

**Clearswift SECURE Exchange Gateway  
Installation & Getting Started Guide**  
Version 4.11.0  
Document Revision 1.0

# Copyright

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# 1. About this guide

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This guide provides information for administrators installing the Clearswift SECURE Exchange Gateway onto a virtual machine or physical server. It covers the procedures and requirements necessary for a full installation.

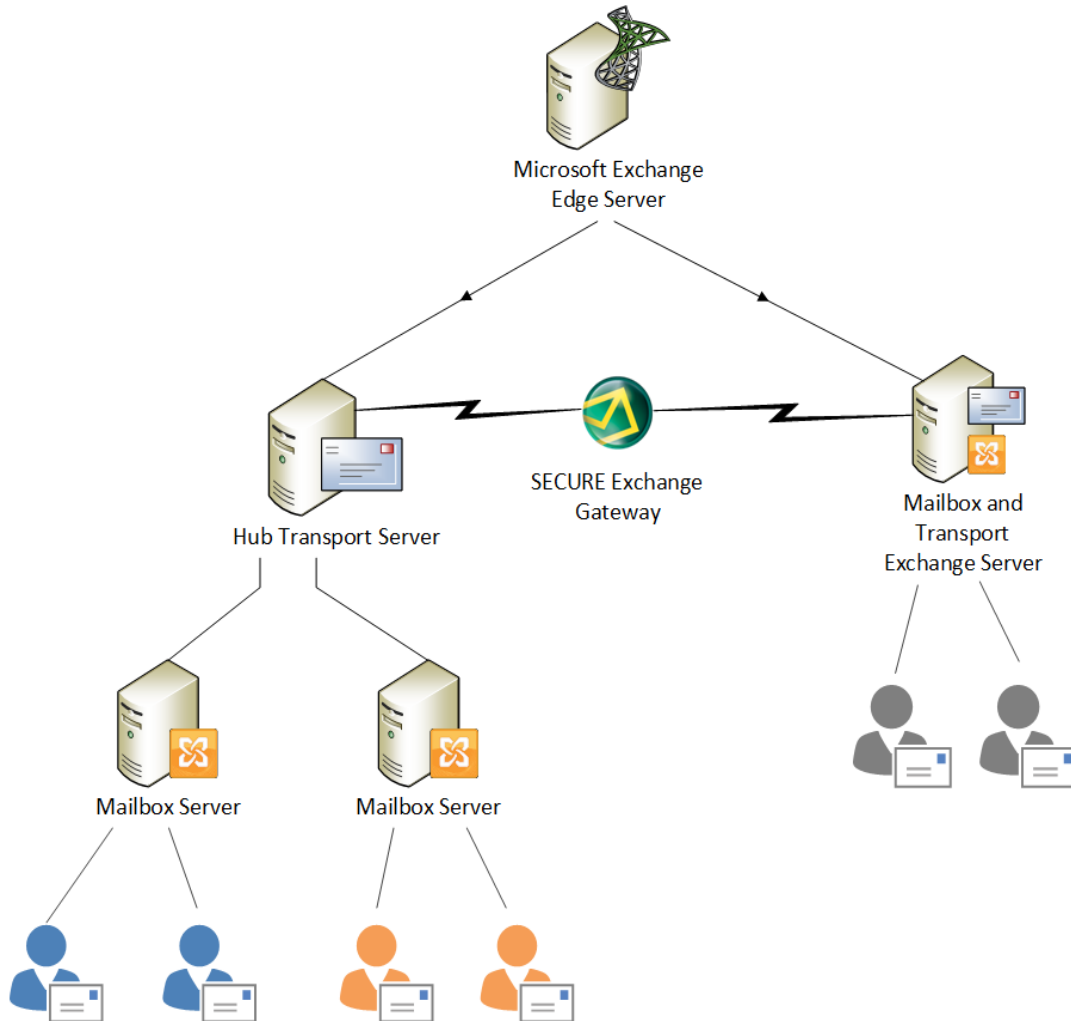
## 1.1 Who is this guide for?

This guide is intended for use by:

- New customers installing the Clearswift SECURE Exchange Gateway for the first time.
  - Existing customers upgrading from an earlier version 4 release of the Clearswift SECURE Exchange Gateway to version 4.11.0.
-

## 2. Before installing

This section outlines prerequisites and considerations you need to make before installing the Clearswift SECURE Exchange Gateway. The Gateway runs on 64 bit Red Hat Enterprise Linux (RHEL 6.10). You can install the product on a physical server or virtual machine. See [Prerequisites](#) for more information on supported platforms.



### 2.1 Types of installation

You can install the Clearswift SECURE Exchange Gateway using one of the following processes:

Installation process	Description	Where to start
Standard install process	Applies to users installing the product from an ISO image that contains both RHEL 6.10 and the Clearswift software.	<a href="#">Installing from the ISO image</a>

Installation process	Description	Where to start
Hardware install process	Applies to users deploying the product using pre-installed hardware supplied by Clearswift.	<a href="#">Running the Clearswift First Boot Console</a>
Software install process (from ISO)	Applies to users installing the product on an existing RHEL 6.10 platform.	<a href="#">Appendix A: Software Install Process</a>
Software install process (from online Clearswift repositories)	Applies to users installing the product on an existing RHEL 6.10 platform.	<a href="#">Appendix B: Software Install Process</a>

## 2.2 Obtaining the software

You can obtain the Clearswift SECURE Exchange Gateway software from:

- The [Clearswift download area](#) where you can download the Clearswift SECURE Exchange Gateway ISO image.
- The [Clearswift support portal](#) where you can download the Interceptor software.
- Clearswift, with your pre-installed hardware.

