IBM BigFix
Version 9.2

Asset Discovery User's Guide

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Note
Before using this information and the product it supports, read the information in "Notices" on page 25.

This edition applies to version 9, release 2, modification level 0 of IBM BigFix and to all subsequent releases and modifications until otherwise indicated in new editions.

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Contents

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Chapter 1. Setting up your environment

IBM BigFix Asset Discovery has some key uses in enterprise environments:

- Identification of network assets – including devices such as routers, printers, switches, wireless access points, or anything with an IP address.
- Identification of unmanaged and rogue computers including computers that have had theIBM BigFix agent disabled or rogue computers that are not managed by the company.

With this information, important license inventory questions can be answered regarding what kind of device it is, when it was installed and where it is located. Additionally, security questions and concerns can be answered regarding unauthorized employee computers, wireless units or rogue devices on the network.

TheIBM BigFix Asset Discovery solution is unique because the scanning is done by other agents of nearby computers. This is known as distributed scanning. This approach has several key benefits:

- Conserves WAN bandwidth
- Scanning can be done in parallel for much faster results, in minutes instead of weeks
- Can be easily customized to work in complex network configurations, including isolated subnets
- Individual subnets can run customized scan types

IBM BigFix Asset Discovery works by using Fixlet and Tasks to deploy Scan Points to specified agents in your network. You can then use other Fixlets and Tasks to run Nmap scans at intervals of your choosing. Scan results are automatically sent to the IBM BigFix server, which imports the data into the IBM BigFix database. The scan information can then be viewed in the IBM BigFix console using the *Unmanaged Assets* tab.

Note: You must install the BES server plug-in service to work with Asset Discovery Fixlets. This plug-in is available for installation in the BES Support site.

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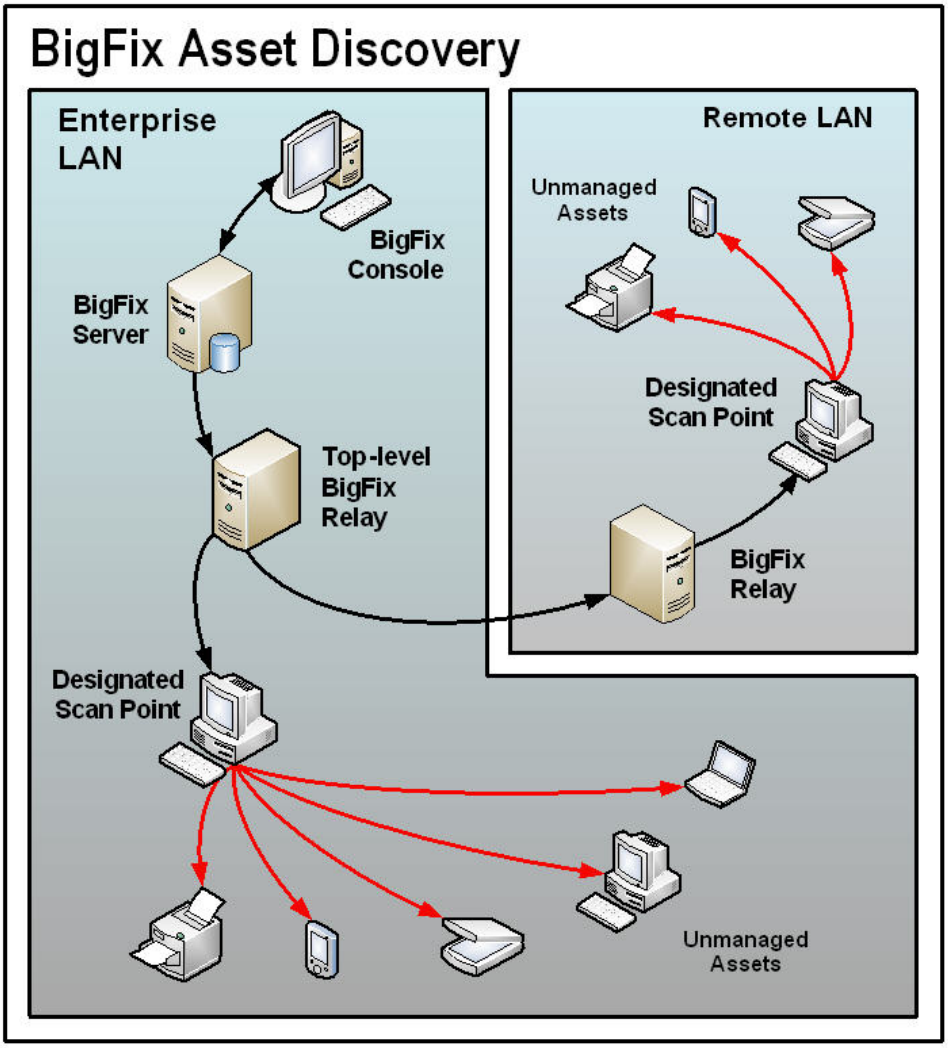
Chapter 2. Overview

IBM BigFix Asset Discovery works by designating certain computers as *Scan Points*. Any agent can be designated as a Scan Point if it is running a supported operating system. These Scan Points query the unmanaged assets in your network. The following image illustrates this process.



Information is retrieved from these unmanaged assets by the Scan Points and sent back through relays to the database on theIBM BigFix server. From there, you can examine the results on theIBM BigFix console:

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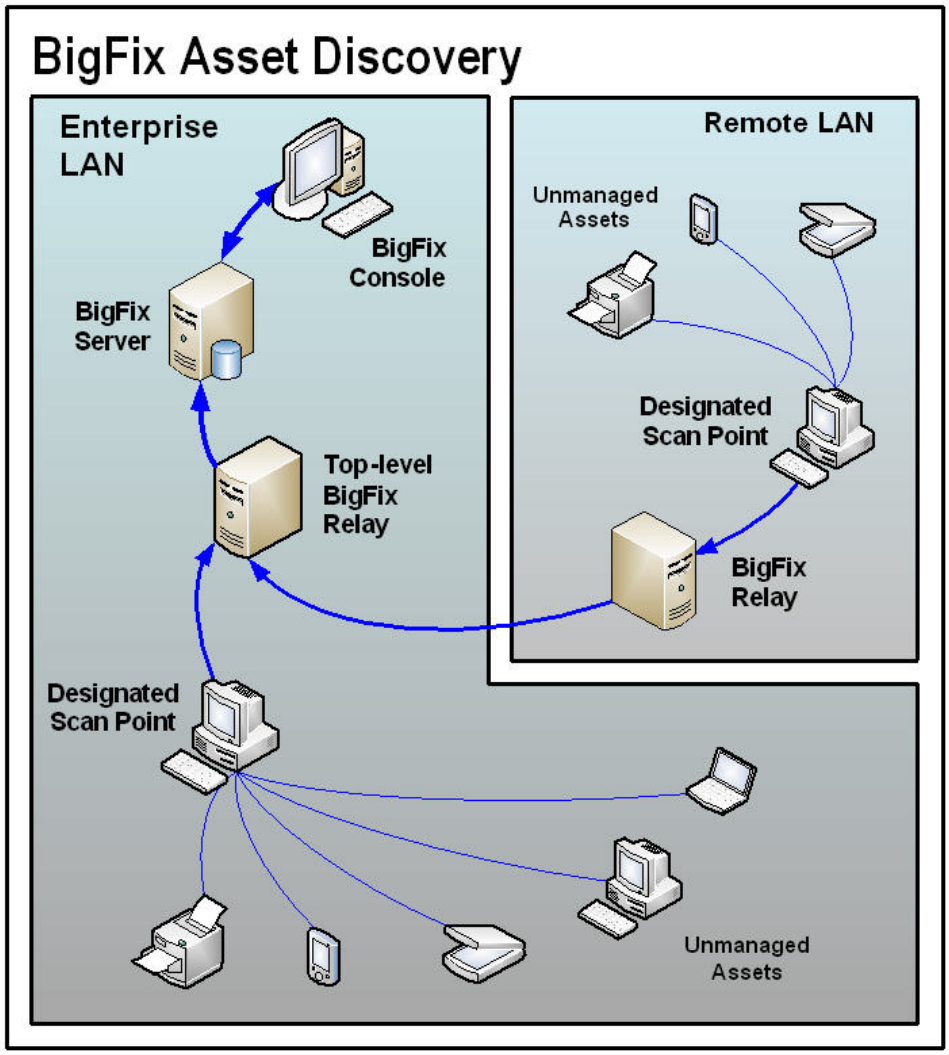


