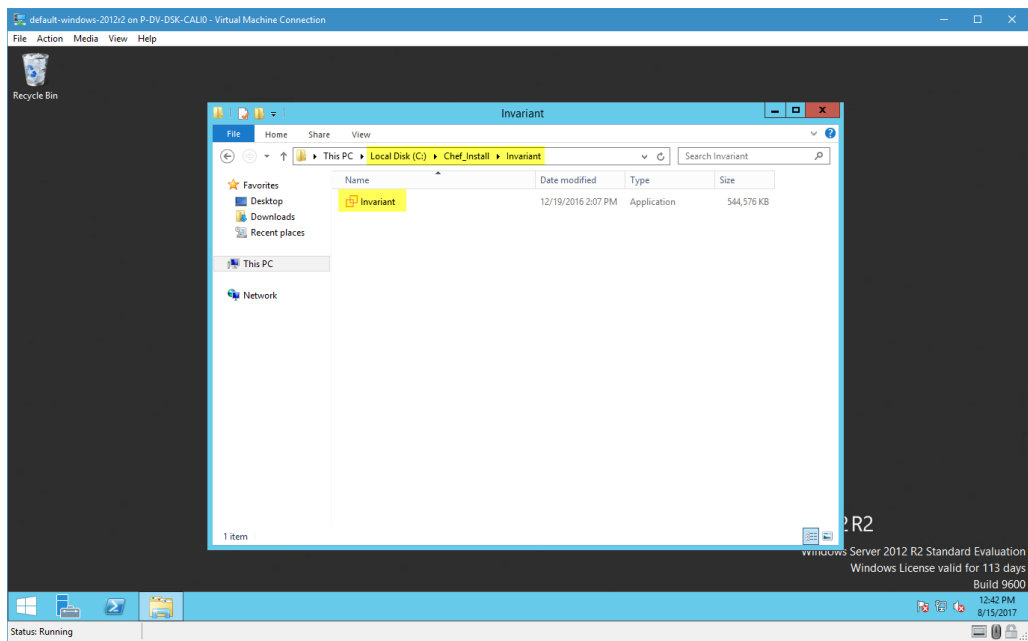
- Extract the **SQL Server 2016 Developer Edition ISO** file previously downloaded and copy its contents to the **Sql** folder on the Hyper-V VM.



- Copy Relativity installer file to **Relativity** folder on the Hyper-V VM.

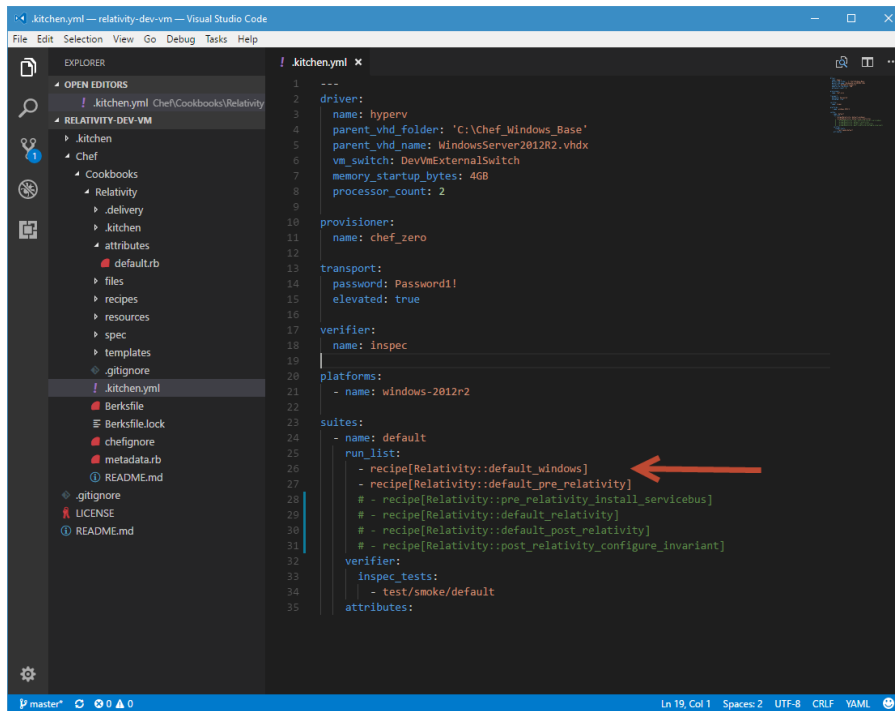


- Copy Invariant installer file to **Invariant** folder on the Hyper-V VM.



