IBM Endpoint Manager
Version 9.0

Asset Discovery User's Guide

IBM Endpoint Manager
Version 9.0

Asset Discovery User's Guide

Note
Before using this information and the product it supports, read the information in "Notices" on page 23.

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

Contents

Chapter 1. Setting up your environment

IBM Endpoint Manager 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 Endpoint Manager 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 Endpoint Manager 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 Endpoint Manager 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 Endpoint Manager server, which imports the data into the IBM Endpoint Manager database. The scan information can then be viewed in the IBM Endpoint Manager console using the *Unmanaged Assets* tab.

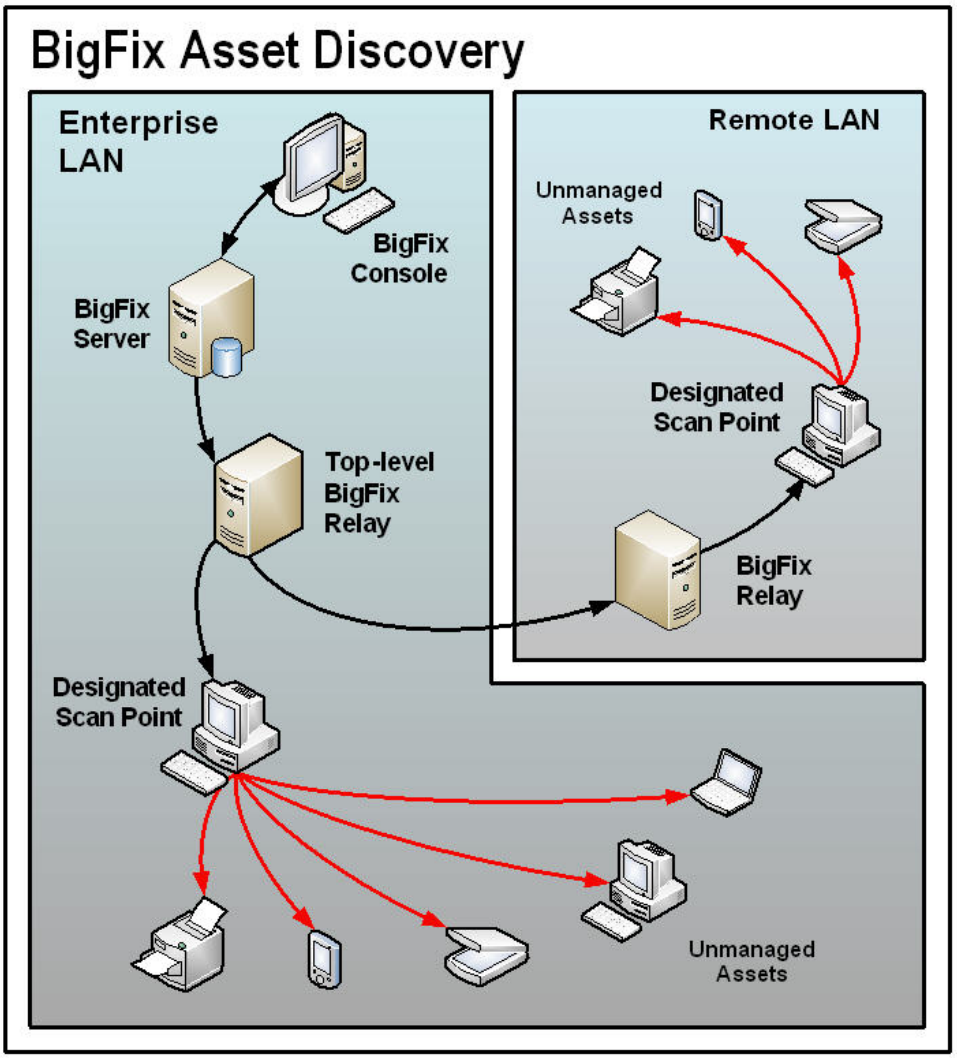
System requirements

IBM Endpoint Manager 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.

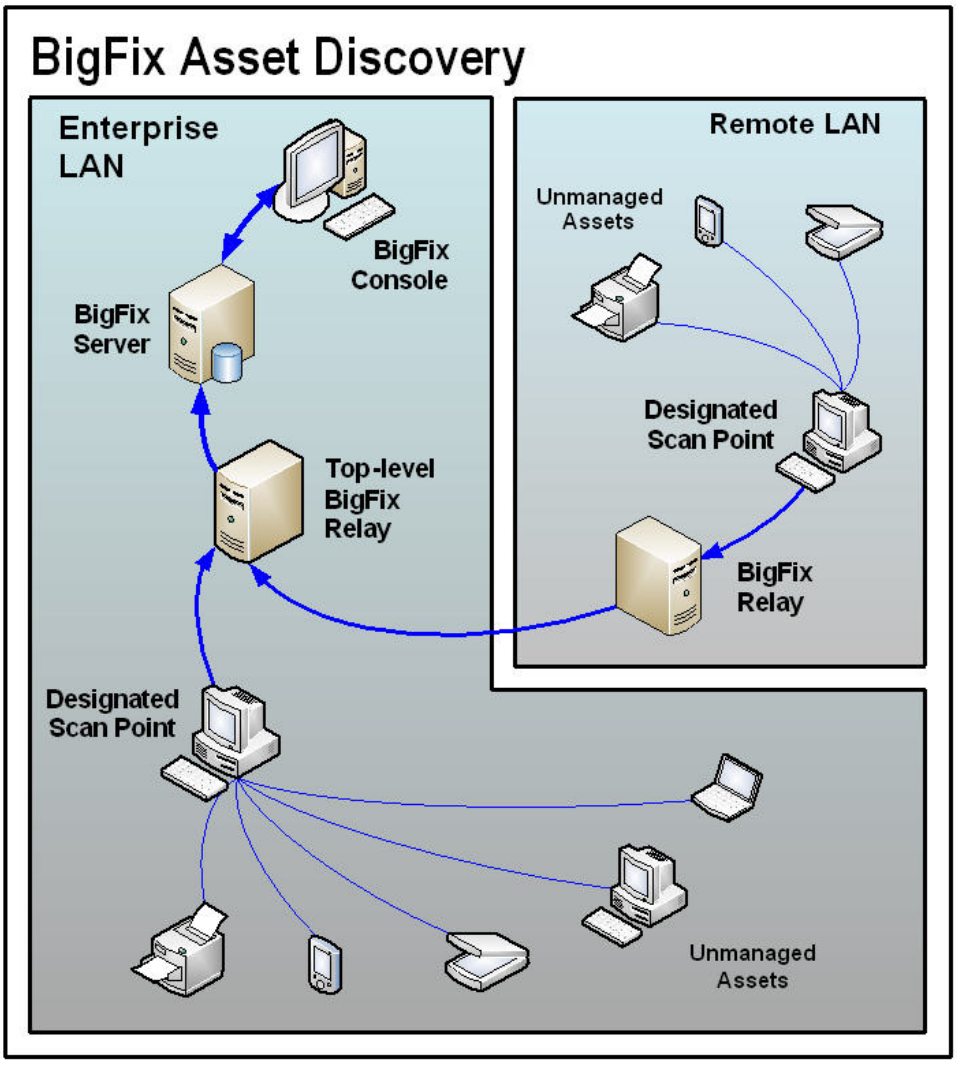
The nmap.org website indicates that Nmap supports all versions of Windows since NT, including Windows 2000, Windows XP, Windows Vista, Windows 7, and Server 2003/2008. Nmap supports also Linux operating systems.

