



Service Deployment System (SDX) Release Notes

Release 4.0.1

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SDX-300 4.0.1 Release Notes

Release Overview

These *Release Notes* cover Release 4.0.1 of the SDX-300 application. If the information in these *Release Notes* differs from the information found in the published documentation set, follow these *Release Notes*.

Before You Start

These *Release Notes* include information on the changes between Release 4.0.0 and 4.0.1. Before you use your new software, read these *Release Notes* in their entirety, especially the section *Known Problems and Limitations*. You need the following documentation to fully understand all the features available in Release 4.0.0:

- These 4.0.1 *Release Notes*, which describe changes between Releases 4.0.0 and 4.0.1.
- The 4.0.0 *Release Notes*, which describe features available in Release 4.0.0.
- The 4.0.x SDX software documentation set, which provides detailed information on features available in Release 4.0.0.

If the information in your current *Release Notes* differs from the information found in the other documentation sources, follow the *Release Notes*.

Documentation

The 4.0.x SDX documentation set consists of several manuals and is available in electronic (PDF) and printed format. Refer to the following table to help you decide which document to use.

If you want to...	Then go to the...
Install the system software	SDX-300 Installation and Configuration Guide (p/n 162-00661-00)
Start and operate the SDX software	SDX-300 Installation and Configuration Guide
Administer an operational system (add, change, or delete)	SDX-300 Administration Guide (p/n 162-00658-00)
Develop portals	SDX-300 Developer's Guide (p/n 162-00659-00)
Develop workflows	SDX-300 Developer's Guide
Obtain information about the LDAP schema	SDX-300 Developer's Guide
Integrate Funk Steel-Belted RADIUS	SDX-300 Integration Guide (p/n 162-00660-00)
Integrate Merit RADIUS	SDX-300 Integration Guide
Learn more about the general operation of the SDX product	SDX Product Overview Guide (p/n 162-00657-00)

The *SDX-300 Service Deployment System Documentation* CD includes the entire documentation set in PDF format. The *SDX-300 Service Deployment System Software* CD includes the *Release Notes* in addition to the software.

Release Highlights

Highlights include the following product enhancements.

- PPP and DHCP Authentication Names Available for Accounting

This release accommodates the situation in which an SDX owner requires subscribers to use separate names for PPP or DHCP authentication and for login to the portal, and uses both these values for accounting purposes. To meet this requirement, the SDX software now includes the following new attributes:

- > Plug-in attribute PA_PRIMARY_USER_NAME
- > RADIUS class attribute primaryUserName

The plug-in attribute identifies the PPP or DHCP authentication name for plug-in events and the plug-in interface. You can use the

flexRADIUS attribute in the SAE configuration properties to identify the authentication name for accounting records. However, you can still use the existing attribute loginName to identify the portal login for accounting records. For example, you can add the following lines to the SAE configuration:

```
RadiusPacket.stdAcct.startstop.User-Name = primaryUserName
RadiusPacket.stdAcct.startstop.Calling-Station-Id =
    loginName
```

- Identifying the Type of Directory

This release includes a new DES property called signatureDN that identifies the DN of the entry that specifies the LDAP schema attribute usedDirectory. This attribute identifies the type of directory, such as openLDAP or DirX, to which the SDX software connects.

Identifying the type of directory allows the SDX software to accommodate the different ways that different directories process DES queries, and enables more efficient retrieval of information.

If you load the LDAP schema from the SDX software CD, and use this LDAP schema as the structure for your directory, you can use the default value (*o=UMC*) for the signatureDN property. However, if you use a customized LDAP schema rather than the provided LDAP schema, you must configure the signature DN property.

For complete details on this feature, see *Appendix A, Specifying the Type of Directory*.

- Changes to Database

The subscriber subtree has been changed for the three sample scenarios that we provide with the demo residential portal. In earlier releases, the database could lead to conflicts if you loaded the ISP service portal with one of the other scenarios, due to two different retailer objects having the same domain values. The following table shows the old values and the new values:

Scenario	Old retailer	New retailer	Old domain	New domain
Equipment registration	vISP-one vISP-two vISP-three	virtual-SP	isp1.com isp2.com isp3.com	virneo.net
ISP service	isp1.com isp2.com	SP	isp1.com isp2.com	virneo.com
Implicit ISP service	vISP-one vISP-two vISP-three	virtual-SP	isp1.com isp2.com isp3.com	virneo.net

These changes will affect authentication for an existing RADIUS installation. The authentication files for the UMCradius package and for Funk Steel Belted Radius were changed appropriately to match the database changes.