3.3.3 Run pre-relativity install chef script

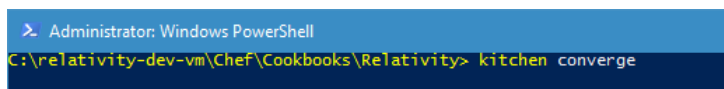
- In kitchen.yml file, comment the recipes except for pre-relativity install chef recipes as shown in the following screenshot.



```
1 ---
2 driver:
3   name: hyperv
4   parent_vhd_folder: 'C:\Chef_Windows_Base'
5   parent_vhd_name: WindowsServer2012R2.vhdx
6   vm_switch: DevVmExternalSwitch
7   memory_startup_bytes: 4GB
8   processor_count: 2
9
10  provisioner:
11    name: chef_zero
12
13  transport:
14    password: Password1!
15    elevated: true
16
17  verifier:
18    name: inspec
19
20  platforms:
21    - name: windows-2012r2
22
23  suites:
24    - name: default
25      run_list:
26        - recipe[Relativity::default_windows]
27        - recipe[Relativity::default_pre_relativity]
28        # - recipe[Relativity::pre_relativity_install_servicebus]
29        # - recipe[Relativity::default_relativity]
30        # - recipe[Relativity::default_post_relativity]
31        # - recipe[Relativity::post_relativity_configure_invariant]
32
33  verifier:
34    inspec_tests:
35      - test/smoke/default
36
37  attributes:
```

- Run the pre-relativity install chef scripts. Run the following command in PowerShell window.

kitchen converge



```
Administrator: Windows PowerShell
C:\relativity-dev-vm\Chef\Cookbooks\Relativity> kitchen converge
```

- Wait till the script finishes execution.

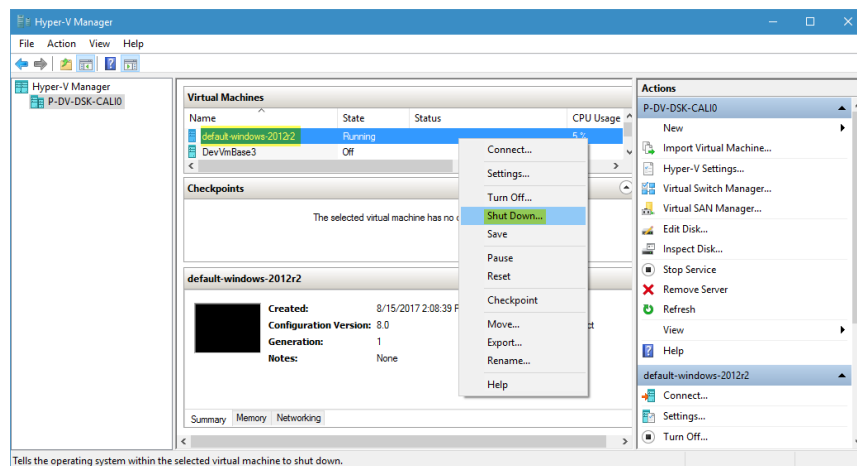
```
[WIN-PRIVOTED]: LON: [ End Set ] in 195.9180 seconds.
Operation 'Invoke-Command' complete.

* powershell_script[enable_protocol_Top_MSSQL_SERVER] action run
* execute: C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NoInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI-L/AppData/Local/Temp/chef-script20170822-1596-yrokti.ps1"
* powershell_script[enable_protocol_Top_MSSQL_SERVER] action run
* execute: C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NoInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI-L/AppData/Local/Temp/chef-script20170822-1596-16y6y5.ps1"
* powershell_script[restart_MSSQL_SERVER] action nothing (skipped due to action nothing)
* directory[ci_bak] action create
* create new directory ci_bak
* directory[ci_vdr] action create
* create new directory ci_vdr
* directory[ci_vdr] action create
* create new directory ci_vdr
* directory[ci_vdr] action create
* create new directory ci_vdr
* windows_service[SOLBrowser] action enable
* enable service windows_service[SOLBrowser]
* windows_service[SOLBrowser] action start
* start service windows_service[SOLBrowser]
* log[recipe_end_TimePre-Relativity_Setup_SqlServer]: 2017-08-22T10:10:22-07:00 action write
* log[recipe_duration[Pre-Relativity_Setup_SqlServer]: 0.01534 seconds] action write
* log[Finished Sql Server Install] action write
* log[Finished Pre-Relativity Setup] action write

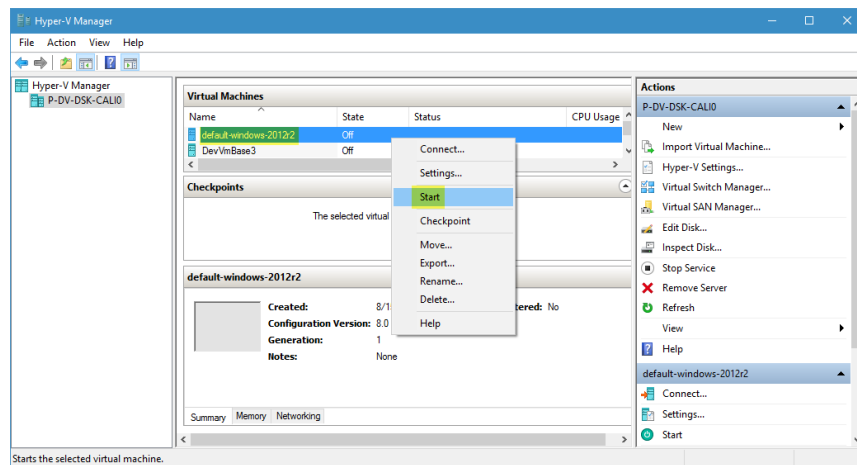
Recipe: Relativity::default::Pre-Relativity
log[recipe_end_TimePre-Relativity]: 2017-08-22T10:10:22-07:00 action write
* log[recipe_duration[default_Pre-Relativity]: 0.01206 seconds] action write
* log[Finished Pre-Relativity Setup] action write

Running handlers:
Running handlers complete
Chef Client finished, 144/170 resources updated in 11 minutes 58 seconds
Finished Chef Client: 2017-08-22T10:10:22-07:00 (2,062.34s).
----- Kitchen is finished. (13m32.08s)
C:\relativity-dev\chef\cookbooks\relativity
```