System requirements

IBM BigFix Asset Discovery supports Windows 7, Windows Vista, Windows 2008, Windows 2003, Windows XP, Windows 2000, or Red Hat Linux 5, Red Hat Enterprise Linux 6, either x86 or x64 architectures, and Red Hat Enterprise Linux 7.

The nmap.org website indicates that Nmap supports all versions of Windows since NT, including Windows 2000, Windows XP, Windows Vista, Windows 7, and Server 2003/2008. Nmap supports also Linux operating systems.

Installation

You perform the following installation tasks in the Asset Discovery site:

- Enable the Unmanaged Asset Importer Service on your IBM BigFix server
- Designate specific agents as scan points
- Run the scan

Note: To view Unmanaged Assets, you must have the proper permissions set through the BES Administration Tool. To access the tool, click **Start > All Programs > IBM BigFix Enterprise > BES Administration Tool**). A user can be granted permission to view all unmanaged assets or only those connected to the Scan Points that they administer.

Installing the site

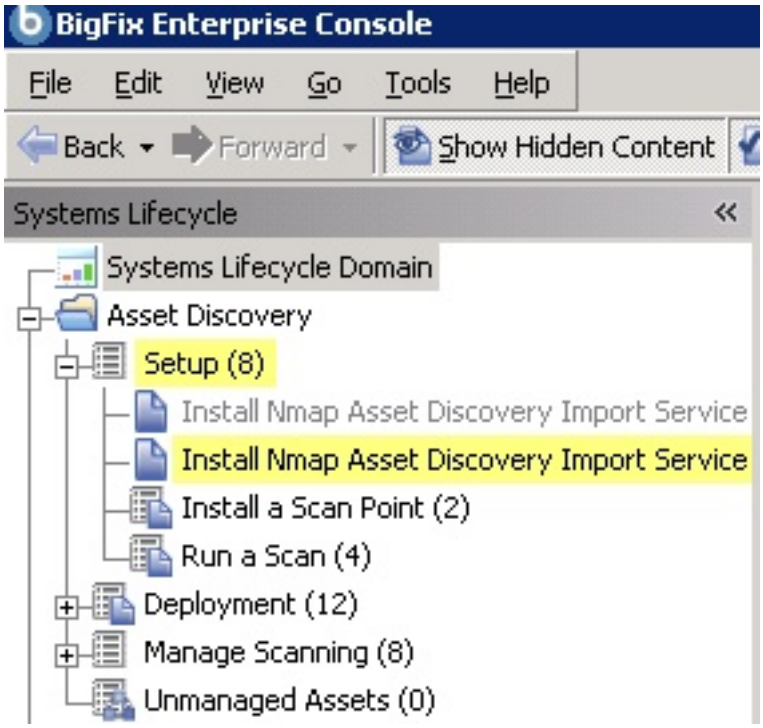
To enable and subscribe all the computers to the external site using the IBM BigFix Console, perform the following steps:

1. Open the BigFix Management domain and scroll to the top to view the associated dashboards.
2. In the Licensing dashboard, click the external site and enable it, if not already enabled, by clicking the name of the site in the list of sites.
3. In the properties panel of the external site, select the **Computer subscriptions** tab and click **All computers** to subscribe all the computers in the IBM BigFix environment to the external site.
4. Click **Save Changes** to save the site subscription settings.

