Cisco Security Device Manager

User Guide

(Versions 2.4 and 2.5)

Table of Contents

Introduction

Cisco Router and Security Device Manager (SDM) is a web-based device management tool used in several Networking Academy Courses. CCNA Courses Discovery & Exploration include limited instruction and activities on SDM version 2.4, while CCNA Security includes a significant portion of instruction and activities on SDM version 2.5. This User Guide provides a reference for both versions including instructions on installation of the appropriate version for your course.

Table 1 lists the corresponding SDM version for each curriculum. The listed versions of SDM executable files can be found on Academy Connection and Cisco Systems, Inc. as noted later in this document. Please use the appropriate version of SDM with the course and versions listed to ensure the most accurate match of screen output results during lab exercises.

Table 1 SDM version for each curriculum

	CCNA Discovery and Exploration Versions 4.0 & 4.1	**CCNA Security Version 1.0**
SDM Version	2.4	2.5

This document includes information on the SDM installation process as well as instructions to run SDM. If removal of SDM becomes necessary, this document also includes steps to remove SDM from the router or personal computer.

Please note that Cisco Systems, Inc. announced the end-of -life for SDM. February 26, 2012 is the last day that Cisco Engineering may release any final software maintenance releases or bug fixes. The last day to receive service and support on SDM is February 28, 2014. The replacement product for SDM is Cisco Configuration Professional (CCP). Furthermore, the Integrated Services Routers Generation Two (ISR G2), 1900, 2900 and 3900 series, are not supported by SDM. These routers use Cisco Configuration Professional (CCP) for GUI based configuration.

All the information regarding SDM included in this document is compiled from documents posted by Cisco Systems, Inc. The links to these documents can be located in the Further Resources section of this document.

Downloading SDM executable files

Academy Connection

A Networking Academy instructor can log in and download the SDM executable zip files from Academy Connection. On the Academy Connection website, these zip files are located in the Equipment Information section under Resources or the classroom setup tab in the related curriculum.

Equipment Information

Once you have logged into Academy Connection, on the right side of the Instructor Home page under Resources, locate **Equipment Information** (Figure 1). Then choose **Lab Equipment List & Contact Info** and the desired SDM Installer. Choose the related
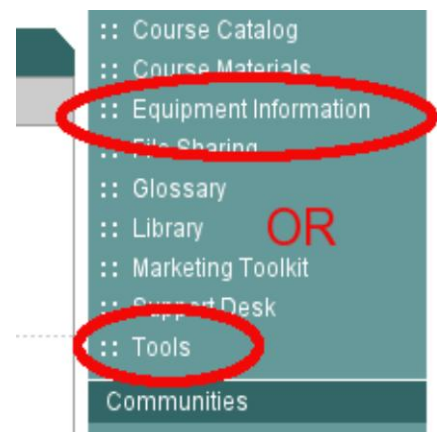
Figure 1 Tools on the right side bar

SDM version, for example, SDM version 2.5 if supporting CCNAS labs or 2.4 for Discovery and Explorations labs. Download the zip file to a desired location.

Classroom Setup Tab

SDM executable zip files can also be found in the Classroom Setup tab. After logging into Academy Connection website as an instructor, choose **Tools** (Figure 1) on the right side bar on the Instructor Home page.

After clicking **Tools**, find the section labeled **Find Curriculum & Instructional Tools** (Figure 2). Then choose the desired curriculum and click **Find Tools**. On the next page, choose the **Classroom Setup** tab and locate the related SDM zip file. Click on the link to the zip file and save the zip file in a desired location on the PC.
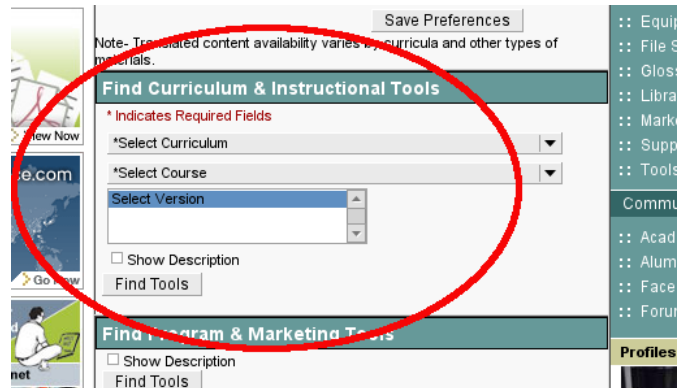

Figure 2 Find Curriculum & Instructional Tools

Click-Paths to Download Corresponding SDM versions

Equipment Information: Equipment Information > Lab Equipment List & Contact Info > desired SDM Installer

CCNA Discovery, SDM v2.4: Choose **Tools > Select Curriculum > CCNA Discovery** > **Select Course**. Choose any CCNA Discovery Course and the version. Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.4 installer**'

CCNA Exploration, SDM v2.4: Choose **Tools** > **Select Curriculum > CCNA Exploration** > **Select Course** . Choose any CCNA Exploration Course and the version. Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.4 installer**.

CCNA Security, SDM v2.5: Choose **Tools > Select Curriculum** > CCNA Security > **Select Course > CCNA Security** and the version . Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.5 installer**.

Cisco Website

A Network Academy instructor with a privileged Cisco Connection Online (CCO) account can download SDM from the Cisco website.

Router Requirements

The following section lists only the system requirements in Academy curricula for use with Cisco equipment sold through the Academy. For a complete list of supported IOS images, routers, adapters, cards, and network modules, please visit the following link for the release notes provided by Cisco Systems, Inc.

http://www.cisco.com/en/US/products/sw/secursw/ps5318/prod_release_notes_list.html

Supported Routers

SDM supports many routers including the ISR G1 models used by Networking Academy. These models include the 1841, 2801 and 2811. SDM does NOT support the ISR G2 routers (1900, 2900, and 3900).

G2 models use CCP as the preferred GUI configuration tool. Table 2 lists only the Academy-bundled routers and available IOS images from CCO for use with SDM v2.4 and v2.5. For a complete list of routers supported by each version of SDM, please visit

http://www.cisco.com/en/US/products/sw/secursw/ps5318/prod_release_notes_list.html

Cisco's Feature Navigator or Software Advisor can also provide this information by searching on feature, image, or platform.

Table 2 SDM Supported Cisco Routers and IOS Versions

SDM Supported Routers	Available Cisco IOS Versions
Cisco **1721**, **1751**, and **1760**	· 12.4(3) or later · 12.4(2)T or later
Cisco **1841**	· 12.4(2)T or later · 12.4(3) or later · 15.0(1)M or later · 15.1(1)T or later
Cisco **2611XM**, **2620XM**, **2621XM**, and **2691**	· 12.3(8)T or later · 12.4(3) or later · 12.4(2)T or later
Cisco **2801** and **2811**	· 12.4(2)T or later · 12.4(3) or later · 15.0(1)M or later · 15.1(1)T or later

Adapters Cards and Network Modules

SDM supports a variety of adapters, cards, and network modules. Table 3 lists all the supported interfaces sold through the Academy. SDM is compatible with HWIC-4ESW, WIC-1B-ST, WIC-1T, WIC-2A/S and WIC-2T cards.