Known Behavior

This section briefly describes certain SDX software behavior and related issues to emphasize how the system works.

Distinguished Name Syntax

- The “#” character can cause various problems for distinguished names (DNs). For example, if used in the PolicyGroup DN, the Service to PolicyGroup relationship is not treated properly, which causes the failure in service actions for the given service.

Work-around: Do not use the “#” character in DNs.

Reference: TIC4133

Domains in SAE

- When you define regular expressions for a domain name parser, you must include a total of four backslashes (\\\\) to effect a single backslash. For example, suppose you define the following parser:

```
LoginName.parser.1.2.1 = (.*)[\\\\](.*)
```

You will get the following results if you use this to parse the login name `isp1\\jane`:

```
domain name: isp1
user name: jane
```

Reference: TIC5875

- The default configuration of the SAE assumes that a domain is always present, as in the following example:

```
RadiusPacket.stdAuth.auth.User-Name = "%s@s" % (uid,
domain)
```

Work-around: To support only authentication without domains, change this configuration to the following:

```
RadiusPacket.stdAuth.auth.User-Name = uid
```

To support authentication with and without domains, change the configuration to the following:

```
RadiusPacket.stdAuth.auth.User-Name = domain and "%s@%s" %  
    (uid, domain) or uid
```

Reference: TIC5840

Empty Operator Groups

- If you delete all the operators from an operator group, the SDX software creates a non-functional operator for the group. You can ignore this operator. If the group requires a functional operator, you must add a new operator.

Reference: TIC6522

Enterprise Portal API

- Beginning with SDX Release 4.0, the enterprise portal API supports reading and writing of all types of attributes associated with directory entries. Previously, the enterprise portal API supported reading and writing of only string attributes.

To implement this feature, the signatures of the following methods now use the *type* `Object[]` rather than the *type* `String[]`.

- > `Persistent.getAttribute`
- > `Persistent.setAttribute`
- > `PersistentChangeListener.preAttributeChange`
- > `PersistentChangeListener.postAttributeChange`

Work-around: You must update portals that use these methods. For example, modify the following statements:

```
Persistent per = ...  
String s[] = per.getAttribute(attribute);
```

to this:

```
Persistent per = ...  
String s[] = (String[]) per.getAttribute(attribute);
```

Reference: TIC4892

Migration

- The spelling of header fields of the file accounting plug-in (fileAcct) were corrected between the 3.x and 4.x releases. This correction may cause your existing accounting applications not to operate correctly if you upgrade from a 3.x release to Release 4.0.0 or a higher release. Make sure that your applications do not expect the incorrect spelling.

Reference: TIC5881

NIC

- The NIC directory agent does not support dynamic changes to a directory entry that result in the entry being removed from its search filter.

Work-around: If you require such changes, you must restart the NIC host containing this agent for the changes to take effect. For example, consider the MultiPop scenario provided as part of the NIC sample data. If you remove the POP-Ottawa scope from the directory entry with the following DN:

```
virtualRouterName=default,orderedCimKeys=Ottawa_ERX_Node,  
o=Network, o=umc
```

then the OttawaPoolVr and OttawaVrSaeId agents will not dynamically detect the change. You must restart OttawaHost for the changes to take effect.

Reference: TIC5987

- If the `jacorb.connection.client_idle_timeout` property is not properly configured, the ORB relies on the TCP default socket time-out (usually 8 minutes) to determine when a connection between redundant NIC hosts is down, thus affecting overall system availability.

Work-around: Ensure that this property is uncommented in the `jacorb.properties` file of all participating hosts. You must then set the property to a reasonable value, between 5,000 and 30,000 milliseconds. The following example sets a value of 10,000 ms:

```
jacorb.connection.client_idle_timeout=10000
```

Reference: TIC6070, TIC6579

- You must synchronize the clocks of the different servers in a distributed SDX deployment. User sessions may not be recognized if the clocks are not synchronized.

We strongly recommend that you configure NTP on every server used for an SDX deployment.

Reference: TIC5674

- Whenever you change the local pools at the virtual router, you must stop the COPS connection and restart it for the changes to be in the LDAP directory.

Alternatively, you can manually change the pools in the directory object representing this VR. Refer to *SDX Installation and Configuration Guide, Chapter 6, Configuring and Starting the NIC*, for the valid IP pools syntax.