## 2.3 Prerequisites

Before installing, you should check that you have the following:

### Hardware requirements

Your computer or virtual machine requires a minimum of 6 GB RAM and a 60 GB hard drive for use in testing and demonstration environments. Clearswift recommends a minimum of 200GB hard drive for use in a production environment based on your storage and processing requirements.



We recommend increasing the size by a minimum of 25% if you intend to store message-tracking data for 2 years.

Message Volume	Processor	Number of Processors	Memory	Disk	Raid
Low (<20,000 per hour)	Dual/Quad Core	1	8 GB	320GB+ SATA/SCSI	Optional
Medium	Quad/Hexa/Octa	1	8 GB	320GB+	Optional

Message Volume	Processor	Number of Processors	Memory	Disk	Raid
(<50,000 per hour)	Core			SATA/SCSI	
High (<60,000 per hour)	Quad/Hexa/Octa Core	2	8 GB	2 x SAS 15k RPM	Yes (1)
Very High (>60,000 per hour)	Quad/Hexa/Octa Core	2	8-16 GB	Multiple SAS 15k RPM	Yes (1, 10)

### Installation media

Please ensure you are using the correct version of the ISO image: EMAIL\_4110\_4110.iso.

After you download a copy of the ISO image from the online Clearswift Repository, there are a number of ways you can use it to install the software:

- Copying the ISO image to DVD. Clearswift recommends using this option when installing the Clearswift SECURE Exchange Gateway software.
- Copying the ISO image to USB media. See Appendix B of this guide for instructions.
- Attaching the ISO image as a virtual DVD drive. This applies to virtual machines only.

### Browser support

The Clearswift SECURE Exchange Gateway supports connections using TLS 1.2 ciphers and has been tested with the following browsers:

- Internet Explorer IE10 (Windows 7)
- Internet Explorer IE11 (Windows 7 , Windows 8)
- Mozilla Firefox - latest
- Google Chrome - latest
- Microsoft Edge (Windows 10)

### Clearswift SXG Interceptor prerequisites

To install the Clearswift SXG Interceptor, you must have the following:

- Windows 2008 SP2 and later
- Exchange 2007 SP3 or later
- Microsoft Active Directory Lightweight Directory Services (AD LDS)





AD LDS is only required if the SXG Configuration Store component is selected during install. The SXG Configuration Store component is selected by default during installation of the Clearswift SXG Interceptor. However installation of the SXG Configuration Store component is only required during installation of the Clearswift SXG Interceptor on the first server in your organization.

- Microsoft .Net 3.5
  - PowerShell 2.0
-

## 3. Installing the Clearswift SECURE Exchange Gateway

You can install the Clearswift SECURE Exchange Gateway software from the ISO image that you downloaded from the Online Clearswift Repository.

The installation process includes the following phases:

1. Combined installation of Red Hat Enterprise Linux 6.10 operating system and the Clearswift SECURE Exchange Gateway from the installation media.
2. Running the console-based *System Configuration* wizard to adjust default system values, including network configuration.
3. Enable access to the Clearswift online repositories containing the latest software updates.

Once the Gateway has been installed, you will need to complete the *Clearswift Installation Wizard*.

### 3.1 Installing the Clearswift SECURE Exchange Gateway

The following steps describe how to install the Clearswift SECURE Exchange Gateway.

[Section 3.2 Installing from the ISO image](#) only applies if you are performing a standard installation using the ISO image containing both RHEL 6.10 and the Clearswift software.



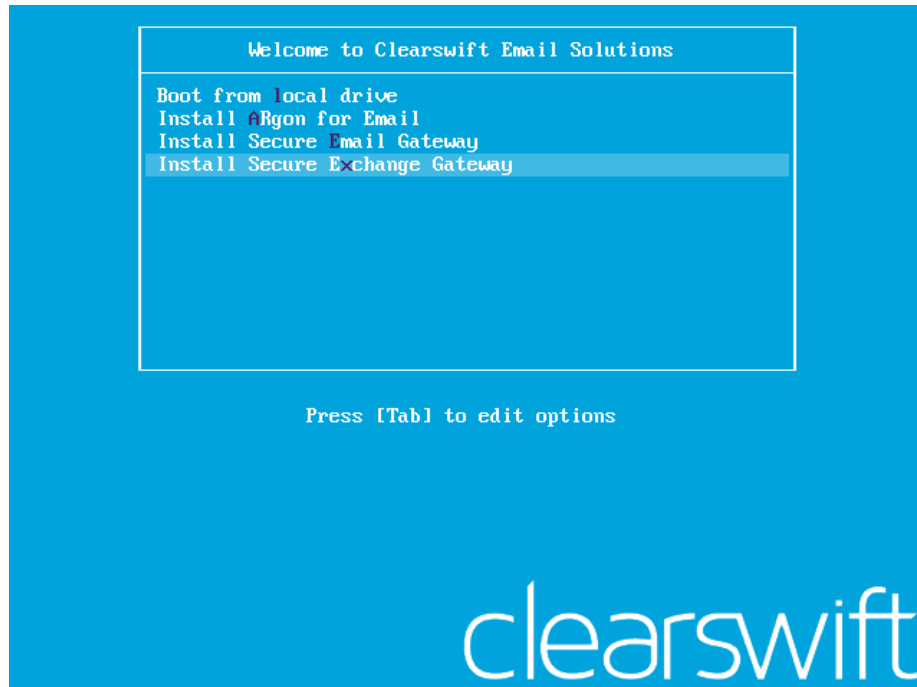
If you are performing the hardware install, go to [Section 3.3 Running the Clearswift System Configuration wizard](#).

