

Data Importing Procedure

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Data Importing is a SiteAudit feature available since version 1.6

Feature Description

The Data Importing feature makes it possible to import discovery and/or provisioning data into a SiteAudit database using an XML document that describes the data to import.

Discovery

Allows inclusion or exclusion of the following:

- Networks
- IP network Ranges
- Device

Inclusion only:

- SNMP Community Strings

Provisioning

The following data can imported for any printer that has been discovered:

- Location
- Printer Name
- Serial Number
- Product Number
- Asset Tag
- Installed On
- Acquired On

One of the following printer's attributes must be known in order to import provisioning data: Serial number, IP address, or MAC address.

Importing Data Benefits

The capability to import data reduces the deployment time and saves labor costs for some medium and all large environments.

Discovery Data

1. For large deployments with numerous networks and/or IP ranges

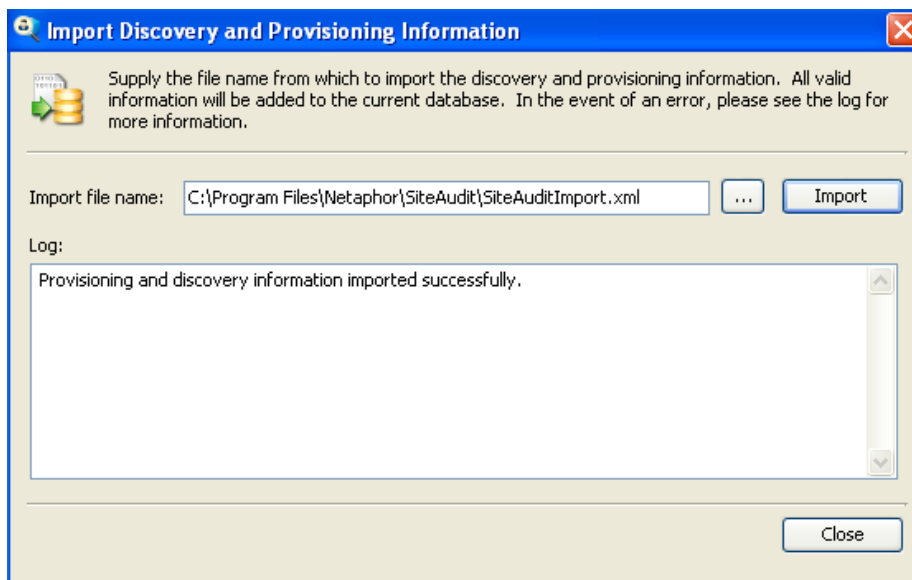
Provisioning Data


1. Add location information prior to using SiteAudit Printer Assignment allows printers to be quickly assigned to their respective location or department
2. Add acquired and installed information to track warranty and end of life analysis

Import Procedure

The XML import document containing the desired import data must be created prior to importing data into SiteAudit. A sample import document, *SiteAuditImport.xml*, is installed in the SiteAudit root folder. This document can be copied and modified to import data for a specific environment.

To import data into a SiteAudit database, launch the Import Discovery and Provisioning Information dialog by selecting **Import...** from the **Tools** menu.



- Click the  button to navigate and select the import document.
- Click the **Import** button to start the import.

Once the import process completes, a popup dialog appears and indicates if the import process succeeded or if errors occurred. The Log: text area will indicate which import data was imported and which sections were not found.

