Relativity Dev VM

Create Windows Base Machine

Documentation

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# Instructions

1. Create the following folders on host machine
   1. **S:\Hyper-V**
   2. **S:\ISO**
2. Download **Windows Server 2016** ISO file at this link - <https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2016>
3. Copy the downloaded ISO file to **S:\ISO** folder
4. Enable Hyper-V on the host machine.
5. Create an **External Hyper-V Virtual Switch** on the host machine. Name the switch as **Default Switch.**
6. Set **PowerShell** to always open with ‘**Run as Administrator**’ permissions.
7. Run the following commands in PowerShell

$vm = New-VM -Name DevVmBase -MemoryStartupBytes 12GB -NewVHDPath "S:\Hyper-V\DevVmBase\Virtual Hard Disks\DevVmBase.vhdx" -NewVHDSizeBytes 256GB -Path "S:\Hyper-V" -SwitchName “Default Switch”

$vm | Add-VMDvdDrive -Path "S:\ISO\Windows\_Server\_2016\_Datacenter\_EVAL\_en-us\_14393\_refresh.ISO "

$vm | Set-VM -AutomaticStartAction StartIfRunning -AutomaticStopAction ShutDown

$vm | Start-VM

1. Choose the **Windows Server 2016 Standard Evaluation (Desktop Experience)** option for windows installation.
2. Eject the OS disk.
3. Change Computer Name to **DevVmBase**.
4. Share the host machine internet connection with the VM. (share it to **Default Switch**)
5. Set **PowerShell** to always **Run as Administrator**.
6. Change **PowerShell Execution Policy** by running the following command in PowerShell

Set-ExecutionPolicy Unrestricted

1. Check the **PowerShell version** on the VM by running the following command

Get-Host | Select-Object Version

1. If the installed PowerShell version is not 5.1.x.x, Install **PowerShell 5.1**
   1. Download and install [Win8.1AndW2K12R2-KB3191564-x64.msu](https://go.microsoft.com/fwlink/?linkid=839516) file at this link - <https://www.microsoft.com/en-us/download/details.aspx?id=54616>
   2. Restart VM.
2. Check the .NET version **installed** on the VM is **.NET 4.6.2** by running the following command in PowerShell. The value should be **True**.

Get-ChildItem 'HKLM:\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\Full\' | Get-ItemPropertyValue -Name Release | Foreach-Object { $\_ -ge 394802 }

Reference: <https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/how-to-determine-which-versions-are-installed#ps_a>

1. If the installed .NET version is not .NET 4.6.2 or higher, Install **.NET 4.6.2**
   1. Download and install - <https://www.microsoft.com/en-us/download/details.aspx?id=53344>
   2. Restart VM.
2. Delete any Install files from the **Downloads** and **Recycle Bin** folders.
3. In **Server Manager** application
   1. Turn off **Firewall** (for Domain, Private and Public profiles)
   2. Enable **Remote Management**
   3. Enable **Remote Desktop** connections
   4. Remove **IPV6** for the **Ethernet** Network Adapter.
      * Right click on the Ethernet Adapter and **uncheck** **Internet Protocol Version 6 (TCP/IPv6)**
   5. Turn **IE Enhanced Security Configuration** Off. (for Administrators and Users)
   6. Change **Windows Time zone** to **Central (US & Canada)** and turn **On** the **Set time zone automatically** setting.
4. Setup **WinRM**
   1. Run the following commands in PowerShell

Get-NetFirewallPortFilter | ?{$\_.LocalPort -eq 5985 } | Get-NetFirewallRule | ?{ $\_.Direction -eq "Inbound" -and $\_.Profile -eq "Public" -and $\_.Action -eq "Allow"} | Set-NetFirewallRule -RemoteAddress "Any"

winrm quickconfig -q

winrm set winrm/config/winrs '@{MaxMemoryPerShellMB="512"}'

winrm set winrm/config '@{MaxTimeoutms="1800000"}'

winrm set winrm/config/service '@{AllowUnencrypted="true"}'

winrm set winrm/config/service/auth '@{Basic="true"}'

Start-Service WinRM

set-service WinRM -StartupType Automatic

1. Change **User Account Control** settings to **Never Notify**.
2. **Windows Updates**
   1. Turn on Automatic Updates.
   2. Install all available updates
3. In Hyper-V Manager, turn off **Enable Dynamic Memory** settings
4. Install the following software manually
   1. Ninite
      * Use **Ninite.com** for the following
        + Java Runtime
        + Notepad++
        + Chrome
        + Visual Studio Code
        + 7 zip
        + WinDirStat
      * **Rename** the exe to Ninite.exe
      * **Copy** the Ninite.exe to this path on the VM - **"C:\Software\_Install\Ninite.exe"**
      * Also set Ninite to update software using Task Scheduler (<https://www.groovypost.com/howto/ninite-install-update-programs-automatically/>)
   2. Download the following installers and copy to the **C:\Software\_Install** folder on the VM. Next install them.
      * Adobe Reader
      * Visual Studio 2015 Remote Debugger – Latest and x64
      * Visual Studio 2017 Remote Debugger – Latest and x64
      * Visual Studio 2019 Remote Debugger – Latest and x64
      * SQL Server Management Studio – Latest
5. For Windows Explorer
   1. Show hidden files
   2. Show extensions for known types
6. Taskbar
   1. Set to Never combine labels
7. Pin the following programs to Taskbar on the VM (follow the below order)
   1. PowerShell
   2. Chrome
   3. SQL Server Management Studio
   4. Notepad++
   5. Visual Studio 2015 Remote Debugger
   6. Visual Studio 2017 Remote Debugger
   7. Visual Studio 2019 Remote Debugger
   8. Services
   9. Task Manager
8. Reset the Windows Server 6-month trial license
9. Install Latest Windows Updates
10. Run Latest Ninite from this path - **"C:\Software\_Install\Ninite.exe"**
11. Run Chef scripts for Base Image
12. Login into SQL Server Management Studio with **sa** login and save Credentials
13. Create a Relativity Login page Bookmark in Chrome