Table 3 List of supported interfaces sold through the Academy

SDM Supported Router Interfaces	Part Numbers
WAN Interfaces (WICs)	WIC-1T, WIC-2A/S, WIC-2T, WIC-1B-S/T
High speed WICs (HWICs)	HWIC-4ESW

Memory Requirements

Table 4 lists the minimum router memory requirements to successfully run SDM. The table only lists the requirements for SDM versions 2.4 and 2.5.

Table 4 Memory Requirements for Routers and PC to Support SDM

Applications	Version 2.4	Version 2.5
Cisco SDM (Flash Memory on the Router)	6.97 MB	7.63 MB
Cisco SDM Express (Flash Memory on the Router)	2.04 MB	2.43 MB
Cisco SDM installed on a PC	7.5 MB	8.14MB
Wireless Management Application (in addition to Cisco SDM memory requirements on the Router)	2 MB	2.13 MB

PC System Requirements

SDM can be run from a router via a web browser or a small executable installed on the PC. This section documents the PC requirements for running SDM properly from either location.

SDM is designed to run on a personal computer that has a Pentium III or faster processor. SDM can be run on a PC using any of the following operating systems for SDM versions 2.4 and later:

- Microsoft Windows XP Professional
- Microsoft Windows 2003 Server (Standard Edition)
- Microsoft Windows 2000 Professional with Service Pack 4 (Windows 2000 Advanced Server is not supported)
- Microsoft Windows Vista (Business Edition)

Note: A Windows PC is necessary to install SDM. After SDM has been installed on the router, a PC with network connectivity to the router can access SDM from a web browser by using the router IP address or hostname.

Minimum Screen Resolution

Cisco SDM requires a screen resolution of at least 1024 x 768.

Web Browser Versions and Java Runtime Environment Versions

SDM version 2.4 or later can be used with the following browsers:

- Netscape 7.1 and 7.2
- Netscape 9.0 (supported only in version 2.5)
- Internet Explorer version 5.5 and later versions
- Firefox 1.0.6 and later versions

SDM uses SUN Java Runtime Environment (JRE) version 1.4.1 or later integrated into the web browser. The Java versions required to run SDM as documented by Cisco Systems are listed in Table 5.

cisco

Cisco | Networking Academy®
Mind Wide Open™

Table 5 Java Requirement for SDM

SDM Version	Supported JRE Versions
2.4	JRE 1.4.2_08, JRE 1.5.0_06, JRE 1.5.0_07, JRE 1.5_09
2.5	JRE 1.4.2_08, JRE 1.5.0_06, JRE 1.5.0_07, JRE 1.5_09, JRE 1.6.0_02, JRE 1.6.0_03

Links to Download or Verify Java

Download the older versions of Java: http://java.sun.com/products/archive/

Testing and verifying the installed version of Java: http://www.java.com/en/download/testjava.jsp

Router Preparation

The following section outlines the steps to prepare the router to install and run SDM. The router establishes network communications with a Windows PC during SDM installation. HTTP/HTTPS is also enabled for web browser access. Finally, privileged user accounts are setup for router access using SDM.

Steps to Setup Router for SDM access

Step 1) Configure the router Fa0/0 IP address

(This is the interface that a PC will connect to using a web browser to bring up SDM. An SDM router may require connection to a different port in order to access SDM. The IP address in this example is for reference only. Any network addresses will work as long as there is network connectivity between the router and PC.)

Router(config)# **interface Fa0/0**
Router(config-if)# **ip address 10.10.10.1 255.255.255.248**
Router(config-if)# **no shutdown**

Step 2) Enable the HTTP/HTTPS server of the router

Router(config)# **ip http server**
Router(config)# **ip http secure-server**
Router(config)# **ip http authentication local**

Step 3) Create a user account with privilege level 15 (enable privileges)

Router(config)# **username** <username> **privilege 15 password** <password>
Replace <username> and <password> with the username and password that was chosen by the user.

Step4) Configure SSH and Telnet for local login and privilege level 15

Router(config)# **line vty 0 4**
Router(config-line)# **privilege level 15**
Router(config-line)# **login local**
Router(config-line)# **logging synchronous**
Router(config-line)# **transport input telnet**
Router(config-line)# **transport input telnet ssh**

SDM Installation

SDM can be installed on a Windows PC, a SDM-supported router (see Supported Routers for a list of routers sold by the Academy) or both a Windows PC and a router. The option to install SDM on both a computer and a router allows the user the option to launch SDM from a Windows computer or from any PC via the web browser. All options require network connectivity to the router, HTTP/HTTPS enabled on the router, and a compatible Java version running on the computer.

The following is a sample installation procedure for SDM version 2.4 on a Windows computer or router. The procedure is similar for other versions of SDM. When the file is unzipped, the folder SDM-V24 will be created in the user-defined location. In this example, the executable file **setup** is found in the SDM-
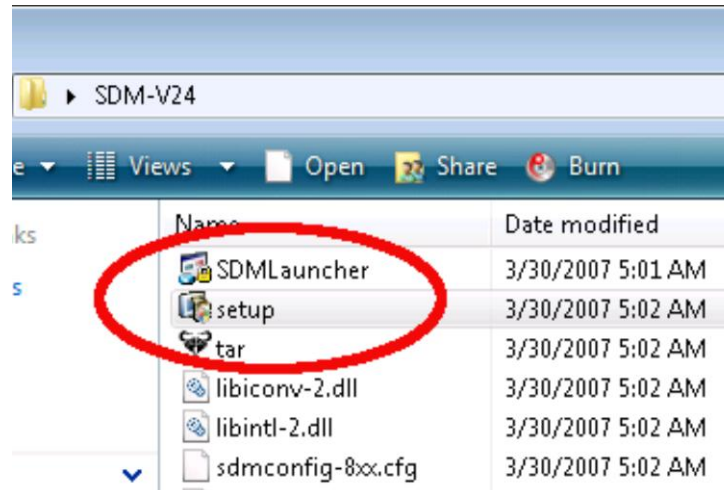
*Figure 3 In the SDM-V24 folder, double click the **setup.exe** file to start the SDM installation process*

V24 folder, and the setup process is started by double-clicking on the setup.exe icon (Figure 3). Once all the permission issues are satisfied , the Cisco SDM-InstallShield wizard appears (Figure 4). The installation process can begin once the license agreement is accepted (Figure 5).

*Figure 4 Click **Next** on the Welcome Screen to continue.*

After accepting the license agreement, the user has three choices for SDM installation (Figure 6):

- **This Computer (Here):** SDM is run from the local Windows PC that meets the memory and hardware/software requirements listed earlier. The user can access the router by using this locally installed SDM executable to connect to a target router.

- **Cisco Router:** SDM is installed in flash memory of a supported router. (Please see Supported Routers for a list of supported routers sold by the Academy.) This option allows the user to access the router that is using SDM from any PC that has a compatible web browser.