XML File Format - Samples

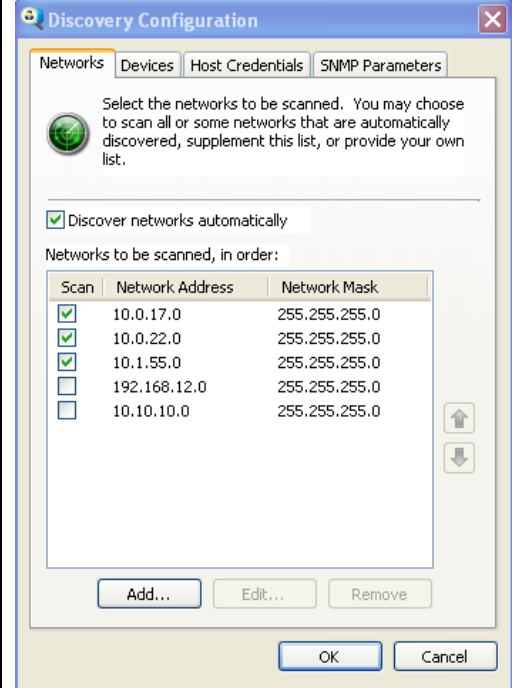
The XML samples below illustrate how to import data into SiteAudit. More examples can be found in the *SiteAuditImport.xml* document that is installed in the SiteAudit installation directory *Samples\en*.

Discovery Example: Importing networks

Both included and excluded networks can be imported. Each network must be separated by a comma and the subnet mask must be separated from the network with a dash. If an error is detected in the IP address or subnet mask, then the entire group (include or exclude) is ignored.

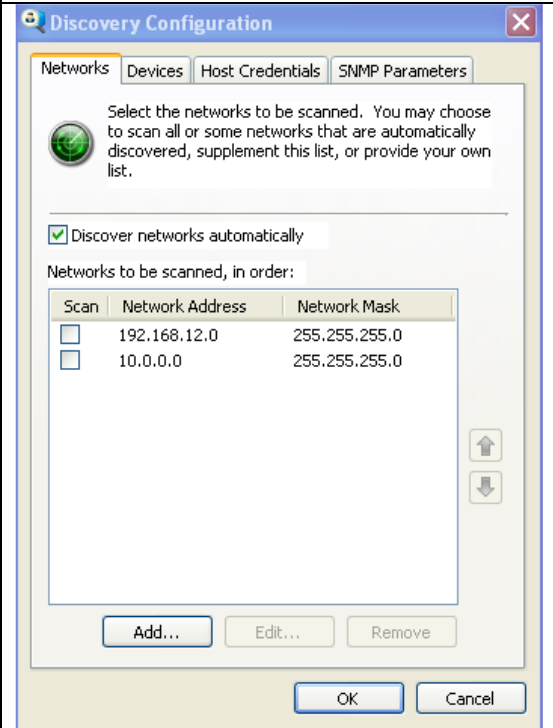
Both Include and Exclude contain valid entries, therefore, all entries are appended to the network scan list

```
<root>
  <Import>
    <Discovery>
      <Networks>
        <Include>
          10.0.17.0 - 255.255.255.0,
          10.0.22.0 - 255.255.255.0,
          10.1.55.0 - 255.255.255.0
        </Include>
        <Exclude>
          192.168.12.0-255.255.255.0,
          10.10.10.0 - 255.255.255.0
        </Exclude>
      </Networks>
    </Discovery>
  </Import>
</root>
```



300.0.22.10 is an invalid IP address; therefore, only excluded networks are appended to the network scan list

```
<root>
  <Import>
    <Discovery>
      <Networks>
        <Include>
          300.0.22.10 - 256.255.255.0,
          10.0.17.0 - 255.255.255.0,
          19.0.0.0 - 255.255.255.0
        </Include>
        <Exclude>
          192.168.12.0-255.255.255.0,
          10.0.0.0-255.255.255.0
        </Exclude>
      </Networks>
    </Discovery>
  </Import>
</root>
```