Reference: TIC5377

Policy Analyzer

- When using Policy Analyzer, the special value “none” indicates no selection of a policy group. For example, you can use this feature to change the default policy group from a DHCP to no policy group.

Reference: TIC6012

Policy Editor

- Do not use the pipe symbol (|) in any field for local parameter definition.

Reference: TIC5409

Policy Engine

- For all policy attributes that use a numeric value, the numeric values are converted to integers. For literal integer values in policies, the policy uses only that portion of a value that can be converted to an integer.

For example, if a policy has a literal TOS byte value of 300, the high bits are ignored (or a mask of 255 is used) so that the value used for TOS byte is 44; that is, 300–256.

Reference: TIC4557

Policies

- The E-series router rejects eclipsed policies; that is, policies that use the same classifier and have the same precedence. This rejection can lead to surprising behavior, especially if you are using the dynamic service sessions feature of the SDX software. It is important that you differentiate (using different substitutions) the policies installed as part of a dynamic service session. You must customize both ingress and egress classifiers. Otherwise, only the first instance of the dynamic session can be activated, and subsequent activations will be rejected.

Reference: TIC5898

Plug-Ins

- The flexRadiusAcct plug-in allows the use of radiusClass to define RADIUS packets for user sessions. The radiusClass field was previously specified as available only for service accounting.

The following fields are also available for UserTracking, but are documented as available only for ServiceTracking:

ifSessionId	sessionId	terminateCause
sessionTimeout	sessionTime	

Reference: TIC5689

- The functionality of the SDX plug-in interface has been enhanced for Release 4.0.x. As a consequence, all clients that implement the plug-in interface as defined for Release 3.x continue to work with Release 4.0.x, but require that you recompile the IDL interface files.

You must modify hosted plug-ins that were implemented for Release 3.x so that they import the package `net.juniper.smgmt.sae.sspPlugin.*` instead of `com.unisphereNetworks.ssc.sspPlugin.*`.

Reference: TIC5629

SAE

- Do not modify the SAE configuration in the directory while the SDX software is starting up.

Reference: TIC6050

Tracking Plug-In Behavior

- The SAE sends a STOP request when a service session is stopped. If the policies associated with the service define accounting rules, the

SAE retrieves volume data from the router and sends the data in the STOP request. However, network errors can prevent the SAE from retrieving the volume data, and lead to a STOP request in which the volume counters are set to zero. In this case, if an interim update that includes non-zero volume counters for the same service session exists, use the update and not the STOP request.

Reference: TIC3552

Known Problems and Limitations

This section identifies known problems and limitations in this release.

Directory Eventing System

- Do not disable DES for the user directory subtree, or you will experience a performance degradation.

Because OpenLDAP directory server does not support directory eventing for more than 5,000 objects, we recommend that you do not use OpenLDAP directory server when more than 5,000 subscribers and subscription objects are deployed.

Reference: TIC5889

DirX Directory Server

- An issue in the Siemens DirX Directory Server 6.0 prevents the SDX software from supporting this software.

Reference: TIC6053, 5886

Documentation

- In the *SDX-300 Administration Guide, Chapter 3, Subscribers and Subscriptions*, the description of the Status field in the SSP Subscription pane of SDX Admin is incorrect. The description should read:
 - > active – subscriber can activate this service
 - > suspended – subscriber cannot activate this service, although it may be available through the API
 - > hidden – service is not available through the API and cannot be activated automatically when subscriber logs on (see Activation field)

Funk Steel-Belted RADIUS

- Funk Steel-Belted RADIUS Service Provider Edition 4.0 receives accounting requests from the SAE for users with a nondefault realm setup. However, this version of the RADIUS server does not write these accounting records into the accounting file.

Work-around: Contact Funk Customer Support for Steel-Belted Radius Service Provider Edition 4.0.4, which solved this issue.

Reference: TIC5180

NIC

- In a configuration with redundancy of NIC hosts, when the passive host assumes the active role, it does not obtain information that it needs from NIC resolvers and agents. Consequently, resolutions that involve this host may fail.

Work-around: Restart the host when it becomes passive. Because the host is passive, restarting it does not disrupt NIC resolutions.

Reference: TIC6823, TIC6693

- Dynamic configuration change of the Resolver List property of the SAE Plugin Agent is not supported. If changes to this property are required, the host containing the agent must be restarted.