If you are installing onto an existing RHEL 6.10 server, use the instructions in Appendix A or Appendix B of this guide to perform the installation. Then refer to [Section 3.3 Running the First Boot Console](#) to complete the installation of the Clearswift SECURE Exchange Gateway.

### 3.2 Installing from the ISO image

1. Insert the media containing the ISO image into the drive and power on the server.

The *Welcome to Clearswift Email Solutions* should be displayed. If the load device can not be found you might need to adjust your system boot sequence in the BIOS.



2. Use the arrow keys or keyboard shortcuts to select **Install Secure Exchange Gateway** from the menu. Press the **Enter** key to select the installation. The install process begins and runs automatically.



The entire install process, including post-installation scripts, takes between 10-15 minutes to complete. After *Package Installation* completes, the install process displays the message "Running post-installation scripts" for a period of up to 5 minutes. When this message is on screen, the install process still runs in the background and you should not interrupt it. At the end of the install process, the system reboots automatically. The *Welcome to Clearswift Solutions* boot screen appears again and **Boot from local drive** triggers automatically after a timeout of 60 seconds.

### 3.3 Running the Clearswift First Boot Console

Complete the following steps in the *First Boot Console*:

1. Log in as **cs-admin** using the default credentials:
  - Login: **cs-admin**
  - Password: **password**

The *First Boot Console* appears and you can start the configuration process.

2. Follow the on-screen instructions to select:

- **Locale Configuration**
- **Keyboard Configuration**
- **Timezone Configuration**



The Gateway derives its system time and locale settings from the selections made at this point. It is important that you set these correctly during installation as you cannot change system time and locale later.

3. On the **Network Configuration** page update the following settings:

- **System Hostname:** Enter the new Hostname and press **Save**.
- **Network Adapters:** Select a network adapter and press **Edit**. Press **IPv4 Addresses** and then **Edit** your selected IP address. After you have made your edits, press **Save**.
- **DNS Servers:** Select a DNS entry and press **Edit**. Add **Search Domains** if required or leave blank.

After you have made your edits, press **Save**.

4. Configure your repository settings on the **Repository Configuration** page.



Clearswift online repositories are normally disabled by default after installation. This indicates updates are to be taken from the local media. However, if you have access to the Internet you might want to receive updates from the Clearswift online repositories by selecting **Online Mode**.

5. On the **cs-admin password** page enter a new password for your cs-admin account. The complexity of this password depends on the password policy that is being enforced. The Clearswift password policy applies by default to standard installations from the ISO image. This policy requires you to set passwords that are a minimum of eight characters in length, do not resemble dictionary words (example: Pa55word), do not include sequences (example: 1234), and include at least one from three of the following:

- Uppercase letters
- Lowercase letters

- Digits
- Symbols

See [Clearswift password policy requirements](#) in the online help for more information, including examples. The online help also provides information on how to disable the password policy.

6. Apply your settings and confirm to reboot the server.
7. Following the reboot, open a browser and navigate to the Gateway IP address:

**https://<ip-address>/Appliance**



To check your IP address, log in to the console using the default credentials.

Select **View System Status** and click **OK**.

The *Clearswift SECURE Exchange Gateway* installation wizard is displayed.

Clearswift SECURE Exchange Gateway clearswift

Thank you for choosing **Clearswift**. The setup process consists of a few easy steps, during which you will be asked to provide information on your network configuration.

You will have been supplied with a license key and serial number by your supplier. Please enter these details now.

Company Name :

License Key :

Serial Number :

The system might take around 5-10 minutes to apply the settings before you can use the Clearswift SECURE Exchange Gateway. We recommend visiting the [First Steps](#) topic in the online help when the Gateway interface is accessible.



If the Clearswift installation media has been ejected following the reboot, you **must** ensure that it is re-inserted *before* configuring the Clearswift Installation Wizard. The wizard requires access to the installation media to complete the setup of your Gateway.

Notes on using the Clearswift SECURE Exchange Gateway installation wizard



The network settings displayed by the wizard reflect the settings you created when configuring Red Hat Enterprise Linux. These settings are displayed as read-only.



We recommend configuring the wizard immediately after the install and *before* configuring any additional network adapters. However, if you need to reboot the machine before configuring the installation wizard, you should disable your firewall as root user when your reboot is complete. To disable your firewall, run the `service iptables stop` command. After you complete the wizard, the firewall starts again automatically.

### 3.4 Enabling or disabling access to the Clearswift online repositories

In Clearswift First Boot Console, you selected updates to be applied from either the online Clearswift repositories or your (offline) local media.

Clearswift online repositories are normally disabled by default after installation. This indicates updates are to be taken from the local media. However, if you have access to the Internet you might want to receive updates from the Clearswift online repositories by selecting **Online Mode**.



If you are using Microsoft Azure, you should note that the use of online repositories will download updates to your system and you will be charged by Microsoft for this download.

You can change the source for the online repositories later, if required. To do this:

Click **Configure System > View and Apply Software Updates > Enable/Disable use of Online Repositories**.

Switching from offline to online repositories gives access to Red Hat security fixes normally within 24 hours of their publication. We recommend this for most installations. However you should only do this if you intend to also use online repositories for future Clearswift product upgrades.



Switching *from online to offline* is not supported and could lead to updating issues in the future.

To be confident that your system is up-to-date, you must apply system or product upgrades using Server Console. If you attempt to upgrade using the command line, it will report 'no updates available'.