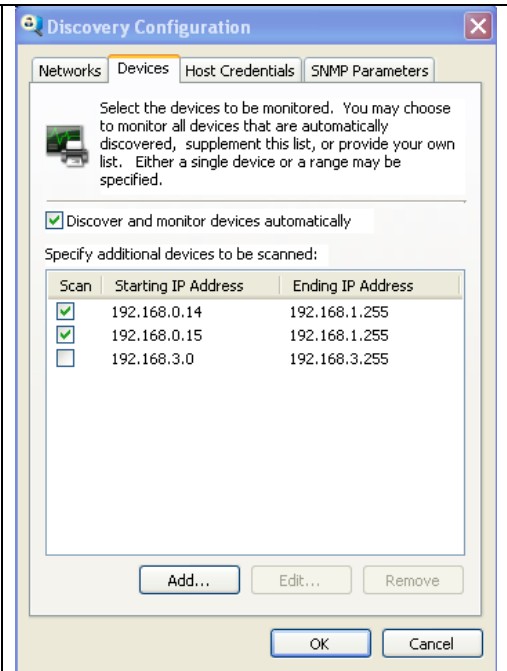


Discovery Example: Importing device ranges

Both included and excluded device ranges can be imported. A dash must exist between the lower and upper device address. Each device range must be separated by a comma. If an error is detected in an IP address, then the entire group (include or exclude) is ignored.

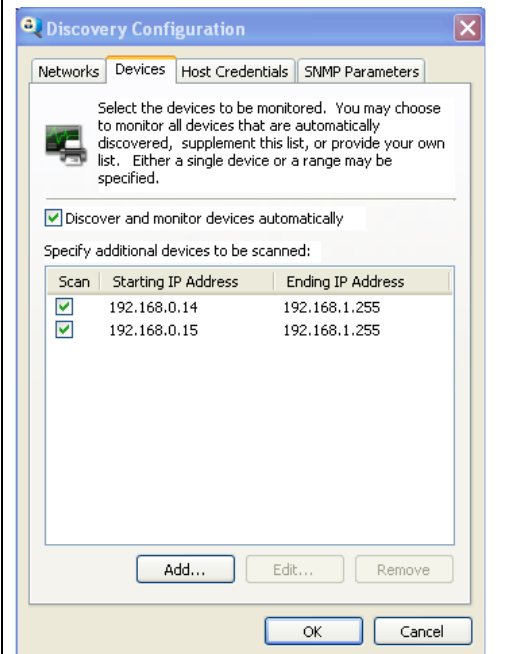
Both Include and Exclude contain valid entries, thus both sections are imported

```
<root>
  <Import>
    <Discovery>
      <Ranges>
        <Include>
          192.168.0.14 - 192.168.1.255,
          192.168.0.15 - 192.168.1.255
        </Include>
        <Exclude>
          192.168.3.0 - 192.168.3.255
        </Exclude>
      </Ranges>
    </Discovery>
  </Import>
</root>
```



An error exists in the Exclude range. Device address 256.4.3 is invalid and thus the entire Exclude range is ignored

```
<root>
  <Import>
    <Discovery>
      <Ranges>
        <Include>
          192.168.0.14 - 192.168.1.255,
          192.168.0.15 - 192.168.1.255
        </Include>
        <Exclude>
          256.4.3 - 10.7.7.7
          192.168.3.0 - 192.168.3.255,
        </Exclude>
      </Ranges>
    </Discovery>
  </Import>
</root>
```

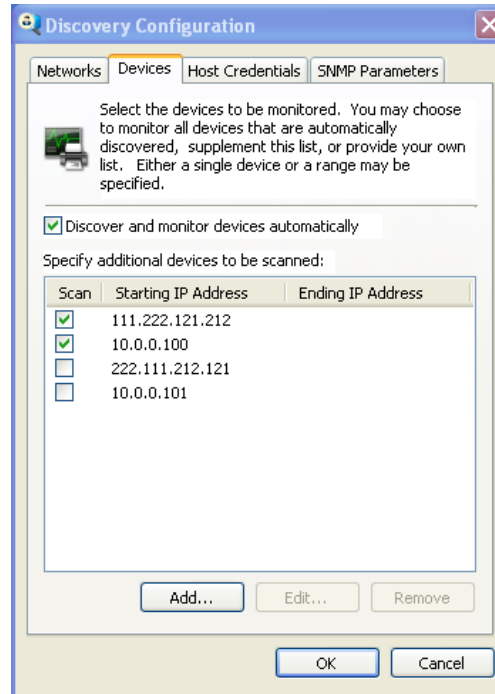


Discovery Example: Importing devices

Devices can be imported for discovery inclusion or exclusion. Device IP addresses must be separated by a comma. If an error is detected in an IP address, then the entire group (include or exclude) is ignored.

