# Relativity Dev VM Running Vagrant and Chef Scripts Documentation [October 16, 2019]

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# 1 Requirements

• CPU cores: 4 cores

RAM: 12GBStorage: 140GB

Licenses

Windows Server 2012 R2

o Relativity

- Windows 10 Pro with Hyper-V features enabled.
- Windows Admin account.
- Internet connection

# 2 Downloads

- List of files needed for running the Vagrant/Chef recipes.
  - o Relativity installer
  - o Invariant installer

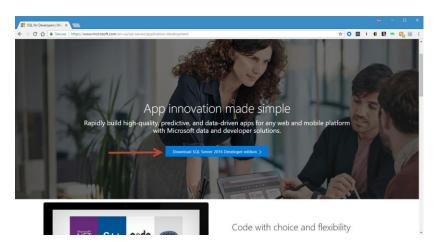
- Secret Store
- Datagrid
- o SQL Server 2016 Developer Edition
- Service Bus Defect Windows update
- Visual Studio Code text editor
- o MS Office Professional Plus 2010
- o MS Works Converter
- o Lotus Notes
- o Jungum

#### 2.1.1 Relativity installation

- Please contact <a href="mailto:support@relativity.com">support@relativity.com</a> to get the installer files for the following:
  - Relativity
  - Invariant
  - Secret Store
  - Datagrid

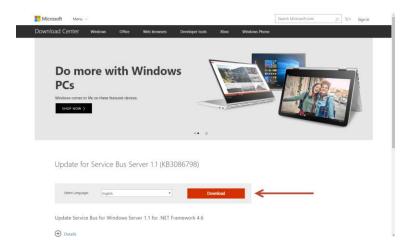
## 2.1.2 SQL Server 2016 Developer Edition

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



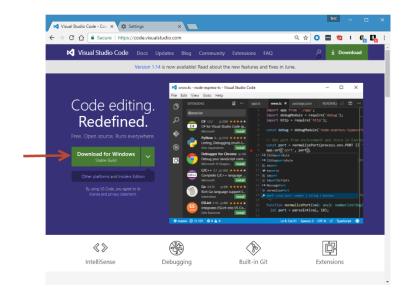
#### 2.1.3 Service Bus 1.1 Defect Windows Update

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



#### 2.1.4 Install Visual Studio Code text editor

• Download and Install Visual Studio Code from this link Visual Studio Code



# 3 Setup Workstation

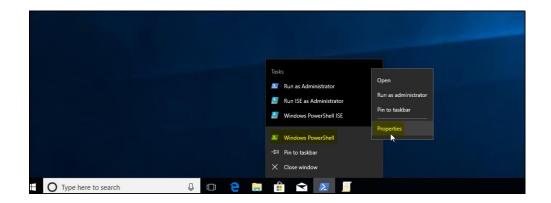
• It's important that you run the below steps in order.

## 3.1 Login

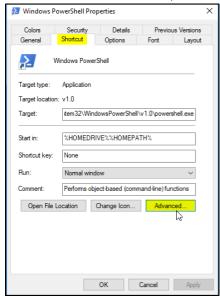
• Login into your workstation with a Windows Administrator account.

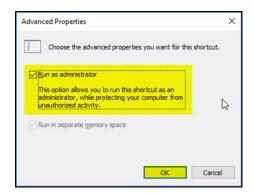
#### 3.2 Setup PowerShell

- Let's configure PowerShell to always open as an Administrator.
- Pin **PowerShell** to your Task Bar
- Right click on Windows PowerShell then Properties



Find the tab called Shortcut, then Advanced, then Run As Administrator





• Open a PowerShell window (should be opening as an Administrator now) and run the following command:

Set-ExecutionPolicy Unrestricted

```
Administrator. Windows PowerShell

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/PlinkID=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

PS C:\WINDOWS\system32>
```

#### 3.3 Install Chocolatey

• Run the following command in PowerShell window.