- Go to **Hyper-V manager** and restart (**Shut Down** and **Start**) your VM once the script finishes execution.
 - Shut Down

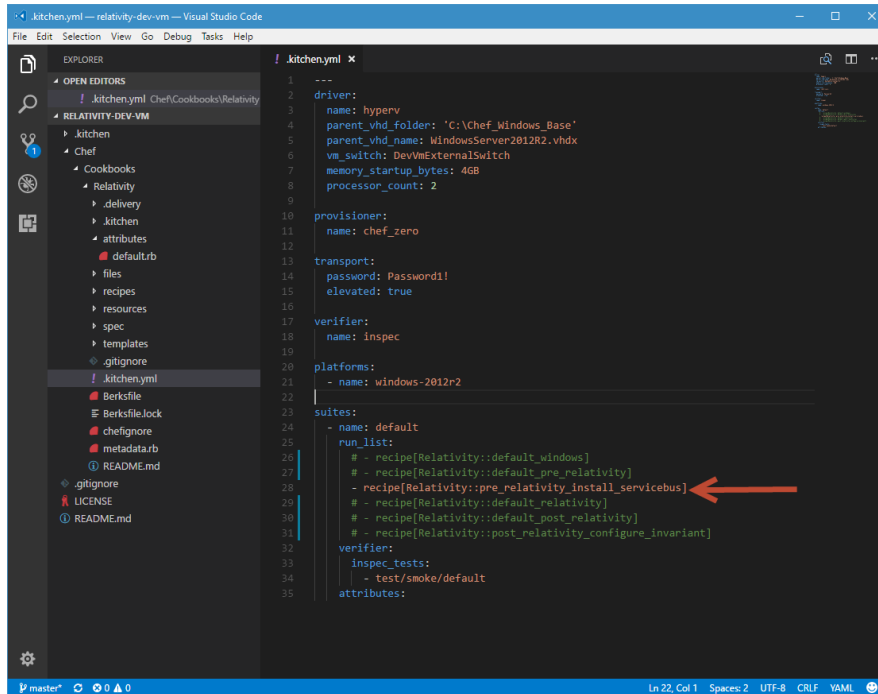


- Start



Run pre-relativity service bus install chef script

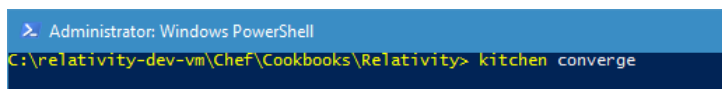
- In kitchen.yml file, comment the recipes except for pre-relativity service bus install chef recipe as shown in the following screenshot.



```
1 ---
2 driver:
3   name: hyperv
4   parent_vhd_folder: 'C:\Chef_Windows_Base'
5   parent_vhd_name: WindowsServer2012R2.vhdx
6   vm_switch: DevVMExternalSwitch
7   memory_startup_bytes: 4GB
8   processor_count: 2
9
10 provisioner:
11   name: chef_zero
12
13 transport:
14   password: Password!
15   elevated: true
16
17 verifier:
18   name: inspec
19
20 platforms:
21   - name: windows-2012r2
22
23 suites:
24   - name: default
25     run_list:
26       # - recipe[Relativity::default_windows]
27       # - recipe[Relativity::default_pre_relativity]
28       - recipe[Relativity::pre_relativity_install_servicebus]
29       # - recipe[Relativity::default_relativity]
30       # - recipe[Relativity::default_post_relativity]
31       # - recipe[Relativity::post_relativity_configure_invariant]
32
33     verifier:
34       inspec_tests:
35         - test/smoke/default
36     attributes:
```

- Run the pre-relativity install chef scripts. Run the following command in PowerShell window.

kitchen converge



```
> Administrator: Windows PowerShell
C:\relativity-dev-vm\Chef\Cookbooks\Relativity> kitchen converge
```

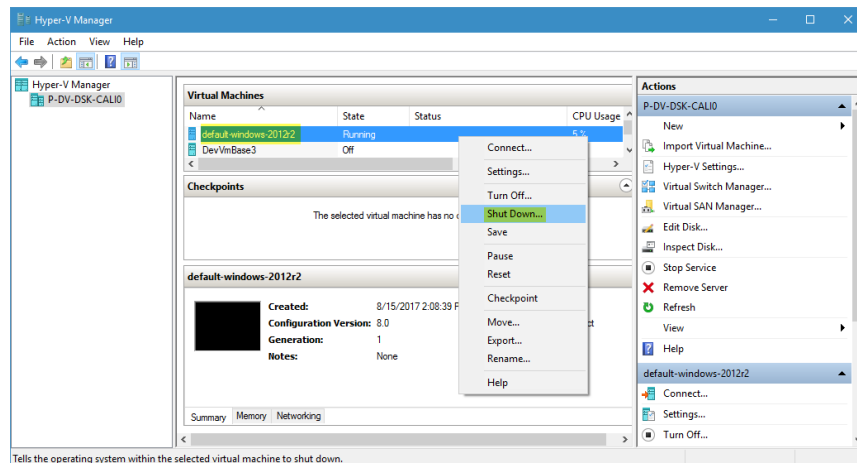
- Wait till the script finishes execution.

```
Recipe: webp1::install::no-
  windows_package[Microsoft web Platform Installer 5.0] action nothing (skipped due to action: nothing)
Recipe: relativeity::pre::relativeity::install::servicebus
  webp1_product[Servicebus_1.1.0] action install
  * log[Creating new service bus farm] action write
  * powershell_script[new_sb_farm] action run
  * execute C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NonInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI~1/AppData/Local/Temp/chef-script20170822-4688-h2Nk1p.ps1"