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## 4. Installing your Clearswift SXG Interceptor

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Depending on your organization's requirement and infrastructure you have the following options:

- Single Microsoft Exchange Server, single Clearswift SXG Interceptor, and single Gateway
- Single Microsoft Exchange Server, single Clearswift SXG Interceptor, and multiple Gateways
- Multiple Microsoft Exchange Servers, multiple SXG Interceptors, and multiple Gateways

The steps in the guide assume a Single Microsoft Exchange Server, single Clearswift SXG Interceptor, and single Gateway configuration.

Before you install your Clearswift SXG Interceptor, the following steps need to be completed on the Exchange Gateway and Exchange Server:

### 4.1 Exchange Gateway

1. Install and set up the SECURE Exchange Gateway as described in section 3 of this installation guide.
2. Create a DNS entry for the Exchange Gateway.
3. Add your Exchange Server to the **Exchange Servers** page on the SECURE Exchange Gateway.

For information on how to do this, see [Configure Gateway to Exchange Server communication](#) in the Exchange Gateway online Help.

4. Make a note of the Exchange Server's **Client ID**.

### 4.2 Exchange Server

You need to create a Universal security group and create a user that will be used to access the Configuration store.

1. Create the universal security group.
  - a. From **Active Directory Users and Computers**, create a group called **Clearswift SXG Administrators** in the root domain of the forest. Ensure **Group scope** is set to **Universal**.
2. Create the user to be used to access the Configuration Store.
  - a. From **Active Directory Users and Computers**, create a user in the root domain of the forest. Select the **Password never expires** check box.
3. Add the user to the **Clearswift SXG Administrators** group.
4. Add the user that will be performing the Interceptor install to the **Clearswift**



**SXG Administrators** group.

5. Add any users that will be using the Clearswift SXG Interceptor Powershell cmdlets to the **Clearswift SXG Administrators** group.
6. Log out and then log in to ensure permissions are activated.

### 4.3 Install your Clearswift SXG Interceptor

1. Go to <https://www.clearswift.com/support/portals>
2. Download the Clearswift SXG Interceptor installer to a location on your Microsoft Exchange server.
3. Log on to your Microsoft Exchange server using an account that is a member of the Clearswift SXG Administrators group.
4. Using Windows Explorer locate the downloaded Clearswift SXG Interceptor installer and then run it.
5. Follow the instructions in the setup wizard.

You will find extra information about the wizard pages in the following table:

Wizard page	Extra information
<b>Feature Selection</b>	<p>Select the following options for a first Interceptor install in a new deployment:</p> <ul style="list-style-type: none"><li>■ Clearswift SXG Interceptor</li><li>■ Clearswift SXG Interceptor Configuration Store</li><li>■ Clearswift SXG Management Shell</li></ul> <p><b>Note:</b> Any features that you choose not to install are offered when the installer is run again.</p> <p>Clear the <b>New instance</b> check box if you do not want to install the configuration store on your Microsoft Exchange server.</p> <p><b>Note:</b> The configuration store must be installed on another server before you can install the Interceptor without a configuration store.</p>
<b>Prerequisite Checks</b>	<p>Make sure that all your versions of Exchange, PowerShell, Microsoft.Net and Active Directory Lightweight Directory Services (AD LDS) are supported.</p>
<b>Installation Settings</b>	<p>If you are installing the Clearswift SXG Interceptor, you must provide the Exchange server's client ID.</p> <p><b>Tip:</b> Copy and paste the client ID from the Exchange Server page on the Exchange Gateway.</p> <p>If you haven't got a client ID at this stage, you can set one after you have installed the Clearswift SXG Interceptor.</p> <p>For more information, see the <i>Work with Client IDs</i> section of <a href="#">Configure Gateway to Exchange Server communication</a> in the Exchange Gateway</p>

Wizard page	Extra information
	online help.
<b>Microsoft AD LDS Credentials</b>	Provide the user name that you created to access the configuration store in the format <i>DOMAIN\username</i> . The account should have rights to install, and then access, the new instance of the Clearswift SXG Interceptor configuration store.

## 4.4 Complete the SXG Interceptor installation

You need to perform the following tasks, as a minimum, to complete the installation:

1. Add an SXG Gateway
2. Enable the SXG Gateway
3. Enable the Clearswift SXG Interceptor

Optionally, after these steps, you can:

- Add interception rules
- Enable monitor mode
- Configure performance counters
- Check that the installation is valid

This section describes the mandatory tasks.

To add an SXG Gateway, you use the **Add-SXGGateway** cmdlet. To do this:

1. Click **Start > All Programs > Clearswift SXG Interceptor > Clearswift SXG Interceptor Management Shell**.



If using Windows Server 2012, go to the start screen and click the **Clearswift SXG Interceptor Management Shell** icon.

2. Add the Gateway. From the command line type the following:

```
Add-SXGGateway [[-Identity] <GatewayIdentity>]
[<CommonParameters>]
```

where:

- *<GatewayIdentity>* is the Fully Qualified Domain Name (FQDN) of the SXG you want to add



To find the FQDN, from the SXG UI click **System > Ethernet Settings**.

- *<CommonParameters>* is a list of optional common parameters, for example, verbose, debug.