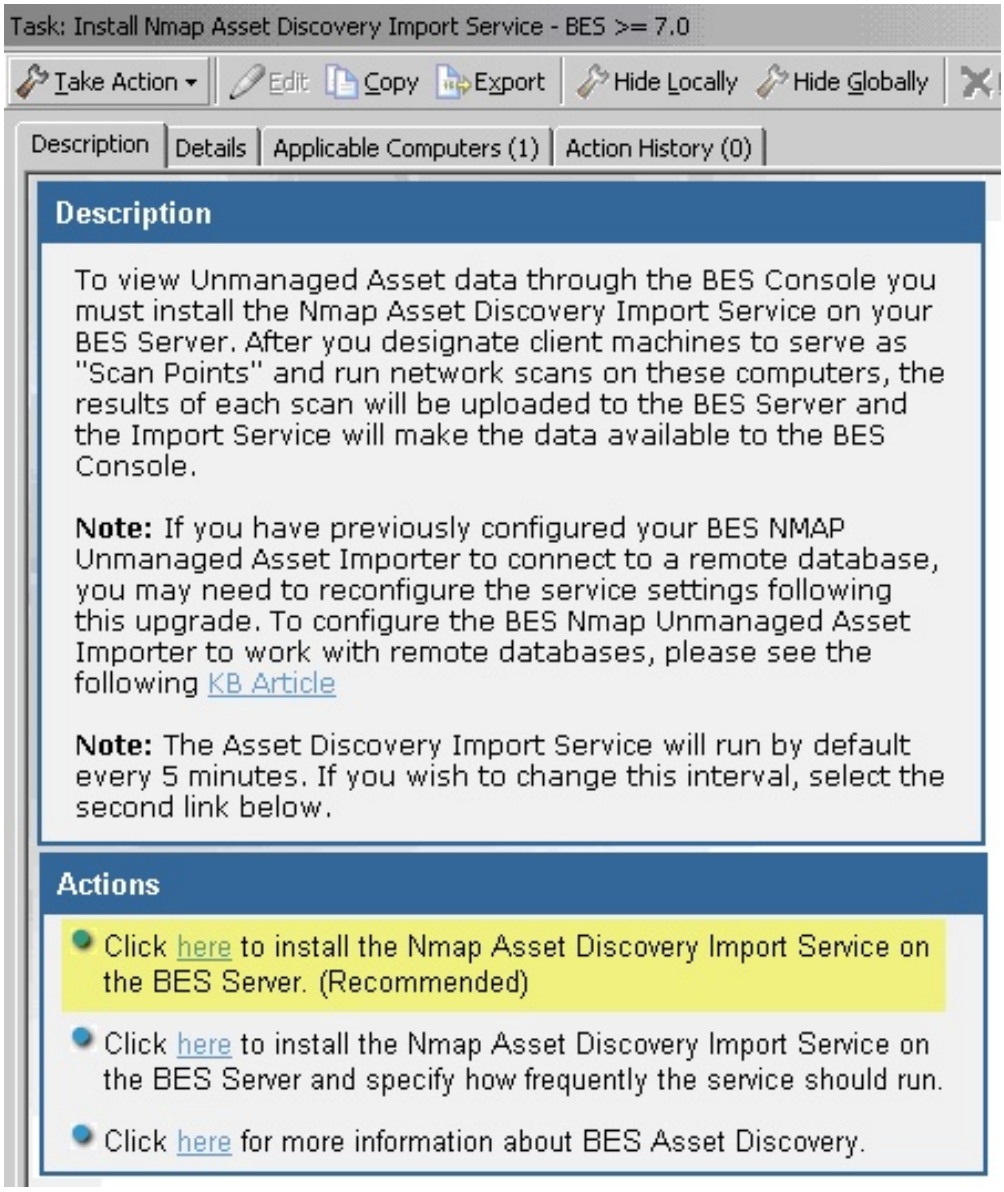
Installing the Import Service task

Note: When accessing a remote database, the NMAP Import Service needs to be run as a domain user, as the standard local system will not allow access to the SQL database. This service should be configured like otherIBM BigFix services in a remote database environment.

Expand the Setup node in the Asset Discovery navigation tree to find the *Install Nmap Asset Discovery Import Service* Task.



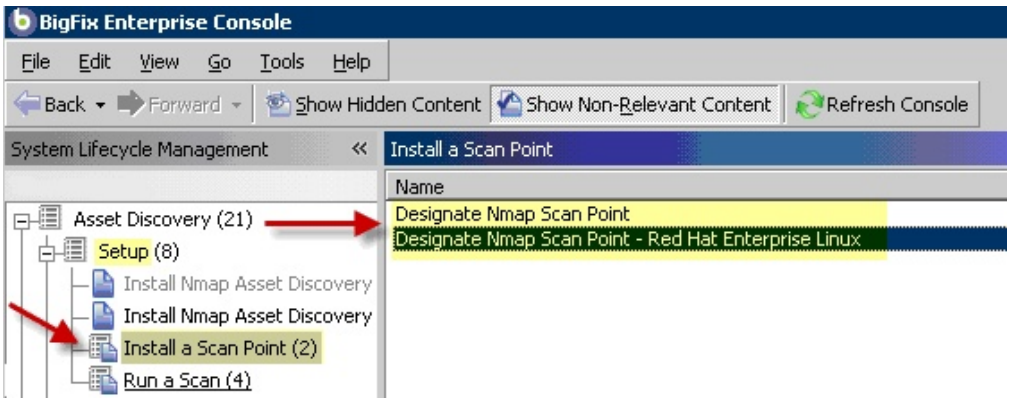
Click the task and view the description in the work area.



To install the Nmap Asset Discovery Import Service on the IBM BigFix server, click the link in the Actions box. By default, the Import service runs every five minutes and checks for new Nmap scan data that has been delivered to theIBM BigFix server. If you want to establish a different frequency, select the second Action link.

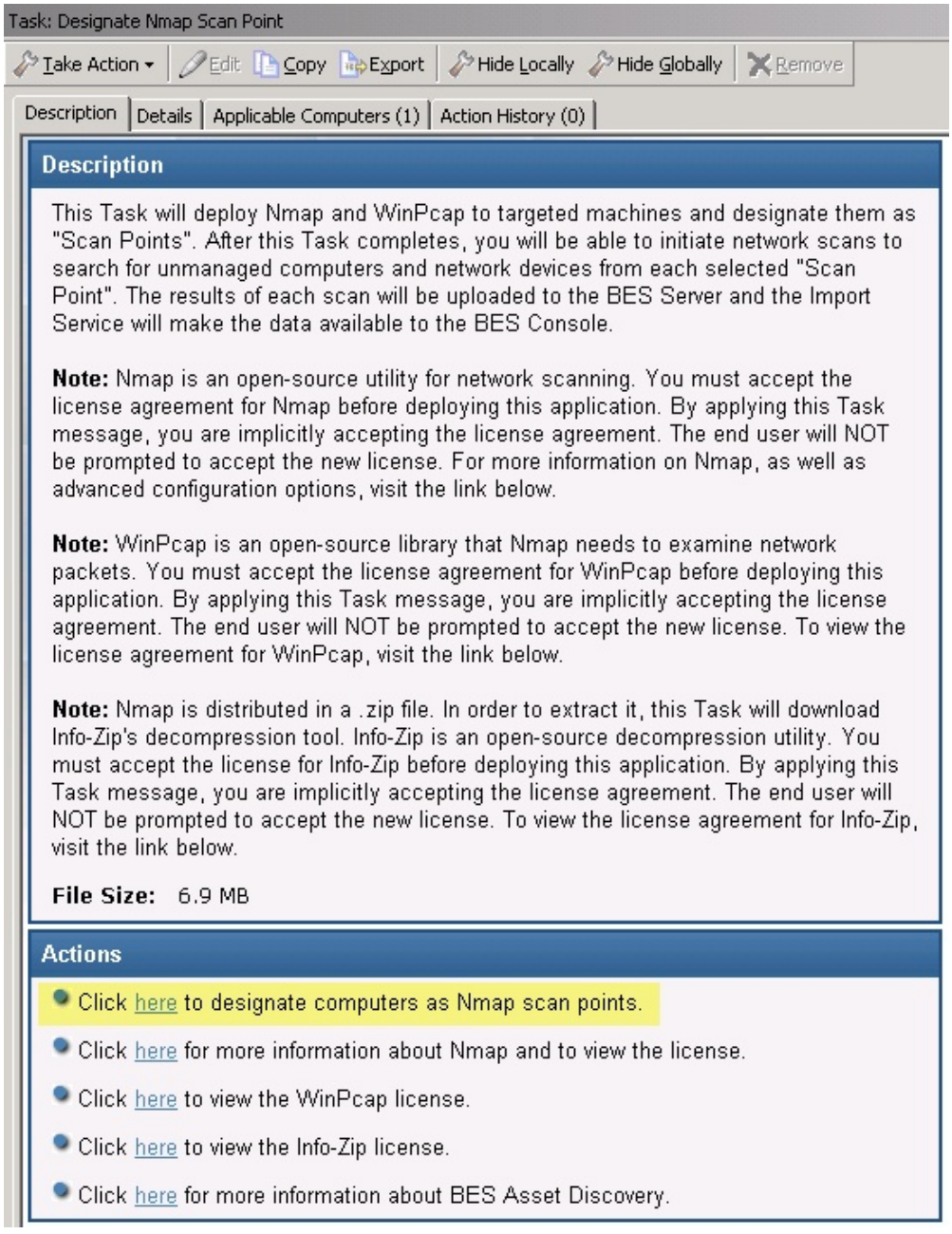
Installing Scan Points

In the Setup node of the Asset Discovery navigation tree, click *Install a Scan Point*. A list of the scan point designation tasks are displayed in the List Panel on the right.



