NetIQ® SocialAccess

Installation and Configuration Guide

January 2013

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About this Book and the Library

The *Installation and Configuration Guide* for NetIQ® SocialAccess provides step-by-step instructions about how to install and configure the appliance.

Intended Audience

This book provides information for individuals responsible for implementing and administering the SocialAccess appliance. To use this book, you must also understand SAML 2.0.

Other Information in the Library

The library provides the following information resources:

Help

Provides context-sensitive information and step-by-step guidance for common tasks.

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1 Product Overview

NetIQ SocialAccess is an appliance that simplifies a customer's experience accessing resources on the Internet.

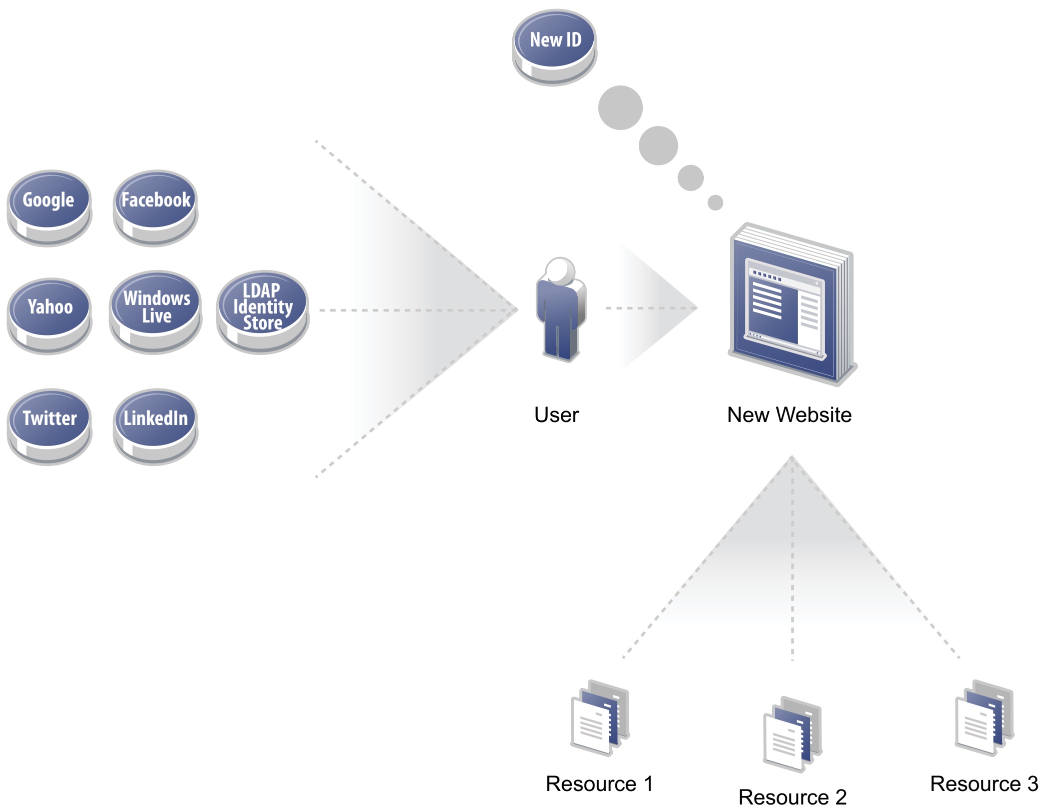
- Section 1.1, "Problems with Customers Accessing Resources on the Internet," on page 11
- Section 1.2, "The Solution SocialAccess Provides," on page 12
- Section 1.3, "How SocialAccess Works," on page 14

1.1 Problems with Customers Accessing Resources on the Internet

Most businesses have an Internet presence and require customers to have an account to access the resources they provide on the Internet. As a customer this means you have multiple accounts and multiple passwords you must remember to access the resources you want on the Internet.

For example, the following graphic depicts the process a customer goes through to gain access to a new Internet site they want to use.

Figure 1-1 User Accesses a New Web Site

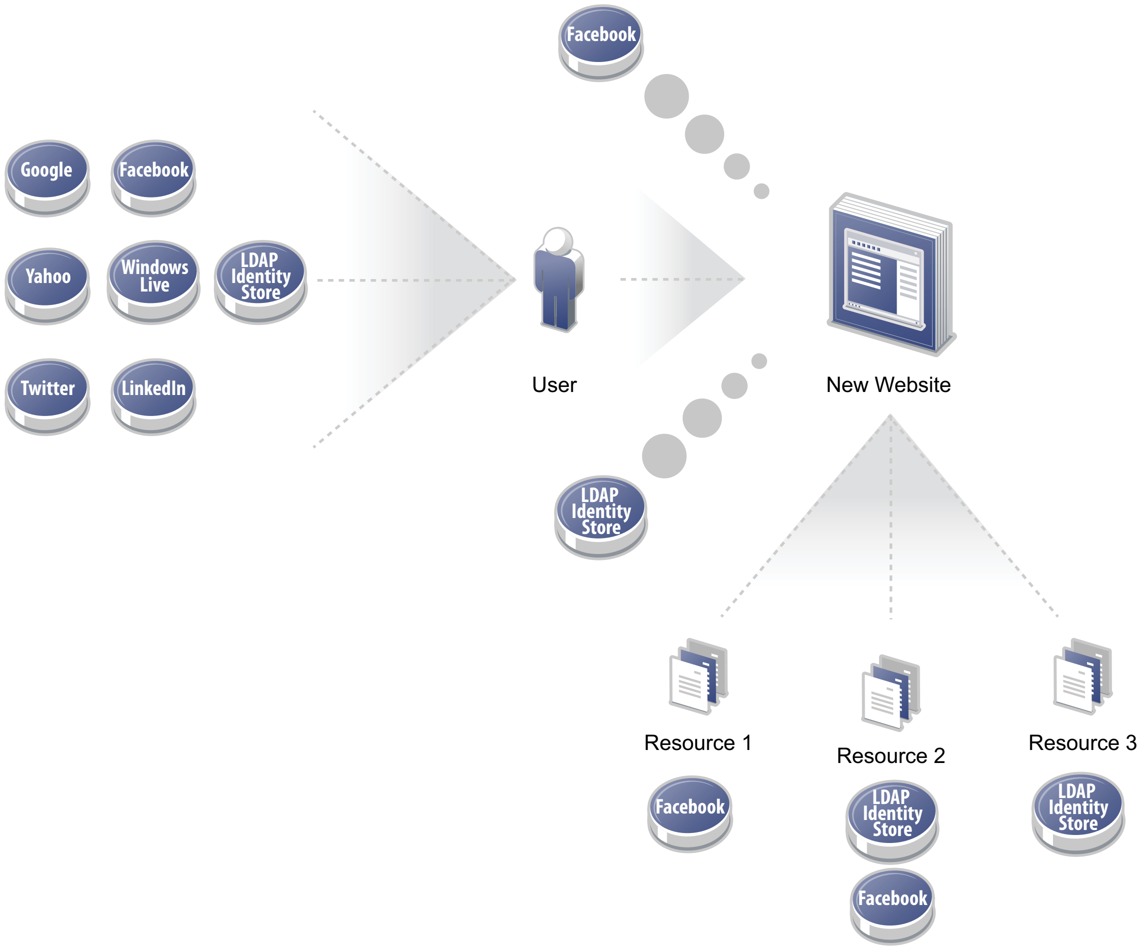


1. The customer already has multiple existing Internet account IDs and passwords.
2. The customer accesses the new Internet site and the site requires the customer to create another account ID and password.
3. The user creates a new account ID and password.
4. The user accesses all of the resources available on the new Internet site.

1.2 The Solution SocialAccess Provides

SocialAccess provides a solution that allows customers to use existing Internet account IDs and passwords to gain access to a new Internet site. For example, the following graphic depicts the process a customer goes through using the SocialAccess solution.

Figure 1-2 *SocialAccess Solution*



1. The customer already has multiple existing Internet account IDs and passwords.
2. The customer wants access to the new Internet site.
3. The new Internet site provides a login page displaying the different options the customer can use to authenticate.

   SocialAccess provides this landing page as part of the product.
4. The customer enters their existing Internet account ID and password for one of the sites listed. For example, the customer uses their Facebook account ID and password to log into the new Internet site.
5. SocialAccess validates the user's account ID and password with Facebook.
6. SocialAccess grants the user access to the new Internet site, Resource 1, and Resource 2.
7. If the user authenticated with the LDAP account ID, instead of Facebook, SocialAccess grants the user access to the new Internet site, Resource 2, and Resource 3.

SocialAccess controls which resources a customer can access depending on the type of existing account they use to access the new Internet site.

1.3 How SocialAccess Works

SocialAccess allows you configure multiple identity sources that customers can use to authenticate to your business' Internet site. SocialAccess creates a SAML assertion using attributes obtained from the identity sources to allow SAML authentications into the resources associated with your Internet site.

For a sample network diagram see, Section 3.3.4, "A Sample Network Configuration," on page 21.

2 Installing SocialAccess

SocialAccess is a VMware appliance that you download and deploy into your IT environment.