  * log[Created new service bus farm] action write
  * log[Adding service bus host to farm] action write
  * powershell_script[add_sb_host] action run
  * execute C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NonInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI~1/AppData/Local/Temp/chef-script20170822-4688-o41o4c.ps1"
  * log[Added service bus host to farm] action write
  * log[Creating new service bus namespace] action write
  * powershell_script[new_sb_namespace] action run
  * execute C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NonInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI~1/AppData/Local/Temp/chef-script20170822-4688-8zob40.ps1"
  * log[Created new service bus namespace] action write
  * log[Setting service bus farm dns] action write
  * powershell_script[set_sb_farm_dns] action run
  * execute C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe -NoLogo -NonInteractive -NoProfile -ExecutionPolicy Bypass -InputFormat None -File "C:/Users/ADMINI~1/AppData/Local/Temp/chef-script20170822-4688-h320wz.ps1"
  * log[Finished setting service bus farm dns] action write
  * log[Setting correct service bus credentials] action write
  * powershell_script[correct_sb_creds] action run
  * log[Finished setting correct service bus credentials] action write
  * log[sleeping for 2 mins for service bus services to start running] action write
  * log[recipe_end_time(pre::relativeity::install::servicebus): 2017-08-22T08:50:56-07:00] action write
  * log[recipe_duration(pre::relativeity::install::servicebus): 275.802864 seconds] action write
  * log[Finished Service Bus install] action write

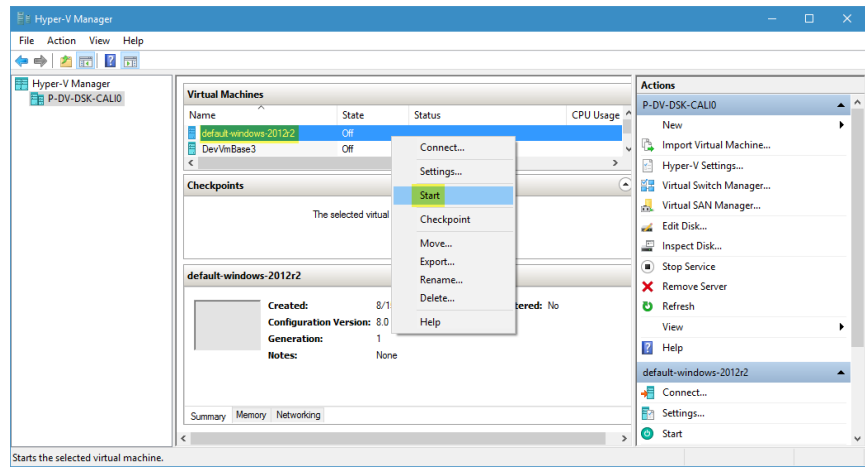
Running handlers:
Running handlers complete
Chef Client finished, 22/25 resources updated in 12 minutes 46 seconds
P-DV-DSK-CAL00: ~$ cd C:\Users\ADMINI~1\AppData\Local\Temp\chef-script20170822-4688-h2Nk1p.ps1
-----> Kitchen is Finished. (13m28.00s)
C:\relativeity-dev\ve\chef\Cookbooks\Relativeity
```