Set-ExecutionPolicy Bypass -Scope Process -Force; iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))

```
PS C:\WINDOWS\system32> Set-ExecutionPolicy Bypass -Scope Process -Force; lex ((New-Object System.Net.WebClient).Download dString(\https://chocolatey.org/install.ps!))
Getting latest version of the Chocolatey package for download.
Getting Chocolatey from https://chocolatey.org/api/Vz/package/chocolatey/0.10.9.
Downloading 7-Zip commandline tool prior to extraction.
Extracting C:\Users\CHANDR-1.ALI\AppData\Local\Temp\chocolatey\chocInstall\chocolatey.zip to C:\Users\CHANDR-1.ALI\AppData\Local\Temp\chocolatey\chocInstall\chocolatey.chocInstall\chocolatey\chocInstall\chocolatey\chocInstall\chocolatey\chocolatey\chocInstall\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey\chocolatey
```

#### 3.4 Install GIT Version 2.14.1

Run the following command in PowerShell window.

choco install git --version 2.14.1

```
PS C:\wTNDOWS\system32> choco install git --version 2.14.1
Chocolatey v0.10.9
Installing the following packages:
git
git
gy un accept licenses for the packages.
Progress: Downloading git.install 2.14.1... 100%
Progress: Downloading git classes for the packages.
Progress: Downloading git 2.14.1... 100%
Progress: Downloading git 2.14.1... 100%
Chocolatey-core.extension v1.3.3 [Approved]
Chocolatey-core.extension v2.3.3 [Approved]
Chocolatey-core.extension y2.3.3 [Approved]
Chocolatey-core.extension w2.3.3 [Approved]
Chocolatey-core.extension w3 successful.
Software installed to 'C:\Programbata\chocolatey\extensions\chocolatey-core'

git.install v2.14.1 [Approved]
git.install v2.14.1 [Approved]
git.install package files install completed. Performing other installation steps.
The package git.install wants to run 'chocolatey\extensions\chocolatey-core'

git.onfirm automatically next time, use '-y' or consider:
choco feature enable -n allowGlobalConfirmation
Do you want to run the script?([Y]es/[N]o/[P]rint): y

Using Git LFS
Install installed to 'C:\Program Files\Git'
git.install has been installed.
git.install installed to 'C:\Program Files\Git'
git.install or in the automatically uninstalled.
Environment Vars (like PATH) have changed. Close/reopen your shell to
see the changes (or in powershell/tend.exe just type 'refreshenv').
The install of git.install was successful.
Software installed to 'C:\Program Files\Git'
git v2.14.1 [Approved]
git package files install completed. Performing other installation steps.
The install of git.was successful.
Software install location in explicitly set, could be in package or
default install location in installer.
Chocolatey installed 3/3 packages.
See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).
```

#### 3.5 Clone Dev VM repository from Github

- Run the follo
- wing command in PowerShell window.

cd "C:\"

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> cd "C:\"
PS C:\>
```

Run the following command in PowerShell window.

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

```
Administrator: Windows PowerShell

PS C:\> git clone https://github.com/relativitydev/relativity-dev-vm.git

Cloning into 'relativity-dev-vm'.
remote: Counting objects: 1238, done.
remote: Compressing objects: 100% (196/196), done.
remote: Total 1238 (delta 227), reused 285 (delta 141), pack-reused 848

Receiving objects: 100% (1238/1238), 37.74 MiB | 3.45 MiB/s, done.

Resolving deltas: 100% (744/744), done.

PS C:\>
```

#### 3.6 Install Chef Development Kit Version 2.4.17

• Run the following command in PowerShell window.

. { iwr -useb https://omnitruck.chef.io/install.ps1 } | iex; install -project chefdk -channel stable -version 2.4.17

```
Select Administrator: Windows PowerShell

PS C:\> . { iwr -useb https://omnitruck.chef.io/install.ps1 } | iex; install -project chefdk -channel stable -version 2.4.17

ModuleType Version Name ExportedCommands

Script 0.0 Omnitruck {Get-ProjectWetadata, Install-Project, install}

Installing chefdk from C:\Users\CHANDR~1.ALI\AppData\Local\Temp\chefdk-2.4.17-1-x64.msi
```

#### 3.7 Enable the Hyper-V Windows feature

Run the following command in PowerShell window.

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

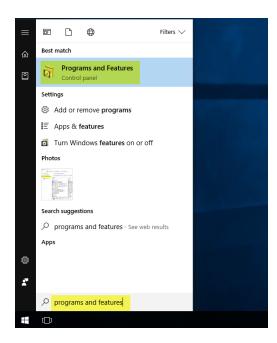
```
Administrator: Windows PowerShell