Reference: TIC5718

- Dynamic configuration change of Resolvers properties is not supported. These properties include the Resolver Role, Resolvers List, and Roles List. If you must change these properties, you must subsequently restart the host containing the resolver.

Reference: TIC5720

- IP address bytes are masked to fit the eight bits instead of being considered illegal. For example, the address 10.227.9.2392 is converted to 10.227.9.88, because $2392 \bmod 256 = 88$; that is, 2392 logically ANDed with 255 = 88.

Reference: TIC5910

- Redundancy monitors are not supported in Release 4.0.1. When you set up a redundant system (host or agents), ensure that there is no possibility of network partitioning between all the participants (redundant entities and clients).

Reference: TIC6015

Plug-Ins

- You cannot define synchronous plug-ins for scoped services. The synchronous events (after a failover) are not delivered, which will corrupt the plug-in state.

Work-around: You can still define synchronous plug-ins on the base service definition.

Reference: TIC6045

Policy Editor

- The policy engine does not allow the activation of a service without an associated policy group.

Work-around: Define a policy group with an empty ingress policy list and an empty egress policy list and attach it to the service.

Reference: TIC5477

- When you perform a SaveAs operation to a directory server, the SDX software does not check the names of local parameters in the policy group with names of existing global parameters in the directory server. After the SaveAs operation is complete, the directory server will contain global parameters and local parameters with the same names. You will not receive any messages about duplicate names. If local and global parameters have duplicate names, the policy engine uses the local parameter definitions.

Reference: TIC4921

Policy Engine

- Integer division (operator //) and floating point number division (operator /) are performed left to right in an expression in a substitution. Integer division requires integer operands; otherwise the expression cannot be evaluated, resulting in invalid substitution. The result is 10 for both of the following examples, but one is valid and the other is invalid:

> Valid Substitution

$x = 120 // 3 / 4$ is valid, since it equates first to $40 / 4$

> Invalid Substitution

$x = 120 / 3 // 4$ is invalid, since it equates first to $40.0 // 4$

Reference: TIC4196

- The value acquisition mechanism of the SDX policy engine ignores invalid substitutions. The policy can be used as long as a valid substitution is present that provides a value for a required parameter.

For example, if the ToS byte value in a substitution is larger than 255 (x:tosByte=300), the substitution is ignored in the value acquisition mechanism.

Reference: TIC4529

System Management

- If you start the SAE while the SNMP agent is not running, the SDX SAE may log some error messages at start-up that indicate that the SNMP agent infrastructure is not initialized.

Work-around: You can safely ignore these messages.

Reference: TIC6756

- If the SNMP agent is shut down while traps are being generated, then org.omg.CORBA.TRANSIENT errors might be logged in the *stderr* file.

Work-around: This condition is temporary and will rectify itself automatically in a short time. You can safely ignore the errors.

Reference: TIC5224

Uninstalling SDX Software

- When you issue the **uninstall** command to remove SDX 4.0.1 and lower, the uninstallation process does not stop the following SDX processes if they are running:

OpenLDAP	SDX Admin	SDX Policy Editor
OpenLDAP Add-on	SDX Configuration Editor	

These unstopped processes will cause problems when you later install new software.

Work-around: Before you issue the **uninstall** command, ensure that you have stopped all running SDX processes related to the components being uninstalled.

Web Admin and SAE XDR Objects

- Numbers in policy XDR objects in SDX Web Admin and SAE log files are displayed using the 2's complement for an integer (32 bits). For example, 4294967295 is shown as -1.

Work-around: To get the correct positive number, add 2^{32} to the negative number.

Reference: TIC4472

Cautions

The following cautions apply to Release 4.0.1:



Caution 1

SDX 4.0.1 requires JRE Version 1.4.1_01. Solaris 8 and Solaris 9 come with different JRE versions pre-installed. You must install the JRE package provided on the SDX software CD (UMCjre).



Caution 2

Install the correct IP Filter version for your version of Solaris. Installing the IP Filter for Solaris 8 on a Solaris 9 system (or vice-versa) will cause an unrecoverable Solaris operating system crash. You might have to reinstall the operating system if this happens.

Restrictions and Recommendations

Juniper Networks SDX Release 4.0.1 has been tested with JUNOSe Release 4.1.1. SDX Release 4.0.1 is intended to work with JUNOSe Releases 4.0.3, 4.1.2, and 5.0.2.