- **Both (computer and router):** The user can install SDM on both a Windows PC and the flash memory of a supported router. (See Supported Routers) This option allows the user to launch SDM from the PC or alternately from any PC by using a compatible browser. Only routers with the locally installed version of SDM can be accessed by PCs using the browser method.
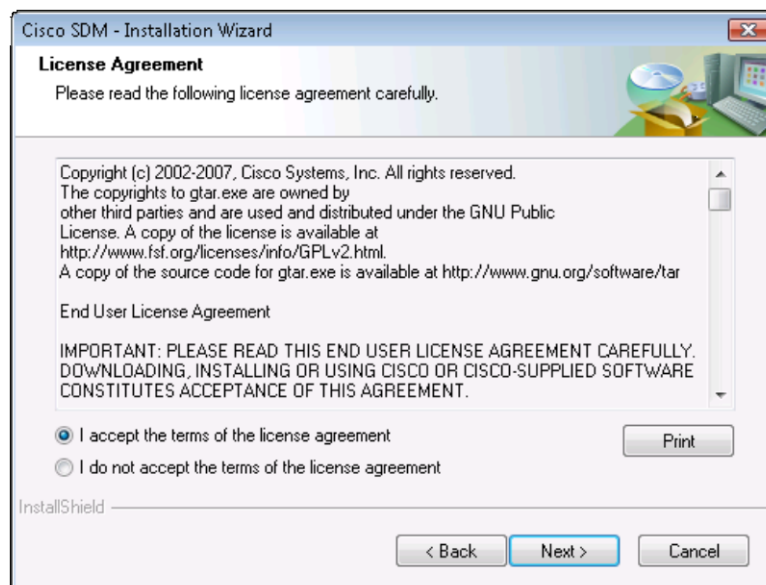
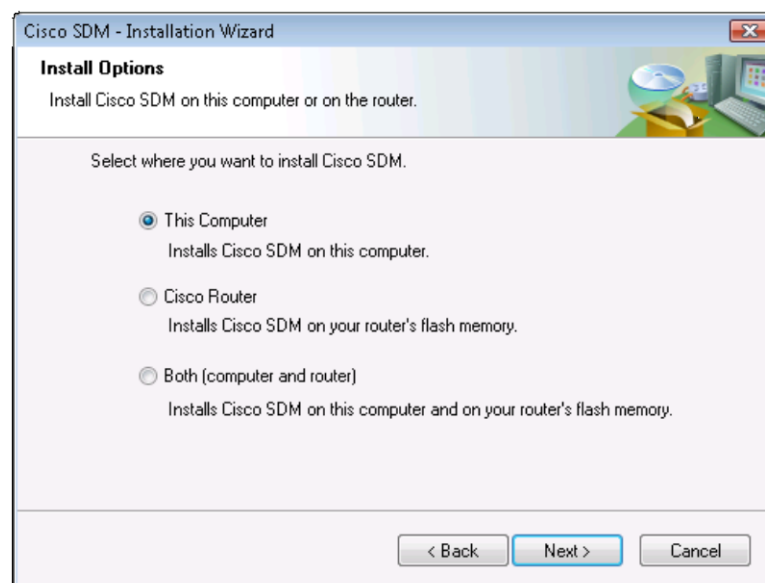*Figure 5 Continue with the installation, the use must accept the license agreement by clicking **Next**.*

*Figure 6 Choose an installation option and click **Next**.*

Installation on a Local Windows PC

Installing SDM on a Windows PC is similar to installing other applications on a PC. The installation wizard will guide the users through all the steps. The user decides the destination folder for SDM installation (Figure 7) and clicks Next. The installation starts when the user clicks Install (Figure 8).
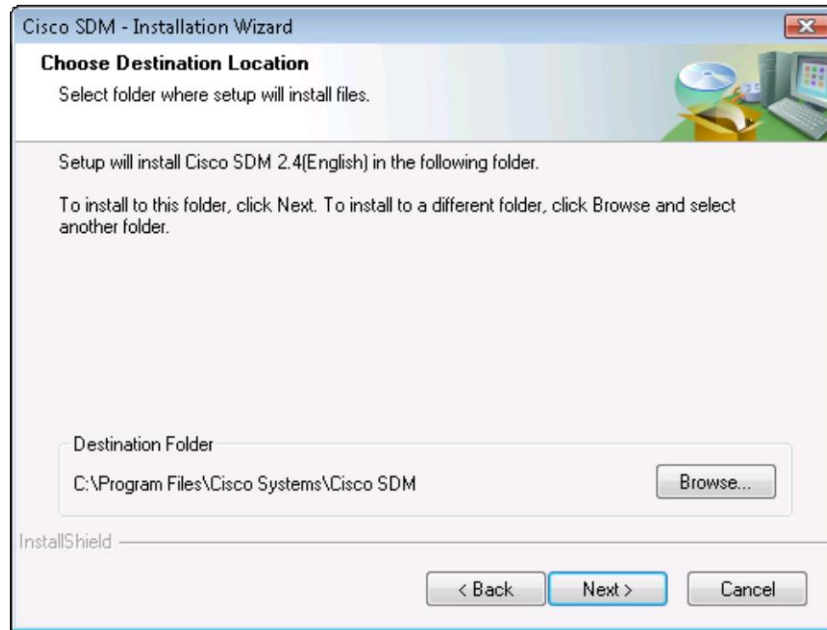

Figure 7 Click Choose the destination folder

When the installation is finished, Cisco Systems is listed under Programs in the Start Menu and a short cut to Cisco SDM may appear on the desktop. SDM can be started by choosing Cisco SDM under the submenus for Cisco Systems in the Start Menu or double-clicking the desktop icon (if it was installed).
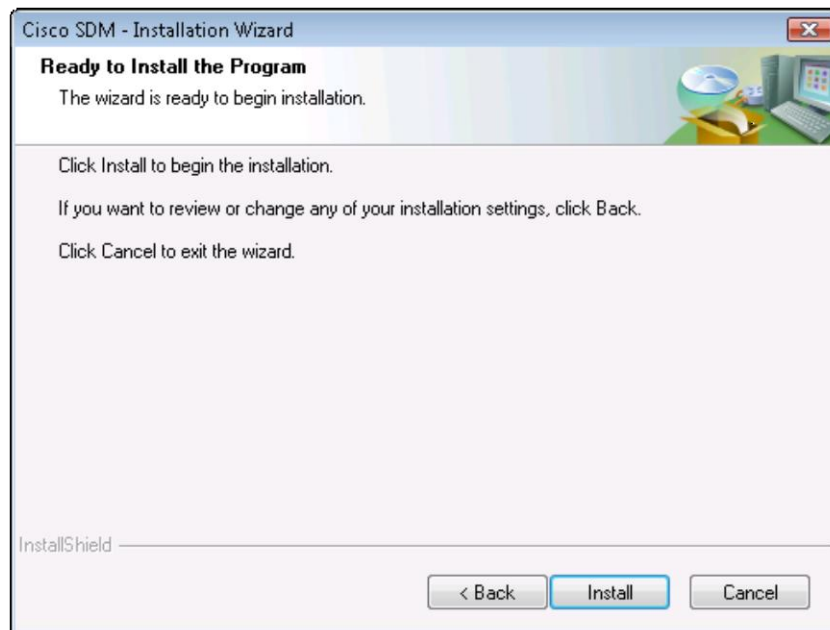

*Figure 8 Click **Install** to commence the SDM installation process for a Windows PC.*