PS C:\> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All -NoRestart

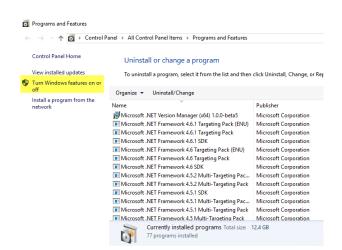
Path :
Online : True
RestartNeeded : False

PS C:\>
```

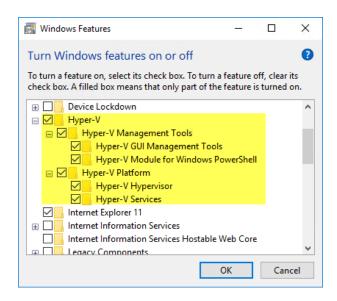
- Restart your workstation.
- Verify Windows Hyper-V feature installation
  - o Once your workstation finished restart, Go to Programs and Features



Click on Turn Windows features on or off

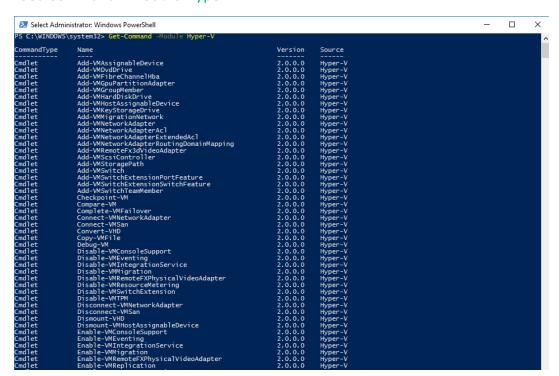


Verify if Hyper-V is checked as shown in the below screenshot



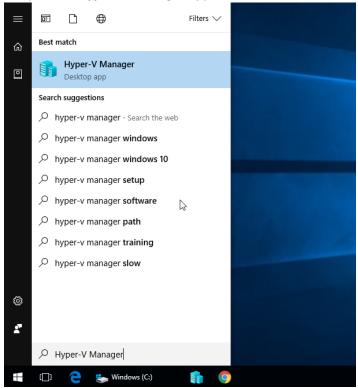
- You can also verify Hyper-V installation via PowerShell
  - Run the following command in PowerShell window. You should see results as shown in the below screenshot.

#### Get-Command - Module Hyper-V

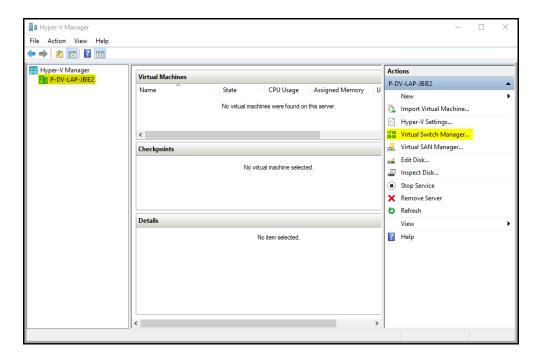


#### 3.8 Setup Hyper-V Virtual Switch

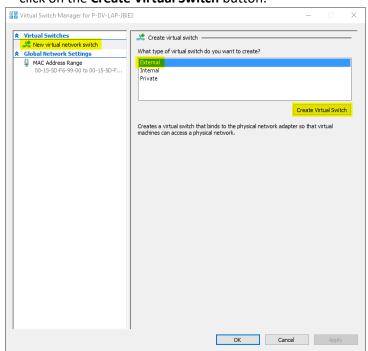
• Open the Hyper-V Manager application.



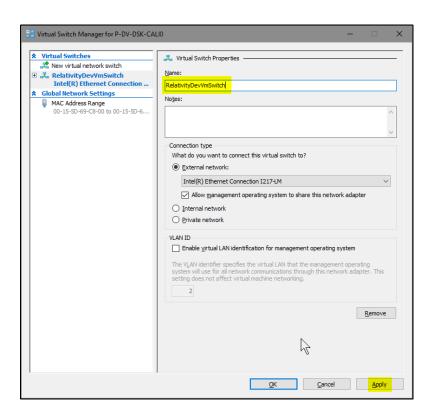
- Make sure you have an **External Virtual Switch** which lets you access your VM from your local machine.
  - Select your local machine from the left pane.
  - In the Actions pane located in Hyper-V Manager, click on the Virtual Switch Manager link, see screenshot below.



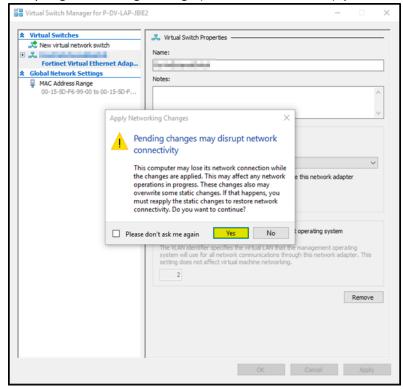
 If you don't already have an external network switch please click the New virtual network switch link under Virtual Switches. Select External for the type of switch and click on the Create Virtual Switch button.