- Section 2.1, "Requirements," on page 15
- Section 2.2, "Deploying the Appliance," on page 16
- Section 2.3, "Configuring the Appliance without a DHCP Server," on page 16
- Section 2.4, "Initializing the Appliance," on page 17
- Section 2.5, "Re-initializing the Appliance," on page 17

2.1 Requirements

Use the information in the following table to verify that you meet the requirements for SocialAccess before deploying the appliance.

Table 2-1 *SocialAccess Requirements*

Components	Requirements
VMware	One of the following versions of VMware: ◆ vSphere Hypervisor 5.0 ◆ vSphere 5.0 ◆ ESXi 4.1 ◆ ESX 4.1
Node	Minimum hardware requirements for each node in the appliance: ◆ 60 GB disk space ◆ 2 Cores ◆ 4 GB RAM
Browsers	**Administration:** The supported browsers for administration tasks are: ◆ Internet Explorer 9 ◆ Firefox 17 and 18 ◆ Chrome **Users:** The supported browsers for users are: ◆ Internet Explorer 9 on Windows 7 ◆ Firefox 15 and 16 on Windows 7

Components	Requirements
Cluster	Supported cluster configuration: ◆ Up to a five-node cluster ◆ Each node must reside in the same time zone ◆ Each node must reside in the same IP subnet
DNS	SocialAccess requires that all appliance nodes, administration workstations, end user workstations, and identity sources be able to resolve the public DNS name of the appliance.

2.2 Deploying the Appliance

SocialAccess is an OVF virtual appliance. For more information about virtual appliances, see What is OVF? (http://www.vmware.com/appliances/getting-started/learn/ovf.html).

You must deploy the appliance to your VMware server.

1. If you are using Windows, extract the VMware image.

   or

   If you are using Linux, use the following command to extract the image:

   ```
   tar -zxvf vmware_image.tar.gz
   ```

2. Deploy the SocialAccess virtual appliance.

   For more information, see Deploy Virtual Appliances (http://www.vmware.com/it/appliances/getting-started/deploy/get_started.html).

3. If you do not have a DHCP server in your environment, skip to Section 2.3, “Configuring the Appliance without a DHCP Server,” on page 16.

   or

   Power on the appliance, then proceed to Section 2.4, “Initializing the Appliance,” on page 17.

The initial boot configures SocialAccess. The initial boot could take between five and ten minutes for the configuration to complete. When the appliance is ready, it displays a welcome message with the initialization URL `https://ip_address/appliance/Init.html`.

You can deploy the OVF file or convert the OVF file to a VMX file. If you use the VMX file, disable the default option of **Synchronize guest time with host** option for the image. Right-click the appliance in the VMware client, then deselect **Edit Settings** > **Options** > **VMware Tools > Synchronize guest time with host**.

2.3 Configuring the Appliance without a DHCP Server

To configure the appliance, the appliance must obtain an IP address through DHCP or have a static IP address assigned through the VMware settings. Perform these steps only if there is no DHCP server in your environment. If a DCHP server exists in your environment, you can assign a static IP address after the initial boot without editing the VMware settings.

Edit the VMX file and add the following lines with the values for your environment:

```
#These settings are related to date/time/timezone and NTP server
#Configures /etc/sysconfig/clock and /etc/ntp.conf
guestinfo.prop1="CLONE_DATE="
guestinfo.prop2="CLONE_timezone="
guestinfo.prop3="CLONE_NTP_SERVER="
guestinfo.prop4="CLONE_HWCLOCK="
guestinfo.prop5="CLONE_SYSTOHC="

#
#Network related settings
#CLONE_DO_DHCP=false, only configure static settings
#CLONE_DO_DHCP=true,  tries DHCP and if it fails configure with static settings
guestinfo.prop6="CLONE_DHCP=true"
guestinfo.prop7="CLONE_DNS_NAME_SERVER1="
guestinfo.prop8="CLONE_DNS_NAME_SERVER2="
guestinfo.prop9="CLONE_DNS_NAME_SERVER3="
guestinfo.prop10="CLONE_DNS_SEARCH1="
guestinfo.prop11="CLONE_DNS_SEARCH2="
guestinfo.prop12="CLONE_DNS_SEARCH3="
guestinfo.prop13="CLONE_NETMASK="
guestinfo.prop14="CLONE_DEFAULT_GATEWAY="
guestinfo.prop15="CLONE_IP="
guestinfo.prop16="CLONE_DNS_NAME="
```

If you do not need a line, either leave the value blank, or leave the line out of the VMX file altogether. Power on the appliance, then proceed to Section 2.4, "Initializing the Appliance," on page 17.

2.4 Initializing the Appliance

You must now initialize the appliance.

1. Verify that you meet the requirements listed in Section 2.1, "Requirements," on page 15.
2. From a supported browser, access the initialization Web interface at the URL displayed on the appliance screen after it is deployed.

   For example: `https://`*`ip_address`*`/appliance/Init.html`
3. Fill in the fields displayed to initialize the appliance.
4. Click **Finish**.

   A successfully initialized appliance automatically redirects the browser to the Admin page (`https://`*`dns_name_appliance`*`/appliance/Admin.html`).
5. Specify the appliance password, then proceed with Chapter 3, "Configuring the Appliance," on page 19.

2.5 Re-initializing the Appliance

If you must re-initialize the appliance, use the following steps:

1. From a supported browser, access the initialization Web interface at `https://`*`ip_address`*`/appliance/Init.html`.
2. Specify the password for the appliance, then change the configuration values as needed.
3. Click **Finish**.

3 Configuring the Appliance

After you have initialized the appliance, you must perform additional configuration for the appliance to work.

- Section 3.1, "Accessing the Administration Page," on page 19
- Section 3.2, "Registering SocialAccess," on page 19
- Section 3.3, "Configuring Network Options," on page 20
- Section 3.4, "Configuring Clustering," on page 22
- Section 3.5, "Configuring Events to Forward to a Syslog Server," on page 25

3.1 Accessing the Administration Page

After you properly initialize the appliance using the information in Section 2.4, "Initializing the Appliance," on page 17, the browser automatically redirects to the Admin page. If not, you can access the Admin page as follows:

1. In a supported browser, specify `https://dns_name/appliance/Admin.html`.
2. Specify the appliance password you created during the initialization process.

3.2 Registering SocialAccess

SocialAccess provides a 30-day trial period. If you do not register the appliance within 30 days after installation, the appliance stops working. The bomb icon on the Admin page displays how many days are left in the trial period.

For the purpose of meeting licensing requirements, when you register a single appliance, the cluster as a whole is considered to be registered. However, in order to use the Novell Customer Center (NCC) update channel to download and install software updates, you must register each node in the cluster separately. The bomb icon remains on the Admin page if there are nodes in the cluster that have not yet been registered for channel updates. For more information about the update channel, see Section 7.3, "Updating the Appliance," on page 44.

To register your appliance:

1. Log in to your Customer Center at http://www.novell.com/center (http://www.novell.com/center).

   The Customer Center is for NetIQ, Novell, and SUSE customers.
2. Under **My Products**, select **SocialAccess**.
3. Select **License Key**, then save the license key to a location where you can access it from your SocialAccess appliance.
4. Log on to your SocialAccess appliance and access the Admin page.

5 Click the appliance, then click **Register appliance**.
6 Specify the email address you used when you registered with the Customer Center.
7 Specify the license key you downloaded from the Customer Center.
8 Click **Register**.
9 Repeat Step 5 through Step 8 for each appliance in the cluster.

When you have successfully registered all nodes in the cluster, the bomb icon disappears.

3.3 Configuring Network Options

SocialAccess contains a manual routing table, supports two NICs, and provides a forward proxy only for testing purposes.

- Section 3.3.1, "Configuring the Forward Proxy," on page 20
- Section 3.3.2, "Configuring the Second NIC," on page 20
- Section 3.3.3, "Configuring the Routing Table," on page 21
- Section 3.3.4, "A Sample Network Configuration," on page 21

3.3.1 Configuring the Forward Proxy

The forward proxy feature is only for testing purposes. The forward proxy is not supported in a production environment.

The forward proxy takes requests coming from the internal network and forwards these requests to the internet.

To configure the forward proxy:

1 Access the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`, then log in with the password specified during the initialization process.
2 In the **Tools** palette, drag and drop the **Forward Proxy** icon to the bar in the middle of the Admin page.
3 Use the following information to configure the forward proxy:

   Forward Proxy Server: Specify the IP address and port number for your proxy server.

   Ignore List: Specify any IP addresses with the associated DNS names you want the forward proxy to ignore. For example 127.0.0.0|localhost.
4 Click **OK** to save your changes. Note that, as you click **OK**, the services restart and you must log in to the Admin page again.

3.3.2 Configuring the Second NIC

SocialAccess allows you to configure two NICs for each node in the cluster. You can configure one NIC for the administrative network and a second NIC for the public network.

When you configure the second NIC, the SocialAccess appliance has only one global DNS name. In order for your users on the private network to access the correct network with the global DNS name for the appliance, you must do additional configuration on your network.

Two options allow users on the private network to access the SocialAccess appliance with the global DNS name:

- An entry in the local host file on each user's computer that resolves the global DNS name of the appliance to the private network.
- A separate DNS server that routes all internal traffic to the global DNS name of the appliance.