Installation on the Flash Memory of a Router

Once the router preparation is finished (see Router Preparation), the installation can be started by executing the setup.exe file in the SDM-v24 folder on a Windows PC. The Cisco SDM-InstallShield wizard will start after all the security and licensing issues are addressed. The user clicks Next to continue. The user must accept the license agreement to continue with the installation (Figure 9).
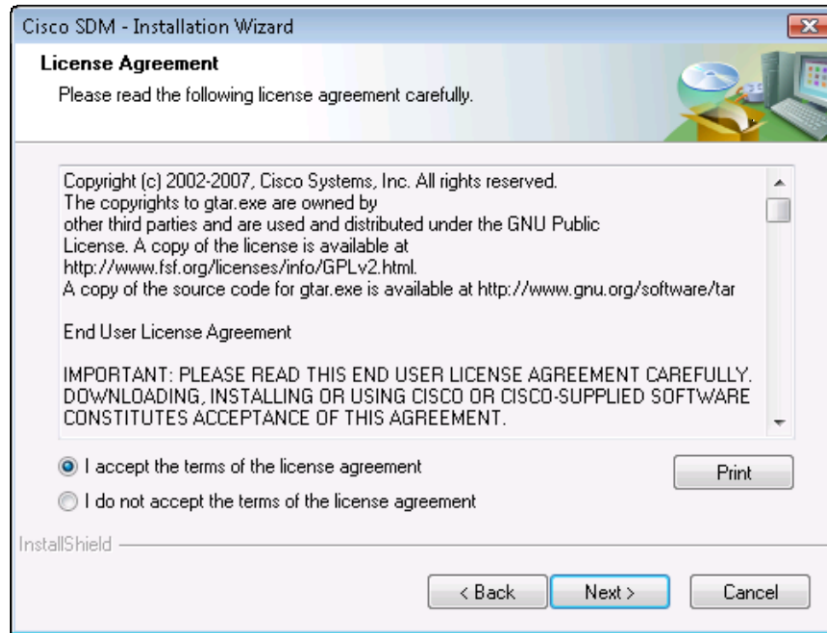

*Figure 9 To continue with the installation, the user must accept the license agreement by clicking **Next**.*

In the Install Option dialog box, choose **Cisco Router** to install SDM on the flash memory of the router (Figure 10). In the Router Authentication dialog box, input the IP address or hostname of the router and the username of a privilege level 15 username & password pair that was previously configured on the
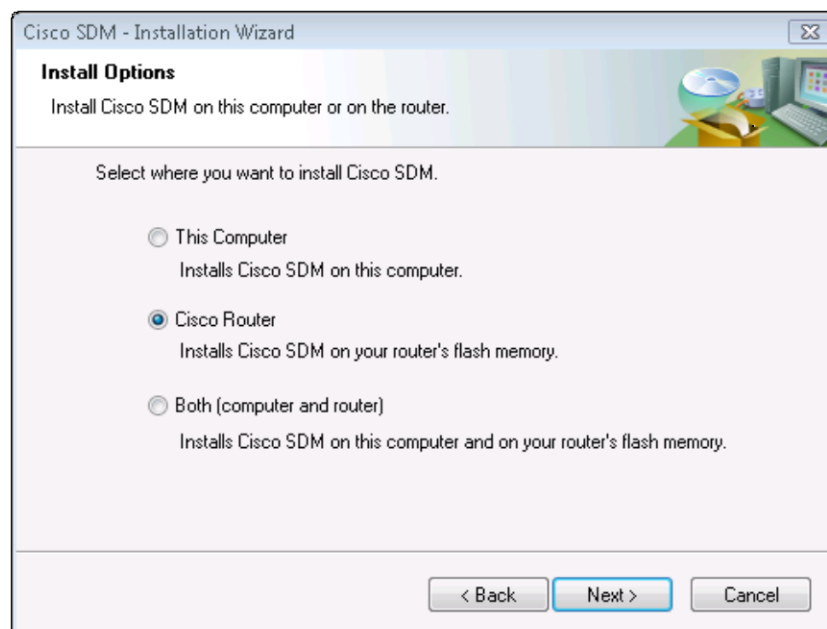

*Figure 10 Choose Cisco Router and click **Next**.*

router in the Router Preparation step. Click **Next** to start the SDM installation on the router (Figure 11). It could take a few minutes for the Windows PC to connect to the router. After the wizard connects to the router, it prompts the user for the type of SDM installation: Typical or Custom. Most likely, Typical is an adequate choice. The Installation Wizard prompts the user to choose the SDM components for
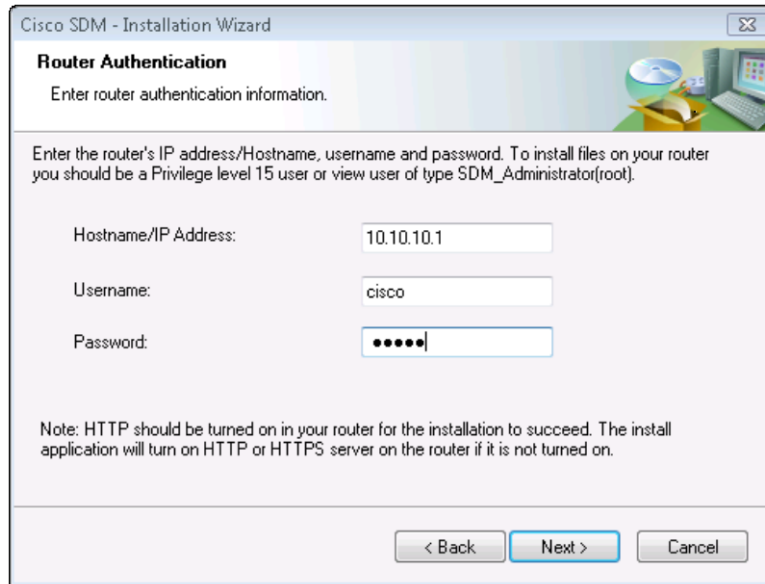

Figure 11 Input the IP address of the router, privilege level 15 username and password

installation. The user should verify that there is enough space available on flash to install all the desired components (Figure 12). If space is limited, the user can choose not to install Cisco SDM Express. Cisco SDM Express is optional in the general function of SDM. Cisco SDM Express is only used for the initial router setup or after restoring the router to the default factory settings. Once the components are selected, the Installation Wizard is ready to install SDM on the router. The user clicks Next to continue with the installation. When the user is ready to install SDM on the router, the user clicks Install to start installing the application. After SDM is installed on the router, a user can access the router by using a web browser if the user has the right credentials and network access to that router.
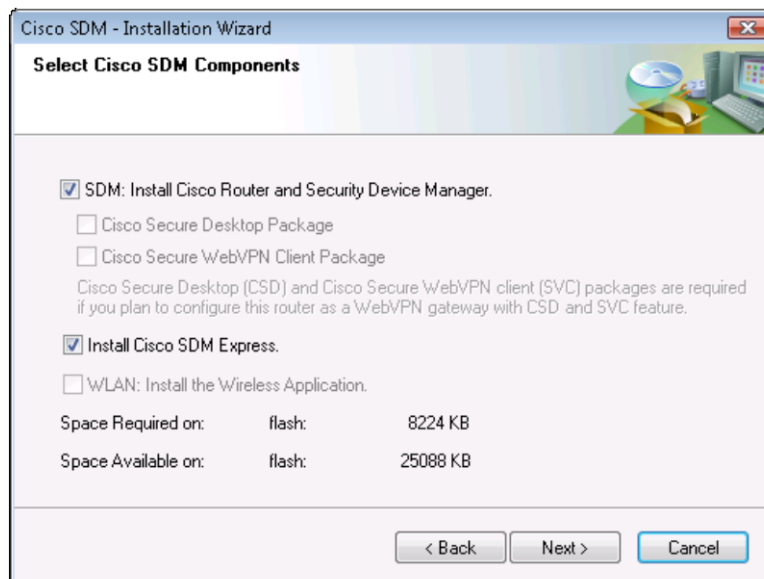