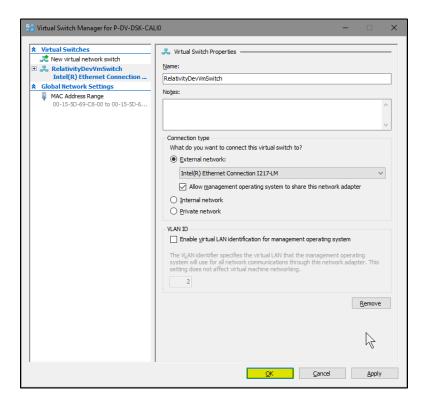
Provide a friendly name for the new switch (For example: RelativityDevVmSwitch)
 and click Apply button.



o If you get a warning message (see screenshot below), please click the **Yes** button.



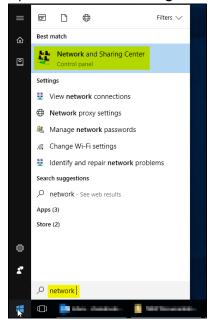
Next click the **OK** button to create your new virtual switch.



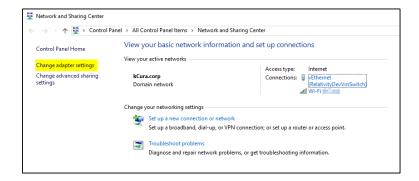
#### 3.9 Share Internet Connection

 Sharing the internet connection of your workstation with the Dev VM will make it easy to access it.

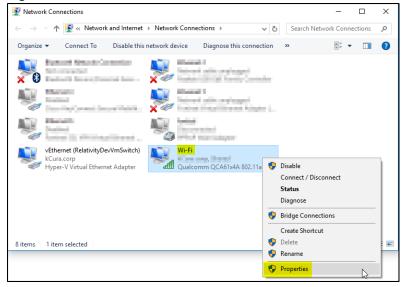




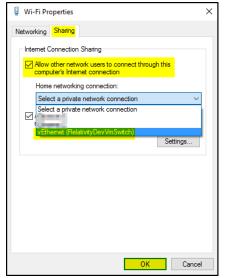
• Click on **Change adapter settings** link on the left pane.



Right click on the Network connection which has the internet access and select Properties.



Select Sharing tab, select the checkbox for Allow other network users to connect through
this computer's Internet connection option. From the dropdown, select the virtual switch
you created for Dev VM and click OK.



#### 3.10 Install Vagrant Version 2.0.1

• Run the following command in PowerShell window.

choco install vagrant --version 2.0.1

```
Administrator Windows PowerShell

S Ci > choco install vagra --version 2.0.1

Chocolatey viol.09

Installing the following packages:

Wayrant

By installing you accept licenses for the packages.

