

Tachyon - Nomad as Content Provider Lab Guide

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Document Purpose and Conventions

This document has the following aims:

- To provide instructions to delegates to enable completion of the practical training labs
- Where relevant, provide guidance which can be used during real world implementations

The following conventions are used to highlight important information.

Warning

Hot Tip

Best practice

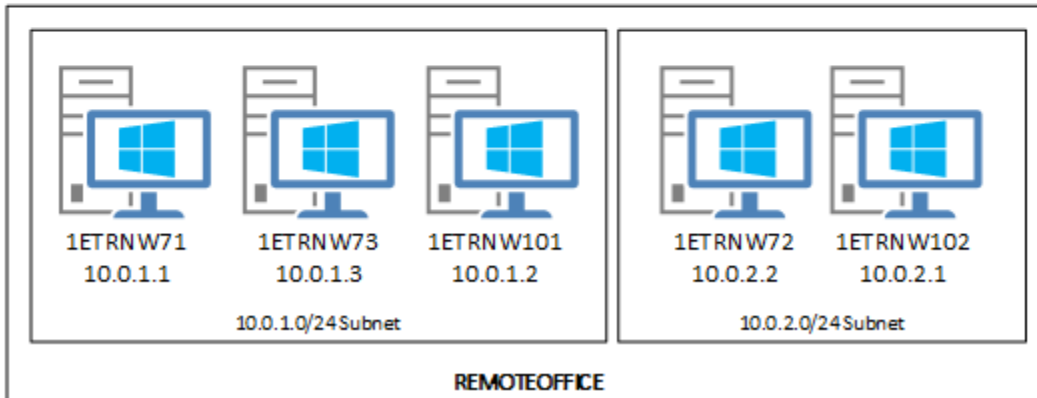
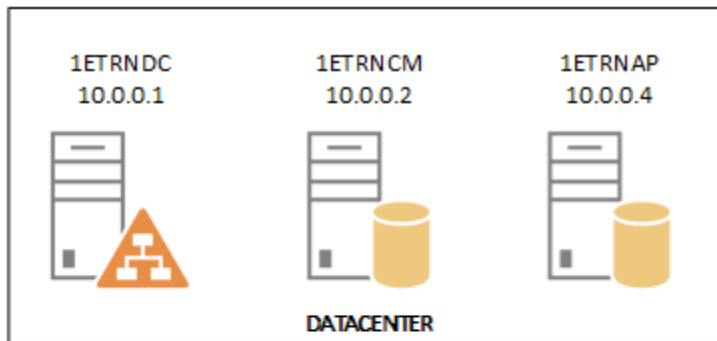
Discussion point

Indicates the virtual machine that should be used for the exercise or task.

Lab Information

The lab environment consists of the following computers:

Computer	Role	Subnet	AD Site
1ETRNDK	Domain controller for the 1ETRNL.LOCAL domain. The ConfigMgr package source folder is located on this server.	10.0.0.0/24	Datacenter
1ETRNCM	ConfigMgr server with a local SQL instance. All ConfigMgr roles are installed in this server.	10.0.0.0/24	Datacenter
1ETRNP	Application server that will host the ActiveEfficiency server and database. SQL is installed locally.	10.0.0.0/24	Datacenter
1ETRNW71	Windows 7 client computer	10.0.1.0/24	RemoteOffice
1ETRNW72	Windows 7 client computer	10.0.2.0/24	RemoteOffice
1ETRNW73	Windows 7 client computer	10.0.1.0/24	RemoteOffice
1ETRNW101	Windows 10 client computer	10.0.1.0/24	RemoteOffice
1ETRNW102	Windows 10 client computer	10.0.2.0/24	RemoteOffice



✔ The password for all accounts used in the lab environment is: Passw0rd

⚠ Ignore any patching popups on our servers. We have deliberately left them unpatched to show patching via Patch Success and/or Nomad

Tachyon – Using Nomad as Content Provider

Our lab currently has Tachyon v4.1 installed. In this lab we will install Nomad 7.0 and enable the Nomad module of the 1E Client which is already installed on our devices. We will then deliver 2 instructions that have content associated with them and watch the Nomad processes take place. This lab will not get into the configuration details of Nomad. For that information, please consume the content for Nomad – Implementing and Using and register for a Nomad – Hands on Lab Session.