- Go to **Hyper-V manager** and restart (**Shut Down** and **Start**) your VM once the script finishes execution.

- Shut Down



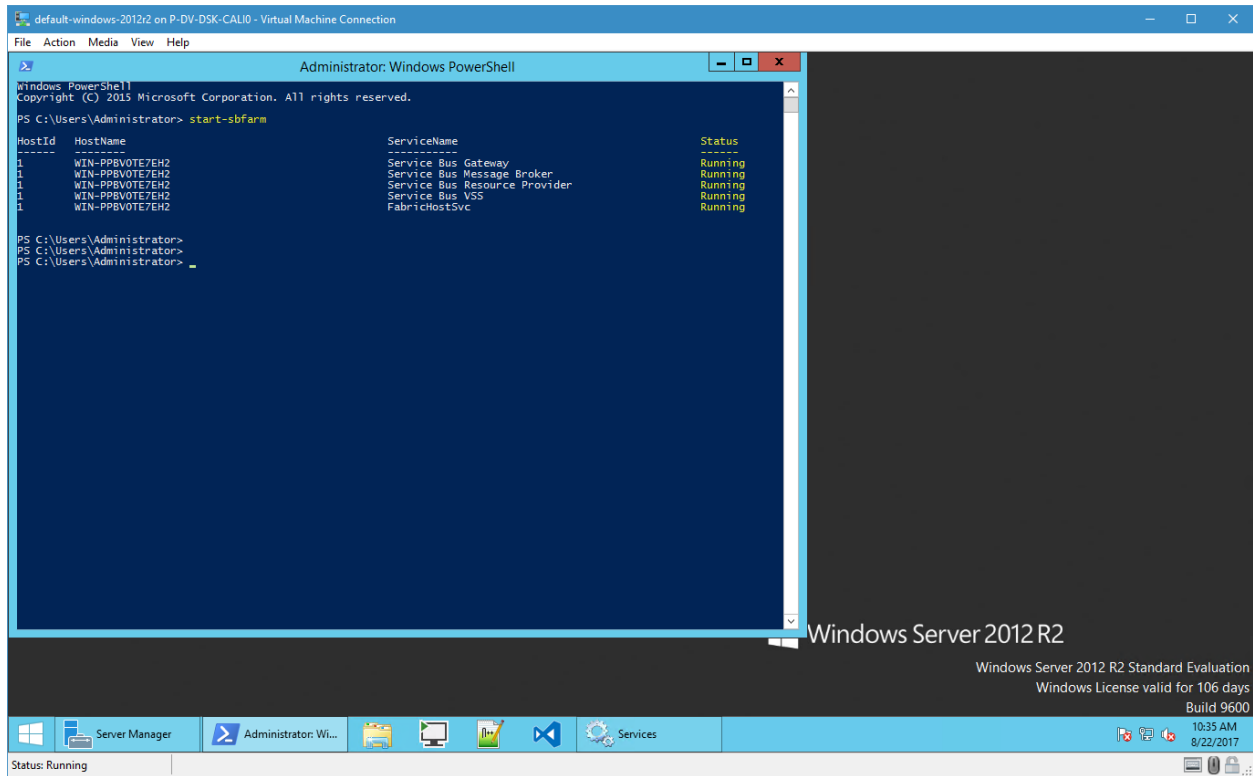
- Start



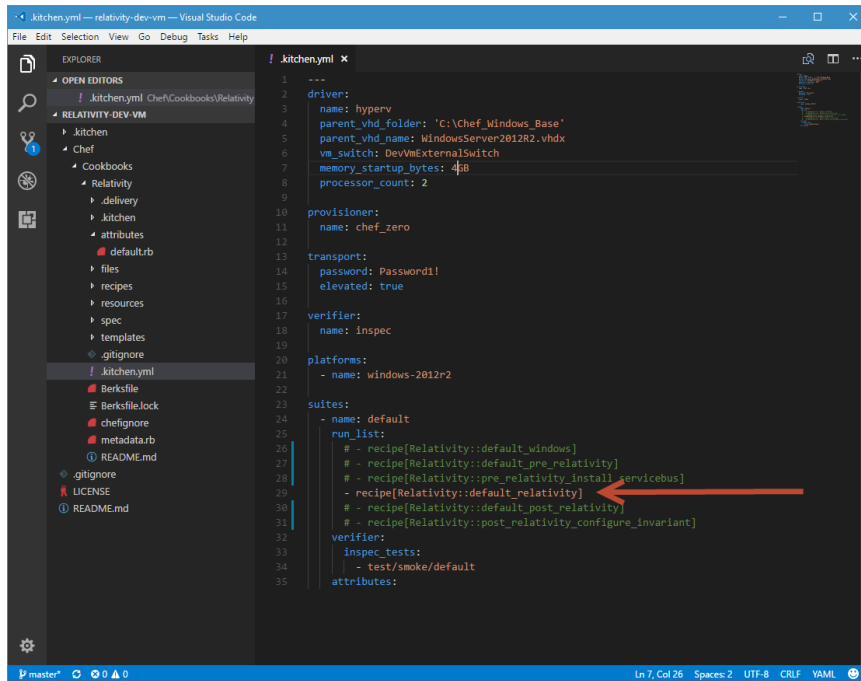
3.3.4 Run relativity install chef script

- Connect to the Hyper-V VM and make sure the Service Bus services are started by running a powershell command. Run the following command in PowerShell window.

start-sbfarm



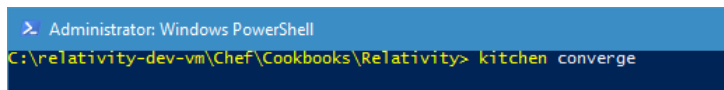
- In kitchen.yml file, comment the recipes except for relativity install chef recipes as shown in the following screenshot.



```
1 ---
2 driver:
3   name: hyperv
4   parent_vhd_folder: 'C:\Chef_Windows_Base'
5   parent_vhd_name: WindowsServer2012R2.vhdx
6   vm_switch: DevVMEthernetSwitch
7   memory_startup_bytes: 4GB
8   processor_count: 2
9
10  provisioner:
11    name: chef_zero
12
13  transport:
14    password: Password1!
15    elevated: true
16
17  verifier:
18    name: inspec
19
20  platforms:
21    - name: windows-2012r2
22
23  suites:
24    - name: default
25      run_list:
26        # - recipe[Relativity::default_windows]
27        # - recipe[Relativity::default_pre_relativity]
28        # - recipe[Relativity::pre_relativity_install_servicebus]
29        - recipe[Relativity::default_relativity]
30        # - recipe[Relativity::default_post_relativity]
31        # - recipe[Relativity::post_relativity_configure_invariant]
32
33    verifier:
34      inspec_tests:
35        - test/smoke/default
36
37    attributes:
```