Use the following steps to configure the NICs:

1. Access the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`, then log in with the password specified during the initialization process.
2. Click a node icon, then select **Configure**.
3. To configure the first NIC, click the **Administration Interface** tab, then change the network settings for your administrative network.
4. Click **Apply** to save your changes.
5. To configure the second NIC, click the **Public Interface** tab.
6. Select **Enable Separate Public Interface**.
7. Configure the network settings for your public network.
8. Click **Apply** to save the changes.
9. Click **Close** to close the **Configuration** tab.
10. Repeat Step 2 through Step 9 for each node in the cluster.

3.3.3 Configuring the Routing Table

SocialAccess provides a routing table for your use if your network has static routes. The routing table allows you to define the next hop in your network for the node in the cluster to reach the desired destination.

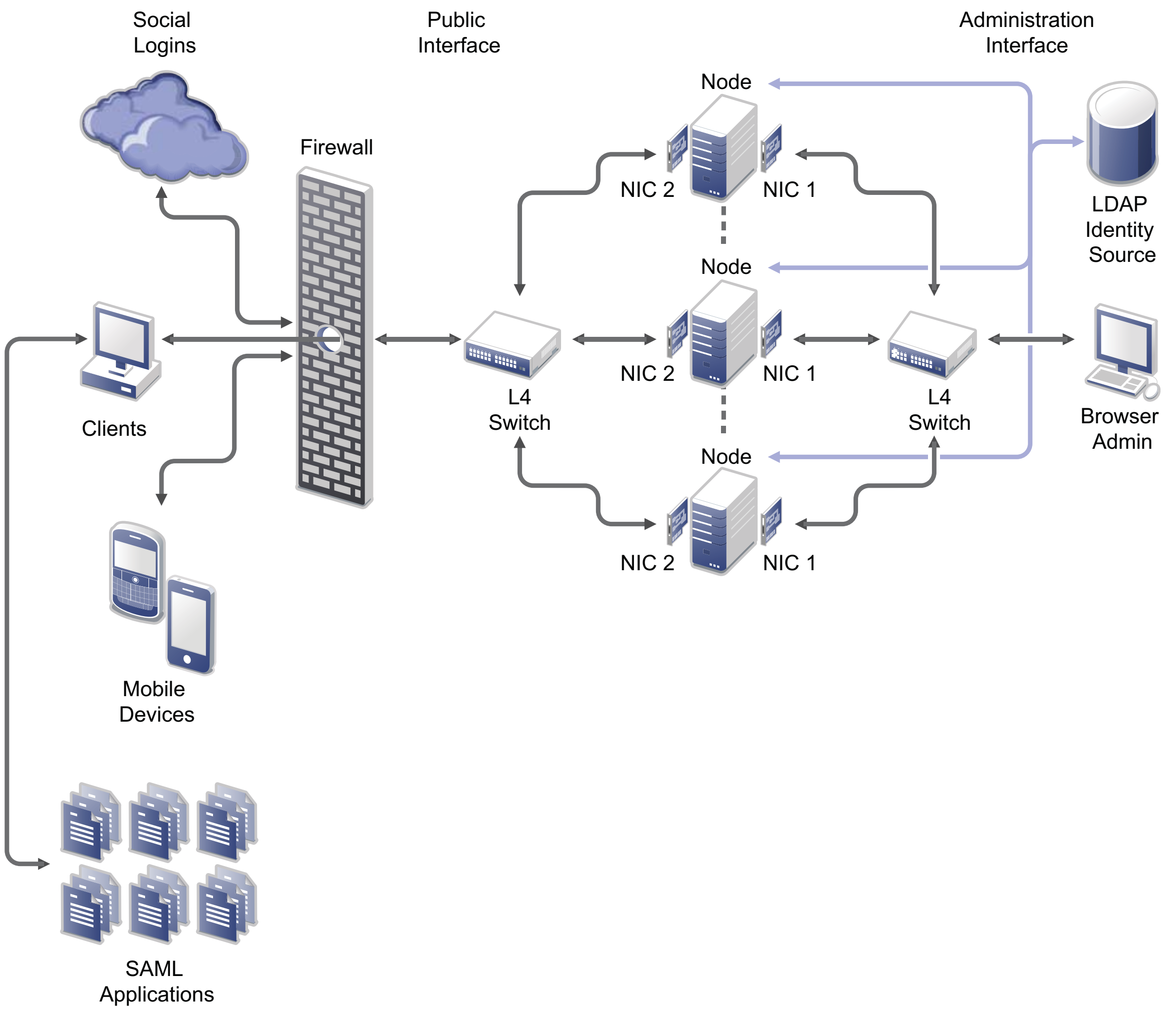
Use the following steps to configure the routing table for each node:

1. Access the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`, then log in with the password specified during the initialization process.
2. Click the node icon, then select **Configure**.
3. Click the **Routing** tab.
4. Click the plus sign icon to add a route.
5. Define the desired route, then click **OK**.
6. Add additional routes if desired.
7. Click **Close** to close the **Configuration** tab.
8. Repeat Step 2 through Step 7 for each node in the cluster.

3.3.4 A Sample Network Configuration

The following graphic depicts a possible network configuration using SocialAccess.

***Figure 3-1** A Sample Network Diagram*



The network diagram shows that each node has both NICs enabled. The first NIC is the administration interface for the node and the second NIC is the public interface of the node. All of the administration and corporate information stays on the administration interface side of the network. All user requests and application requests communicate only on the public interface. This configuration provides a layer of security for your corporate information.

3.4 Configuring Clustering

You can cluster the SocialAccess appliance. By default, SocialAccess is a single node cluster. You add a node to the cluster by selecting **Join Cluster** during the initialization process. SocialAccess supports up to a five-node cluster.

- Section 3.4.1, "Clustering Configuration Options," on page 23
- Section 3.4.2, "Advantages of Clustering," on page 23
- Section 3.4.3, "Managing Nodes in the Cluster," on page 23
- Section 3.4.4, "Configuring an L4 Switch for Clustering," on page 25

3.4.1 Clustering Configuration Options

The Cluster icon configuration options are global settings for all nodes in the cluster. To manage these configuration options, see the following sections:

- Section 7.2, “Changing Public DNS Name or NTP Server Settings, or Uploading New Certificates,” on page 43
- Section 6.4, “Configuring the Session Timeout for Users,” on page 42

3.4.2 Advantages of Clustering

SocialAccess provides clustering for different advantages. Most of these advantages are available only if you configure an L4 switch or Round-robin DNS. The L4 switch is the best solution.

Disaster Recovery: Adding additional nodes to the cluster provides disaster recovery for your appliance. If one node goes down or becomes corrupt, you can promote another node to master.

High Availability for Authentications: SocialAccess provides high availability for authentications and the single sign-on service, when using an L4 switch in conjunction with clustering. This solution allows users to authenticate in case of problems with the nodes within the cluster. The L4 switch sends authentication requests to the nodes with which it can communicate.

Load Balancing: You can configure the L4 switch to distribute authentications to nodes so one node does not receive all authentication requests while other nodes sit idle.

Scalability: Configuring an L4 switch with clustering increases the scalability of SocialAccess. Each node in the cluster increases the number of possible simultaneous logins.

3.4.3 Managing Nodes in the Cluster

SocialAccess supports up to five nodes in a cluster. You add nodes to the cluster through the initialization process, and perform all other initialization tasks on the Admin page.

- “Adding a Node to the Cluster” on page 23
- “Promoting a Node to Master” on page 24
- “Removing a Node from the Cluster” on page 24

Adding a Node to the Cluster

Follow the steps listed below to successfully add a node to the cluster:

1. Verify the cluster is healthy.
   - All nodes must be up and communicating.
   - All components must be in a green state.
   - All failed nodes must be removed from the cluster.

   For more information about verifying your cluster is healthy, see Section 8.3, “Troubleshooting Different States,” on page 49.
2. Download and deploy a new VM machine for the new node.

   For more information, see Section 2.2, “Deploying the Appliance,” on page 16.
3. Select **Join Cluster** as the first step to initialize the new node, then follow the on-screen prompts.

   For more information, see Section 2.4, “Initializing the Appliance,” on page 17.

4 Wait for the login screen for the Admin page to be displayed. A progress bar indicates how much time this takes.

5 Log in to the Admin page, and wait for all spinner icons to stop processing and all components to be green before performing any other tasks.

   The cluster is adding the node and there are a lot of background processes running. This final step could take up to an hour to complete.

Promoting a Node to Master

The first node installed is the master node of the cluster by default. The master node runs provisioning, reporting, approvals, and mapping policies services. You can promote any node to become the master node.

1 Take a snapshot of the cluster.

2 Verify the cluster is healthy.

   For more information, see Section 8.3, "Troubleshooting Different States," on page 49.

3 Click the node to become the master node on the Admin page, then click **Promote to Master.**

   An M appears on the front of the node icon indicating it is now the master node.

The services move from the old master to the new master. The old master is now just a node in the cluster.

When you switch the master node, the logs start again on the new master and reports start again on the new master. The historical logs are lost. The reporting data is also lost, unless you are using Sentinel Log Manager.

WARNING: If the old master node is down when you promote another node to master, remove the old master from the cluster, then delete it from the VMware server. Otherwise, the appliance sees two master nodes and becomes corrupted.