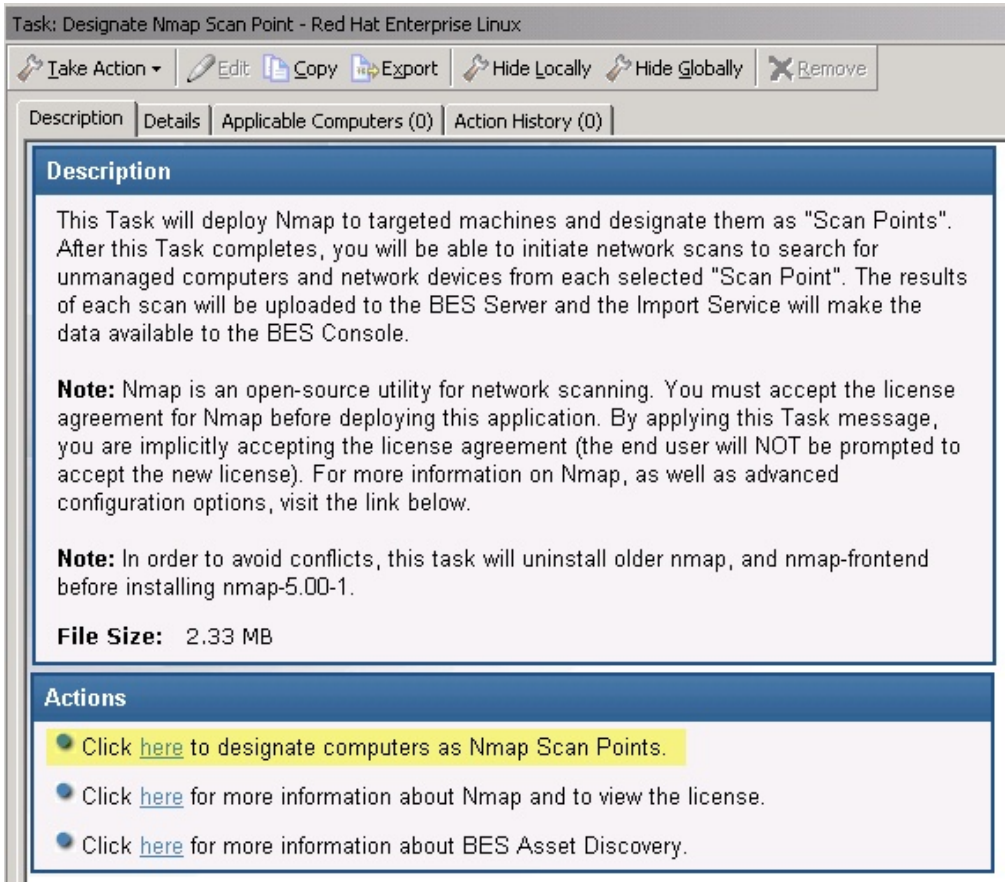
The computers you designate as Scan Points must be running Windows. These Scan Points are the hubs from which the local subnet is scanned. You can also view the license agreements for Nmap, WinPcap and Info-zip.

Click the *Designate Nmap Scan Point* Task.



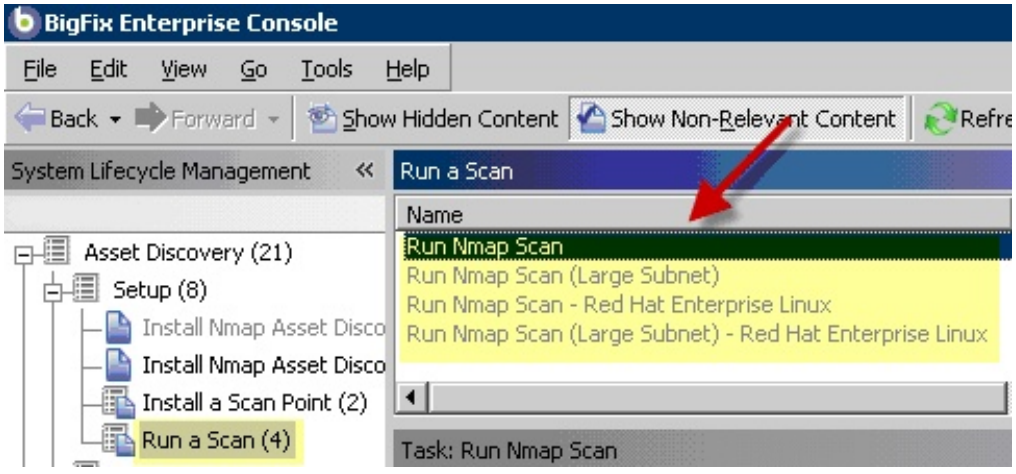
Click the first Actions box link to access the Take Action dialog. From the Target tab, select the computers that you want to designate as Scan Points.

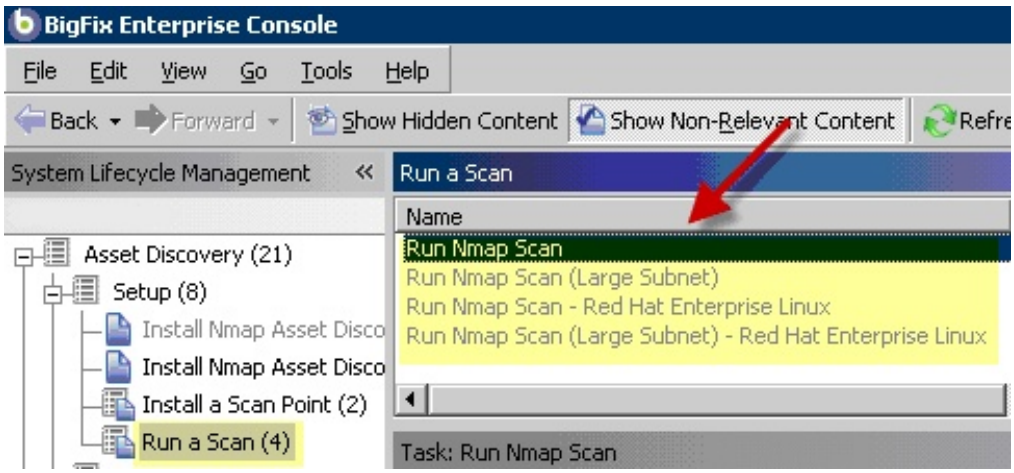
Click the *Designate Nmap Scan Point – Red Hat Enterprise Linux* Task. Click the first Actions box link to designate Nmap Scan Points.1