Overview

IBM Endpoint Manager 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 Endpoint Manager server. From there, you can examine the results on theIBM Endpoint Manager console:



Installation

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

- Enable the Unmanaged Asset Importer Service on your IBM Endpoint Manager 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 Endpoint Manager 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.

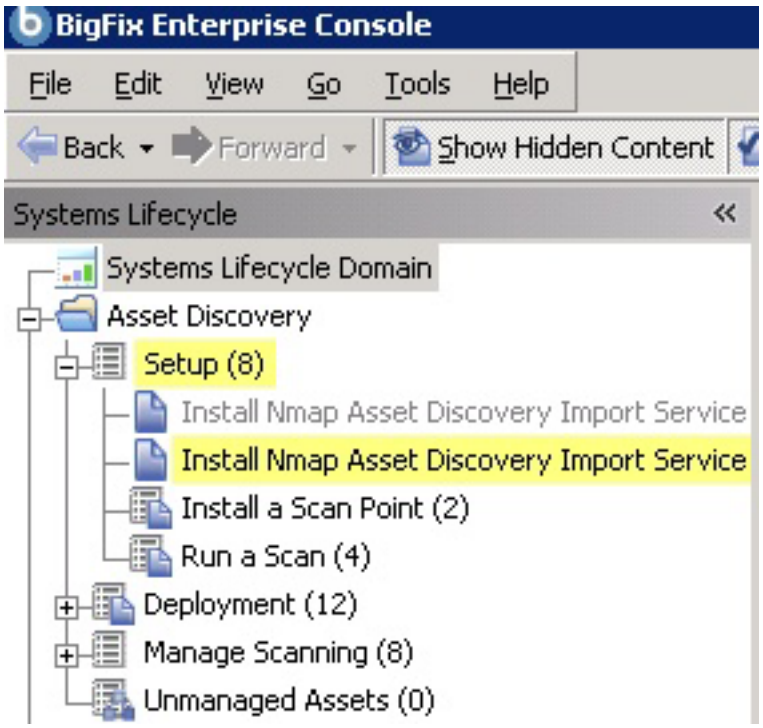
Installing the site

The process for site subscription depends on the version of the console. For site subscription instructions, click **here**.

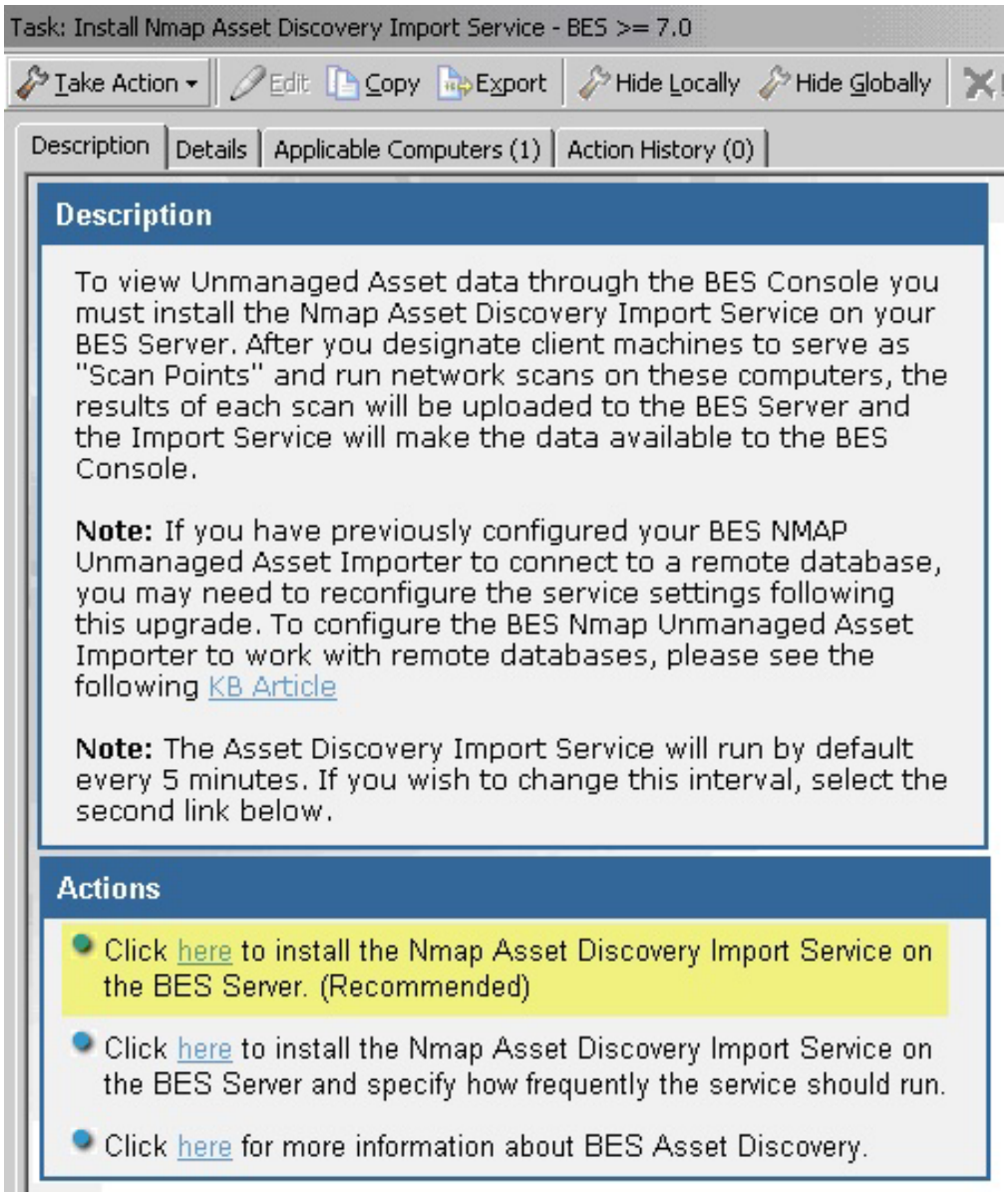
Installing the Import Service task

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 Endpoint Manager 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.