Progress: Downloading vagrant 2.0.1... 100%

Vagrant v2.0.1 [kgprowed]

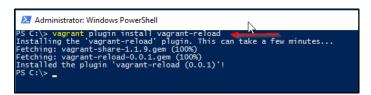
Vagrant v2.0 [kgprow
```

• Restart your workstation.

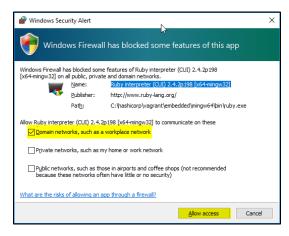
#### 3.11 Install Vagrant Reboot plugin

• Run the following command in PowerShell window.

vagrant plugin install vagrant-reload



If you see a popup, select Allow access as shown in below screenshot.t



#### 3.12 Install Vagrant berkshelf plugin

Run the following command in PowerShell window.

vagrant plugin install vagrant-berkshelf

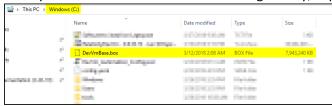
```
PS C:\> vagrant plugin install vagrant-berkshelf
Installing the 'vagrant-berkshelf' plugin. This can take a few minutes...
Installing the 'vagrant-berkshelf' plugin. This can take a few minutes...
Installed the plugin 'vagrant-berkshelf (S.1.2)'!
Post install message from the 'vagrant-berkshelf' plugin:

The Vagrant Berkshelf plugin requires Berkshelf from the Chef Development Kit.
You can download the latest version of the Chef Development Kit from:
https://downloads.chef.io/chefdk

Installing Berkshelf via other methods is not officially supported.
PS C:\>
```

#### 3.13 Add Dev VM Windows Base machine to Vagrant boxes list

- Follow the instructions provided in a different document to create a Windows Base machine. This Windows Base image is needed to run the Vagrant/Chef scripts.
- Once you have the Windows Base box image ready, copy it to your C drive.



 Next we need to add the Windows Base box image to the Vagrant boxes list. Run the following command in PowerShell window.

vagrant box add "DevVmBaseImage" C:\DevVmBase.box

```
Administrator: Windows PowerShell

C:\> vagrant box add "DevYmBaseImage" C:\DevYmBase.box

=> box: Box file was not detected as metadata. Adding it directly...

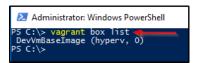
=> box: Adding box 'DevYmBaseImage' (v0) for provider:
box: Unpacking necessary files from: file:///C:/DevYmBase.box
box:

=> box: Successfully added box 'DevYmBaseImage' (v0) for 'hyperv'!

C:\>
```

 Confirm the vagrant box was successfully added. Run the following command in PowerShell window.

#### vagrant box list



#### 4 Create New Dev VM

• It's important that you run the below steps in order.

#### 4.1 Login

Login into your workstation with a Windows Administrator account.

#### 4.2 Navigate to the Dev VM GIT repository

• Run the following command in PowerShell window.

cd "C:\relativity-dev-vm\"

```
Administrator: posh~git ~ relativity-dev-vm [master]

C:\> cd "C:\relativity-dev-vm\"
C:\relativity-dev-vm [master =]>
```

#### 4.3 Switch to vagrant-poc branch

• Run the following command in PowerShell window.

git checkout vagrant-poc

```
Administrator: posh~git ~ relativity-dev-vm [vagrant-poc]

C:\relativity-dev-vm [master =]> git checkout vagrant-poc

Switched to branch 'vagrant-poc'

Your branch is up-to-date with 'origin/vagrant-poc'.