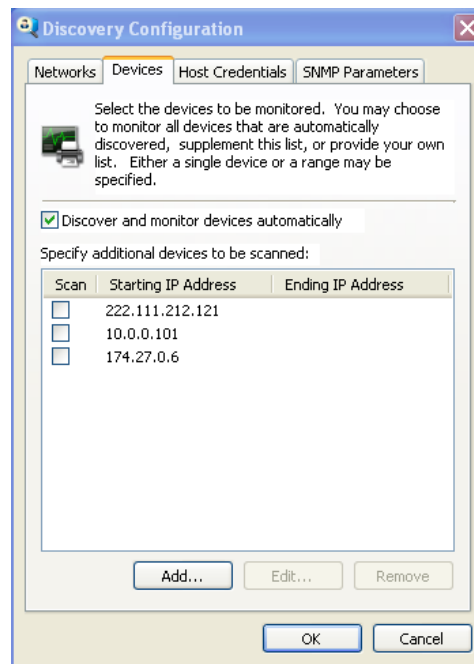
Valid set of IP address. All data is imported

```
<root>
  <Import>
    <Discovery>
      <Devices>
        <Include>
          111.222.121.212,
          10.0.0.100,
        </Include>
        <Exclude>
          222.111.212.121,
          10.0.0.101,
        </Exclude>
      </Devices>
    </Discovery>
  </Import>
</root>
```



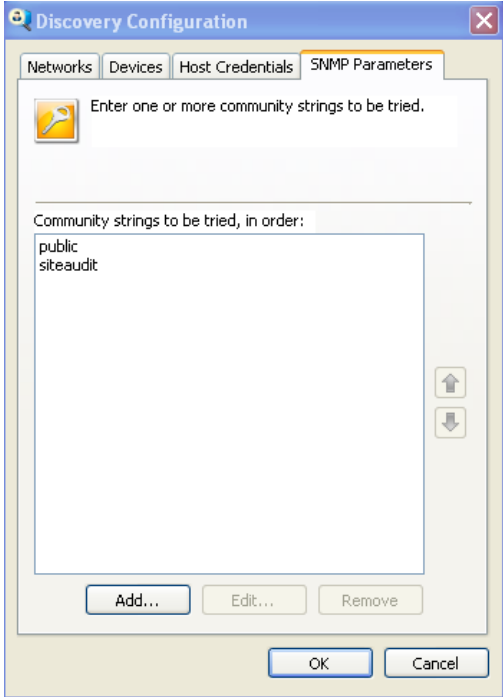
The IP address, 311.222.121.212, is invalid, thus the Include devices are ignored and only excluded devices are imported

```
<root>
  <Import>
    <Discovery>
      <Devices>
        <Include>
          311.222.121.212,
          10.0.0.1,
          244.26.0.5
        </Include>
        <Exclude>
          222.111.212.121,
          10.0.0.101,
          174.27.0.6
        </Exclude>
      </Devices>
    </Discovery>
  </Import>
</root>
```



Discovery Example: Importing community strings

Imported community strings will replace all existing community strings. Each community name must be separated by a comma. Since community strings can contain spaces, it is important to not insert spaces between the community names. All community names must be wrapped inside a CDATA section.

<p>Imported community strings replace all existing community strings</p> <pre><root> <Import> <Discovery> <CommunityStrings> <![CDATA[public,siteaudit]]> </CommunityStrings> </Discovery> </Import> </root></pre>	
--	---

Provisioning: Importing printer data

The following printer data can be imported into the SiteAudit database such as, the printer name, asset tag, serial number, product number, location, acquired date and installed date. Printer data can be updated by importing the desired data for devices that have already been discovered by SiteAudit. In order to update a printer's data, one of the following three things must be known about the printer, either: MAC address, IP address, or the printer serial number. In order to import data for direct-connect printers, one must use IP address provisioning and include a tag that specifies the device ID. Typically, the device ID is the same as the Printer Name.

The following examples illustrate how to import data using provisioning.