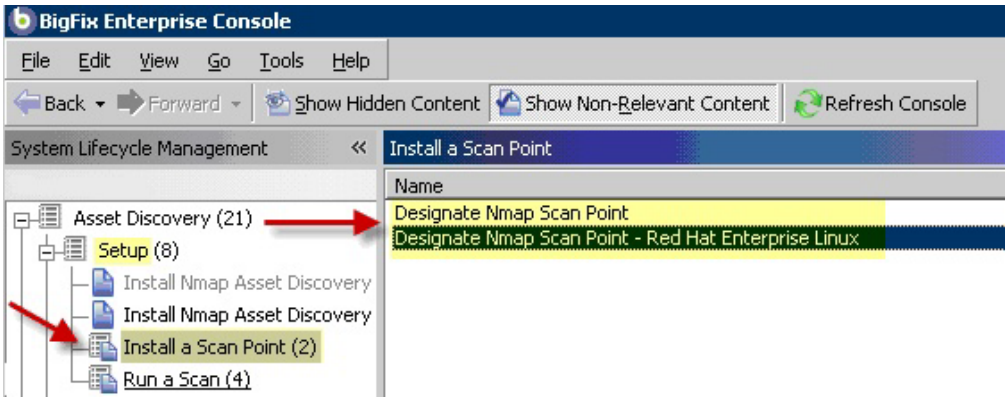
Click the task and view the description in the work area.



To install the Nmap Asset Discovery Import Service on the IBM Endpoint Manager 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 Endpoint Manager server. If you want to establish a different frequency, select the second Action link.

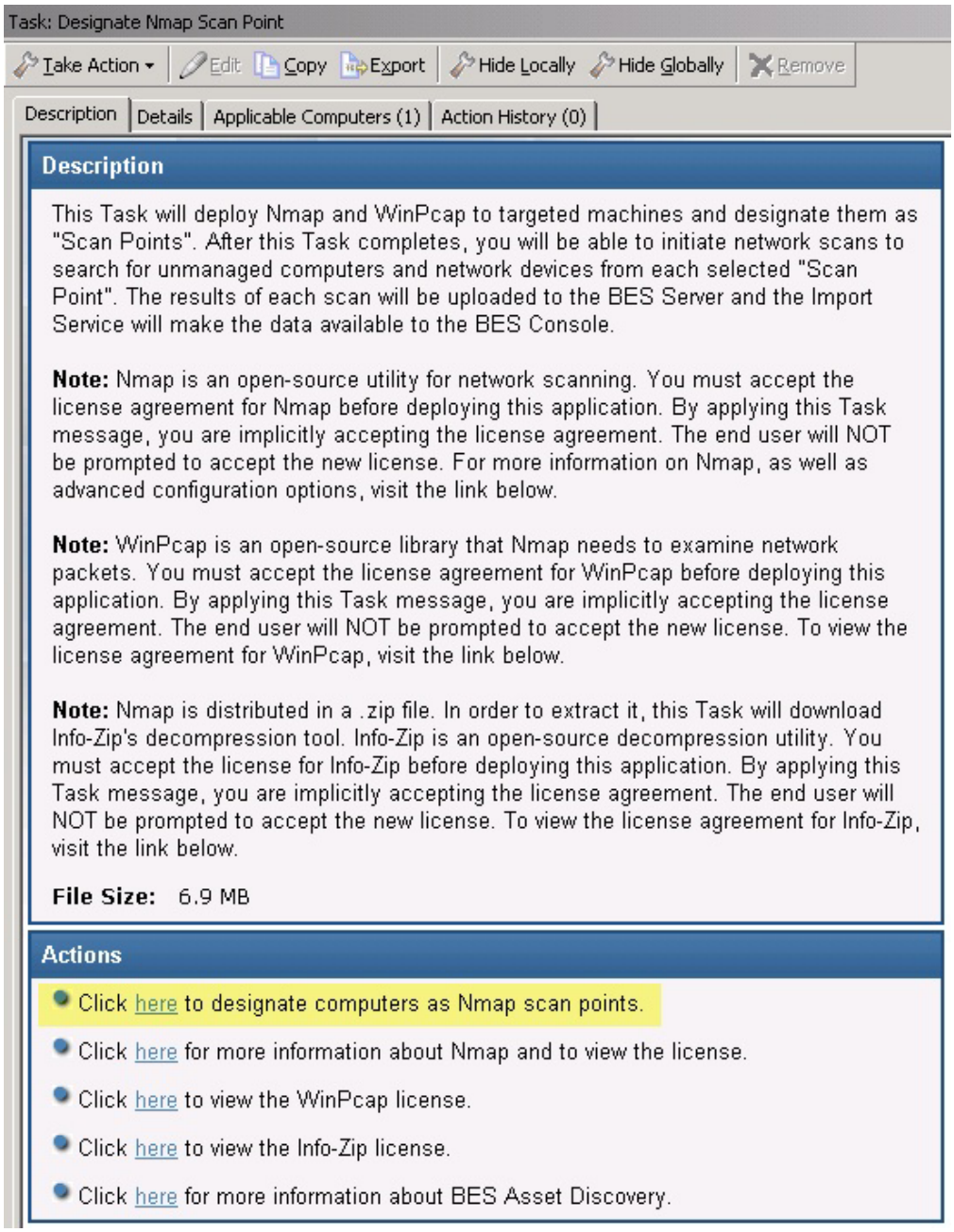
Installing Scan Points

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.