C:\relativity-dev-vm [vagrant-poc =]>
```

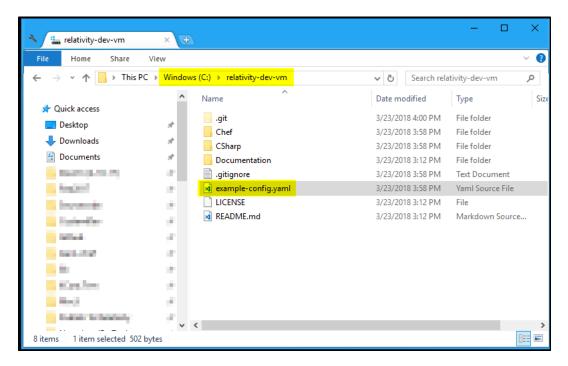
#### 4.4 Copy the config.yaml file required for Dev VM

• Run the following command in PowerShell window.

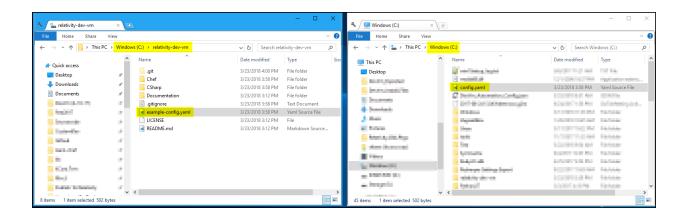
start .

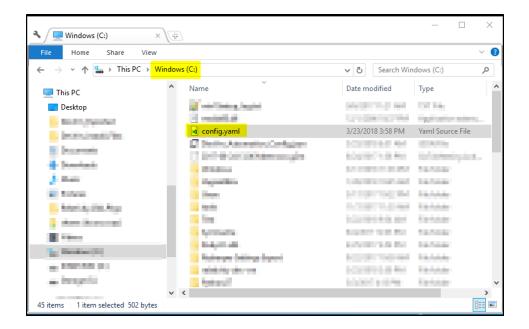
```
Administrator: posh~git ~ relativity-dev-vm [vagrant-poc]
C:\relativity-dev-vm [vagrant-poc ≡]>
Start .
C:\relativity-dev-vm [vagrant-poc ≡]>
```

• This opens the current folder in Windows Explorer.

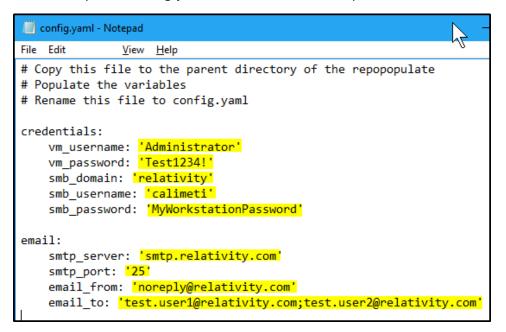


• Copy the **example-config.yaml** file from **C:\relativity-dev-vm** folder to **C drive** and rename it to **config.yaml**.





Open the config.yaml file from C drive in Notepad.



- Update the properties in the config.yaml file. Please find below a brief description of each property.
  - o **vm\_username**: Windows Admin username of the Dev VM.
  - o vm\_password: Windows Admin password of the Dev VM.
  - o **smb\_domain**: Domain of your workstation. If your workstation is not part of a domain, use your workstation computer name.
  - o **smb\_username**: Windows Admin username of your workstation.

- o **smb\_password**: Windows Admin password of your workstation.
- smtp\_server, smtp\_port, email\_from, email\_to will be values for the email server on your domain. These values will be used to send the report of the Smoke tests run after the Dev VM creation.
- Save the changes to the config.yaml file.

#### 4.5 Update Configuration file

Navigate to the configuration file directory. Run the following command in PowerShell window.

cd "C:\relativity-dev-vm\Chef\Cookbooks\Relativity\attributes"

- The directory contains one file name default.rb.
- Open the **default.rb** file and update the necessary properties.

#### 4.6 Run the Dev VM Creation script

#### 4.6.1 Navigate to the Dev VM GIT repository

• Run the following command in PowerShell window.

cd "C:\relativity-dev-vm\Chef\"

```
Administrator: posh~git ~ relativity-dev-vm [vagrant-poc]

C:\relativity-dev-vm [vagrant-poc =]> cd "C:\relativity-dev-vm\Chef\"

C:\relativity-dev-vm\Chef [vagrant-poc =]>
```

#### 4.6.2 List all the files in Chef folder

• Run the following command in PowerShell window.

ls