Detailed cmdlet help is available from the **Clearswift SXG Interceptor Management Shell** and each cmdlet has extended help options. For example, to see examples for *Add-SXGGateway*, type the following at the prompt:

```
get-help Add-SXGGateway -examples
```



For further technical information, type the following commands at the prompt:

```
get-help Add-SXGGateway -detailed
```

```
get-help Add-SXGGateway -full
```

To see a list of cmdlets, type the following at the prompt:

```
get-command -module SXGInterceptor
```

3. Enable the Gateway. From the command line type the following:

```
Set-SXGGateway [[-Identity] <GatewayIdentity>] -Enabled $true
```

- *<GatewayIdentity>* is the FQDN of the SXG you want to enable

4. Enable the Interceptor. From the command line type the following:

```
Set-SXGInterceptor [[-Identity] <InterceptorIdentity>] -Enabled $true
```

- *<InterceptorIdentity>* is the FQDN of the server where the Clearswift SXG Interceptor is installed



Interceptors can only use Exchange Gateways in the same peer group and in the same AD site.

For help including configuration tasks you need to perform on your Exchange Gateway, interception rule creation, and performance monitoring, see the [Exchange Gateway online help](#).

## 4.5 Validate the Clearswift SXG Interceptor installation

You can validate the Clearswift SXG Interceptor installation by running the following commands from the **Clearswift SXG Interceptor Management Shell**:

```
Get-SXGSettings
```

**Expected result:** The AD LDS username, logging level and security protocol types should be displayed.

```
Get-SXGInterceptor
```

**Expected result:** Interceptor details should be displayed. Note that there will be no details if the first installation is a configuration store on a non-Exchange server.

```
Get-SXGInterceptionRules
```

**Expected result:** Default rules should be displayed.

```
Get-SXGGateway
```

**Expected result:** The reported sites should include the site Exchange is in.

## 4.6 Test your Clearswift SXG Interceptor

1. On your Exchange Server computer, send a test email message using either Outlook or the Outlook Web App.
2. On your Exchange Gateway, go to the **Home** page, and then view the **Recent Messages** area.
3. View the Clearswift SXG Interceptor log(s) located in C:\ProgramData\Clearswift\SXGInterceptor\logs
4. Using **Event Viewer**, view the **Applications** event log.

## 5. Upgrading from an earlier version

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If you are installing the Clearswift SECURE Exchange Gateway for the first time, please ignore this section.

If you are migrating from a previous version of the Clearswift SECURE Exchange Gateway, you **must**:

1. Apply any pending configuration changes.
2. Back up your system and latest configurations before installing.
3. Clear the inbound queues.

**If you are upgrading from 4.9.0:**

Check your email routing. On upgrade, the Gateway migrates routes with the same domain to **MTA Groups**.

**If you are upgrading from version 4.6.0 or earlier:**

Check your email routing.



On upgrade, the Gateway migrates your existing routes by collecting together any routes with the same domain (routing to different servers). These are added to MTA Groups and are used sequentially as failovers. This transfers your pre-existing failover configuration into the MTA Group format.

The Gateway then groups any identical routes (Server, Port, Auth, and TLS) that route to different domains. This helps you to identify routes more easily on the **MTA Groups** tab.

### 5.7 Applying software updates

Perform the following steps to download and apply software updates when you upgrade to Clearswift SECURE Exchange Gateway 4.11.0.

Open an SSH session and access the Clearswift Server Console. Log in using your cs-admin access credentials.



#### **Online or Offline mode?**

*Offline mode* is designed for installations that operate in a closed environment, disconnected from the Internet. Unless



this is a specific requirement for your system, you should install the Clearswift SECURE Exchange Gateway in online mode.

To perform an offline upgrade you require a copy of the latest release ISO mounted to suitable media (DVD/USB). Please contact Clearswift Technical Support if you need additional guidance on how to complete this step.

If you have online repositories enabled, updates will be downloaded overnight (automatically). You can apply them immediately. You can also use the **Check for New Updates** button if you believe that there has been a recent security fix issued.

To apply software updates:

1. Select **Configure System > View and Apply Software Updates > Apply Updates > OK** from the Clearswift Server Console main menu.
2. Select **Yes** to confirm that you want to apply the updates.  
All downloaded updates will now be installed. This process can take several minutes. A rolling progress log will be displayed.
3. When the *Operation Complete* message appears, select **Done** to complete the install process.

At the end of the upgrade process, the system will prompt you to either reboot or log out. Follow the instructions on-screen.

Gateway services will restart automatically in either case.

#### 5.7.1 Upgrading Kaspersky

After the Gateway software has been upgraded, traffic is stopped while the anti-virus definitions are updated. Traffic will be restarted automatically afterward. However, if you do not have a reliable connection to the Internet or are working in an offline environment, the definitions cannot be updated and traffic will not be restarted.

You can choose to get the definitions yourself by other means, or to restart the traffic with out-of-date definitions.

To restart traffic manually:

1. Navigate to **System > Service Control**.  
The **Service Control** page is displayed.
2. Click **Restart** for the stopped **Policy Enforcement** service.

A dialog appears indicating whether the action has been successful.

You may have to wait a few moments before the requested action completes. When the status changes, the **Current Status** table indicates the new status.

## 5.7 Upgrading Users from version 4.8 or earlier

After you have upgraded, you need to assess the names of the roles created for your existing users as part of the transition to role-based administration. The upgrade process identifies all unique roles and gives them names, such as **Role 1**, **Role 2**, linking them up with the relevant users.

It is recommended that you give the roles more meaningful names after you have upgraded.

## 5.7 Upgrading TLS configuration from version 4.6 or earlier



When you upgrade, mail flow is stopped. You must modify the mandatory Outbound TLS settings in your Connection Profiles before you can enable mail flow by restarting the **SMTP Inbound Transport**, **SMTP Outbound Transport**, and **SMTP Alert Transport** services.