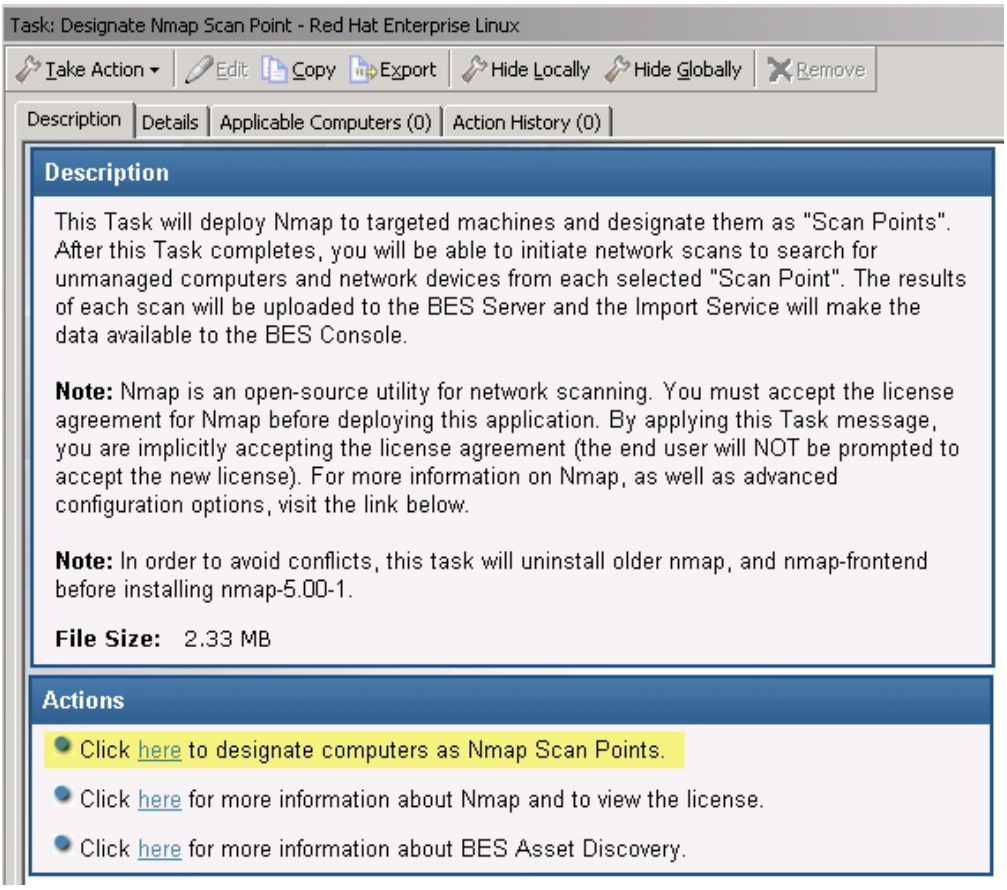
The computers you designate as Scan Points must be running Windows. These Scan Points are the hubs from which the local subnet is scanned. You can also view the license agreements for Nmap, WinPcap and Info-zip.

Click the *Designate Nmap Scan Point* Task.



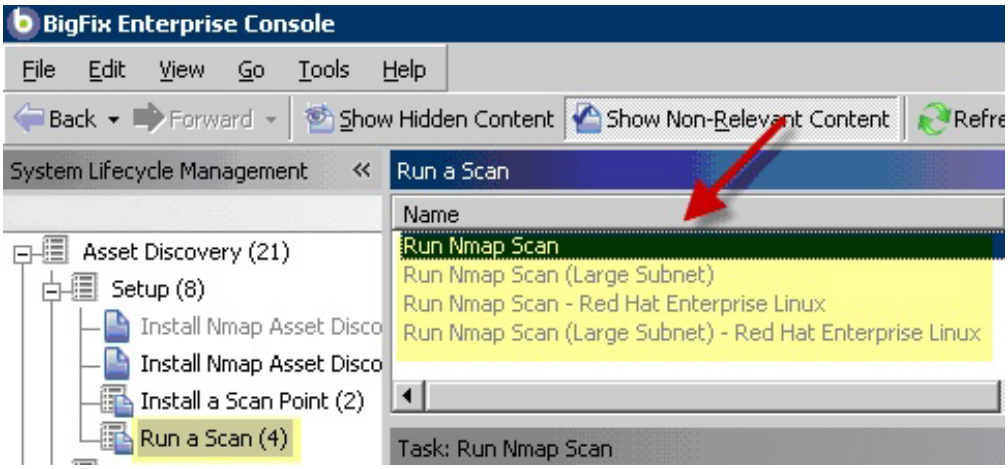
Click the first Actions box link to access the Take Action dialog. From the Target tab, select the computers that you want to designate as Scan Points.

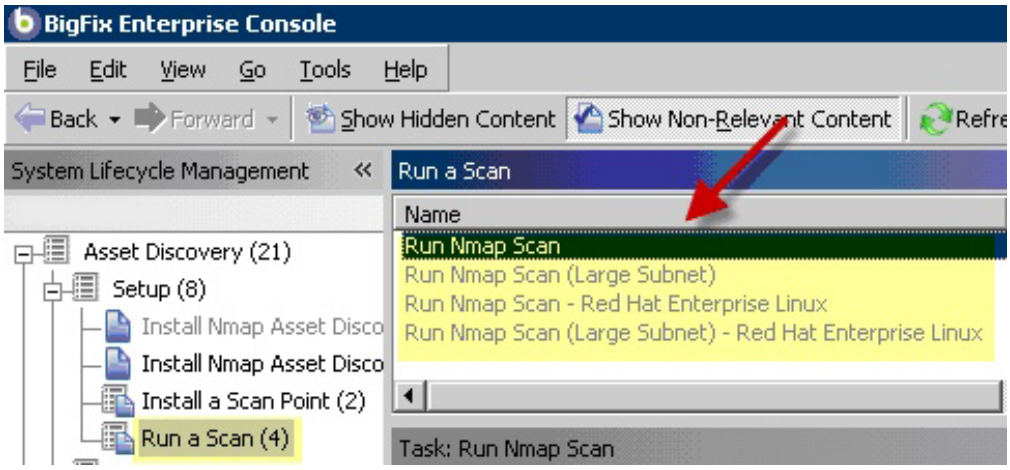
Click the *Designate Nmap Scan Point – Red Hat Enterprise Linux* Task. Click the first Actions box link to designate Nmap Scan Points.1