When a Tachyon instruction has content associated with it and Nomad is not installed Tachyon will use the Background Channel to point the devices to the location of the content for download. This functionality is observed in the Tachyon Operator course. We will be working with Nomad for our content transfers in this mini-lab. For Tachyon to use Nomad as the content provider Config Mgr is not required.

Preparing to Enable the Nomad Module of the 1E Client

Since the 1E Client 4.1 has been deployed to all our devices we simply need to deliver an action that enables the Nomad module of the 1E Client.

Prepare to Enable the Nomad Module of the 1E Client

1ETRNPAP

1. Log into **1ETRNPAP** as **1ETRNPAppInstaller**
2. Open the OneDrive Shortcut and download **1E Tachyon - Course Content\Tachyon – Nomad as Content Provider\1ETRNP-EnableNomadModule.xml** to **c:\temp**
3. Right click on the file you just copied and select **Edit with Notepad**
4. Look at the code in the instruction. Notice that we are editing the **1EClient.conf** file and restarting the service to enable the Nomad Module

5. Open file explorer and navigate to **c:\Program Files\1E\Client** right click on **1EClient.conf** and choose **Open With**, Choose **Notepad**
6. Scroll down to the bottom of the file and notice that the line for the *Module.Nomad.Enabled = false* close the file without making any changes.
7. Launch *Google Chrome* and Use the Shortcut to open the **Tachyon Portal**
8. Launch the *Settings* Application and Navigate to **Configuration – Instructions – Instruction Sets**
9. Click the **Upload** button and navigate to **c:\temp Select 1ETRN-EnableNomadModule.xml**
10. Move the instruction into the **1E Client** instruction set so that we can deliver it to our devices

This instruction can be modified in TIMS to enable the other modules of the 1E Client also.

Enabling the Nomad Module of the 1E Client

We are going to use the Tachyon instruction that we just uploaded to enable the Nomad module of the 1E Client, we could just as easily use Config Mgr Compliance to do this. 1E provides the Configuration Items that you can import into Config Mgr to enable any of the other modules of the 1E Client. We have a course in the Course Library that covers this functionality see 1E Client – Installing and Upgrading. There is also a mini lab that only takes 1 hour to complete on the 1E Client. Config Mgr is not needed for Tachyon to use Nomad. The Nomad elected master will use the Background channel to download the content just as the elected master downloads the content from a Config Mgr Distribution Point. Once the elected master has the content Nomad operates in the same way as it does in a Config Mgr environment. In this lab we will not demonstrate the advanced functionality of Nomad (fan out, SSD, PBA, PXE Everywhere, etc) for that please see our Nomad – Implementing and Using course and labs.

Enable the Nomad Module of the 1E Client

1ETRNW71

11. Log into **1ETRNW71** as **1ETRNTachyon_Admin1**
12. In *Google Chrome* switch app to launch the *Explorer Application*
13. In the *I want to know* field type in **Enable**
14. Select the **Enable the Nomad Module of the 1E Client** instruction that we just uploaded
15. Click **Perform this action**
16. Since this is an Action, we must enter our password – do that now
17. Open *LiveMail* and grab the one-time code to authenticate for instruction x

1ETRNW102

18. Log into **1ETRNW102** as **1ETRNTachyon_AdminPP**
19. Launch the *Explorer Application* and navigate to **Notifications**
20. Approve instruction x

Validating the Nomad Module Enablement

1ETRNW71

21. Still logged into *Explorer Application* view the responses from the instruction
22. When all 7 devices have responded open *File Explorer* and navigate to **c:\ProgramData\1E\Client\1E.Client.log** and open the file to view the contents
23. Look for *Running Instruction (InstructionID=XXX)* with XXX being the instruction number that you just improved. Notice it does a *-reconfigure Nomad.Module.Enabled=true* with a *-restart*
24. Open **c:\Program Files\1E\Client\1EClient.conf**
25. Scroll down to the bottom and notice the *Module.Nomad.Enabled = true* close the file without making any changes.
26. Open the *Services applet* and notice the 1E Nomad Branch Service is now running

If we would have had an older version of Nomad installed on our device the start of the Nomad module of the 1E Client would have removed any prior versions.