Removing a Node from the Cluster

You can remove a node from the cluster if something is wrong with the node. However, after removing a node, it cannot be added back into the cluster. You must delete this instance of the appliance from your VMware server, then deploy another instance to the VMware server to add a node back into the cluster.

To remove a node from the cluster:

1 (Conditional) If the node you are removing is the master node, promote another node to be master.

2 (Conditional) If you are using an L4 switch, delete the node from the L4 switch.

3 On the Admin page, click the node you want to remove from the cluster.

4 Click **Remove from Cluster**.

   The interface immediately reflects that the node is gone, but it takes some time for the background processes to finish.

5 Delete the image of the node from the VMware server.

3.4.4 Configuring an L4 Switch for Clustering

If you want high availability or load balancing, you must configure an L4 switch for the SocialAccess appliance. An L4 switch can be configured in many different ways. Use the following recommendations to configure the L4 switch to work with the appliance.

- **Heartbeat:** Use the following URL to define the heartbeat for the L4 switch:

  `https://`*`dns_of_appliance`*`/osp/h/heartbeat`

  or

  `https://`*`ip_address_of_appliance`*`/osp/h/heartbeat`

  The L4 switch uses the heartbeat to determine if the node in the cluster is up and working or not. The heartbeat URL returns a text message of Success and a 200 response code.
- **Persistence:** Also known as sticky sessions, allows all subsequent requests from a client to be sent to the same computer. To make this happen, select SSL session ID persistence when configuring the L4 switch.

Persistence increases the performance of the appliance for the end users, by removing the delay that might occur if the client sends a request to a new node instead of using the existing session to the same node.

3.5 Configuring Events to Forward to a Syslog Server

SocialAccess allows you to forward login and logout events to a syslog server.

To configure SocialAccess to forward events:

1. Access the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`, then log in with the password specified during the initialization process.
2. Drag and drop the syslog tool from the Tools palette to the middle of the page.
3. Click the syslog tool, then click **Configure**.
4. Specify the IP address and the port of the syslog server.
5. Select the type of protocol to use: **UDP**, **TCP**, or **TLS**.

4 Configuring Identity Sources

After you have configured the appliance, you need to configure the identity sources. SocialAccess uses identity sources for user authentication to SAML applications or of Web services. You must configure the identity source and the connector for the identity source for the authentication process to work.

SocialAccess supports the following identity sources and also provides two templates: OAuth 2.0 and OpenID Connect.

- Section 4.1, "Configuring Active Directory as an Identity Source," on page 27
- Section 4.2, "Configuring eDirectory as an Identity Source," on page 28
- Section 4.3, "Configuring reCAPTCHA with the Connector for eDirectory," on page 29
- Section 4.4, "Configuring Facebook as an Identity Source," on page 29
- Section 4.5, "Configuring Google as an Identity Source," on page 30
- Section 4.6, "Configuring LinkedIn as an Identity Source," on page 31
- Section 4.7, "Configuring MSLive as an Identity Source," on page 31
- Section 4.8, "Configuring Twitter as an Identity Source," on page 32
- Section 4.9, "Configuring Yahoo as an Identity Source," on page 32
- Section 4.10, "Configuring OAuth2 Sites as Identity Sources," on page 33
- Section 4.11, "Configuring OpenID Connect Sites as Identity Sources," on page 34

4.1 Configuring Active Directory as an Identity Source

SocialAccess supports Windows Server 2008 R2. To configure Active Directory as an identity source, use the following steps:

1. Verify that you have an Active Directory administrator account.
2. Log in to the Admin page.

   `https://dns_name/appliance/Admin.html`
3. Drag and drop the Connector for Active Directory from the Identity palette to the middle of the page.
4. Click the connector, then click **Configure**.
5. Use the following information to configure the Connector for Active Directory:

   Credentials: Specify the fully distinguished LDAP format name and password of the Active Directory administrator account.

   Search context: Specify the fully distinguished LDAP format of the context where the connector searches for user objects.

Active Directory Servers: Specify the IP address and LDAP port of the Active Directory server where the user objects reside. Select **Enable LDAP SSL** to use port 636, or the default non-SSL port is 389.

6 (Optional) If you have custom attributes you want to map, click **Advanced Options** > **Attribute Mappings**, then specify your custom attributes.

7 Click **OK**, then click **Apply** to save the configuration.

The Connector for Active Directory is now an identity source for user logins.

4.2 Configuring eDirectory as an Identity Source

SocialAccess supports eDirectory 8.8.7 and 8.8.6. To configure eDirectory as an identity source, use the following steps:

1 Verify that you have an eDirectory administrator account with the following minimum rights for the Connector for eDirectory to work:

- **Property Rights**
  - **CN:** compare, read, inherit
  - **Description:** compare read, inherit
  - **Given Name:** compare, read, inherit
  - **GUID:** compare, read, inherit
  - **Internet Email Address:** compare, read, inherit
  - **Login Disabled:** compare, read, inherit
  - **Member:** compare, read, inherit
  - **Member Of:** compare, read, inherit
  - **Surname:** compare, read, inherit
- **Entry Rights:** browse inherit

2 Log in to the Admin page.

`https://dns_name/appliance/Admin.html`

3 Drag and drop the Connector for eDirectory from the Identity palette to the middle of the page.

4 Click the connector, then click **Configure**.

5 Use the following information to configure the Connector for eDirectory:

Credentials: Specify the fully distinguished LDAP format name and password of the eDirectory administrator account with the minimum rights.

Search context: Specify the fully distinguished LDAP format of the context where the connector searches for user objects.

eDirectory Server: Specify the IP address and LDAP port of the eDirectory server that contains a Master or Read/Write replica of the partition where the user objects reside. Select **Enable LDAP SSL** to use port 636, or the default non-SSL port is 389.

6 (Optional) If you have custom attributes you want to map, click **Advanced Options** > **Attribute Mappings**, then specify your custom attributes.

7 Click **OK**, then click **Apply** to save the configuration.

The Connector for eDirectory is now an identity source for user logins.

4.3 Configuring reCAPTCHA with the Connector for eDirectory

You can configure reCAPTCHA to work with the Connector for eDirectory to provide an additional layer of security for the user login process. reCAPTCHA displays a phrase a user must type in addition to their password to stop hacking attempts.

To configure reCAPTCHA:

1. In eDirectory, enable **Intruder Detection** on the container where your user objects reside.

   For more information, see "Setting Up Intruder Detection for All Users in a Container" (https://www.netiq.com/documentation/edir88/edir88/data/afxkmdi.html#a3p5g0i) in the *eDirectory 8.8 SP 7 Administration Guide*.

2. In eDirectory, verify that the Intruder Lockout value is higher than the number of failed login attempts you plan to specify in Step 12.
3. Access the Google reCAPTCHA (https://www.google.com/recaptcha/admin/list) Web site.
4. Log in using one of your Google accounts.

   For example, if you use your Gmail account, the reCAPTCHA account is associated with the Gmail account.

5. (Conditional) If this is not your first site, click **Add a New Site**. Otherwise, skip to the next step.
6. Specify a domain.

   Read the **Tips** for more information.

7. Click **Create Key**.
8. Copy the **Public Key** and **Private Key** the UI displays to use when you configure the Connector for eDirectory.
9. Log in to the Admin page.

   `https://dns_name/appliance/Admin.html.`

10. Verify that you configured a Connector for eDirectory.
11. Drag and drop the reCAPTCHA tool from the Tools palette to the middle of the page.
12. Use the following information to configure the reCAPTCHA feature:

    Start reCAPTCHA at: Specify how many failed login attempts can occur before eDirectory users must use reCAPTCHA.

    Public Key: Paste the Public Key value from the reCAPTCHA configuration.

    Private Key: Paste the Private Key value from the reCAPTCHA configuration.

If a user fails to log in to eDirectory more than the specified number of failed login attempts, the login screen displays the reCAPTCHA feature.

4.4 Configuring Facebook as an Identity Source

To configure Facebook as an identity source:

1. Install the developer App to your profile from the Facebook Developers (https://developers.facebook.com) Web site.
2. Create a new App with the following requirements:
   - Create the application with an **Apps** header tag.
   - Enable the **Website with Facebook** login option.

- Set the value of the **Site URL** field to your SocialAccess appliance publicly resolvable DNS name.
- Verify that your domain name is now part of the **Basic Info** in the **Apps Domain** section.

3 Copy the **App ID** value and the **App Secret** value to use when you configure the Connector for Facebook.

4 Log in to the Admin page.

`https://`*`dns_name`*`/appliance/Admin.html`

5 Drag and drop the Connector for Facebook from the Identity palette to the middle of the page.

6 Click the connector, then click **Configure**.

7 Use the following information to configure the Connector for Facebook:

App ID: Specify the **App ID** value from the Facebook configuration.

App Secret: Specify the **App Secret** value from the Facebook configuration.

8 Click **OK**, then click **Apply** to save the configuration.

The Connector for Facebook is now an identity source for user logins.

4.5 Configuring Google as an Identity Source

To configure Google as an identity source:

1 Follow the Basic Steps (https://developers.google.com/accounts/docs/OAuth2/) in the instructions on the Google Developers Web page to configure the Google APIs for OAuth2 authentications.