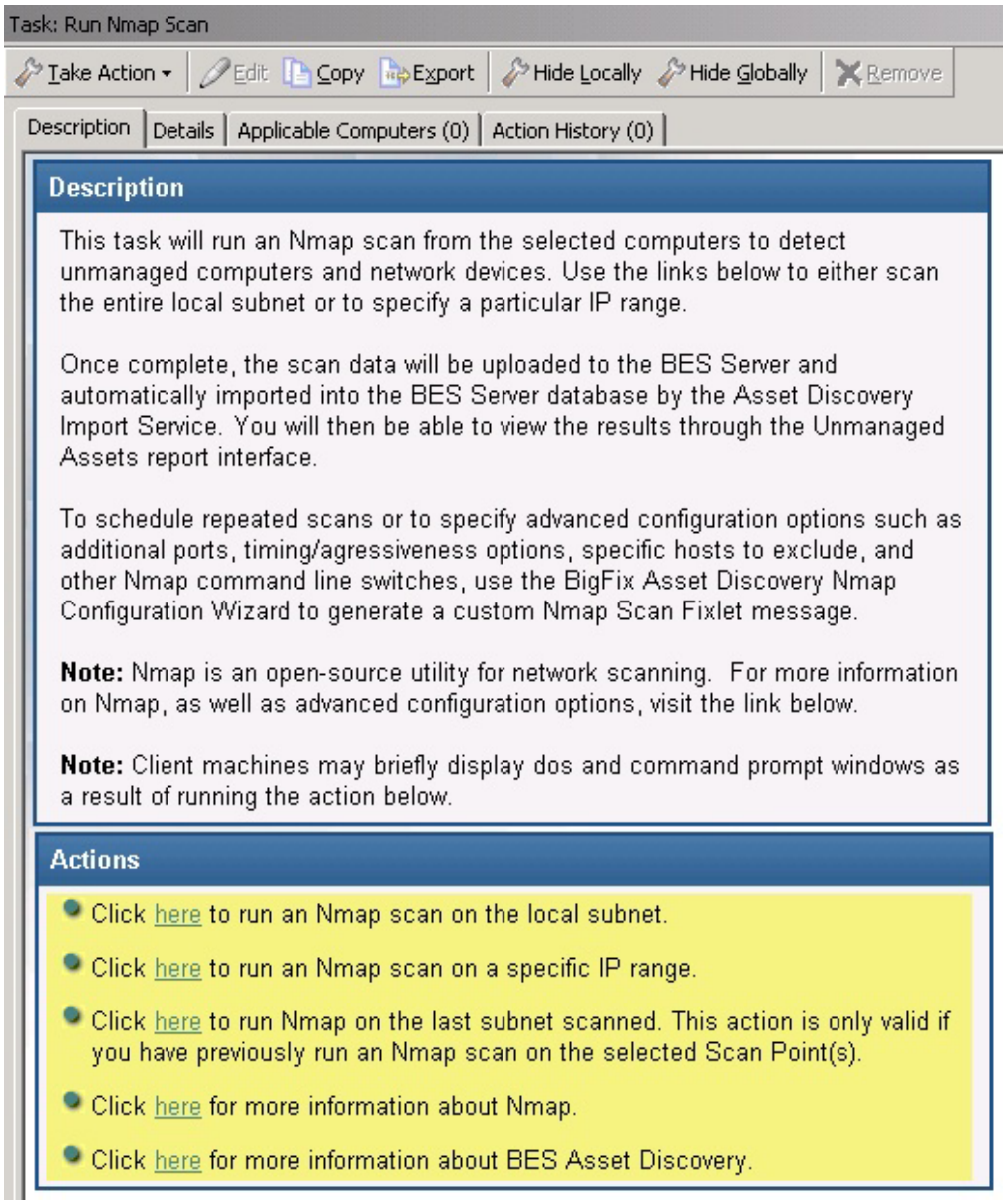
Running a scan

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 Endpoint Manager server and imported into the database by the Importer service. The scan results are then visible on the Unmanaged Asset tab in theIBM Endpoint Manager console.

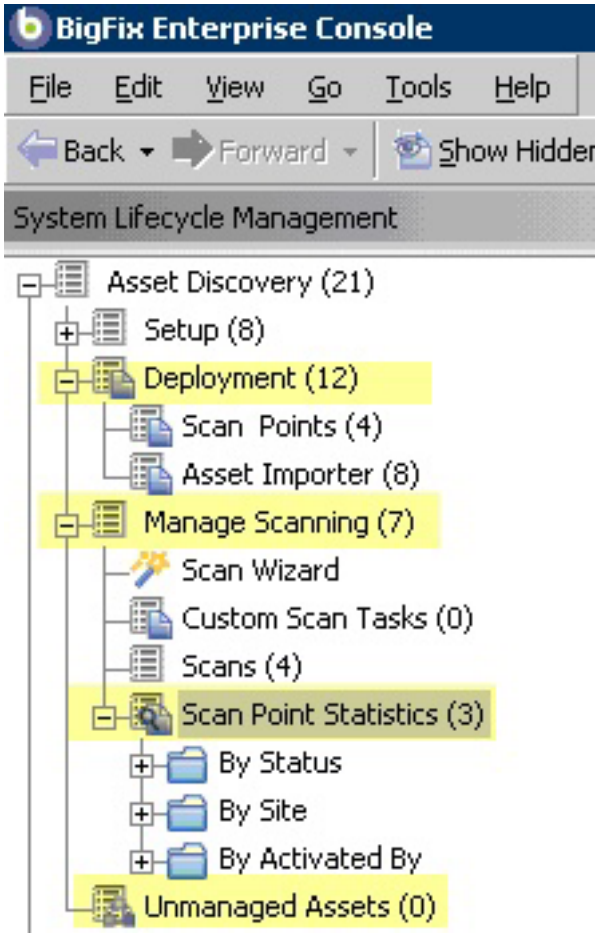
This completes the installation of the Asset Discovery service.