1. Check if you are using custom Sendmail configuration files. These are **customin.m4** and **customout.m4** files in **/etc/mail**. You are advised to contact Clearswift Support to discuss how to migrate these settings.
2. Check if you are using mandatory TLS settings. These settings will need to be modified after the upgrade. If you are using mandatory TLS settings, when you upgrade, mail flow is stopped. You must:
  - Configure mandatory Outbound TLS settings on individual Connection Profiles. Specify the Connection Profile for each routing table entry in the Email Routing page that requires a mandatory TLS connection.
  - Ensure that for Outbound TLS, SAN/CN matching values do not include whitespace characters.
  - Restart mail flow by starting the following services: SMTP Inbound Transport, SMTP Outbound Transport, and SMTP Alert Transport.If you did not have TLS configured prior to upgrade, disregard this step.
3. Check your email routing failover procedures. Postfix does not attempt multiple routing table entries on initial failure and must be set up so that routing is performed by DNS, using a DNS record for the domain with multiple "A" records. Ensure that your failover procedures take this into account. For more information, refer to Specifying Routing of Email.
4. If you are using address rewriting, note that the Validate Sender Domain check is now performed on the original address, not the rewritten address.

5. Change your AUTH profile user names and passwords, if you are using the same user name on different profiles. For more information, refer to SMTP Authentication.
6. Perform maintenance on the Connection Profile client host list and sender domain list. Sender domains are configured separately.  
On upgrade, anything other than an IP address is placed on both lists and requires that you remove the domains from the client host list and the hosts from the sender domain list. For more information, refer to Manage SMTP Connections.



## 6. Troubleshoot your Clearswift SXG Interceptor

The following can help you locate problems with your Exchange Interceptor installation.

### 6.1 Display information about the Interceptor

1. Open the **Clearswift SXG Interceptor Management Shell**.
2. Type the following:

```
Get-SXGInterceptor | Format-List
```

The following information is displayed with values applicable to your Interceptor:

```
Identity           : HUB1.example.com
InterceptorIdentity : HUB1.example.com
State              : Inactive
Enabled            : True
ClientID           : 94bbc203-81a2-45be-a5ff-54c6a3dadad3
MonitorModeEnabled : False
QueueLength        : 0
Version            : 4.5.0.n
```

### 6.2 Check that the Clearswift SXG Interceptor is installed as a transport agent

1. Open the **Clearswift SXG Interceptor Management Shell**.
2. Type the following:

```
Get-TransportAgent
```

The following information is displayed.

```
Identity           Enabled
-----
Priority
-----
Transport Rule Agent      True
1
Text Messaging Routing Agent True
2
Text Messaging Delivery Agent True
3
ClearswiftSXGInterceptor  True
4
```

## 6.3 Set the logging level

You can set the logging level by using the following command from the **Clearswift SXG Interceptor Management Shell**.

```
Set-SXGSettings -LogLevel [Off|Error|Warn|Info|Debug]
```

## Appendix A: Software install process (from disc)

The following steps describe how to install the Clearswift SECURE Exchange Gateway on top of an existing Red Hat Enterprise Linux (RHEL) 6.10 Server (including a suitably configured AWS or Azure instance) using the ISO image.



You should install RHEL 6.10 as a **Minimal** server installation, with a separate `/`(root) and `/var` partition. The root partition should be 20GB (minimum) and `/var` should use a minimum of 60 GB for test environments and 200GB for production environments.

To install the Clearswift SECURE Exchange Gateway:

1. Assume root role at the command line.
2. Insert the media containing the ISO image and mount it onto `/media/os`:

```
mkdir -p /media/os
```

```
mount /dev/cdrom /media/os
```

3. Manually install the `cs-email-repo-conf` package. The `cs-email-repo-conf` package configures your system to be ready for you to install the Clearswift SECURE Exchange Gateway:

```
rpm -ivh /media/os/cs-repo/Packages/cs-email-repo-conf-3.6.3-1.x86_64.rpm
```

4. Forcibly remove postfix, rsyslog and samba V3:

```
yum remove -y postfix rsyslog samba-common
```

5. Install the required product using the following command:

```
yum install -y cs-sxg --enablerepo=cs-*
```

This command enables access to external repositories and ensures that only Clearswift repositories are subsequently used to install the Gateway.



If Step 5 fails due to additional conflicts, you might need to remove additional packages during Step 4.

6. Log out completely, and log back in as `cs-admin`. Refer to [Running the First Boot Console](#) to continue.

## Post installation considerations

After completing the software install process, the install process might have modified the following parts of your system:

1. Firewall configuration is now under Gateway control. If SSH access is required you need to re-enable it through the Clearswift SECURE Exchange Gateway user interface. See [Configuring SSH Access](#) in the Clearswift SECURE Exchange Gateway online help for more information.
2. All network configuration is now under Server Console control. You should avoid changing network configuration at the command line as the Gateway is not notified of these changes. If changing network configuration at the command line is necessary, please contact Clearswift Support for more information.
3. crontab configuration is modified. Pre-existing root cronjobs might be lost, but you can re-add them.

## After a software installation

The software installation process will not automatically disable any of your pre-existing repository configurations. From the command line you will be able to install additional third-party software in the normal way. This includes additional RedHat software.



From version 4.6 onwards, you will only be able to apply Clearswift-provided upgrades using the Clearswift Server Console. Server Console will ensure that only trusted Clearswift repositories are used during the upgrade process and will explicitly block any unintended updates from third-party repositories during the process.

---

## Appendix B: Software install process (from Clearswift online repositories)

---

The following steps describe how to install the Clearswift SECURE Exchange Gateway on top of an existing Red Hat Enterprise Linux (RHEL) 6.10 Server (including a suitably configured AWS or Azure instance) using the repositories hosted online by Clearswift. You will need Internet access to complete this installation.