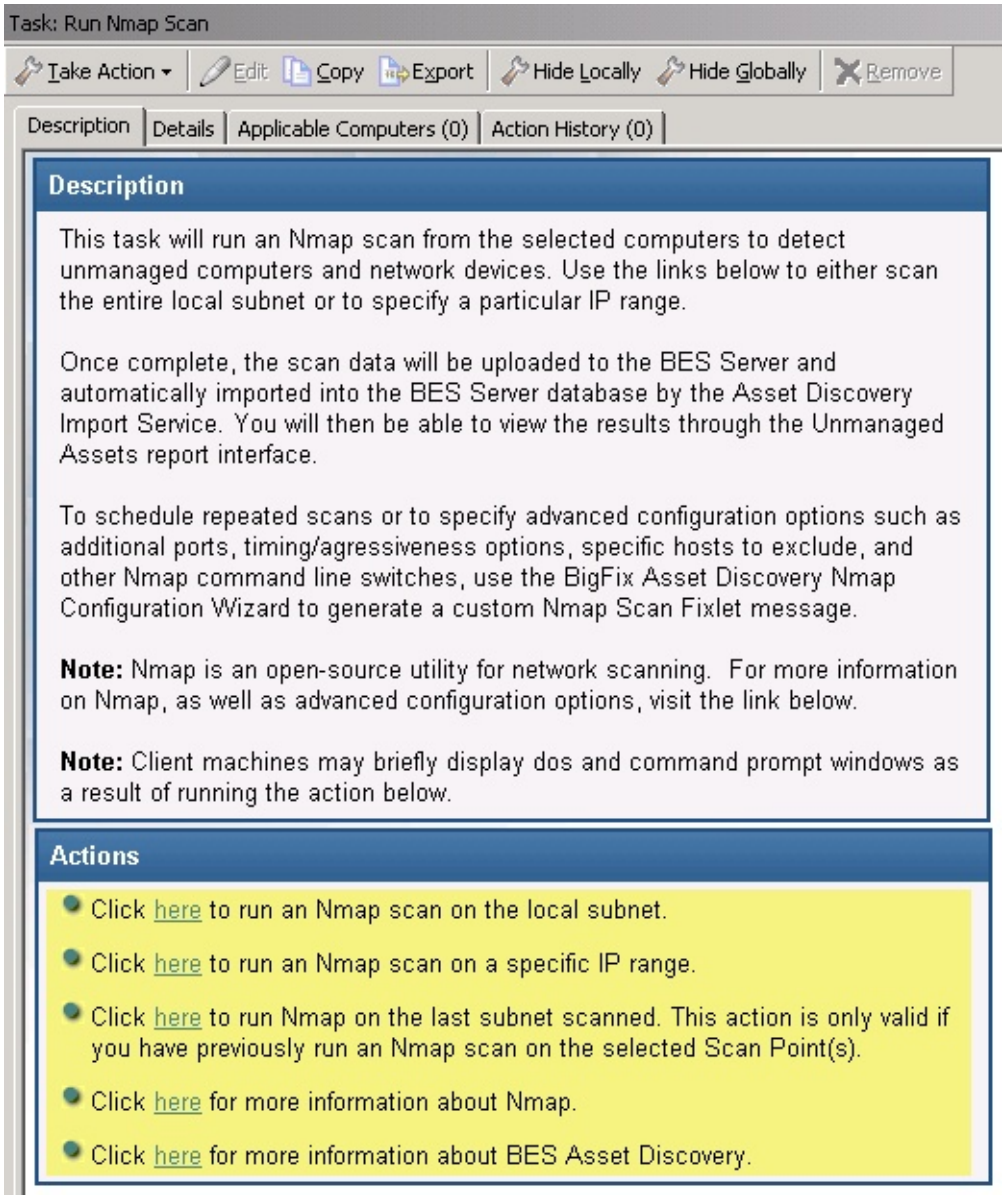
Running a scan

In the Setup node of the Asset Discovery navigation tree, click *Run a Scan.* You see that there are available tasks associated with this action. Click one of the available scans.





When the task opens in the work area, select one of the available links in the Actions box to initiate the Nmap scan. You can specify a local or large subnet.



A scan on a class C network (255 IP addresses) usually takes anywherefrom 10-30 minutes, depending on your network. You can also create your own custom Tasks to schedule and configure Nmap scans using the *Asset Discovery Nmap Configuration Wizard*.

When a Scan Point completes its local scan, the results are uploaded to theIBM BigFix server and imported into the database by the Importer service. The scan results are then visible on the Unmanaged Asset tab in theIBM BigFix console.

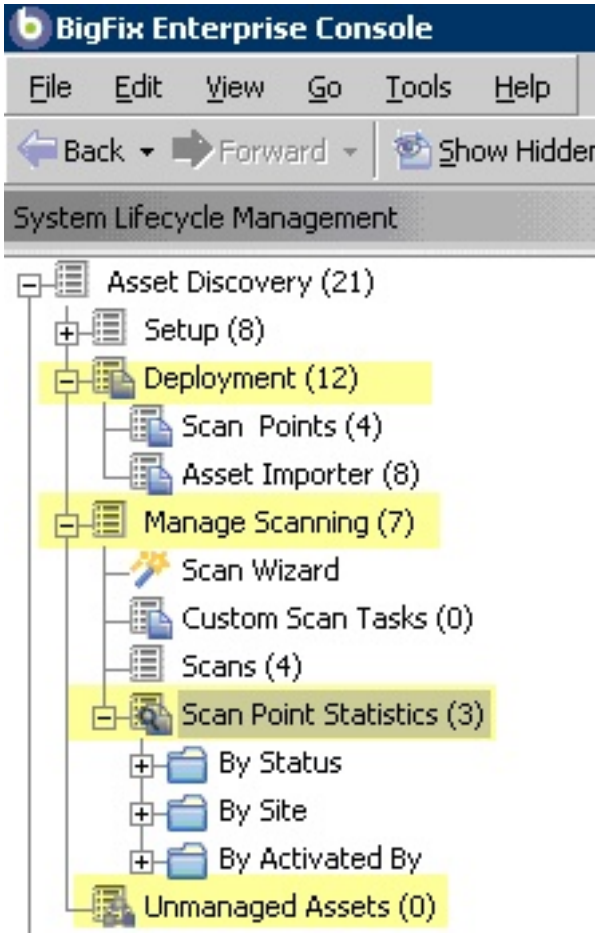
This completes the installation of the Asset Discovery service.

Chapter 3. Using Asset Discovery

Operation

Once installed, you can view all unmanaged asset information that has been retrieved by your various Scan Point computers.

At any point, you can activate the *Scan Point Statistics* to view information about designated Nmap Scan Points. Click *Scan Point Statistics* under the *Manage Scanning* node of the navigation tree. You can view statistics *By Status, By Site* or *By Activation.*