2 Create a new application in the **API Console**.

3 Edit the application **JavaScript origins** to be the DNS name of your SocialAccess appliance.

4 Edit the **Redirect URIs** to include the URL: `https://`*`dns_name`*`/osp/a/t1/auth/oauth2/landingpad`, then change the *dns_name* to the DNS name of your SocialAccess appliance.

5 Copy the **Client ID** value and the **Client Secret** value to use when you configure the Connector for Google.

6 Log in to the Admin page.

`https://`*`dns_name`*`/appliance/Admin.html`

7 Drag and drop the Connector for Google from the Identity palette to the middle of the page.

8 Click the connector, then click **Configure**.

9 Use the following information to configure the Connector for Google:

Client ID: Specify the **Client ID** value from the Google configuration.

Client Secret: Specify the **Client Secret** value from the Google configuration.

10 Click **OK**, then click **Apply** to save the configuration.

The Connector for Google is now an identity source for user logins.

4.6 Configuring LinkedIn as an Identity Source

To configure LinkedIn as an identity source:

1 Log in to LinkedIn at the LinkedIn Developer Web site (https://www.linkedin.com/secure/developer).

2 Click **Add New Application**.

3 Create a new application with the following information:

OAuth Accept Redirect URL: Specify `https://`*`dns_name`*`/osp/a/t1/auth/saml2/sso` where the *dns_name* is the DNS name of the SocialAccess appliance.

JavaScript API Domains: Specify `https://`*`dns_name`* where the *dns_name* is the DNS name of the SocialAccess appliance.

4 Copy the **API Key** value and the **Secret Key** value to use when you configure the Connector for LinkedIn.

5 Log in to the Admin page.

`https://`*`dns_name`*`/appliance/Admin.html`

6 Drag and drop the Connector for LinkedIn from the Identity palette to the middle of the page.

7 Click the connector, then click **Configure**.

8 Use the following information to configure the Connector for LinkedIn:

API Key: Specify the **API Key** value from the LinkedIn configuration.

Secret Key: Specify the **Secret Key** value from the LinkedIn configuration.

9 Click **OK**, then click **Apply** to save the configuration.

The Connector for LinkedIn is now an identity source for user logins.

4.7 Configuring MSLive as an Identity Source

To configure MSLive as an identity source:

1 Create an application with a Windows Live login (MS Live) by following the instructions in the MSDN Library Getting Your Client ID for Web Authentication (http://msdn.microsoft.com/en-us/library/bb676626.aspx).

2 Edit the application, then add the DNS name of your SocialAccess appliance as the **Redirect domain** under the **API Settings**.

3 Copy the **Client ID** value and the **Client Secret** value to use when you configure the Connector for MSLive.

4 Log in to the Admin page.

`https://`*`dns_name`*`/appliance/Admin.html`

5 Drag and drop the Connector for MSLive from the Identity palette to the middle of the page.

6 Click the connector, then click **Configure**.

7 Use the following information to configure the Connector for MSLive:

Client ID: Specify the **Client ID** value from the MSLive configuration.

Client Secret ID: Specify the **Client Secret** value from the MSLive configuration.

8 Click **OK**, then click **Apply** to save the configuration.

The Connector for MSLive is now an identity source for user logins.

4.8 Configuring Twitter as an Identity Source

To configure Twitter as an identity source:

1. Access the Twitter application at the Twitter Developer Web site (https://dev.twitter.com/apps).
2. Select **Create a new application**.
3. Create a new application with the following information:

   Website: Specify the publicly resolvable DNS name of your SocialAccess appliance.

   callbackURL: Specify `https://`*`dns_name`*`/osp/a/t1/auth/saml2/sso` where the *dns_name* is the DNS name of the SocialAccess appliance.
4. Copy the **Consumer Key** value and the **Consumer Secret** value to use when you configure the Connector for Twitter.
5. Log in to the Admin page.

   `https://`*`dns_name`*`/appliance/Admin.html`
6. Drag and drop the Connector for Twitter from the Identity palette to the middle of the page.
7. Click the connector, then click **Configure**.
8. Use the following information to configure the Connector for Twitter:

   Consumer Key: Specify the **Consumer Key** value from the Twitter configuration.

   Consumer Secret: Specify the **Consumer Secret** value from the Twitter configuration.
9. Click **OK**, then click **Apply** to save the configuration.

The Connector for Twitter is now an identity source for user logins.

4.9 Configuring Yahoo as an Identity Source

To configure Yahoo as an identity source:

1. Log in to the Yahoo Developer Web site (http://developer.yahoo.com/).

   You must have a Yahoo developer account to log in to the Web site.
2. Click **My Projects**.
3. Click **New Project**, then select **Standard**.
4. Create a new application with the following information:

   Application Domain: Specify `http://`*`dns_name`* where the *dns_name* is the DNS name for the SocialAccess appliance.

   Application URL: Specify `https://`*`dns_name`*`/osp/a/t1/auth/saml2/sso` where the *dns_name* is the DNS name of the SocialAccess appliance.

   Permission: Enable the **Social Directory (Profiles)** permission to **Read Public**.
5. Copy the **Consumer Key** value and the **Consumer Secret** value to use when you configure the Connector for Yahoo.
6. Log in to the Admin page.

   `https://`*`dns_name`*`/appliance/Admin.html`
7. Drag and drop the Connector for Yahoo from the Identity palette to the middle of the page.

8 Click the connector, then click **Configure**.

9 Use the following information to configure the Connector for Yahoo:

   Consumer Key: Specify the **Consumer Key** value from the Yahoo configuration.

   Consumer Secret: Specify the **Consumer Secret** value from the Yahoo configuration.

10 Click **OK**, then click **Apply** to save the configuration.

The Connector for Yahoo is now an identity source for user logins.

4.10 Configuring OAuth2 Sites as Identity Sources

SocialAccess provides a generic OAuth2 template. The OAuth2 template allows you to configure OAuth2 sites as identity sources for SocialAccess. For more information about OAuth 2, see the OAuth2 Web site (http://oauth.net/2/).

To use the OAuth2 template:

1. Create an OAuth2 application that represents the SocialAccess appliance on the developer site you want to use as an identity source.

   Creating an application does not require any coding.

2. Copy the following information into a document as you create the OAuth2 application to use when configuring the OAuth2 template:

   - Client ID
   - Client Secret ID
   - Authentication URL
   - Token URL or access token
   - Profile URL
   - (Conditional) Profile header
   - Scope separator

3. Log in to the Admin page.

   `https://dns_name/appliance/Admin.html`

4. Drag and drop the OAuth2 template from the Identity Source palette to the middle of the page.

5. Click the template, then click **Configure**.

6. Use the information gathered in Step 2 to create your own Connector for OAuth2 following the on-screen prompts.

7. (Optional) You can upload a login card image that is specific to your OAuth2 application in the **Login card image** field. The users see this image when they log in to SocialAccess.

   The image can be a `.png`, `.jpg`, or `.gif` file. The file size is 215px x 50px and the file must be under 1 MB in size.

8. Click **OK**, then click **Apply** to save and create the Connector for OAuth2.

It is common with some OAuth sources that the Token URL or Profile URL requires the oauth_token variable instead of the expected accessToken variable. To fix this, add the following:

`URL:?oauth_token{$accessToken}`

For example: `https://api.foursquare.com/v2/users/self?oauth_token={$accessToken}`

4.11 Configuring OpenID Connect Sites as Identity Sources

SocialAccess provides a generic OpenID Connect template. The OpenID Connect template allows you to configure OpenID Connect sites as identity sources for SocialAccess. For example, PayPal is an OpenID Connect site.

To use the OpenID Connect template:

1. Create an OpenID Connect application that represents the SocialAccess appliance on the developer site you want to use as an identity source.

   Creating an application does not require any coding.
2. Copy the following information into a document as you create the OpenID Connect application to use when configuring the OpenID Connect template:
   - (Optional) Discovery URL
   - (Optional) Register URL
   - Client ID
   - Client Secret ID
   - Authentication URL
   - Token URL
   - Profile URL
3. Log in to the Admin page.

   `https://`*`dns_name`*`/appliance/Admin.html`
4. Drag and drop the OpenID Connect template from the Identity Sources palette to the middle of the page.
5. Click the template, then click **Configure**.
6. Use the information gathered in Step 2 to create your own Connector for OpenID Connect following the on-screen prompts.
7. (Optional) You can upload a login card image that is specific to your OpenID Connect application in the **Card image** field. The users see this image when they log in to SocialAccess.

   The image can be a `.png`, `.jpg`, or `.gif` file. The file size is 215px x 50px and the file must be under 1 MB in size.
8. Click **OK**, then click **Apply** to save and create the Connector for OpenID Connect.

It is common with some OpenID Connect sources that the Token URL or Profile URL requires the oauth_token variable instead of the expected accessToken variable. To fix this, add the following:

`URL:?oauth_token{$accessToken}`

For example: `https://api.foursquare.com/v2/users/self?oauth_token={$accessToken}`

5 Creating Custom Connectors

You must configure a connector for each Web service that is using the SocialAccess appliance as a trusted identity provider. A connector's most fundamental function is to aid in establishing SAML federation (for single sign-on and logout) between the service and the SocialAccess appliance.