Resolved Problems

This section lists significant known problems that have been resolved in the current release. For more information on resolved problems, you can go to the Customer Support Center Web site at <https://www.juniper.net/support/csc/kb.html>, log in to the E-series Knowledge Base, enter the Reference ID (TIC $nnnn$) in the Search By Keyword field, and click Search.

ACP

- The admission control plug-in loses its connection to the LDAP server. The ACP stops responding to the SAE; restarting ACP does not resolve the issue.

Reference: TIC6525

Directory Sample Data

- The sample data provided with the SDX software for the ISP service portal scenario uses `isp1.com` as the domain for the retailer `isp1.com`. The sample data for the implicit ISP service portal scenario uses `isp1.com` as the domain for the retailer `vISP-one`. If you load the sample data for both scenarios when you load the LDAP schema, then the SAE and RADIUS will not work correctly because the domain names are not unique.

Reference: TIC5873

NIC

- The NIC sample data provided for the OnePopAllRealms scenario contains a typo. In the OnePopH2 host configuration entry, the list of hosted resolvers are specified as follows:

```
server=/realms/ip/L3a, /realms/sharedIp/L3a,  
/realms/sharedIp/L3a
```

Reference: TIC6055

OpenLDAP Directory Server

- The Berkeley DB embedded in OpenLDAP requires periodic cleanup tasks to be run in order to free up space taken by the transaction log. See the `db_admin` documentation for more information.

Reference: TIC5788

Policy Editor

- Updating an iPlanet Directory Server that acts as a consumer generates an error with the Policy Editor due to a client directory library issue when updates are performed against a iPlanet consumer.

Reference: TIC3912

Policy Manager

- Policy Manager does not display invalid policies after they are saved to Sun ONE (formerly known as iPlanet) Directory Server with replication configured. Policy Manager reads the invalid policies from the directory and generates error messages.

Reference: TIC6653

Portal Connections

- Subscribers are unable to connect to SDX portal pages due to internal server error caused by a file descriptor leak in the SDX Admin pages.

Reference: TIC6547

RADIUS

- Changing the IP address of a RADIUS server for one of the RADIUS plug-ins may cause the RADIUS plug-in to stop functioning.

Reference: TIC6046

- The SDX software generates incorrect RADIUS accounting records (missing the User-Name attribute) after an E-series router fails over from one SDX server to another.

Reference: TIC6230

SAE

- If file scanning is enabled, then a CORBA call cannot delete a Java file that has been installed locally as a script for the SAE Java script invoker interface module. The .class file for the script will be removed, but the .java file will not. The .java file will be scanned and the script will be reinstalled.

Reference: TIC6067

- If you do not specify <usergroup> or <domaingroup> in a parser, then the software interprets this as null instead of an empty string and the login is incorrectly parsed.

Reference: TIC5872, 5858

Web Interface Log-in

- The SAE permits two subscribers to log in via the Web interface with the same credentials loaded for the user session during interface up notification

Reference: TIC6366

Third-Party Software

The SDX Release 4.0.1 system includes the following third-party software components:

- Apache HTTP Server 1.3.26 (<http://httpd.apache.org>)
- Apache Tomcat 4.1.18 (<http://jakarta.apache.org/tomcat>)
- Apache Xerces and Xalan (<http://xml.apache.org>)
- Eclipse platform 2.1.0 (<http://www.eclipse.org/platform>)
- GNU Prolog for Java 0.1.0 (<http://gnuprologjava.sourceforge.net>)
- IP Filter 3.4.31 (<http://coombs.anu.edu.au/~avalon/>)
- JacORB 1.4.0 (<http://www.jacorb.org>)
- Jakarta Struts 1.1-Beta3 (<http://jakarta.apache.org/struts/index.html>)
- JBoss 3.0.6 (<http://www.jboss.org>)
- JDBM 0.12 (<http://www.jdbm.org>)
- JETTY 4.2.6 (<http://jetty.mortbay.org>)
- Jython 2.1 (<http://www.jython.org>)
- mod_ssl 2.8.10-1.3.26 (<http://www.modssl.org>)
- mod_throttle 3.1.2 (http://www.snert.com/Software/mod_throttle/)
- OmniORB 4.0.1 (<http://omniorb.sf.net>)
- OpenLDAP 2.0.18 (<http://www.openldap.org>)
- OpenSSL 0.9.6g (<http://www.openssl.org>)

- Python 2.2.1 (<http://www.python.org>)
- Python-ldap 2.0.0pre5 (<http://python-ldap.sourceforge.net>)

Contacting Customer Service

You can contact Juniper Networks Customer Service for the ERX product line in the following ways:

- Within the United States, call 1-888-314-JTAC
- Outside the United States, call 408-745-9500
- Send e-mail to support@juniper.net

Specifying the Type of Directory



This appendix describes how to specify the type of directory so that the SDX software can optimize interactions between the directory eventing system (DES) and the directory.