*Figure 12 Verify available router flash memory for all desired components and click **Next** to continue.*

Running SDM from a PC

After the SDM installation is completed, SDM can be launched from the short cut on the Desktop or in the Start menu > Programs > Cisco Systems. Once SDM is launched, a dialog box prompts for the IP address or the hostname of the desired router (Figure 13).

Note: If the command **ip http secure-server** was issued for the router, the user can choose to enable HTTPS by clicking on the check box next to "This device has HTTPS enabled and I want to use it" (see Router Preparation).
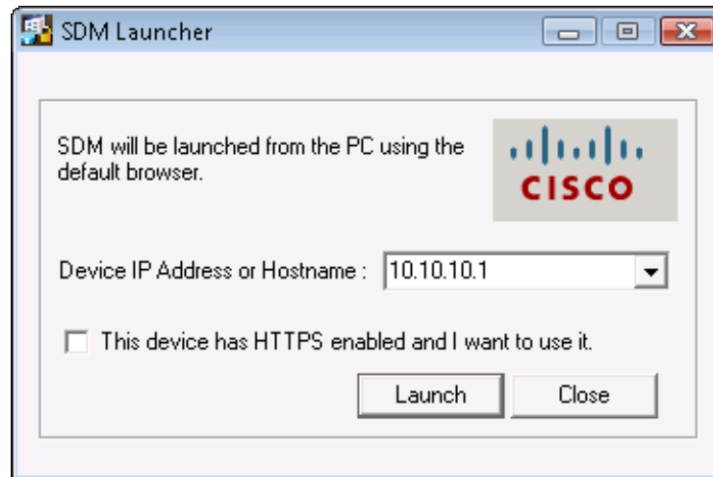

Figure 13 Input the router IP address or hostname to launch SDM.

Once the SDM is launched, an Authentication Required dialog box prompts for username and password (Figure 14). The username and password pair was either configured by the user from the command line interface or from the factory default username *cisco* and password *cisco*. Once the correct credentials are accepted, SDM launches and allows access to the router. If SDM fails to launch at this point, there are a few issues to consider. Check that all the security issues have been addressed. Also consider whether the pop-up blocker in the web browser is disabled for the router IP address or hostname. As an example, in Internet Explorer, the popup blocker can be deactivated by going to Tools > Popup Blocker. In this menu, the user can choose to turn off the popup blocker entirely or disable the popup blocker for certain IP addresses or hostnames. After the popup blocker has been disabled, the user may need to restart SDM and the web browser.
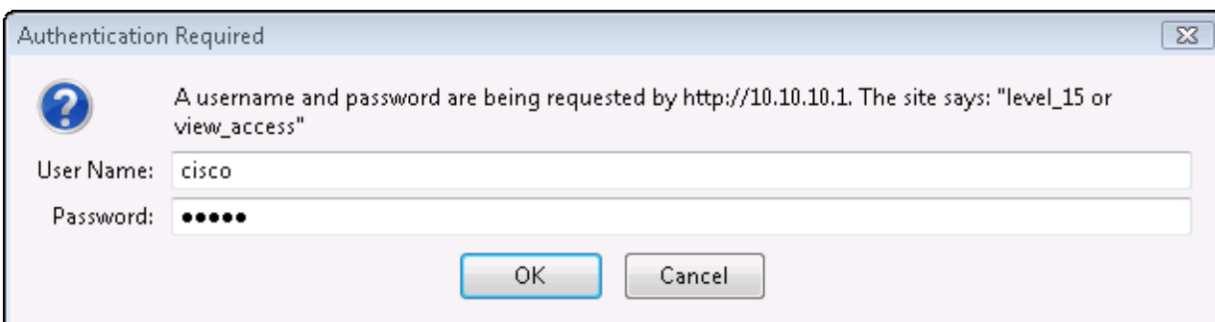

Figure 14 Input username and Password, such as username cisco and password cisco.

Note: If SDM does not start or function properly, please verify the Java version. (see Web Browser Versions and Java Runtime Environment Versions)

Running SDM from a Router

To run SDM from a router, a computer must have network connectivity to the router using a web browser. In the web browser, input the router IP address or hostname. Once SDM starts, SDM prompts if the user wants to use HTTPS to communicate with the router. This occurs if HTTPS is enabled on the router. To enable HTTPS, the command **ip http secure-server** must be configured on the router. The user can use HTTPS by choosing OK to continue with SDM using HTTPS (Figure 15). Next, SDM will
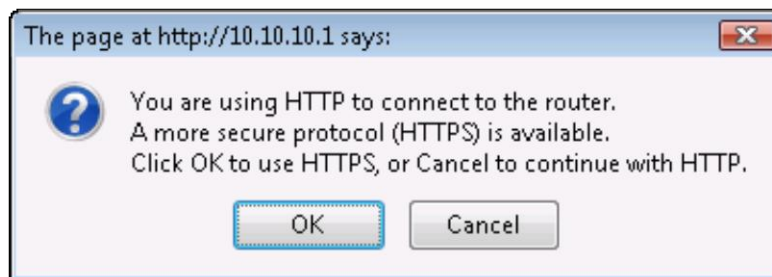
Figure 15 If **ip http secure-server** *is issued for the router, the user can choose to use HTTPS to communicate with the router.*

prompt the user for username and password (Figure 16). When logging in, use either the username and password pair that was configured on the router when setting up the router for SDM installation (see Router Preparation) or the default factory username *cisco* and password *cisco*. SDM will not start if the popup blocker is active for the router IP address or hostname. For example, in Mozilla Firefox, the popup blocker can be disabled by going to the Tools > Options > Content tab. In this tab, the user can choose to turn off popup blocker entirely or disable popup blocker for certain IP addresses or hostnames. After the popup blocker has been disabled, the user may need to restart the web browser to access SDM.
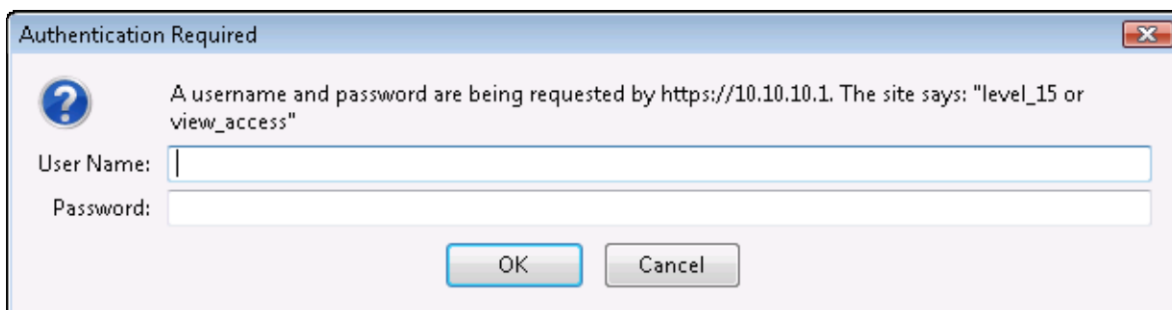
Figure 16 Input username and password with the privileges to access the router.