SocialAccess ships with multiple SAML connectors. You can create custom connectors for any Web service or application that uses SAML 2.0.

- Section 5.1, "Meeting the Web Service or Application Requirements," on page 35
- Section 5.2, "Creating a Custom Connector Definition," on page 36
- Section 5.3, "Exporting the Connector Definition," on page 39
- Section 5.4, "Importing and Configuring the Connector," on page 40

5.1 Meeting the Web Service or Application Requirements

In order to create a custom SAML 2.0 connector, the application or the Web service that connects to SocialAccess must meet the following requirements:

- ❒ The Web service supports SAML 2.0 identity federation.

  For more information about SAML, see the OASIS Web site (http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security).
- ❒ The Web service supports a SAML Web browser single sign-on (SSO) profile, specifically with Redirect/POST bindings for service provider-initiated SSO, and POST binding for identity provider-initiated SSO.
- ❒ The Web service must provide a way for the customer to configure the federation. This usually means providing a facility in the application's administration console that allows the customer to enable and configure SAML SSO.
- ❒ The Web service or application must have technical documents that describe what it requires for the following:
  - ❒ **SAML Assertions:** The document needs to describe the attributes that are required for authentication, such as the user's name or email address. It can include the attributes that are required to assign roles. If possible, obtain a SAML assertion from the application.
  - ❒ **Federation Requirements:** The document needs to describe what is required for federation. It should require an Identity Broker certificate, which allows the application to set the trusted relationship with the Identity Broker. The document should also include URLs for logging in and logging out.
  - ❒ **SAML Metadata:** The application sends SAML metadata to the Identity Broker in order to establish communication. This usually includes a login URL or a customer-specific domain name. Applications that support SAML should publish a SAML metadata document that describes their service. This document is often available from a public URL. If possible, get this document.

Ask the Web service or application vendors the following types of questions to gather the required information:

- What does your SAML assertion look like?
- Do you have a SAML metadata document? What fields, if any, are customer-specific?
- Does your service support the SAML single logout protocol?
- What are the required configuration steps in your application to set up federation?
- What is the information that you provide to customers when you are setting up federation with your LDAP server?

5.2 Creating a Custom Connector Definition

A SAML connector definition consists of multiple components. SocialAccess contains an interface that allows you to create the components in one place.

1. Verify that you have gathered the Web service or application requirements listed in Section 5.1, "Meeting the Web Service or Application Requirements," on page 35.
2. Log in to the SocialAccess appliance.
3. Access the Access Connector Toolkit through the following URL:

   `https://dns_name/css/toolkit`
4. Click **New** > **SAML2**.

   NOTE: This release of SocialAccess does not support the **WSFed** option.

   ---
5. Create the connector definition. For more information, see Section 5.2.1, "Creating the Connector Definition," on page 36.
6. Create the metadata. For more information, see Section 5.2.2, "Creating the SAML 2.0 Metadata," on page 37.
7. Create the assertions. For more information, see Section 5.2.3, "Creating the Assertion," on page 38.
8. (Optional) Create the provisioning definitions. For more information, see Section 5.2.4, "Creating the Provisioning Definition," on page 39.
9. Click **Save** to save the new connector definition.
10. Proceed to Section 5.3, "Exporting the Connector Definition," on page 39 to complete the creation of the new connector.

5.2.1 Creating the Connector Definition

You must import a connector definition into the appliance for the connector to work. SocialAccess helps you create a connector definition.

Table 5-1 Connector Definition Fields

Field	Description	Action
Type	Defines the type of connector for SocialAccess. You cannot change the value of this field. It is set when you select the type of connector to create. For example: SAML2	
Type Name	Defines the type name of the connector for SocialAccess. You cannot change the value of this field. It is set when you select the type of connector to create. For example: Generic SAML2 Connector	
Target Name	The target name is the name of the connector definition file.	Specify a unique name for the connector definition file.
Icon	Allows you to use a custom graphic for your new connector.	Browse to and select a graphic that you want as the icon for the new connector.
Description for Provider	Not a functional field.	.
Description for Customer	Provide enough information so the administrator knows what the connector does.	Specify a description that the Admin page displays.
Settings > Federation Instructions	SocialAccess displays the Federation Instructions when you configure the connector.	Edit the default federation instructions for your connector. You must add information that is specific to your SocialAccess configuration.
Settings > New Settings	A setting provides a way for administrators to input data when creating the connector.	Create a setting for your connector. ◆ Customer-specific sections of the Assertion Consumer Service URL. ◆ Connector-specific setting. For example, a Customer Domain.

5.2.2 Creating the SAML 2.0 Metadata

The metadata is the configuration information the Web service or application uses to communicate to SocialAccess. Some Web services and applications allow you to export the required metadata to an XML file, or it is contained in a URL provided by the Web service or application. You can either import the XML file or specify the required information.

Table 5-2 Metadata Fields

Field	Description	Example
EntityID	Select whether the entity ID comes from the federation instructions or if it comes from the new setting you created when you created the connector definition. EntityID is a field from the metadata that uniquely identifies that particular service provider.	google.com
Assertion Consumer Service URL	Select whether the Assertion Consumer Service URL comes from the federation instructions or if it comes from the new setting you created when you created the connector definition. The Assertion Consumer Service URL is a field from the metadata where the Assertion is posted by the browser.	https://www.google.com/a/${customer-domain}/acs
Logout URL	(Optional) Specify a logout URL. The logout URL corresponds to the field SingleLogoutService from the metadata.	
Logout Response URL	(Optional) Specify a logout response URL. The logout response URL is required when the SingleLogoutService field has ResponseLocation specified in the metadata.	The Connector for NetIQ Access Manager requires this field.
NameID Format	Specify the format of the NameID from the metadata. The NameID format field in the metadata tells the Identity Broker what NameID formats the service provider supports.	
Signing Certificate	Browse to and select a certificate to securely communicate between the service provider and the Identity Broker.	
Import from a file	You can import the metadata from a file or from a URL.	
Import from URL	You can import the metadata from a file or from a URL.	

5.2.3 Creating the Assertion

The assertion is a package of information that supplies statements made by the identity source.

Table 5-3 Assertion Fields

Fields	Description	Example
Audience Restriction	(Optional) Audience Restriction is a field in the Assertion that defines the recipient of the Assertion. Usually this is the same value as the EntityID, and if you leave the field blank the EntityID value is used for this field.	google.com
NameID	The NameID field in the Assertion defines what the service provider receives.	
Format	The NameID format is an email address or it is unspecified. It depends on the requirements of the connected system as to which format you use.	
Destination URL	(Optional) The Destination URL is where the end user ends up after the Identity Broker login with the URL provided on the connector configuration page.	
Protocol Binding	The only binding currently supported is POST.	

5.2.4 Creating the Provisioning Definition

Provisioning is supported only through connectors created by NetIQ. As this time, you cannot create a connector definition that supports provisioning user accounts to the connected system.

5.3 Exporting the Connector Definition

After you create the connector definition, you must export the connector definition. The first step when creating a connector is to import the connector definition. Exporting the connector definition creates a file you can use on another SocialAccess system.

To export the connector definition:

1. Log in to SocialAccess.
2. Log in to the Access Connector Toolkit through the following URL:

   `https://`*`dns_name`*`/css/toolkit`
3. Highlight the connector definition you created, then click **Export**.
4. Save the ZIP file for use on another system.

5.4 Importing and Configuring the Connector

After you create the connector definition, you must import the definition into SocialAccess and configure the connector. The steps to configure the connector are determined by the information you added to the connector definition.

To import a custom connector:

1. Log in to SocialAccess.
2. Log in to the Access Connector Toolkit through the following URL:

   https://*dns_name*/css/toolkit

3. Click the wrench on the toolbar, then select **Import Connector Definition**.
4. Browse to and select the exported custom connector, then click **Import**.
5. Drag and drop the new custom connector from the palette.
6. Click the custom connector, then click **Configure**.
7. Configure the custom connector according to the federation instructions included in the connector.
8. Configure the connecting application or Web service to work with the custom connector.

6 Configuring the End User Experience

After you complete the configuration of the identity sources and the connectors for the SAML applications, you must configure how users access these resources.

- Section 6.1, "Configuring the Login URL," on page 41
- Section 6.2, "Customizing the Login Page," on page 41
- Section 6.3, "Modifying the Changes for the Login Page," on page 42
- Section 6.4, "Configuring the Session Timeout for Users," on page 42

6.1 Configuring the Login URL

You must set up a login page for the login URL that users access to log in with the desired identity source. The following URLs are the login URLs for SocialAccess:

`https://`*`dns_name`*`/osp/a/t1/auth/app`

or

`https://`*`dns_name`*`/osp/a/t1/auth/csel`

6.2 Customizing the Login Page

SocialAccess allows you to customize the user's login page. You can change the SocialAccess branding to your own company's branding for the login page.

To customize the login page:

1. Take a snapshot of the appliance.
2. Log in to the Admin page.

   `https://`*`dns_name`*`/appliance/Admin.html`
3. On the toolbar, click **Tools** > **End User Branding**.
4. Select **Download Default Login Pages**.
5. Save the file.
6. Save a backup copy of the file.
7. Unzip one of the downloaded files.
8. Modify the desired JSP pages and remove any unmodified files from the ZIP file.
9. Zip up the files again, but include only the `images` and `jsp` directories.
10. Log in to the Admin page again.
11. On the toolbar, click **Tools** > **End User Branding**.