MAC Address Provisioning Example: Importing printer data

The following is an example that illustrates how to import data for a discovered device using MAC Address provisioning. Notice the Provision TYPE must be **MACAddress**. The first node under the Printer node must be the MacAddress of the printer whose data is targeted for update. All data should be wrapped inside a CDATA section. To import data for more than one printer using MACAddress provisioning, add an additional <Printer> tag , reference the printer MAC address, and add the appropriate tags to import the desired data.

The MacAddress can be separated using colons or dashes for example, 00:04:00:D7:B7:4A or 00-04-00-D7-B7-4A

Before Import

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
LXKEBED52	00:04:00:D7:B7:4A	10.0.0.12	991VZB5			2/15/2005	2/15/2005	Printer Lab

```
<root>
  <Import>
    <Provisioning>
      <Provision TYPE="MACAddress">
        <Printer>
          <MacAddress>
            <![CDATA[00:04:00:D7:B7:4A]]>
          </MacAddress>
          <SerialNumber>
            <![CDATA[TESTSN]]>
          </SerialNumber>
          <ProductNumber>
            <![CDATA[TESTPN]]>
          </ProductNumber>
          <Name>
            <![CDATA[TESTNAME]]>
          </Name>
          <AssetTag>
            <![CDATA[TESTASSETTAG]]>
          </AssetTag>
          <Location>
            <![CDATA[TESTLOCATION]]>
          </Location>
          <AcquiredOn>
            <![CDATA[21111212]]>
          </AcquiredOn>
          <InstalledOn>
            <![CDATA[22220202]]>
          </InstalledOn>
        </Printer>
      </Provision>
    </Provisioning>
  </Import>
</root>
```

After Import

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
TESTNAME	00:04:00:D7:B7:4A	10.0.0.12	TESTSN	TESTPN	TESTASSETTAG	2/2/2222	12/12/2111	TESTLOCATION

IP Address Provisioning Example: Importing printer data

The following is an example that illustrates how to import data for a discovered device using IP Address provisioning. Notice the Provision TYPE must be **IPAddress**. The first node under the Printer node must be the IPAddress of the printer whose data is targeted for update. All data should be wrapped inside a CDATA section. To import data for more than one printer using IPAddress provisioning, add an additional <Printer> tag, reference the printer IP address, and add the appropriate tags to import the desired data.

Before Import

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
LXKEBED52	00:04:00:D7:B7:4A	10.0.0.12	991VZB5			2/15/2005	2/15/2005	Printer Lab

```
<root>
  <Import>
    <Provisioning>
      <Provision TYPE="IPAddress">
        <Printer>
          <IPAddress>
            <![CDATA[10.0.0.12]]>
          </IPAddress>
          <SerialNumber>
            <![CDATA[TESTSN]]>
          </SerialNumber>
          <ProductNumber>
            <![CDATA[TESTPN]]>
          </ProductNumber>
          <Name>
            <![CDATA[TESTNAME]]>
          </Name>
          <AssetTag>
            <![CDATA[TESTASSETTAG]]>
          </AssetTag>
          <Location>
            <![CDATA[TESTLOCATION]]>
          </Location>
          <AcquiredOn>
            <![CDATA[21111212]]>
          </AcquiredOn>
          <InstalledOn>
            <![CDATA[22220202]]>
          </InstalledOn>
        </Printer>
      </Provision>
    </Provisioning>
  </Import>
</root>
```

After Import

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
TESTNAME	00:04:00:D7:B7:4A	10.0.0.12	TESTSN	TESTPN	TESTASSETTAG	2/2/2222	12/12/2111	TESTLOCATION

IP Address Provisioning Example #2: Importing data for Direct-Connect devices

The following is an example that illustrates how to import data for a direct-connect device using IP Address provisioning. Notice the Provision TYPE *must* be **IPAddress**. The first node under the Printer node must be the IPAddress of the printer whose data is targeted for update. The second node must be the DeviceId of the targeted printer. All data should be wrapped inside a CDATA section. To import data for more than one printer using IPAddress provisioning, add an additional <Printer> tag, reference the printer IP address and device ID, and add the appropriate tags to import the desired data.