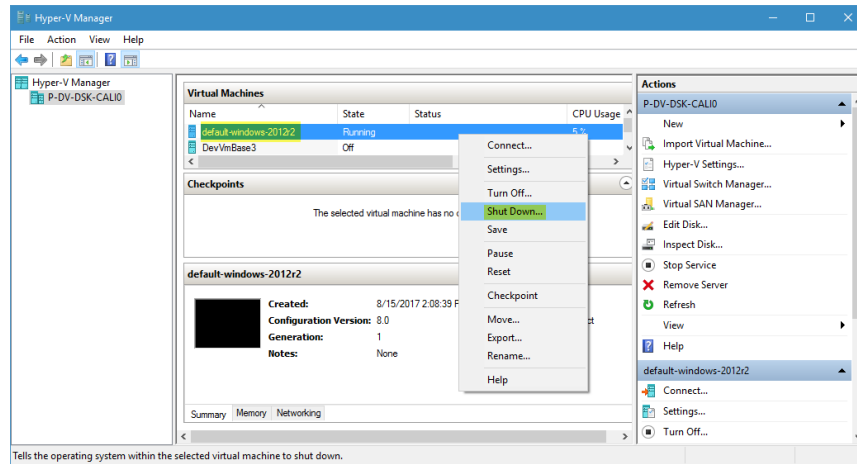
- Run the relativity install chef scripts. Run the following command in PowerShell window.

kitchen converge

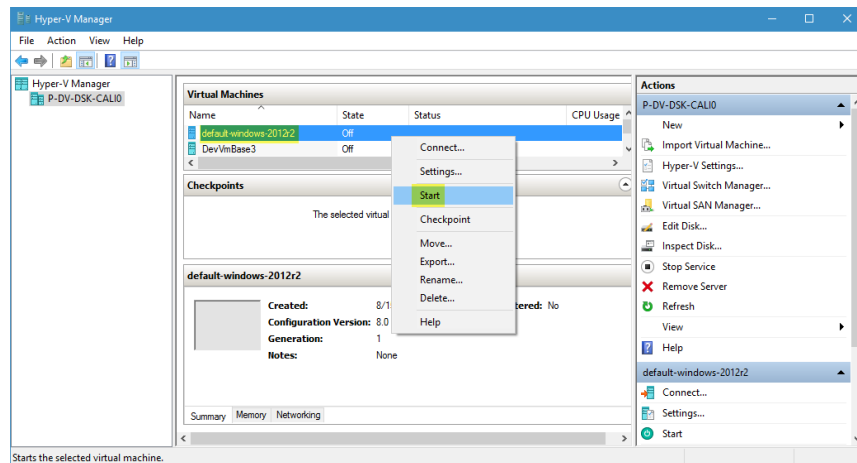


```
> Administrator: Windows PowerShell
C:\relativity-dev-vm\Chef\Cookbooks\Relativity> kitchen converge
```

- Go to **Hyper-V manager** and restart (**Shut Down** and **Start**) your VM once the script finishes execution.
 - Shut Down