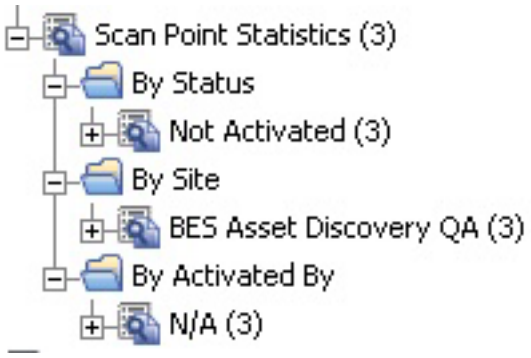
Chapter 2. Using Asset Discovery

Operation

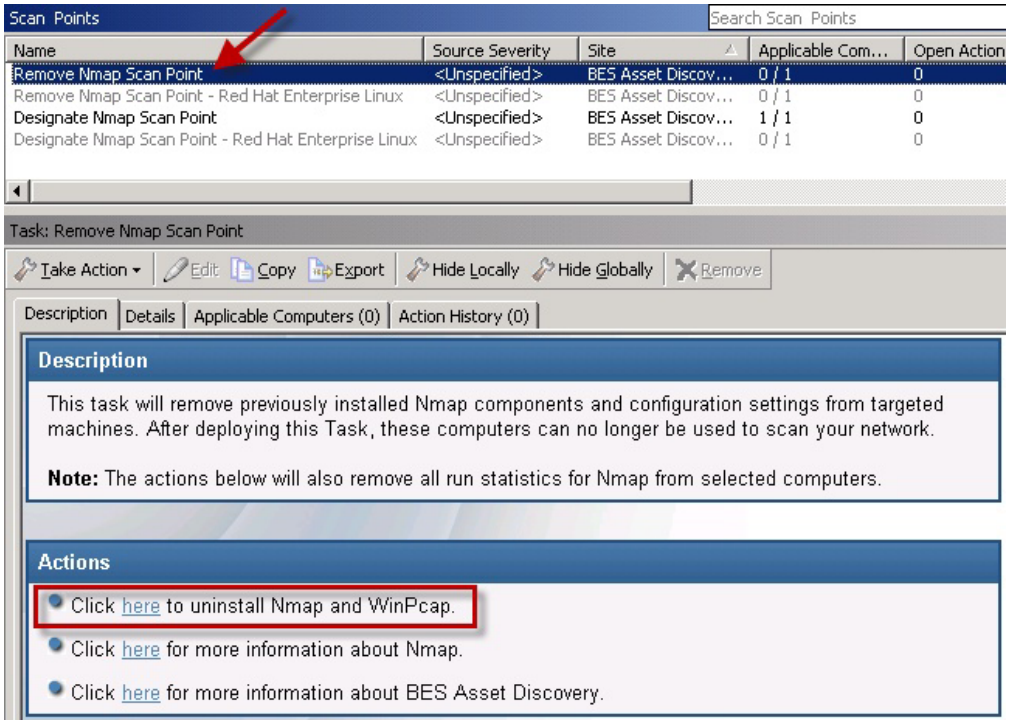
Once installed, you can view all unmanaged asset information that has been retrieved by your various Scan Point computers.

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.*





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.

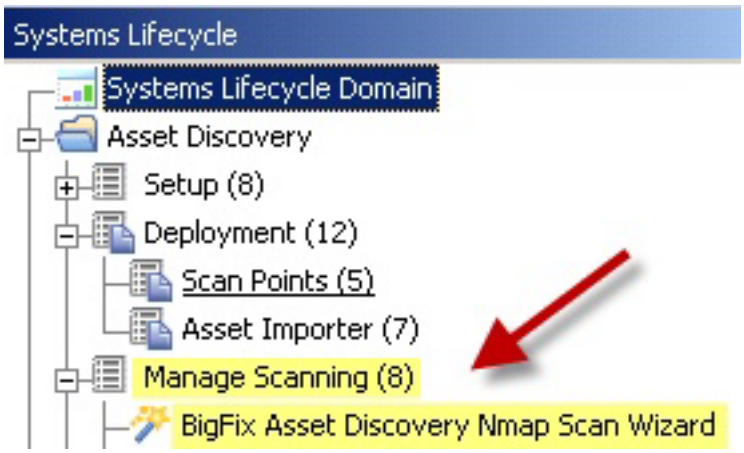


This removes Nmap from the specified Scan Point and can also remove WinPcap. Click in the Actions box to access the Take Action dialog and select the Scan Point computers you wish to decommission. To delete an unmanaged asset, click *Unmanaged Assets* at the bottom of the navigation tree.

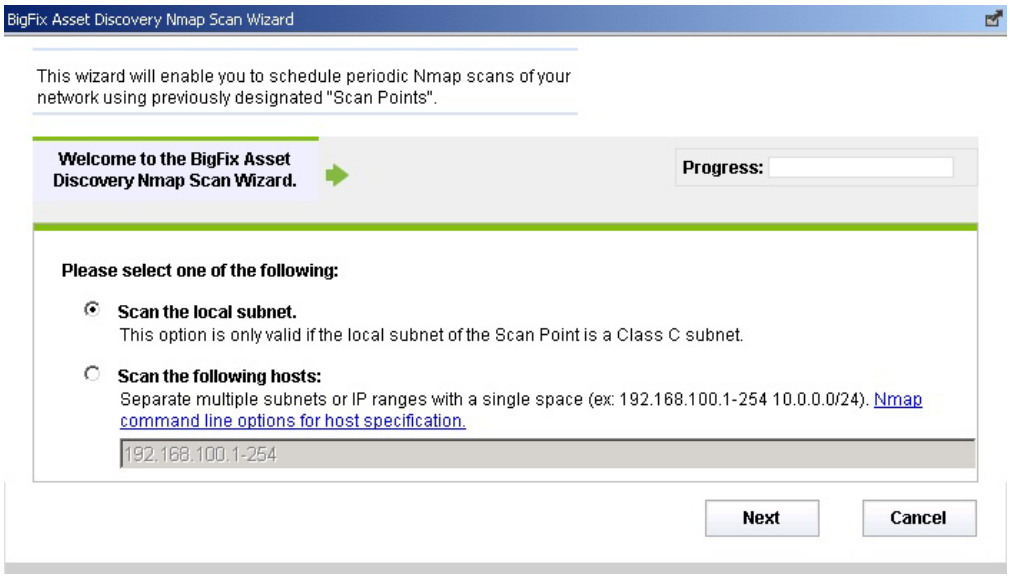
Using the Nmap Scan Wizard

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.