Before Import

IP Address	Printer Name ▲	Location	Serial #	Product Number	Hardware Address	Manufacturer	Model	Output	Status
10.0.1.18	Dell Photo Printer	DO Test Lab			USB002	Dell	DELL_PHOTO_PRINTER_720	Color	Active

```
<root>
  <Import>
    <Provisioning>
      <Provision TYPE="IPAddress">
        <Printer>
          <IPAddress>
            <![CDATA[10.0.1.18]]>
          </IPAddress>
          <DeviceId>
            <![CDATA[Dell Photo Printer]]>
          </DeviceId>
          <SerialNumber>
            <![CDATA[2x030799]]>
          </SerialNumber>
          <ProductNumber>
            <![CDATA[TESTPN]]>
          </ProductNumber>
          <Name>
            <![CDATA[Dell Direct-Connect]]>
          </Name>
          <AssetTag>
            <![CDATA[MOS-4x37q]]>
          </AssetTag>
          <Location>
            <![CDATA[Upstairs]]>
          </Location>
          <AcquiredOn>
            <![CDATA[20040404]]>
          </AcquiredOn>
          <InstalledOn>
            <![CDATA[20040515]]>
          </InstalledOn>
        </Printer>
      </Provision>
    </Provisioning>
  </Import>
</root>
```

After Import

IP Address	Printer Name ▲	Location	Serial #	Product Number	Hardware Address	Manufacturer	Model	Output	Status
10.0.1.18	Dell Direct-Connect	Upstairs	2x030799	TESTPN	USB002	Dell	DELL_PHOTO_PRINTER_720	Color	Active

Serial Number Provisioning Example: Importing printer data

The following is an example that illustrates how to import data for a discovered device using serial number provisioning. Notice the Provision TYPE must be **SerialNumber**. The first node under the Printer node must be the SerialNumber of the printer whose data is targeted for update. All data should be wrapped inside a CDATA section. To import data for more than one printer using SerialNumber provisioning, add an additional <Printer> tag, reference the printer serial number, and add the appropriate tags to import the desired data.

Note: In both MACAddress and IPAddress provisioning, it is possible to update device serial numbers; however, this is not possible when using SerialNumber provisioning.

Before Import

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
LXKEBED52	00:04:00:D7:B7:4A	10.0.0.12	991VZB5			2/15/2005	2/15/2005	Printer Lab

```
<root>
  <Import>
    <Provisioning>
      <Provision TYPE="SerialNumber">
        <Printer>
          <SerialNumber>
            <![CDATA[991VZB5]]>
          </SerialNumber>
          <ProductNumber>
            <![CDATA[TESTPN]]>
          </ProductNumber>
          <Name>
            <![CDATA[TESTNAME]]>
          </Name>
          <AssetTag>
            <![CDATA[TESTASSETTAG]]>
          </AssetTag>
          <Location>
            <![CDATA[TESTLOCATION]]>
          </Location>
          <AcquiredOn>
            <![CDATA[21111212]]>
          </AcquiredOn>
          <InstalledOn>
            <![CDATA[22220202]]>
          </InstalledOn>
        </Printer>
      </Provision>
    </Provisioning>
  </Import>
</root>
```

After Import (note, unlike MACAddress and IPAddress provisioning, the serial number cannot be updated using SerialNumber provisioning)

Printer Name	Hardware Address	IP Address	Serial #	Product Number	Asset Tag	Installed	Acquired	Location
TESTNAME	00:04:00:D7:B7:4A	10.0.0.12	991VZB5	TESTPN	TESTASSETTAG	2/2/2222	12/12/2111	TESTLOCATION