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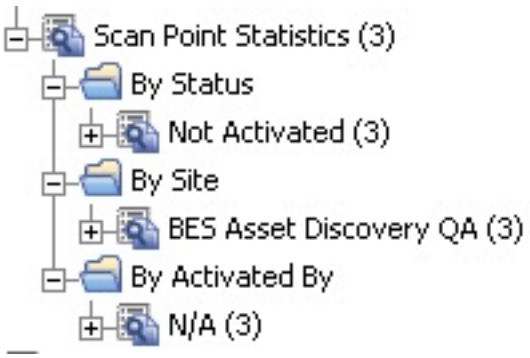
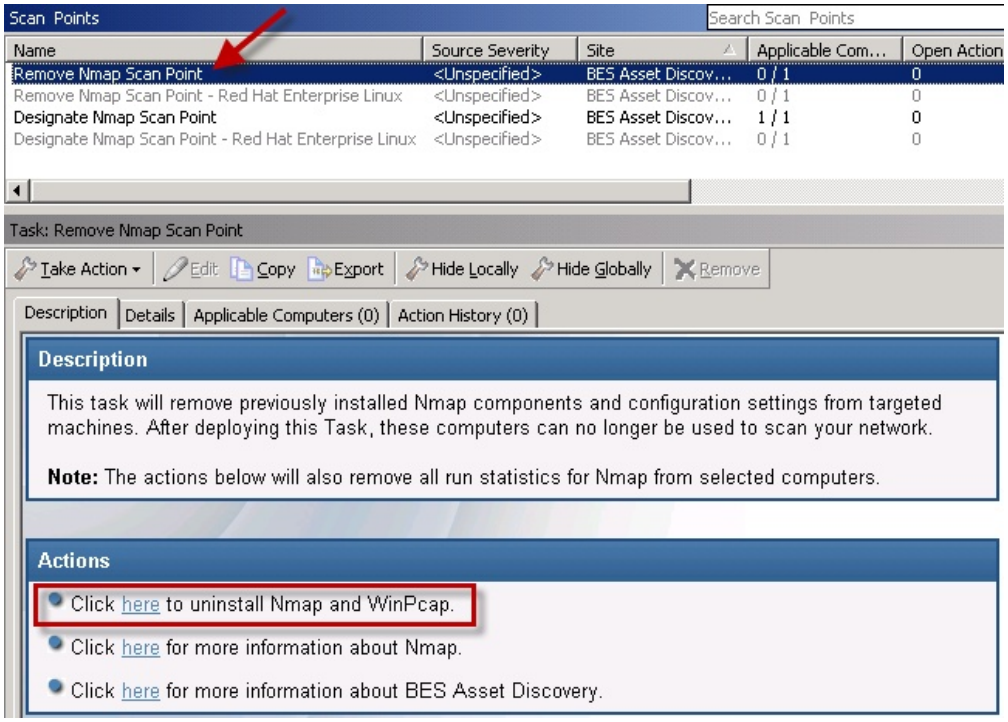


To decommission a Scan Point computer, use the *Remove Nmap Scan Point* task in the Deployment node. To access the Remove Nmap Scan Point tasks, click *Scan Points* under the Deployment node.



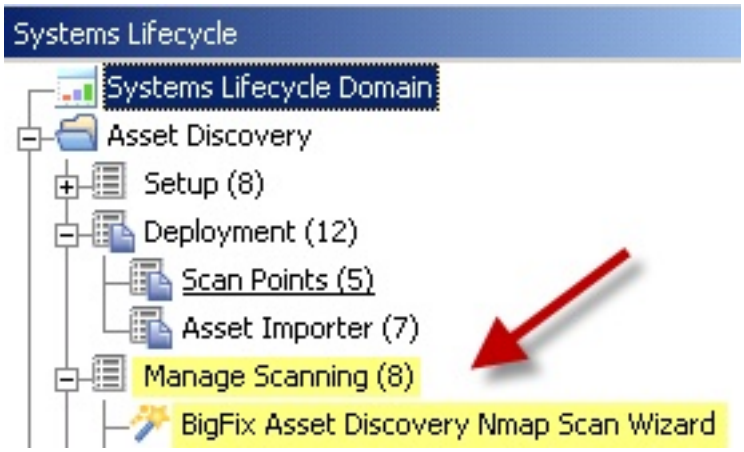
This removes Nmap from the specified Scan Point and can also remove WinPcap. Click in the Actions box to access the Take Action dialog and select the Scan Point computers you wish to decommission. To delete an unmanaged asset, click *Unmanaged Assets* at the bottom of the navigation tree.

Using the Nmap Scan Wizard

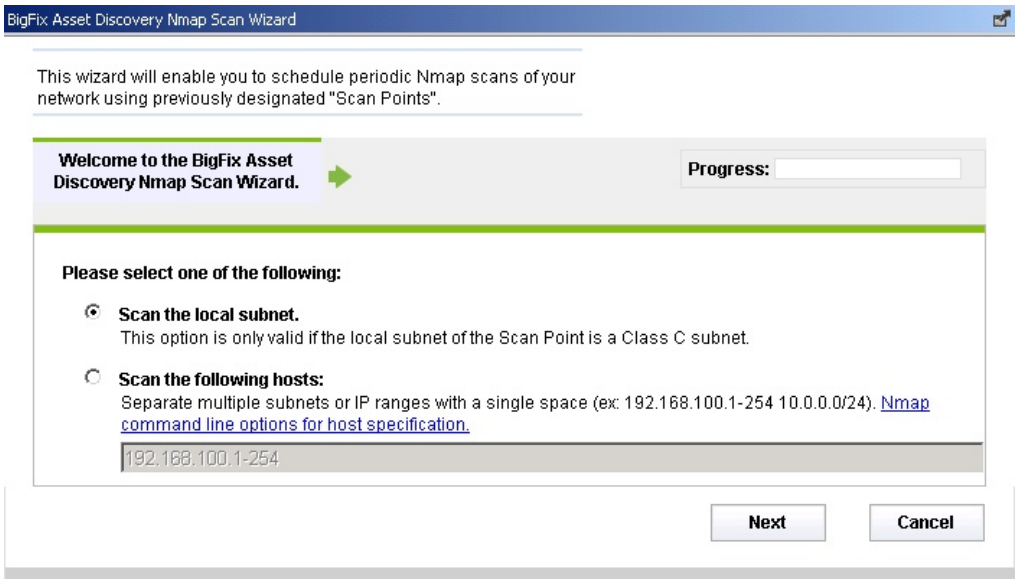
You can change various aspects of the Nmap scanner by using the *Asset Discovery Nmap Scan Wizard*. You can schedule periodic Nmap scans of your network using previously designated Scan Points.

Note: The Nmap scanner requires that the **`UnmanagedAssetImporter -NMAP`** service is running on the server.

Click *Scan Wizard* under the *Manage Scanning* node in the navigation tree.

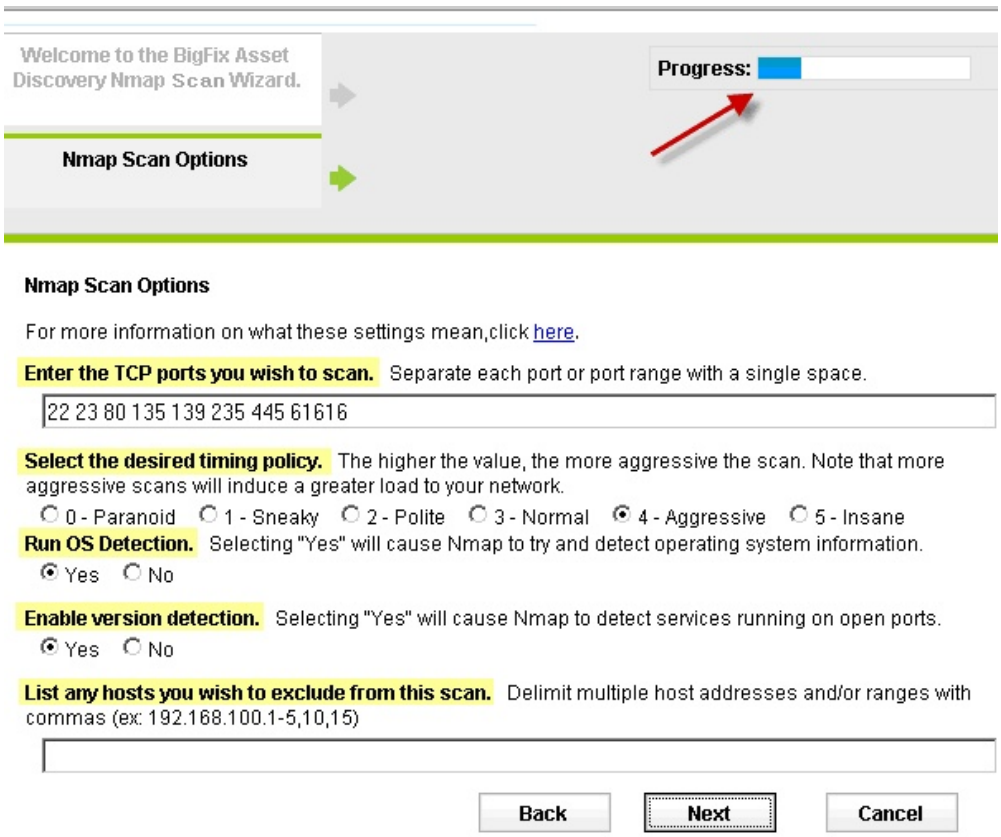


The wizard is displayed on the right.