Delivering Content

We will now deliver an instruction that contains some content so that we can see the Nomad module in action.

1ETRNW71

27. Still logged into **1ETRNW71** as **1ETRNTachyon_Admin1**
28. Launch the *Explorer Application* and in the *I want to know* field type in **Tachyon**

29. Select the **Tachyon Platform Verification Stage 2** and click **Perform this action**
30. Type in **Passw0rd** and then open *livemail* to get the authentication code
31. Type the code for Instruction XX in the open window

1ETRNW102

32. Still logged into **1ETRNW102** as **1ETRN\Tachyon_AdminPP**
33. Refresh the *Chrome* page and notice the Notifications for Instruction XX
34. Approve the pending instruction xx
35. Navigate to **Instructions – History** – Launch our *Tachyon Verification Stage 2*
36. Wait for all 7 devices to respond

Tracing the Content Delivery

In this task we will look at the Nomad steps for the content. Keep in mind that our instruction's content is very small.

1ETRNW102

37. Open **c:\ProgramData\1ENomadBranch\Logfiles\NomadBranch.log**
38. Scroll down and find *Request Election* for our file *GetConfig.ps1*
39. Notice which device was elected the master. We have 2 subnets in our lab so we will have one master on the even numbered subnet (even named machines) and one on the odd numbered subnet (odd named machines)

1ETRNW71

40. Open the **NomadBranch.log** on this machine and look at the lines for our *getconfig.ps1* download
41. Notice that this subnet had a different master elected
42. Take a moment to look at the other entries in the log

Deploying the Nomad Client Health in Guaranteed State

Nomad Client Health is one of our Integrated Product Packs for Guaranteed State. In this Task we will assign and deploy the policy and then view the results from the rules.

1ETRNW72

43. Log into **1ETRNW72** as **1ETRNManager1**

Manager1 is our Guaranteed State Administrator

44. Open the *Guaranteed State* Application if it is not already opened
45. Navigate to **Administration – Policies** select the **Nomad Client Health** policy and click **assign** on the right.
46. Click the + sign at the top of *Management Groups* and choose **All Devices**. Click **Save**.
47. Click the **deploy** button at the top
48. Click **Ok**

Viewing the Results of the Nomad Client Health Policy

49. Navigate to **Overview**
50. Change the drop down at the top from *All Policies* to **Nomad Client Health**
51. Notice the first tile *Device State*. You can drill into both sections of the donut – *Compliant and Non-Compliant*. Drill into each one and look at the individual devices
52. Notice that we have numbers in each of the columns. Each of these are links, and we can drill in for additional details. Do that now.
53. Click on **View History** to see the details of the rules in this policy

We have not enabled any of the fix rules in our Policies. The fix rules are imported into Tachyon but are not enabled. This is to ensure that no changes are made by the system without the change control process being followed. If you want the policy to remediate any issues that are found to be non-compliant then the fix rules must be enabled. More information on this issue can be found in the Tachyon Operator v4 course.

54. Take some time to look at all the results for the different devices.
55. Navigate around and notice the different data points that the rules are looking at.

This lab is just an overview of using Nomad as the content provider for Tachyon. If you have not already taken Tachyon Operator v4, Tachyon Advanced v4 and Nomad please take those courses also. Tachyon Advanced v4 will give you the skills needed to create your own fragments for use in Guaranteed State.

Lab Summary

In this lab, we learned how to enable the Nomad module of the 1E Client in order to use Nomad as the content provider in Tachyon. We were able to deploy an instruction that contained a powershell script and see the Nomad election and content transfer process on each of the subnets. We then deployed the Nomad Client Health Policy in Guaranteed State and took a look at the different items that it is checking for and the results that are returned.