```
posh~git ~ relativity-dev-vm [vagrant-poc] (Admin)
 <1> posh~git ~ rela...
C:\relativity-dev-vm\Chef [vagrant-poc ≡]> ls
   Directory: C:\relativity-dev-vm\Chef
Mode
                   LastWriteTime
                                          Length Name
             3/23/2018 3:12 PM
                                                 Cookbooks
                        3:18 PM
             3/23/2018
                                                 DataBags
             3/23/2018 3:18 PM
                                                 Nodes
             3/23/2018 3:18 PM
                                                 Roles
             3/23/2018 3:18 PM
                                         22114 AutomationScript.ps1
             3/23/2018 3:18 PM
                                           2136 CleanWorkstation.ps1
             3/23/2018
                          3:18 PM
                                           12468 CreateDevVm.ps1
              3/23/2018
                          3:18 PM
                                            2248 SetupWorkstation.ps1
                                           14268 Vagrantfile
              3/23/2018
                          3:18 PM
-a---
             3/23/2018
                         3:18 PM
                                           6144 ZipFolderConsole.exe
C:\relativity-dev-vm\Chef [vagrant-poc =]>
```

CreateDevVm.ps1 PowerShell script has the code to create a new Dev VM.

#### 4.6.3 Run the Creation script

• Run the following command in PowerShell window.

.\CreateDevVm.ps1

• Once the script finishes execution successfully, you should be able to see a

#### 5 Clean Workstation

• It's important that you run the below steps in order.

#### 5.1 Login

• Login into your workstation with a Windows Administrator account.

#### 5.2 Remove Vagrant Box Image

• Run the following command in PowerShell window.

vagrant box remove "DevVmBaseImage" -force

#### 5.3 Uninstall Vagrant berkshelf plugin

• Run the following command in PowerShell window.

vagrant plugin uninstall vagrant-berkshelf

#### 5.4 Uninstall Vagrant reload plugin

• Run the following command in PowerShell window.

vagrant plugin uninstall vagrant-reload

#### 5.5 Uninstall Vagrant

• Run the following command in PowerShell window.

choco uninstall vagrant -force

#### 5.6 Uninstall Chocolatey

• Run the following command in PowerShell window.

Remove-Item -Recurse -Force "\$env:ChocolateyInstall"

• Run the following command in PowerShell window.

[Microsoft.Win32.RegistryValueOptions]::DoNotExpandEnvironmentNames).ToString(), [System.Text.RegularExpressions.Regex]::Escape("\$env:ChocolateyInstall\bin") + '(?>;)?', '',

[System.Text.RegularExpressions.RegexOptions]::IgnoreCase) | % {[System.Environment]::SetEnvironmentVariable('PATH', \$\_, 'User')}

• Run the following command in PowerShell window.

[System.Text.RegularExpressions.Regex]::Replace([Microsoft.Win32.Registry]::LocalMachine.OpenSubKe y('SYSTEM\CurrentControlSet\Control\Session Manager\Environment\').GetValue('PATH', '', [Microsoft.Win32.RegistryValueOptions]::DoNotExpandEnvironmentNames).ToString(), [System.Text.RegularExpressions.Regex]::Escape("\$env:ChocolateyInstall\bin") + '(?>;)?', '', [System.Text.RegularExpressions.RegexOptions]::IgnoreCase) | % {[System.Environment]::SetEnvironmentVariable('PATH', \$\_\_, 'Machine')}

• Run the following command in PowerShell window.

if (\$env:ChocolateyBinRoot -ne " -and \$env:ChocolateyBinRoot -ne \$null) { Remove-Item -Recurse -Force "\$env:ChocolateyBinRoot" }

• Run the following command in PowerShell window.

if (\$env:ChocolateyToolsRoot -ne " -and \$env:ChocolateyToolsRoot -ne \$null) { Remove-Item -Recurse - Force "\$env:ChocolateyToolsRoot" }

• Run the following command in PowerShell window.

[System.Environment]::SetEnvironmentVariable("ChocolateyBinRoot", \$null, 'User')

• Run the following command in PowerShell window.

[System.Environment]::SetEnvironmentVariable("ChocolateyToolsLocation", \$null, 'User')

#### 5.7 Remove Hyper-V Virtual Switch

• Run the following command in PowerShell window.

Remove-VMSwitch "RelativityDevVmSwitch" -Force

#### 5.8 Uninstall Hyper-V

• Run the following command in PowerShell window.

Disable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -NoRestart

Restart your workstation.

#### 5.9 Uninstall Chef Development Kit

- Open **Programs and Features** application.
- Search for **Chef Development Kit**, select it and click Uninstall.