You should install RHEL 6.10 as a **Minimal** server installation, with a separate `/root` and `/var` partition. The root partition should be 20GB (minimum) and `/var` should use a minimum of 60 GB for test environments and 200GB for production environments.

To install the Clearswift SECURE Exchange Gateway:

1. Assume root role at the command line.



When downloading and installing files, we recommend that you check the downloaded file can be verified against the vendor public key.

2. Download the package:

```
# curl --get --remote-name
http://repo.clearswift.net/rhel6/gw/os/x86_64/Packages/cs-
email-repo-conf-3.6.3-1.x86_64.rpm
```

```
% Total      % Received % Xferd  Average Speed   Time    Time
   Time      Current
Speed
101  5084  101  5084    0     0   702k      0  --:--:--  --:--
--:--  --:--:-- 1654k
```

3. Download and install the Clearswift GPG public key:

```
rpm --import http://repo.clearswift.net/it-pub.key
```

4. Verify that the downloaded `cs-email-repo-conf` package is as expected before it is installed:

```
# rpm --checksig --verbose cs-email-repo-conf-3.6.3-1.x86_
64.rpm
```

```
Header V4 RSA/SHA1 Signature, key ID 5522142c: OK
```

```
Header SHA1 digest: OK
(bd504da4d39883f6f001e058c6e8cc506ea1fddc)
```

```
Header V4 RSA/SHA1 Signature, key ID 5522142c: OK
```

```
Header SHA1 digest: OK
(bd504da4d39883f6f001e058c6e8cc506ea1fddc)
V4 RSA/SHA1 Signature, key ID 5522142c: OK
MD5 digest: OK (77df2321e573ac1d8e57578cf6f91a8c)
```



The numbers shown in the example above may be different to those displayed in the terminal window.

5. Manually install the `cs-email-repo-conf` package. The `cs-email-repo-conf` package configures your system to be ready for you to install the Clearswift SECURE Exchange Gateway.

```
rpm -ivh cs-email-repo-conf-3.6.3-1.x86_64.rpm
```

6. Forcibly remove postfix, rsyslog and samba V3:

```
yum remove -y postfix rsyslog samba-common
```

7. Install the required product using the following command:

```
yum install -y cs-sxg --enablerepo=cs-*
```

This command enables access to external repositories and ensures that only Clearswift repositories are subsequently used to install the Gateway.



If Step 5 fails due to additional conflicts, you might need to remove additional packages during Step 4.

8. Log out completely, and log back in as `cs-admin`. Refer to [Running the First Boot Console](#) to continue.

## Post installation considerations

After completing the software install process, the install process might have modified the following parts of your system:

1. Firewall configuration is now under Gateway control. If SSH access is required you need to re-enable it through the Clearswift SECURE Exchange Gateway user interface. See [Configuring SSH Access](#) in the Clearswift SECURE Exchange Gateway online help for more information.
2. All network configuration is now under Server Console control. You should avoid changing network configuration at the command line as the Gateway is

not notified of these changes. If changing network configuration at the command line is necessary, please contact Clearswift Support for more information.

3. crontab configuration is modified. Pre-existing root cronjobs might be lost, but you can re-add them.

## After a software installation

The software installation process will not automatically disable any of your pre-existing repository configurations. From the command line you will be able to install additional third-party software in the normal way. This includes additional RedHat software.



From version 4.6 onwards, you will only be able to apply Clearswift-provided upgrades using the Clearswift Server Console. Server Console will ensure that only trusted Clearswift repositories are used during the upgrade process and will explicitly block any unintended updates from third-party repositories during the process.

---

## Appendix C: USB installation media preparation

The following steps describe how to copy the Clearswift SECURE Exchange Gateway software ISO image to USB media.

1. Download the Clearswift SECURE Exchange Gateway software ISO image from the [Clearswift download area](#).



Please ensure you are using the correct version of the ISO image: EMAIL\_4110\_4110.iso.

2. Download a USB tool that maintains drive volume name. Clearswift recommends using [Rufus Portable](#).




Do not use the standard version of Rufus for this process. Please ensure it is the portable version.



Although you can use USB tools other than Rufus, the following USB tools will not work with the Clearswift SECURE Exchange Gateway software ISO image:

- YUMI
- Universal USB Installer
- Fedora liveusb-creator

The below steps assume that you are using Rufus 2.11 Portable.

3. Run **rufus-2.11p.exe**.
4. Insert your USB media and select it from the **Device** drop-down menu.
5. Under **Format Options**, select **Create a bootable disk using** and click the disk icon  to choose the Clearswift SECURE Exchange Gateway ISO you want to burn. Once Rufus scans the ISO, it fills in other options automatically.
6. Click **Start**. The **ISOHybrid image detected** dialog box appears. Select **Write in ISO Image mode (Recommended)** and then click **OK**. A dialog box appears to warn you that any existing drive data will be removed. Click **OK** if you are happy to proceed.
7. Return to [Installing the Clearswift SECURE Exchange Gateway](#) to complete the installation process.

---

## Appendix D: How to re-enable TLS v1.0 and update ciphers on the 4.11.0 Gateway

---

The following steps describe how to re-enable TLS v1.0 and update ciphers if they have been affected by prior installation, upgrade or other activities.

1. Search for the **sslEnabledProtocols** attribute in the following files:

```
/opt/tomcat/conf/  
server-bind.xml  
server-bind2.xml
```

2. Change the value of each protocol from 'TLSv1.2' to 'TLSv1,TLSv1.2'.  
There are two instances in server-bind2.xml.
3. Search for the **ciphers** attribute in the same files:

```
/opt/tomcat/conf/
```



```
server-bind.xml
```

```
server-bind2.xml
```

4. Add 'TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA' to the end of the comma separated list in each file.

There are two instances in server-bind2.xml.