Note: If SDM does not start or function properly, please verify the Java version. (see Web Browser Versions and Java Runtime Environment Versions)

SDM Express

SDM Express is a component of SDM that performs basic initial router configuration from a web browser using the router IP address. SDM Express is only available when the router is in the original

factory settings (see Further Resources for a sample router configuration). The original factory network settings for a SDM-supported router are listed below in Table 6.

Table 6 Default factory settings for SDM access

	Default Factory Settings
FastEthenet0/0 IP Address / netmask	10.10.10.1 / 255.255.255.248
Username / password	cisco / cisco

Once the router has been configured by the user, SDM is executed instead of SDM Express when a web browser is used to access the router.

Restoring Router to Default Factory Settings

SDM can restore the router to default factory settings. A web browser with the router IP address or hostname is used to access the SDM application installed on the router.

After SDM is launched, under the File menu, choose **Reset to factory default**. Another way to reset the router is to click on the **Configure** button and then choose **Additional Tasks** on the left sidebar of the Configure page. Then choose **Reset to Factory** default under the Configuration Management folder.

It is important to note the instructions in the dialog box (Figure 17). During the process of restoring the router to default factory settings, the current running configurations on the router will be replaced with a default configuration (see Further Resources for a sample). The running configurations of the user will be erased unless they are saved to a PC or other storage devices (Step 1 in Figure 17). When ready, click on the **Reset Router** button. A Warning dialog box will appear and click **Yes** to continue to reset the router.

While the route is resetting, SDM will need to be closed and network connectivity to the router will also be lost. Once the router is reset, SDM can be opened again using the default factory settings. After the router has been reset, the IP address on the PC has to be changed to an available address in 10.10.10.0/29 network to reconnect to the router. To access SDM again on the router, open a web browser to http://10.10.10.1/ and log on with the username *cisco* and password *cisco*. When the credentials are verified, SDM Express will now open for initial router configurations. Once the router is configured, SDM Express will not launch again until the router is restored to default factory settings. SDM will launch in place of SDM Express for normal maintenance.
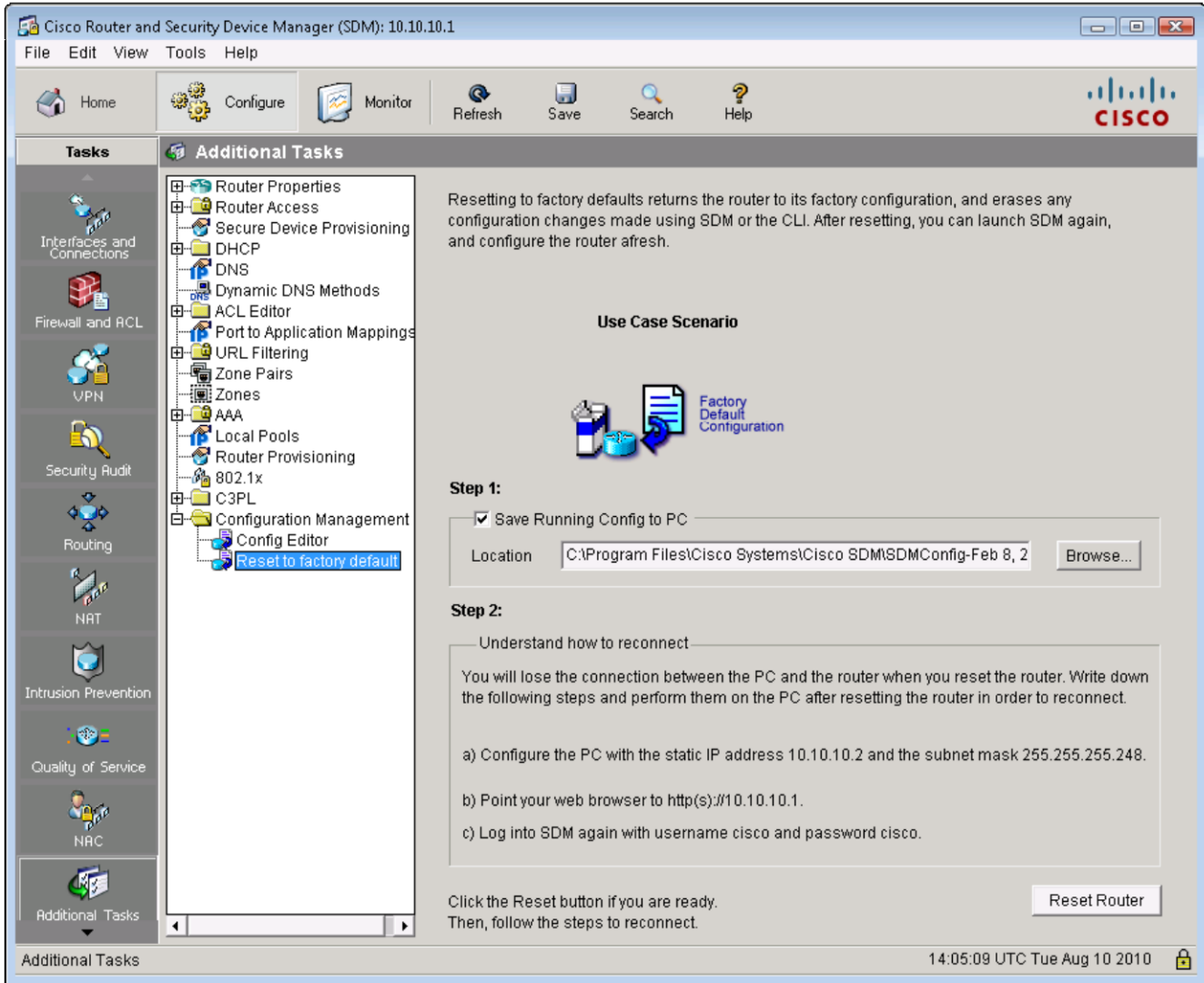
Figure 17 Restore Router to Factory Default.

Uninstalling Cisco SDM Files

Remove SDM from Windows PC

To remove Cisco SDM version 2.1 or later from a PC:

> Step 1: Click **Start > Program > Cisco Systems > Cisco SDM > Uninstall** to launch the Uninstall program.
>
> Step 2: When the message "Do you want to remove the selected applications and all of its features?" appears, click **Yes**.
>
> Step 3: When the Uninstallation Complete screen is displayed, click **Finish**.