Import Sample: Importing data

The following is an example import document

```
<?xml version="1.0" encoding="utf-8"?>
<root>
  <Import>
    <Discovery>
      <Networks>
        <Include>
          10.0.17.0 - 255.255.255.0,
          10.0.22.0 - 255.255.255.0,
          10.1.55.0 - 255.255.255.0
        </Include>
        <Exclude>
          192.168.12.0-255.255.255.0,
          10.10.10.0 - 255.255.255.0
        </Exclude>
      </Networks>
      <Ranges>
        <Include>
          192.168.0.14 - 192.168.1.255,
          192.168.0.15 - 192.168.1.255
        </Include>
        <Exclude>
          192.168.3.0 - 192.168.3.255
        </Exclude>
      </Ranges>
      <Devices>
        <Include>
          111.222.121.212,
          10.0.0.100
        </Include>
        <Exclude>
          222.111.212.121,
          10.0.0.101
        </Exclude>
      </Devices>
      <CommunityStrings>
        <![CDATA[public,siteaudit]]>
      </CommunityStrings>
    </Discovery>
    <Provisioning>
      <Provision TYPE="MACAddress">
        <Printer>
          <MacAddress>
            <![CDATA[0F:FE:EE:5A:D4:39]]>
          </MacAddress>
          <SerialNumber>
            <![CDATA[Imported SerialNumber]]>
          </SerialNumber>
        </ Printer >
        <Printer>
          <MacAddress>
```

```

    <![CDATA[00:C0:EE:54:D9:3C]]>
  </MacAddress>
  <SerialNumber>
    <![CDATA[TESTSN]]>
  </SerialNumber>
  <ProductNumber>
    <![CDATA[TESTPN]]>
  </ProductNumber>
  <Name>
    <![CDATA[TESTNAME]]>
  </Name>
  <AssetTag>
    <![CDATA[TESTASSETTAG]]>
  </AssetTag>
  <Location>
    <![CDATA[TESTLOCATION]]>
  </Location>
  <AcquiredOn>
    <![CDATA[21111212]]>
  </AcquiredOn>
  <InstalledOn>
    <![CDATA[22220202]]>
  </InstalledOn>
</Printer>
<Printer>
  <MacAddress>
    <![CDATA[00:44:EB:54:44:45]]>
  </MacAddress>
  <Name>
    <![CDATA[TESTNAME]]>
  </Name>
  <AssetTag>
    <![CDATA[TESTASSETTAG]]>
  </AssetTag>
  <Location>
    <![CDATA[TESTLOCATION]]>
  </Location>
</Printer>
</Provision>
<Provision TYPE="IPAddress">
  <Printer>
    <IPAddress>
      <![CDATA[192.168.10.104]]>
    </IPAddress>
    <SerialNumber>
      <![CDATA[Imported SerialNumber]]>
    </SerialNumber>
  </ Printer >
<Printer>
  <IPAddress>
    <![CDATA[10.0.0.20]]>
  </IPAddress>
  <SerialNumber>

```

```

    <![CDATA[TESTSN]]>
  </SerialNumber>
  <ProductNumber>
    <![CDATA[TESTPN]]>
  </ProductNumber>
  <Name>
    <![CDATA[TESTNAME]]>
  </Name>
  <AssetTag>
    <![CDATA[TESTASSETTAG]]>
  </AssetTag>
  <Location>
    <![CDATA[TESTLOCATION]]>
  </Location>
  <AcquiredOn>
    <![CDATA[21111212]]>
  </AcquiredOn>
  <InstalledOn>
    <![CDATA[22220202]]>
  </InstalledOn>
</Printer>
<Printer>
  <IPAddress>
    <![CDATA[10.0.0.44]]>
  </IPAddress>
  <AcquiredOn>
    <![CDATA[21111212]]>
  </AcquiredOn>
  <InstalledOn>
    <![CDATA[22220202]]>
  </InstalledOn>
</Printer>

</Provision>
<Provision TYPE="SerialNumber">
  <Printer>
    <SerialNumber>
      <![CDATA[SerialNumber ABC]]>
    </SerialNumber>
    <Name>
      <![CDATA[ImportedName]]>
    </Name>
  </Printer>
  <Printer>
    <SerialNumber>
      <![CDATA[061901628T]]>
    </SerialNumber>
    <Name>
      <![CDATA[TESTNAME]]>
    </Name>
    <AssetTag>
      <![CDATA[TESTASSETTAG]]>
    </AssetTag>
  </Printer>
</Provision>