12 Click **Browse**, then browse to and select the modified file.

13 Wait until the file name changes to a hexadecimal value, then click **OK**.

14 Click **Apply**.

The login page now displays the branding you added to the JSP files.

6.3 Modifying the Changes for the Login Page

SocialAccess allows you to modify the customized login page. To modify the login page:

1 Modify your JSP files from Section 6.2, "Customizing the Login Page," on page 41.

2 Log in to the Admin page.

`https://dns_name/appliance/Admin.html`

3 On the toolbar, click **Tools** > **End user branding**.

4 In the **Branding zip file** field, click **Delete**.

5 Click **Browse**, then browse to and select the modified JSP file.

6 Wait until the file name changes to a hexadecimal value, then click **OK**.

7 Click **Apply**.

6.4 Configuring the Session Timeout for Users

When a user logs into SocialAccess, the default session timeout is 10 minutes. You can change this session timeout value through the Admin page.

To change the session timeout for users:

1 Log in to the Admin page at `https://dns_name/appliance/Admin.html`.

2 Click the Cluster icon in the lower left corner of the screen.

3 Click **Configure**.

4 Change the **User session timeout** field value. The value for the field is in minutes.

5 Click **OK**, then click **Apply** to save the changes.

7 Maintenance Tasks

SocialAccess allows you to change various appliance configuration settings as needed. For example, moving your appliance from a staging configuration to a production environment requires changes to the networking components.

- Section 7.1, “Changing the IP Address,” on page 43
- Section 7.2, “Changing Public DNS Name or NTP Server Settings, or Uploading New Certificates,” on page 43
- Section 7.3, “Updating the Appliance,” on page 44
- Section 7.4, “Recovering from a Disaster,” on page 45

7.1 Changing the IP Address

You can change whether a node uses DHCP or a static IP address on the Admin page.

1 Log in to the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`.

2 Click the node icon, then click **Configure**.

3 Select whether the appliance uses DHCP or a static IP address.

   If you select to use a static IP address, you can change the required values for the subnet mask, default gateway, and the DNS server.

4 Click **OK** to save the changes, then click **Apply** to apply the changes to the appliance.

If you have additional networking options configured, see Section 3.3, “Configuring Network Options,” on page 20.

7.2 Changing Public DNS Name or NTP Server Settings, or Uploading New Certificates

The appliance contains self-generated certificates. You can upload custom certificates through this interface.

1 Log in to the Admin page at `https://`*`dns_name`*`/appliance/Admin.html`.

2 Click the cluster icon, then click **Configure**.

3 Change the key pairs, NTP server, or public DNS name, then click **OK**.

4 Click **Apply** to apply the changes to the appliance.

Expired key pair certificates prohibit changes from being made to this page and make the key pair field red.

7.3 Updating the Appliance

SocialAccess provides an update channel for keeping your appliances up to date with the latest security fixes, bug fixes, and feature updates. Updates work only if you have registered each node in the cluster. For more information, see Section 3.2, "Registering SocialAccess," on page 19.

When an update is available for one or more nodes in the cluster, the SocialAccess Admin page displays a flag icon in the upper right corner of the window. You can also configure the appliance to send an email notification when an update is available. When you click the flag icon, you can see the version of the pending update, instructions on how to apply the update, and the Release Notes associated with the update patch.

The flag icon for the update channel appears only if you are logged in to the Admin page with an administrator account. Other consoles do not display the flag icon.

SocialAccess checks the NCC channel for updates on a regular basis. You can download and install an update as soon as the flag appears on the Admin page, or you can wait for SocialAccess to download the update at 11:23:23 that night, to minimize network impact due to possible size of an update. NetIQ recommends always keeping your appliance up to date. However, updates are cumulative, so if you miss an update you can just install the next one when it is available.

IMPORTANT: If you apply an update to one node, you must apply the update to all the other nodes in the cluster. Update one node at a time. Ensure that the update was successful and the node is still working properly before you begin updating the next node. Do not perform any other administrative tasks requiring an **Apply** command, and do not switch the master node, until all nodes have been successfully updated to the same version of SocialAccess.

This process allows you to run in a mixed environment while updating each node. Once you have applied all available channel updates, the flag icon goes away.

To apply an update:

1. Take a snapshot of each node in the cluster to create a backup.
2. Click the desired node, then click **Apply Update**.

   SocialAccess displays status messages during the installation of the update and the rebooting of the node.
3. After the update completes and the node restarts, click **About** on the node to verify the updated version.
4. Verify the health of the updated node and all of the nodes in the cluster. Make sure all icons are green.

   For more information, see Section 8.1, "Displaying Health," on page 47.
5. Repeat Step 2 through Step 4 for each node in the cluster.
6. When you are sure all of the nodes in the cluster are working as expected, delete the snapshot.

7.4 Recovering from a Disaster

Use snapshots of the nodes to recover from a disaster. It is important to take snapshots of each node in the cluster regularly so you do not lose information.

To recover from a disaster:

1. On a regular basis, take snapshots of the nodes in the cluster.
   - **1a** Power off the working node, then take a snapshot. NetIQ recommends this method, but it requires that you shut down and restart the node in order to take the snapshot.

     or

     Take a snapshot of the running node, ensuring that you include the virtual machine's memory. Including the memory in the snapshot requires more time and space to store the snapshot, but taking a snapshot of a running node without the memory can result in corruption.
   - **1b** Repeat Step 1a for each node in the cluster, within a short time.
2. When a failure happens, restore the master node snapshot first.
3. Restore the other nodes in the cluster.

Use these steps only for disaster recovery. Never restore one snapshot. SocialAccess contains a database that is time-sensitive. Restoring only one node and not the others causes corruption in the appliance.

8 Troubleshooting SocialAccess

Use the following information to troubleshoot any issues you might encounter.

- Section 8.1, "Displaying Health," on page 47
- Section 8.2, "Troubleshooting Tools," on page 47
- Section 8.3, "Troubleshooting Different States," on page 49
- Section 8.4, "Troubleshooting Authentications," on page 51

8.1 Displaying Health

SocialAccess displays health for each node and for the cluster on the Admin page. Hover the mouse over each node to display the health status of the node. If you want more details, click the node, then select **Show health.**

Show health displays the status for each component of the appliance. If the status is anything other than green (healthy), use the troubleshooting tools to determine what is wrong.

8.2 Troubleshooting Tools

SocialAccess provides troubleshooting tools if you encounter problems.

To access these tools:

1. Log in to the Admin page.

   `https://`*`dns_name`*`/appliance/Admin.html`

2. Under Appliances, click the node icon, then click **Enter troubleshooting mode**.
3. Click the node icon again, then click **Troubleshooting tools**.
4. Select one or more of the troubleshooting scenarios listed.
5. Duplicate the error or condition.
6. Click **Download SocialAccess Log Files** link to download the logs.

After you obtain the logs, turn off troubleshooting mode by selecting **Exit troubleshooting mode**. Leaving the logs running affects the performance of your appliance.

All of the log files in Table 8-1 are included in the download, no matter what scenario you select. The scenario you select determines the amount of data displayed in the log files. Search the appropriate log file for errors while troubleshooting issues.

Table 8-1 Troubleshooting Log Files

Feature	Logs
Initialization or commands	ConfigurationReplicator.log
	ConfigurationReplicator_RL.log
	messages
	boot*
	packageoperations.log
	ag4c_configure.out
	ag4c.sh.out
Admin.html UI	adminui.log
Registration	register.log
Updates	zypper.log
Identity Source Provisioning	bis_AD_<*xxxxx*>.log
	bis_AD_<*xxxxx*>_RL.log
	ConnectorLogs.txt
Provisioning to the SaaS Applications	connectors_SFORCE_<*xxxxx*>_RL.log
	connectors_GOOGLEAPPS_<*xxxxx*>.log
	connectors_GOOGLEAPPS_<*xxxxx*>_RL.log
	ConnectorLogs.txt
Mapping	RolesandResourceServiceDriver.log
	UserApplicationDriver.log
Approvals	jboss.log
Reporting	ManagedSystemGatewayDriver.log
	DataCollectionServiceDriver.log
Mobile Devices	mail
	mail.err
	mail.info

8.3 Troubleshooting Different States

SocialAccess displays indicators for the current state of the different components. The display refreshes every five minutes. SocialAccess might not immediately display the change.

The following sections list the different components, the possible states, and troubleshooting steps to take when the state changes.

- Section 8.3.1, "Front Panel of the Node," on page 49
- Section 8.3.2, "Top of the Node," on page 49
- Section 8.3.3, "Identity Source," on page 50

8.3.1 Front Panel of the Node

The indicator is the front panel of the node.

Figure 8-1 *Front Panel*

The states are:

Green: The node is healthy.

Yellow: The node cannot communicate with the other nodes within the five minute refresh.

Red: The node cannot communicate with the other nodes within two of the five minute refresh cycles.

Clear: The node is initializing or the state of the node is unknown.