Remove SDM files from the Router

When removing Cisco SDM from flash memory or from other router disk file system, the user logs into the router and completes the following steps in EXEC mode:

> Step 1: Change to the directory in which the Cisco SDM files are located. If the router has a flash file system, use the following command:

router# **cd flash:**

> Step 2: Use the **delete** command to remove all Cisco SDM files.

> The example below deletes the file sdm.tar:.

> > router# **delete sdm.tar**
> > Delete filename [**sdm.tar**]?
> > Delete flash:sdm.tar? [**confirm**]
> > Press **Return** to confirm the deletion.

> To delete all files with the same extension (.tar):

> router# **delete *.tar** (This will delete all the files with .tar extension)

> Step 3 Reclaim memory space by using the **squeeze flash:** command:

> > router# **squeeze flash:**

> It is not necessary to use the **squeeze flash:** command on DOS-based file systems.

Table 7 displays a sample list of SDM 2.4 related files that are loaded on the router file system. Once these files are removed from the router file system, SDM is no longer accessible from a web browser.

Table 7 Sample list of SDM related files and descriptions of the function of the files

Filename	Size	Description
common.tar	1.11 MB	Cisco SDM and Cisco SDM Express support file
es.tar	840 KB	Cisco SDM Express application file
home.shtml	1.01 KB	Cisco SDM and Cisco SDM Express support file
home.tar	110 KB	Cisco SDM and Cisco SDM Express support file
sdmconfig-modelnum.cfg Example for 1841 Router: sdmconf-18xx.cfg	2.0 KB	Default configuration file
sdm.tar	5.75 MB	Cisco SDM application file
sdmips.sdf	Variable	Files created when Cisco SDM is used to modify Cisco IOS IPS signatures
securedesktop-ios-3.1.1.45-k9.pkg	1.61 MB	Cisco Secure Desktop client software for SSL VPN client.
sslclient-win-1.1.3.173.pkg	406 KB	Full tunnel client software for SSL VPN clients
wlanui.tar	406 KB	Wireless Application
128MB.sdf	515 KB	Signature Definition File (SDF) used by Cisco IOS IPS
wlanui.tar	406 KB	Wireless Application

End of Sale and End of Life of SDM

Cisco Systems, Inc. has announced the end-of-sale and end-of-life for SDM on August 28, 2010. The last day to order SDM is February 26, 2011. February 26, 2012 is the last day that Cisco Engineering may release any final software maintenance releases or bug fixes. The last day to receive service and support on SDM will be February 28, 2014.

The replacement product for SDM is Cisco Configuration Professional (CCP). More information and software download can be found at the following location: http://www.cisco.com/go/ccp

Troubleshooting

Enabling Desired Java Versions

If the PC is running unsupported Java versions, SDM will not function properly. For example, the user cannot select Additional Tasks in the Configure page or select desired check boxes. To fix this, the user enables only the SDM supported Java versions in the Java Control Panel. The Java Control Panel can be accessed through the Control Panel (Figure 18). If the Java icon cannot be found in the Control Panel, Java probably has not been installed on the system. Go to the Java website to download and install Java.
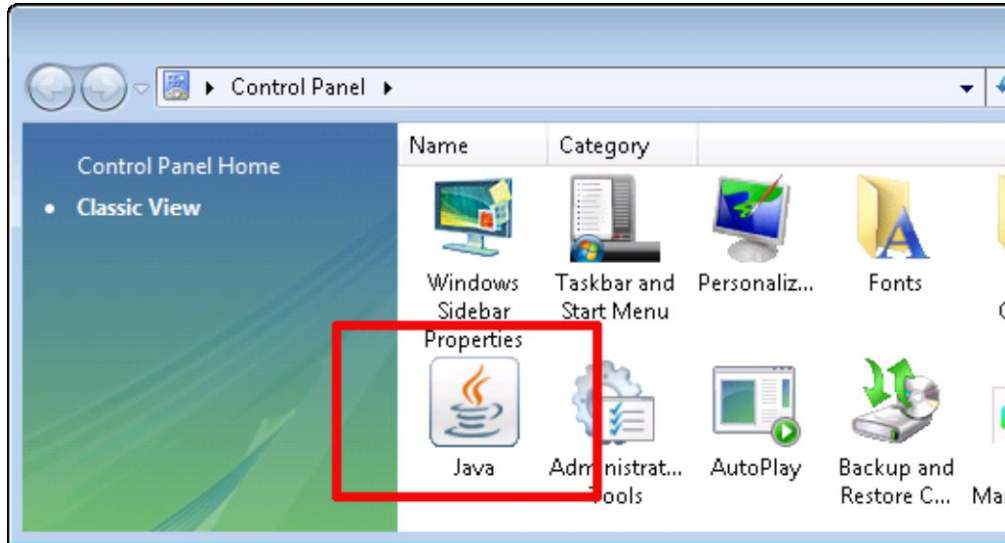

Figure 18 Java Control Panel can be found in the computer Control Panel.

Please see Web Browser Versions and Java Runtime Environment Versions for SDM supported Java versions. Once the Java Control Panel opens, choose the **Java** tab and then click **View** to manage the Java Runtime versions and settings (Figure 19). In the Java Runtime Environment (JRE) Settings dialog box, the user can choose to enable only the SDM-supported Java versions by deselecting the
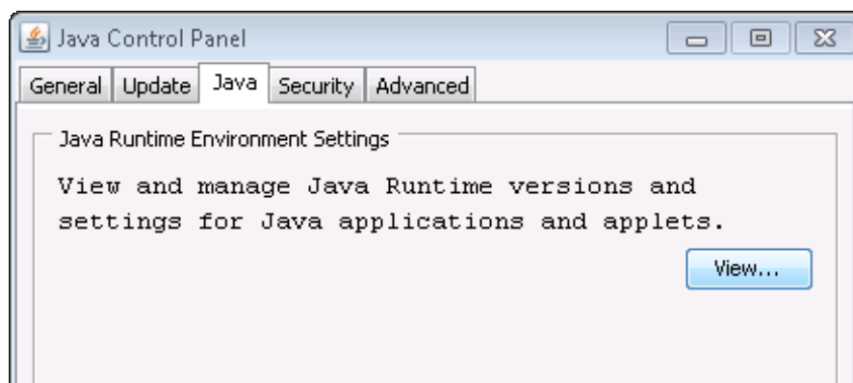

Figure 19 Java Control Panel and select Java tab: click View to manage the Java versions

unsupported version or versions (Figure 20). The user then clicks OK to continue. When only the SDM-supported Java version(s) are enabled, the user closes all web browsers and SDM for the new JRE settings to take effect.