Topic	Page
Overview	A-1
Configuring the Type of Directory	A-3

Overview

This release includes a new DES property called `signatureDN` that identifies the DN of the entry that specifies the LDAP schema attribute `usedDirectory`. This attribute identifies the type of directory, such as `openLDAP` or `DirX`, to which the SDX software connects. For information on this attribute, see *SDX Developer's Guide, Chapter 15, Mapping Object Model to LDAP Schema*.

Identifying the type of directory allows the SDX software to accommodate the different ways that different directories process DES queries, and enables more efficient retrieval of information. In particular, this feature offers benefits for the following tasks:

- Checking whether an object in the directory has not been deleted
- Finding new entries in the directory

The following sections describe how the SDX software uses the `signatureDN` property for these tasks.

Checking Whether an Object in the Directory Has Not Been Deleted

DirX requires the following filter to check whether an object in the directory has not been deleted:

```
(|(!(deleted=*)))(deleted=false))
```

However, use of this filter is not necessary for other types of directory and may result in inefficient retrieval of data. Directories other than DirX perform most efficiently with the following filter:

```
(!(delete=true))
```

When the SDX software performs a DES query to check whether an object in the directory has not been deleted, it uses the signatureDN property to select the appropriate filter for the type of directory.

Finding New Entries in the Directory

The directory monitors the age of entries with two LDAP schema attributes: createtimestamp and modifytimestamp. For all supported types of directory except DirX, the directory adds these attributes and sets them to the same value when a new entry is created. Subsequently, the directory updates the attribute modifytimestamp when an entry is modified.

However, DirX adds only the attribute createtimestamp when an entry is created. When the entry is modified for the first time, DirX adds the modifytimestamp. Consequently, a DES query to find new entries in a DirX directory requires investigation of both the createtimestamp and modifytimestamp attributes, whereas the same query for other types of directory requires only investigation of the modifytimestamp attribute.

When it performs a DES query to find new entries in the directory, the SDX software uses the signatureDN property to determine which timestamps it should investigate.

Configuring the Type of Directory

If you load the LDAP schema from the SDX software CD, the SDX software automatically sets the `usedDirectory` attribute for the type of directory to which it connects. If you use this LDAP schema as the structure for your directory, you can use the default value (`o=UMC`) for the `signatureDN` property, and you do not need to configure the type of directory.

However, you may want to use a customized LDAP schema rather than the provided LDAP schema. If you do so, use the following procedure to allow the SDX software to determine the type of directory:

- 1 Choose the entry that will specify the `usedDirectory` attribute.
- 2 Specify a value for the `usedDirectory` attribute.
- 3 In the property file of the SDX component that connects to this directory, set the `signatureDN` property to the DN of the entry with the `usedDirectory` attribute for the `signatureDN` property.

For example, use SDX Admin to configure the DES properties for the SSP server.

- 4 Repeat steps 1 through 3 for each DES connection.

Table A-1 provides a description of the `signatureDN` property.

Table A-1 Details for `signatureDN` property

Property	<code>signatureDN</code>
Description	DN of the directory entry that specifies the <code>usedDirectory</code> attribute. The <code>usedDirectory</code> attribute identifies the type of directory, such as <code>openLDAP</code> or <code>DirX</code> , to which the SDX software is connected. For information on this attribute, see <i>SDX Developer's Guide, Chapter 15, Mapping Object Model to LDAP Schema</i> .
Default	<code>o=UMC</code>
Example	<code>GlobalUserDatabase.server.signatureDN = o=SDX,o=Juniper,o=Applications</code>
Error handling	If the value of <code>signatureDN</code> is not the DN of a directory entry or is the DN of an entry that does not have a <code>usedDirectory</code> attribute, the SDX software logs an error and proceeds as it would for directory types other than <code>DirX</code> . If the value of the <code>usedDirectory</code> attribute does not correspond to a type of directory that the SDX software supports, the SDX software logs an error and proceeds as it would for directory types other than <code>DirX</code> .