Perform the following troubleshooting steps in the order listed if the state is anything but green:

1. Wait at least five minutes for the display to refresh and display the current state.
2. Click the node, then select **Show health**.

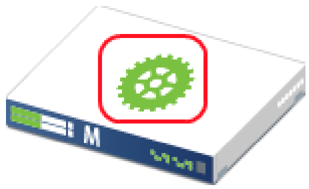
   Show health displays which part of the appliance is having issues.
3. If Show health displays a problem, use the troubleshooting tools to gather logs.

   For more information, see Section 8.2, "Troubleshooting Tools," on page 47.
4. Reboot the appliance, then wait at least another five minute cycle for all nodes to display the current state.

8.3.2 Top of the Node

The indicator is the top of the node.

Figure 8-2 Top of the Node



The states are:

Green: All **Apply** commands completed successfully.

Red: The **Apply** commands did not complete successfully.

Perform the following troubleshooting steps in the order listed if the state is red:

1. Mouse over the top of the node to see the status of the last **Apply** command made on the node.
2. If there is not enough information to help in the summary, click **Enter troubleshooting mode** on the node, then mouse over the node again.

   The troubleshooting mode displays a details summary for the last **Apply** command made on the node.
3. Reboot the appliance, then wait at least another five minute cycle for all nodes to display the current state.

8.3.3 Identity Source

The indicator is the small identity source icon.

Figure 8-3 Small Identity Source

The states are:

Green: The connector to the identity source is healthy.

Yellow: The connector has communication problems with the identity source.

Red: The connector to the identity source is unhealthy or contains errors.

Clear: The state of the connector to the identity source is unknown.

Perform the following troubleshooting steps in the order listed:

1. If the connector is green, but users are not displayed in the SocialAccess interface, verify that the identity source servers are up and communicating.
2. Use the troubleshooting tools to gather logs, then look at the identity source provisioning logs listed in Table 8-1 on page 48 for errors. The `ConnectorLogs.txt` file maps the display name of the connector with the log name of the connector, if there is more than one identity source connector.

3. Click **Show health** on the master node, then click **Access Gateway**.

   If this item is yellow or red, the interface displays helpful information to help troubleshoot the issue.

4. If you are using LDAPS to communicate to Active Directory, refresh the certificates. You refresh the certificates as follows:

   a. Log in to the Admin.html page, then click **Configure** on the Active Directory identity source.

   b. Click the **Refresh** icon next to the Active Directory server.

8.4 Troubleshooting Authentications

There can be multiple reasons why authentications to the SAML applications fail.

Time Synchronization: SocialAccess depends on timestamps to function correctly. Synchronize time between the VMware host, the appliance, and the workstations. Download the authentication logs. In the `catalina.out` file, search for the error `clock skew`.

SAML Authentications: Firefox contains a SAML debug add-on you can use to view the SAML authentication between SocialAccess and the SAML applications. Download the add-on SAML tracer (https://addons.mozilla.org/en-US/firefox/addon/saml-tracer/) to view the SAML request.

A Open Source Licenses Release Notes

- Section A.1, “Documentation,” on page 53
- Section A.2, “Open Source Components,” on page 53
- Section A.3, “Open Source Licenses,” on page 61
- Section A.4, “Obtaining a Copy of the Media,” on page 103

A.1 Documentation

The following sources provide information about SocialAccess:

- **Installation:** *NetIQ SocialAccess Installation and Configuration Guide*
- **Online product documentation:** http://www.netiq.com/documentation/socialaccess (http://www.netiq.com/documentation/socialaccess)

A.2 Open Source Components

- Section A.2.1, “Apache 2.2.17,” on page 54
- Section A.2.2, “Apache Commons Logging 1.1.1,” on page 54
- Section A.2.3, “Apache Portable Runtime 1.4.2,” on page 54
- Section A.2.4, “Argo 2.21,” on page 54
- Section A.2.5, “Bouncy Castle 1.5.140,” on page 55
- Section A.2.6, “dom4j 1.6.1,” on page 55
- Section A.2.7, “dovecot20-backend-pgsql-2.0.20-31.1,” on page 55
- Section A.2.8, “dovecot20-backend-mysql-2.0.20-31.1,” on page 56
- Section A.2.9, “dovecot20-backend-sqlite-2.0.20-31.1,” on page 56
- Section A.2.10, “dovecot20-2.0.20-31.1,” on page 56
- Section A.2.11, “dovecot20-devel-2.0.20-31.1,” on page 56
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- Section A.2.13, “GWT Mosaic 0.4.0-rc4,” on page 56
- Section A.2.14, “gwtupload 0.6,” on page 57
- Section A.2.15, “Hibernate 3,” on page 57
- Section A.2.16, “httpclient 4.1.2,” on page 57
- Section A.2.17, “JavaMail 1.4.3,” on page 57
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- Section A.2.20, “jersey 1.0.3,” on page 58
- Section A.2.21, “jgroups 2.10.0 GA,” on page 58
- Section A.2.22, “log4cxx 0.10.0,” on page 58
- Section A.2.23, “log4j 1.2.15,” on page 58
- Section A.2.24, “NTLM Library (TCP implementation) 1,” on page 58
- Section A.2.25, “OpenSSL 0.98j,” on page 58
- Section A.2.26, “Open-vm-tools 9.0.0-9.1,” on page 59
- Section A.2.27, “libvmtools 9.0.0-9.1,” on page 59
- Section A.2.28, “Recaptcha4j 0.0.8,” on page 59
- Section A.2.29, “Tomcat 5.5.27,” on page 59
- Section A.2.30, “Tomcat 7.7.0.27-10,” on page 60
- Section A.2.31, “Xalan 2.7.1,” on page 60
- Section A.2.32, “Xerces 2.9.1,” on page 60
- Section A.2.33, “XMLSec 1.3.0,” on page 61

A.2.1 Apache 2.2.17

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A.2.4 Argo 2.21

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A.2.5 Bouncy Castle 1.5.140

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A.2.6 dom4j 1.6.1

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A.2.7 dovecot20-backend-pgsql-2.0.20-31.1

See Section A.3.4, “MIT,” on page 65 Dovcot - MIT.

See Section A.3.5, “LGPL V2.1,” on page 66 Dovecot - LGPL V2.1.

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Current exceptions are: src/lib/md5.c : Public Domain

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Solar Designer <solar@openwall.com> (src/lib/md5.c, src/auth/passdb-pam.c)

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Joshua Goodall <joshua@roughtrade.net> (src/auth/mech-cram-md5.c, src/doveadm/doveadm-pw.c)

Jelmer Vernooij <jelmer@samba.org> (src/auth/mech-gssapi.c)

Vaclav Haisman <v.haisman@sh.cvut.cz> (src/lib/ioloop-kqueue.c, src/lib/ioloop-notify-kqueue.c)

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Grepping 'Patch by' from ChangeLog shows up more people.

src/lib/sha1.c and sha2.c:

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src/lib/UnicodeData.txt:

A.2.8 dovecot20-backend-mysql-2.0.20-31.1

See Section A.3.4, "MIT," on page 65 Dovcot - MIT.

See Section A.3.5, "LGPL V2.1," on page 66 Dovecot - LGPL V2.1.

See Section A.2.7, "dovecot20-backend-pgsql-2.0.20-31.1," on page 55.

A.2.9 dovecot20-backend-sqlite-2.0.20-31.1

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See Section A.2.7, "dovecot20-backend-pgsql-2.0.20-31.1," on page 55.

A.2.10 dovecot20-2.0.20-31.1

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See Section A.2.7, "dovecot20-backend-pgsql-2.0.20-31.1," on page 55.

A.2.11 dovecot20-devel-2.0.20-31.1

See Section A.3.4, "MIT," on page 65 Dovcot - MIT.

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See Section A.2.7, "dovecot20-backend-pgsql-2.0.20-31.1," on page 55.

A.2.12 GWT 2.4.0

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A.2.13 GWT Mosaic 0.4.0-rc4

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A.2.14 gwtupload 0.6

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A.2.15 Hibernate 3

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A.2.16 httpclient 4.1.2

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A.2.17 JavaMail 1.4.3

See Section A.3.6, “Javamail,” on page 73.

A.2.18 JavaService 2.0.10

See Section A.3.7, “JavaService,” on page 77.

See Section A.3.5, “LGPL V2.1,” on page 66.

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A.2.21 jgroups 2.10.0 GA

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A.2.22 log4cxx 0.10.0

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A.2.23 log4j 1.2.15

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A.2.24 NTLM Library (TCP implementation) 1

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A.2.28 Recaptcha4j 0.0.8

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- Section A.3.3, "BSD Style License," on page 65
- Section A.3.4, "MIT," on page 65
- Section A.3.5, "LGPL V2.1," on page 66
- Section A.3.6, "Javamail," on page 73
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- Section A.3.8, "COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL) Version 1.0," on page 78
- Section A.3.9, "GPL V2 + classpath exception dual license.," on page 83
- Section A.3.10, "Microsoft Public License MS-PL," on page 88
- Section A.3.11, "OpenSSL License and SSLeay License," on page 89
- Section A.3.12, "GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999," on page 91
- Section A.3.13, "GNU GENERAL PUBLIC LICENSE Version 2," on page 98

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