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

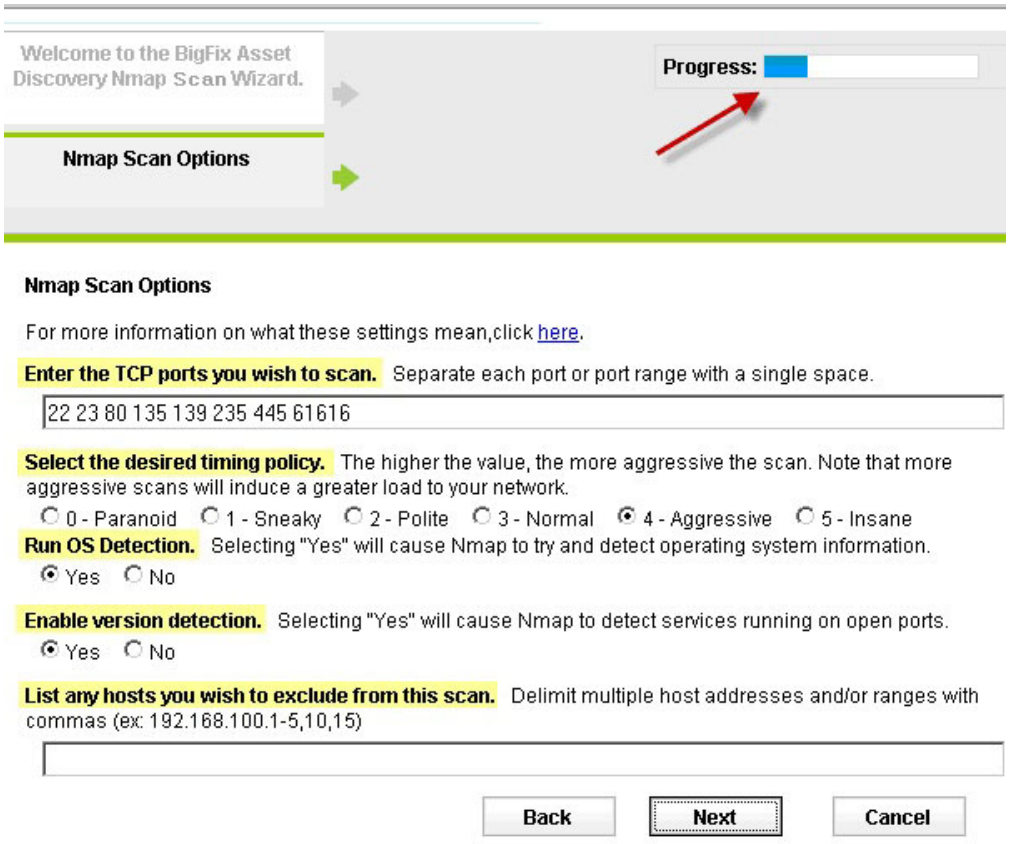


The wizard is displayed on the right.



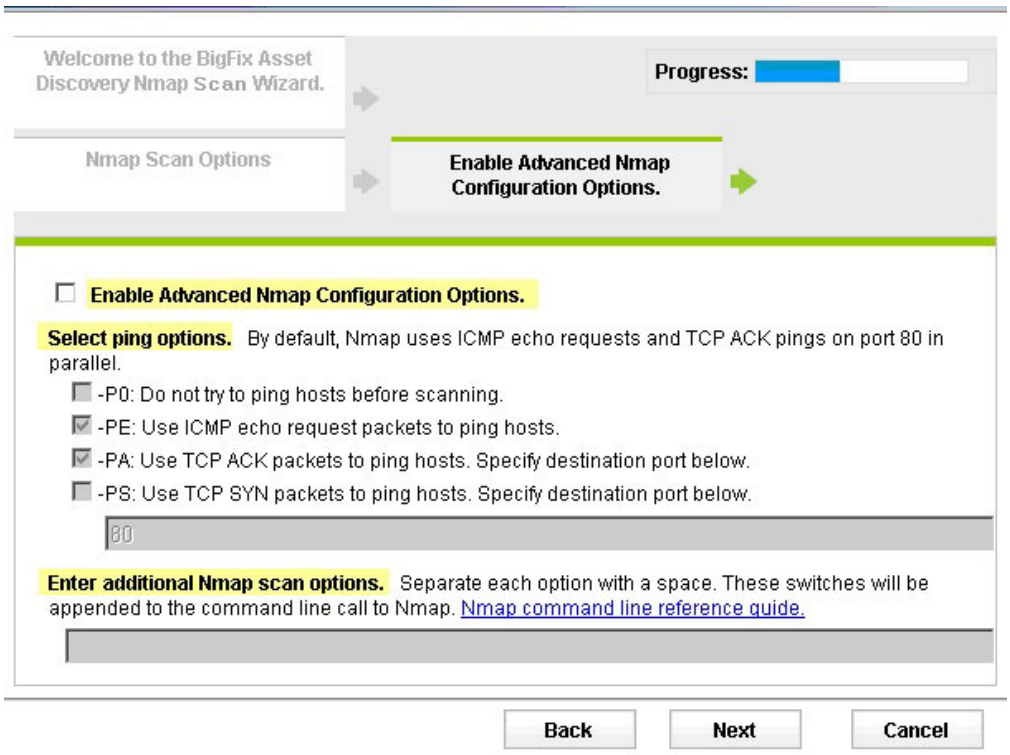
Begin by selecting a type of scan. You can scan the local subnet or scan a particular host. Click *Next*.

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.

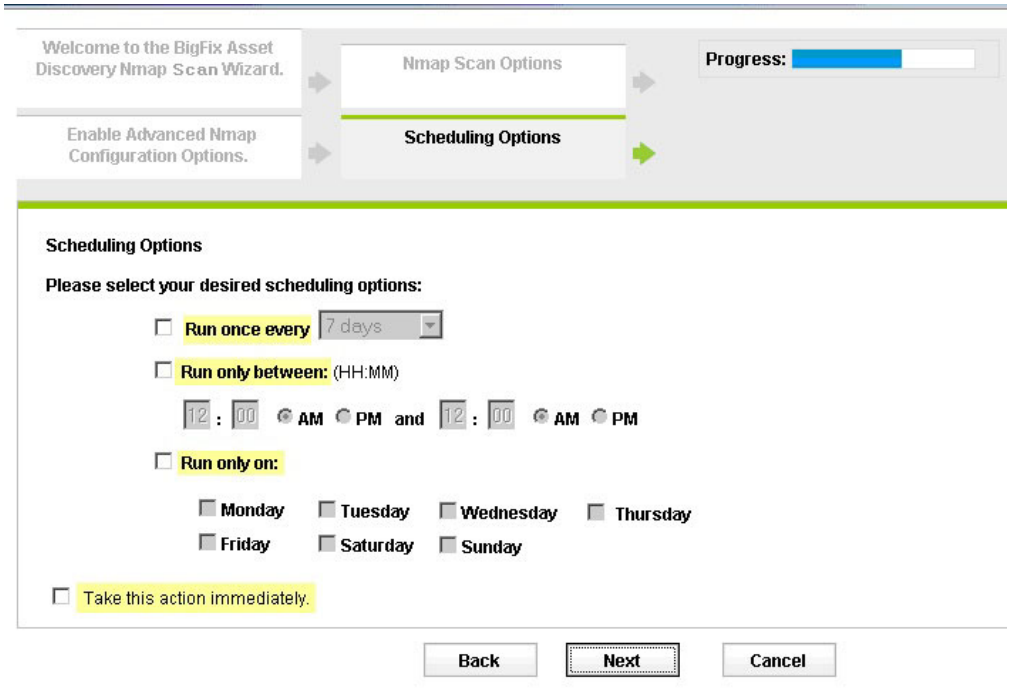


On this screen, you scan ports, run operating system detection, enable version detection, and list hosts to exclude. Make your selections and click *Next.*