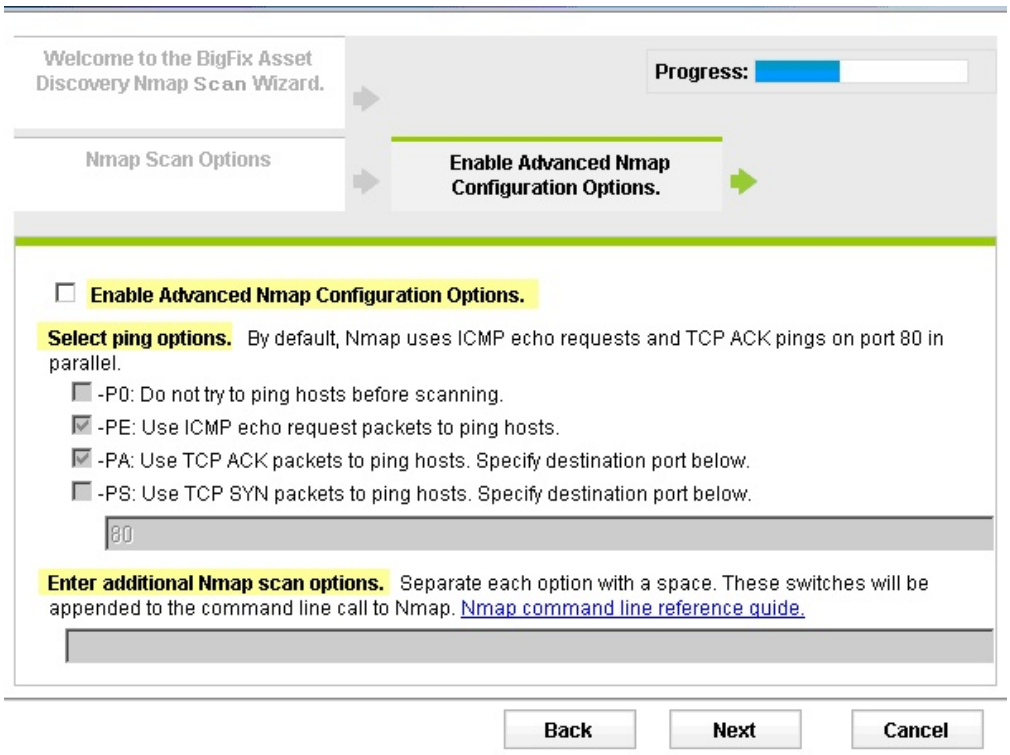
Begin by selecting a type of scan. You can scan the local subnet or scan a particular host. Click *Next*.

If you select *Scan the local subnet*, you set specific parameters of the scan in the next screen. Check the Progress bar at the top of the window.

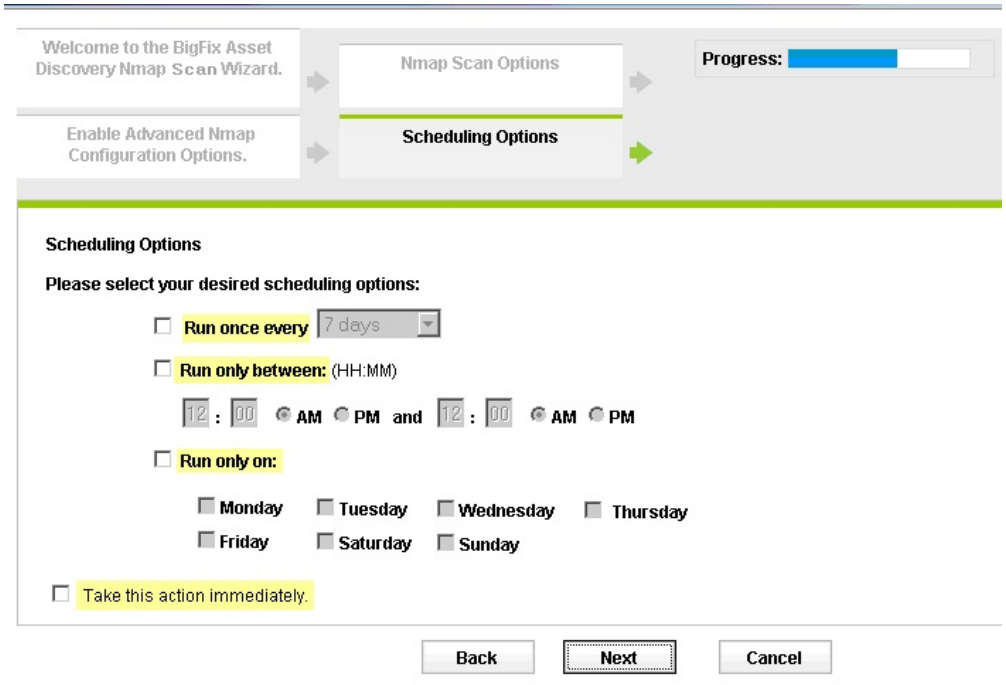


On this screen, you scan ports, run operating system detection, enable version detection, and list hosts to exclude. Make your selections and click *Next*.

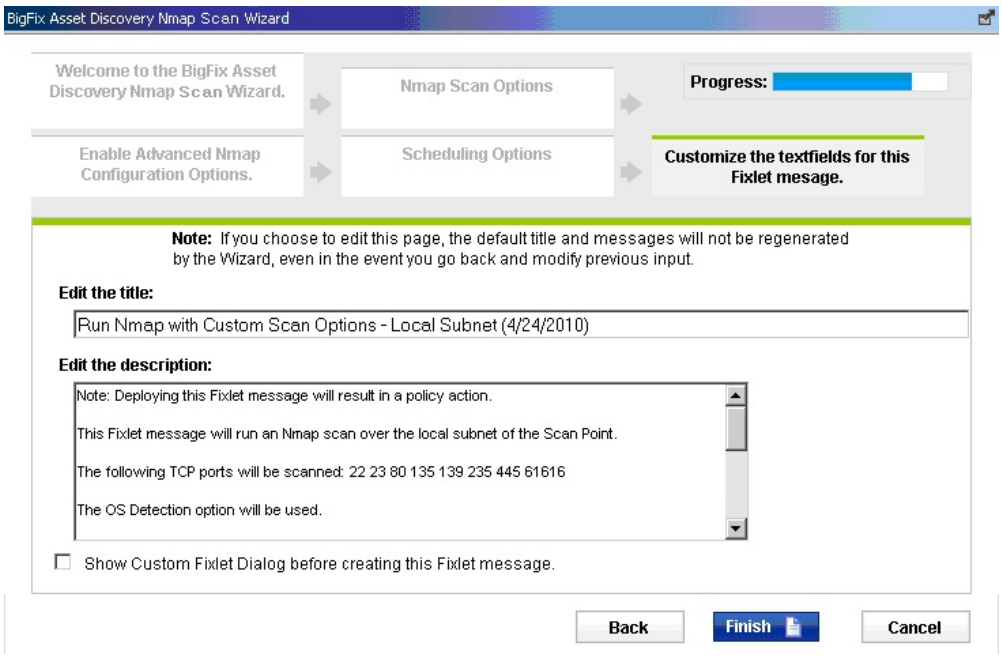
On the next screen, you can enable Advanced Nmap configuration options, select Ping Options, and additional Nmap scan options. Make your selections and click *Next*.