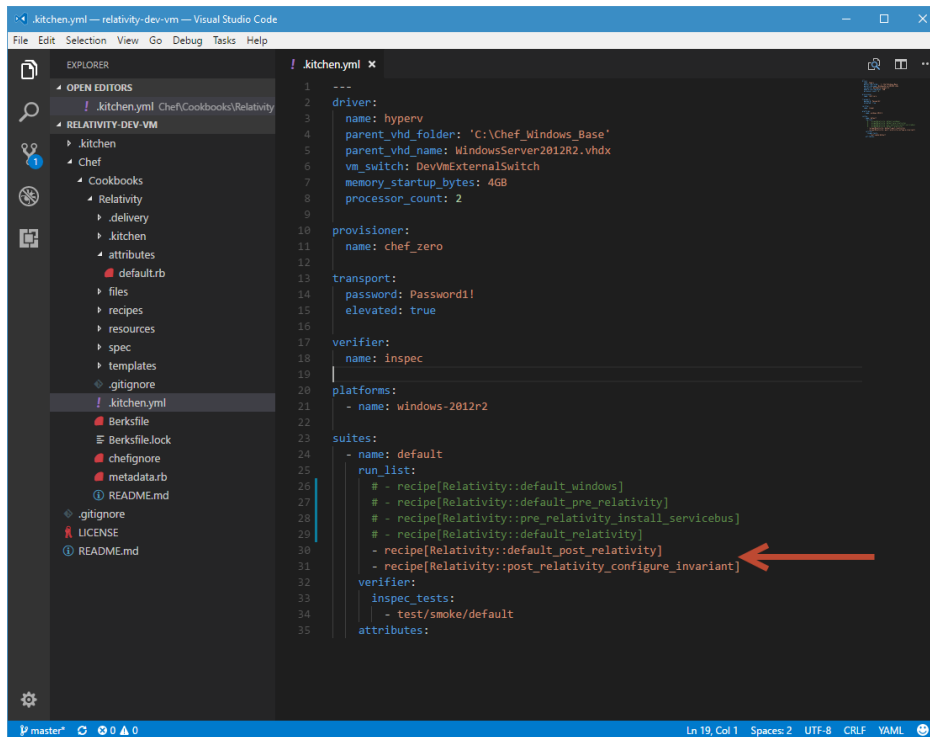


- Start



3.3.5 Run post-relativity install chef script

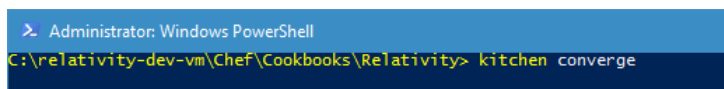
- In kitchen.yml file, comment the recipes except for post-relativity install chef recipes as shown in the following screenshot.



```
1 ---
2 driver:
3   name: hyperv
4   parent_vhd_folder: 'C:\Chef_Windows_Base'
5   parent_vhd_name: WindowsServer2012R2.vhdx
6   vm_switch: DevVmExternalSwitch
7   memory_startup_bytes: 4Gb
8   processor_count: 2
9
10  provisioner:
11    name: chef_zero
12
13  transport:
14    password: Password!
15    elevated: true
16
17  verifier:
18    name: inspec
19
20  platforms:
21    - name: windows-2012r2
22
23  suites:
24    - name: default
25      run_list:
26        # - recipe[Relativity::default_windows]
27        # - recipe[Relativity::default_pre_relativity]
28        # - recipe[Relativity::pre_relativity_install_servicebus]
29        # - recipe[Relativity::default_relativity]
30        - recipe[Relativity::default_post_relativity]
31        - recipe[Relativity::post_relativity_configure_invariant]
32
33  verifier:
34    inspec_tests:
35      - test/smoke/default
36
37  attributes:
```

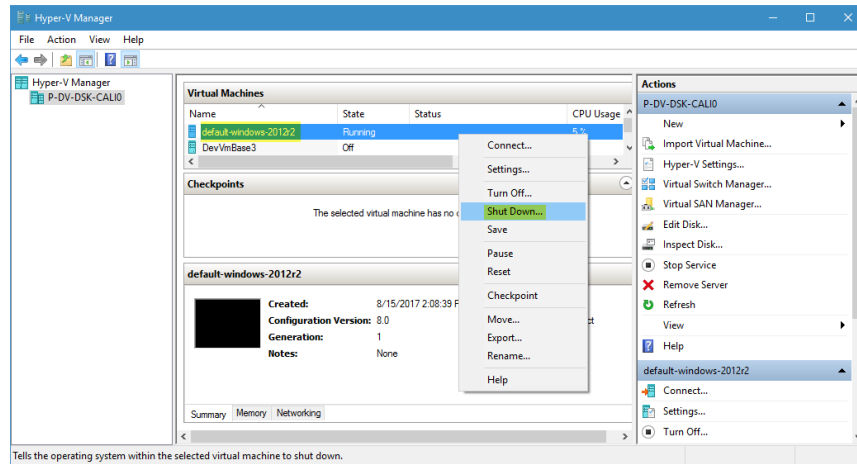
- Run the post-relativity install chef scripts. Run the following command in PowerShell window.

kitchen converge



```
Administrator: Windows PowerShell
C:\relativity-dev-vm\Chef\Cookbooks\Relativity> kitchen converge
```

- Go to **Hyper-V manager** and restart (**Shut Down** and **Start**) your VM once the script finishes execution.
 - Shut Down



- Start