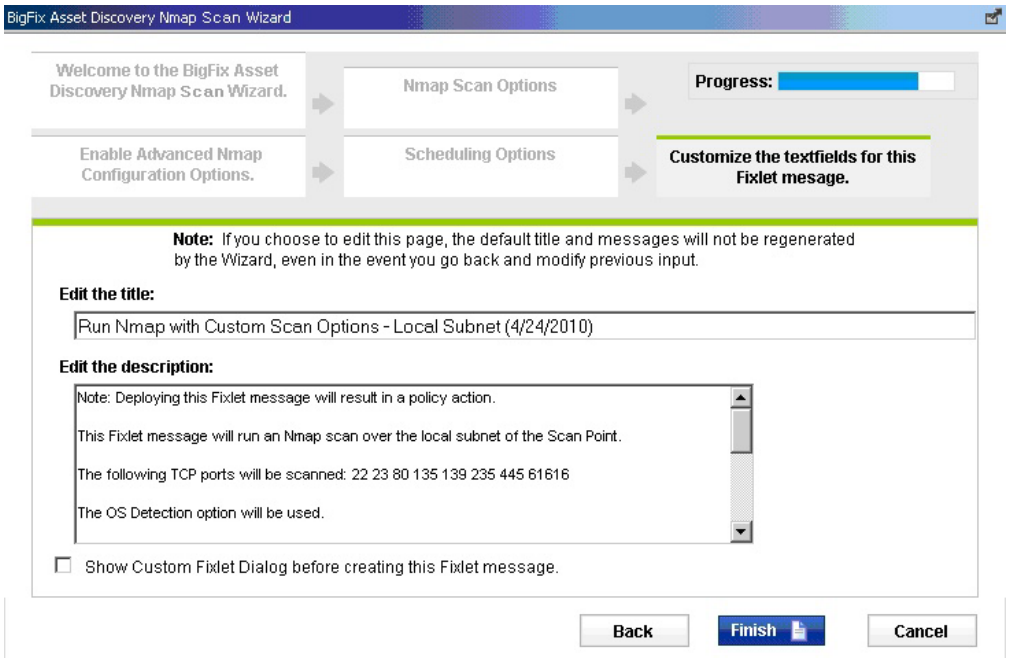
On the next screen, you can enable Advanced Nmap configuration options, select Ping Options, and additional Nmap scan options. Make your selections and click *Next.*



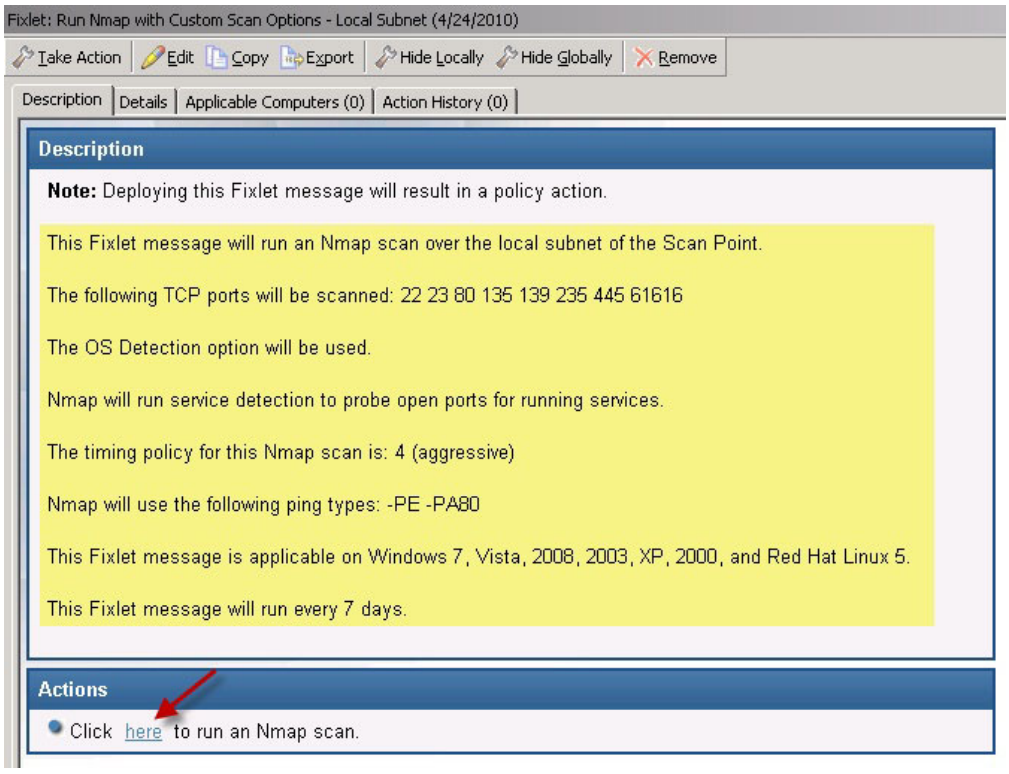
In the next screen, set scheduling options for the scan. You can select the frequency of the scan, and specific hours and days. Make your selections and click *Next*.



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 Endpoint Manager 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 Endpoint Manager 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 Endpoint Manager 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.

Appendix B. Support

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

- IBM Endpoint Manager Support site
- IBM Endpoint Manager wiki
- Knowledge Base
- Forums and Communities

Notices

This information was developed for products and services offered in the U.S.A.

IBM® may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web

sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
2Z4A/101
11400 Burnet Road
Austin, TX 78758 U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the “Web at Copyright and trademark information” at www.ibm.com/legal/copytrade.shtml.

Adobe, Acrobat, PostScript and all Adobe-based trademarks are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, other countries, or both.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency which is now part of the Office of Government Commerce.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Linear Tape-Open, LTO, the LTO Logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.

Printed in USA