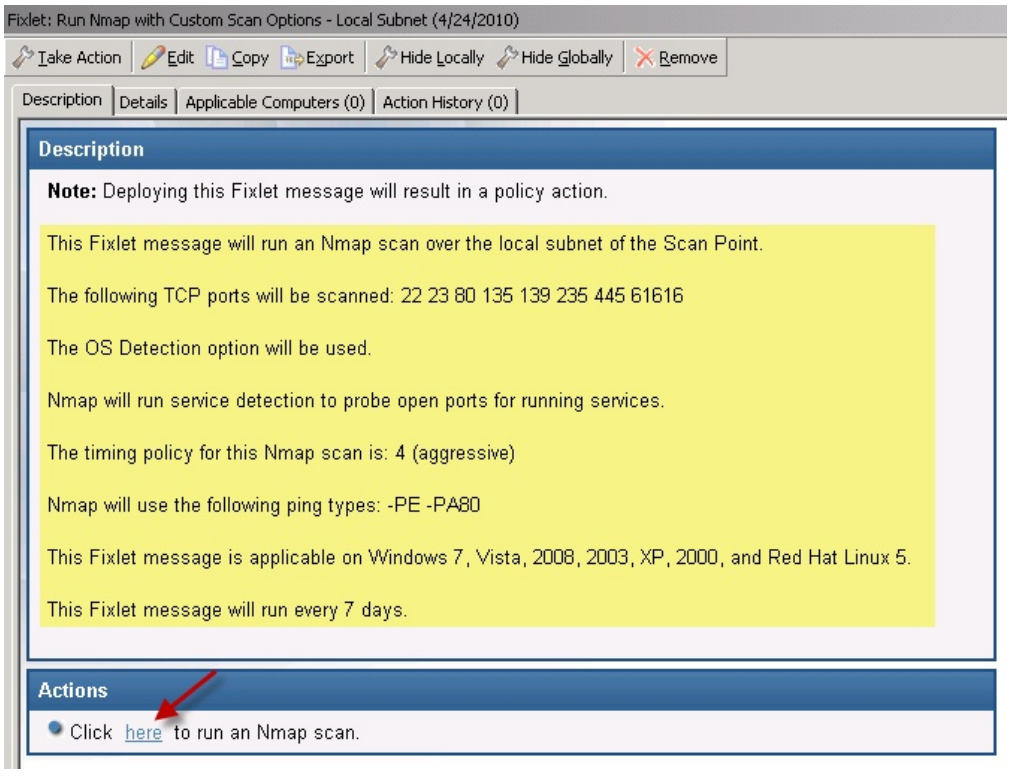
In the next screen, set scheduling options for the scan. You can select the frequency of the scan, and specific hours and days. Make your selections and click *Next*.



In the next screen, you can customize the text fields for the Fixlet. You can edit the title and the description of the Fixlet. When you have customized all text fields, click *Finish* and enter your Private Key Password.



You now see the Fixlet that includes the specific parameters and customizations you entered in the wizard. Review the text in the Description field, and click in the Actions box to run an Nmap scan.



Considerations

Licensing

- When you designate Scan Points, you are installing the Nmap scanner application available from http://www.insecure.org/nmap.
- When you designate Scan Points, you are installing the packet capture library, WinPcap 3.1 from http://winpcap.polito.it/install/default.htm).
- Nmap is distributed as a .zip file. To extract it,IBM BigFix temporarily downloads and uses Info-Zip's decompression tool. *Info-Zip* is an open-source decompression utility. For more information about Info-Zip, see http://www.info-zip.org/.

Potential scanning issues

- Network scans might trigger Intrusion Detection Systems. To minimize this possibility, set the Nmap scanning mode to 0 (“Paranoid”), or modify your IDS to allow Nmap scans. This might cause scans to take longer.
- Network scans might cause certain legacy network devices, such as old network printer devices, to fail if scanned.
- Network scans might cause personal firewalls to advise you that a computer is scanning the local computer. Modify your firewall to allow Nmap scans.
- Nmap is sometimes flagged by virus scanners as a potentially harmful tool. Ensure that your virus scanner is not set to block Nmap from running.
- If you set Nmap to scan a very large network, it might take several hours and consume significant bandwidth during the scan. The default scan is the local Class C network, which is usually a fast LAN. It is not recommended that you scan large networks across the WAN with this tool.
- Using Nmap to scan is typically a very safe operation, but there may be issues specific to your organization that must be addressed. Obtain the appropriate authorization from your network team before proceeding.

Appendix A. Frequently asked questions

I started a scan – where are the results?

When first installed, Asset Discovery might take several minutes to initially scan the system and report on your unmanaged assets. If you still do not see anything in theIBM BigFix console after 20 minutes, press F5 on your keyboard to force a full refresh.

Where is the Unmanaged Assets tab?

The Unmanaged Assets tab is only visible after you install the Nmap Asset Discovery Import Service. It might take a few minutes to display in the interface. When it is displayed, you can open the tab and click the individual assets to learn more about them.

How long does a typical scan take?

Scanning a Class C subnet typically takes 10-30 minutes, but this can vary based on your specific network. On bigger networks, the scans may take several hours to run.

What are the bandwidth requirements?

The Nmap scanner sends small packets that are unlikely to cause any bandwidth concerns, especially because it is designed to scan nearby computers on fast networks. Once the scan is finished, the scan results are uploaded to theIBM BigFix server. Normally this is a relatively small file - generally 10-200 KB - depending on the number of endpoints scanned. Scanning large networks with a single Scan Point can result in bigger files, but these scans are only run periodically.

How often can I run a scan?

When Asset Discovery is set up correctly, there is very little network impact and it can be run fairly often without issues. Scans can be run as often as several times a day to find unauthorized network devices, or less often to maintain accurate network inventory information.

Can the Nmap scan settings be changed?

Yes. The default Nmap scan settings enable fast and thorough scanning. The settings can be changed as necessary using the Nmap Configuration Wizard and support any possible Nmap configuration.

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Appendix B. Support

For more information about this product, see the following resources:

- IBM Knowledge Center
- IBM BigFix Support Center
- IBM BigFix Family support
- IBM BigFix wiki
- Knowledge Base
- IBM BigFix Forum

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