```

```
<Location>
  <![CDATA[TESTLOCATION]]>
</Location>
<AcquiredOn>
  <![CDATA[21111212]]>
</AcquiredOn>
<InstalledOn>
  <![CDATA[22220202]]>
</InstalledOn>
</Printer>
<Printer>
  <SerialNumber>
    <![CDATA[LBY03]]>
  </SerialNumber>
  <Name>
    <![CDATA[TESTNAME]]>
  </Name>
  <AssetTag>
    <![CDATA[TESTASSETTAG]]>
  </AssetTag>
</Printer>
</Provision>
</Provisioning>
</Import>
</root>
```

Data Import FAQs

The following list contains frequently asked questions about importing data into SiteAudit.

Q: What happens to imported discovery data?

Discovery data is augmented. No changes are made to existing discovery data. The exception to this rule is for community strings. Imported community strings replace *all* existing community strings.

Q: What happens if there is an error in the imported data?

An error in an imported network, range, or device data causes the entire set of the include data or the exclude data to be ignored. An error in the include section causes the entire set of include data to be ignored, but the exclude data will be imported if no errors exist in its set.

Q: What happens to imported SNMP community strings?

Imported SNMP community strings replace the existing set of SNMP community strings.

Q: How are SNMP community strings formatted for import?

Community names must be placed inside a CDATA section. Each community name is separated by a comma, with no spaces between the comma and the next community string. I.e. `<![CDATA[public,private,mycommunity]]>`

Q: How can one be sure that provisioning data is added to the database?

Provisioning data is imported when a printer is found matching the provisioning criteria (e.g. serial number, IP address or MAC address). When such a match exists the current data for that printer is replaced with the imported data.

Q: What happens to provisioning data if there is more than one match?

If more than one printer matches the provisioning criteria, each will have its current data replaced by the imported error.

Q: What date format should be used for Acquisition and Installed data?

All dates must be specified as YYYYMMDD

Q: Can one import a serial number using SerialNumber provisioning?

No. To import a serial number for a discovered device, use IPAddress or MACAddress provisioning.

Q: Is it possible to change the inclusion or exclusion state of an existing network using the import mechanism?

No. It is only possible to append additional networks to the list of discovered networks. To change the state of a network, from exclusion to inclusion or vice versa, or the order of network discovery, it is necessary to do this from the SiteAudit Discovery Configuration dialog.

Q: Is it possible to change the order of discovered networks via the import mechanism?

No. This must be done through the SiteAudit Discovery Configuration dialog

Q: Will imported networks overwrite existing networks?

No. If a network has been added manually, it is not possible or necessary to add a duplicate entry.

Q: Can data be imported for more than one device using provisioning?

Yes. Simply add another <Printer> node with the appropriate data for each printer. The following example shows how to update data on two printers using MACAddress provisioning; however, the same is possible using IPAddress or SerialNumber provisioning as well.

```
<Provision TYPE="MACAddress">
  <Printer>
    <MacAddress>
      <![CDATA[00:04:00:D7:B7:4A]]>
    </MacAddress>
    <SerialNumber>
      <![CDATA[imported serial number]]>
    </SerialNumber>
  </Printer>
  <Printer>
    <MacAddress>
      <![CDATA[00:C0:85:2A:C6:CD]]>
    </MacAddress>
    <Name>
      <![CDATA[imported name]]>
    </Name>
  </Printer>
</Provision>
```

Q: What format are MAC addresses entered in the import document?

MAC addresses octets can be separated using either a colon or dash as follows:
00:04:23:AC:D7:03 or 00-04-23-AC-D7-03

Q: How do I import data for a direct-connect device?

Use IP Address provisioning and include the DeviceId tag with the appropriate information for the printer. The Device ID is a hidden column that can be exposed via the Column Chooser.

```
<DeviceId>
  <![CDATA[hp laserjet 640c]]>
</DeviceId>
```

Note: Do not include the DeviceId tag when importing data for network-connected printers.

Q: How do I find the Device ID for a printer?

The Device ID can be displayed in a SiteAudit View by right-clicking a column header and selecting Column Chooser from the popup menu and choosing Device ID.