Note: Only one supported version of JRE is necessary for SDM to function properly. When the user opens SDM or a web browser that refers to the router IP address or hostname, the user may receive a

Java Security Warning dialog box. The user clicks Run to allow the use of an earlier version of Java (Figure 21).
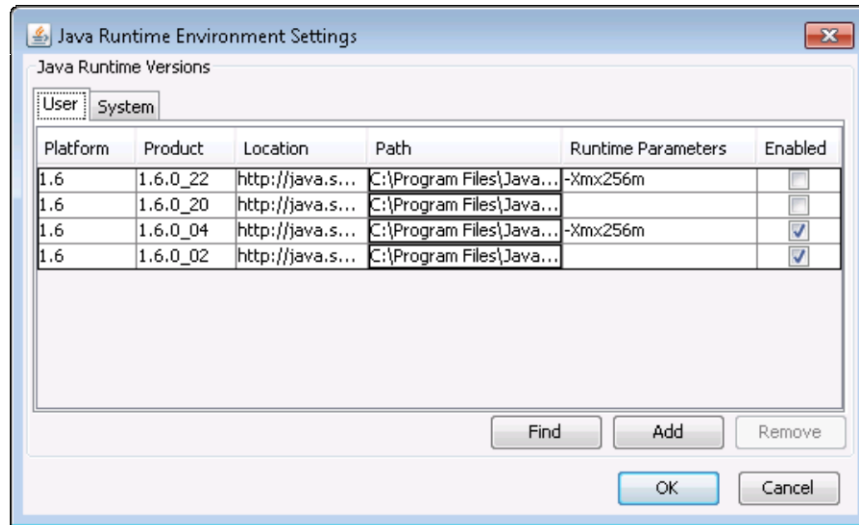

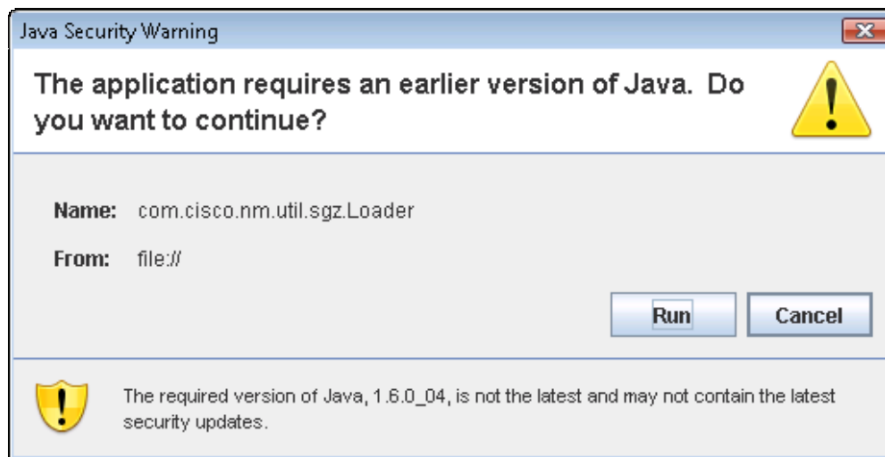*Figure 20 JRE settings to enable only the SDM supported versions.*

*Figure 21 Click **Run** to use an earlier version of Java.*

Java Stack Overflow

To resolve Java stack overflow problems associated with SDM, go to **Start** > **Control Panel** > **Java** --> **Java Tab** . Click **View** on the **Java Applet Runtime Settings** section. Then in **Java Runtime Parameters**, type **-Xmx256m** (see Figure 19 and Figure 20). If Java cannot be found in the Control Panel, Java probably is not installed on the system. Go to the Java website to download and install SDM supported Java versions. Please see Web Browser Versions and Java Runtime Environment Versions for SDM supported Java versions.

For Windows XP with SP2 users

When Cisco SDM is installed on a PC running Windows XP with Service Pack 2, Internet Explorer may display HTML source code when attempting to launch Cisco SDM. To fix this problem, go to **Tools > Internet Options > Advanced**. Then scroll to the **Security** section, check **Allow Active Content to Run in Files on My Compute**r, and click **Apply**. Then re-launch Cisco SDM.

Further Resources

SDM Overview and Support Information

http://www.cisco.com/go/sdm

http://www.cisco.com/en/US/prod/collateral/routers/ps5318/product_data_sheet0900aecd800fd118.html

Release Notes for all available SDM versions

http://www.cisco.com/en/US/products/sw/secursw/ps5318/prod_release_notes_list.html

SDM Download Locations

If you are an instructor in a Cisco Network Academy, SDM versions 2.4 and 2.5 can be downloaded from cisco.netacad.net.

Click-Path to Download Corresponding SDM versions

Equipment Information: Equipment Information > Lab Equipment List & Contact Info > desired SDM Installer

CCNA Discovery, SDM v2.4: Choose **Tools > Select Curriculum > CCNA Discovery** > **Select Course**. Choose any CCNA Discovery Course and the version. Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.4 installer**'

CCNA Exploration, SDM v2.4: Choose **Tools** > **Select Curriculum > CCNA Exploration** > **Select Course** . Choose any CCNA Exploration Course and the version. Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.4 installer**.

CCNA Security, SDM v2.5: Choose **Tools > Select Curriculum** > CCNA Security **> Select Course > CCNA Security** and the version . Click **Find Tools**. Choose the **Classroom Setup** tab and locate **SDM v2.5 installer**.

A Network Academy instructor with a privileged Cisco Connection Online (CCO) account can download SDM from www.cisco.com.

Feature Navigator

http://tools.cisco.com/ITDIT/CFN/jsp/index.jsp

Software Advisor

http://tools.cisco.com/Support/Fusion/FusionHome.do?mySession=144433&myStep=8

Links to Download or Verify Java

Download the latest version of Java: http://java.com/en/dformat ownload/manual.jsp

Download the older versions of Java: http://java.sun.com/products/archive/

Testing and verifying the installed version of Java: http://www.java.com/en/download/help/testvm.xml

Cisco Configuration Professional

Information and software download: http://www.cisco.com/go/ccp

Sample Default Startup Configuration File for Cisco Router and Security Device Manager

```
! The default startup configuration file for Cisco Router and Security Device Manager (SDM)
! DO NOT modify this file; it is required by SDM as is for factory defaults
! Version 1.0
hostname yourname
logging buffered 51200 warnings
username cisco privilege 15 secret 0 cisco
ip domain-name yourdomain.com
interface FastEthernet0/0
 description $ETH-LAN$$ETH-SW-LAUNCH$$INTF-INFO-FE 0$
 ip address 10.10.10.1 255.255.255.248
 no shutdown
ip http server
ip http access-class 23
ip http secure-server
ip http authentication local
ip http timeout-policy idle 60 life 86400 requests 10000
access-list 23 permit 10.10.10.0 0.0.0.7
banner login ^
-----------------------------------------------------------------------
Cisco Router and Security Device Manager (SDM) is installed on this device.
This feature requires the one-time use of the username "cisco"
with the password "cisco". The default username and password have a privilege level of 15.
Please change these publicly known initial credentials using SDM or the IOS CLI.
Here are the Cisco IOS commands.
username <myuser>  privilege 15 secret 0 <mypassword>
no username cisco
Replace <myuser> and <mypassword> with the username and password you want to use.
For more information about SDM please follow the instructions in the QUICK START
GUIDE for your router or go to http://www.cisco.com/go/sdm
-----------------------------------------------------------------------
^
line con 0
 login local
line vty 0 4
 access-class 23 in
 privilege level 15
 login local
 transport input telnet
 transport input telnet ssh
line vty 5 15
 access-class 23 in
 privilege level 15
 login local
 transport input telnet
 transport input telnet ssh

! End of SDM default config file
end
```