5. Restart the UI using the following command:

```
cs-servicecontrol restart tomcat
```

---

## Appendix E: Firewall Ports

---

You might need to open the following ports on your DMZ firewall, depending on your network configuration:

Port	Protocol	Direction	Required for
20	FTP	In/Out	Backup & Restore if using an FTP server located beyond the firewall.
21	FTP	In/Out	Backup & Restore and Transaction Logging if using an FTP server located beyond the firewall.
21	FTPS (exp)	In/Out	Backup & Restore and Transaction Logging.
22	TCP	In	SSH access to the console.
22	SFTP	Out	Backup & Restore, and, server containing lexical data for import
25	TCP	In	Inbound SMTP
25	TCP	Out	Outbound SMTP. If your system uses an alternative port, open that instead.
53	UDP/TCP	Out	DNS requests, if using DNS servers beyond the firewall. Only allow outbound requests to the specified DNS servers, and responses from those servers.
80	TCP	In	HTTP access to the PMM interface (if you are using PMM)
80	TCP	Out	Access to Clearswift product and Operating System updates at <a href="http://repo.clearswift.net">repo.clearswift.net</a> and <a href="http://rh.repo.clearswift.net">rh.repo.clearswift.net</a>
80	TCP	Out	HTTP access to the Sophos, Avira, or Kaspersky Update Servers for fetching anti-virus updates and software upgrades. Sophos update servers: <b><a href="http://sav-update-1.clearswift.net">sav-update-1.clearswift.net</a>, <a href="http://sav-update-2.clearswift.net">sav-update-2.clearswift.net</a>, <a href="http://sav-update-3.clearswift.net">sav-update-3.clearswift.net</a>, <a href="http://sav-update-4.clearswift.net">sav-update-4.clearswift.net</a>, <a href="http://sav-update-5.clearswift.net">sav-update-5.clearswift.net</a>, <a href="http://sav-update-6.clearswift.net">sav-update-6.clearswift.net</a></b>

Port	Protocol	Direction	Required for
			<p>Avira update servers:  <b>aav-update-1.clearswift.net, aav-update-2.clearswift.net, aav-update-3.clearswift.net, aav-update-4.clearswift.net, aav-update-5.clearswift.net, aav-update-6.clearswift.net, *.apc.avira.com</b></p> <p>Kaspersky update servers:  <b>kav-update-8-1.clearswift.net, kav-update-8-2.clearswift.net, kav-update-8-3.clearswift.net, kav-update-8-4.clearswift.net, kav-update-8-5.clearswift.net, kav-update-8-6.clearswift.net</b></p>
80	TCP	Out	HTTP access to the Gateway online help
80	TCP	Out	Access to the Service Availability List: <b>services1.clearswift.net, services2.clearswift.net, services3.clearswift.net</b>
80	TCP	Out	Access to the RSS Feed from <b>www.clearswift.com</b>
123	UDP	In/Out	Access to NTP services, if configured. The following servers are configured by default: <b>0.rhel.pool.ntp.org, 1.rhel.pool.ntp.org, 2.rhel.pool.ntp.org, 3.rhel.pool.ntp.org.</b>
135	TCP	Out	User authentication using NTLM (when using PMM in Full Mode)
137	UDP	Out	User authentication using NTLM (when using PMM in Full Mode)
139	TCP	Out	User authentication using NTLM (when using PMM in Full Mode)
161	UDP	Out	SNMP inbound: the port used by an SNMP browser when scanning the Gateway
162	UDP	Out	SNMP alerts
389	TCP	In/Out	LDAP directory access (if you use LDAP servers beyond the firewall)
389	TCP	In/Out	LDAP Key Server Queries
443	TCP	In/Out	HTTPS access to the Clearswift SECURE Exchange Gateway web interface and for communications between Peer Gateways
443	TCP	In/Out	<p>Kaspersky KSN lookup. (While this is using port 443, the traffic is not standard HTTP/S. Do not try to route through an SSL proxy.) The KSN lookup servers are:  <b>ksn1.kaspersky-labs.com, ksn2.kaspersky-labs.com, ksn3.kaspersky-labs.com, ksn4.kaspersky-labs.com</b></p>

Port	Protocol	Direction	Required for
443	TCP	Out	HTTPS access to the Clearswift Update Server for license management and handling Managed Lexical Expression Lists
443	TCP	In/Out	HTTPS Key Server Queries
445	TCP	Out	User authentication using NTLM (when using PMM in Full Mode)
514	TCP	Out	Access to the central SYSLOG server (log export)
636	TCP	In/Out	Secure LDAP/S directory access
990	FTPS	In/Out	Backup & Restore and Transaction Logging. Also used to connect the Gateway with your server containing lexical data for import
3268	TCP	Out	LDAP connection to an active directory global catalog port (if you are using LDAP servers beyond the firewall)
3269	TCP	In/Out	LDAP and SSL connection to an active directory global catalog port (if you are using LDAP servers beyond the firewall)
11371	TCP	In/Out	HTTPS Key Server Queries
19200	UDP	In/Out	Broadcasting of greylisting data to Peer Gateways

## 7.4 Exchange Server Firewall Ports

The following table lists the ports you might need to open in Windows Firewall on your Exchange Server:

Port	Protocol	Direction	Required for
10443	TCP	Out	HTTPS access to the Clearswift SECURE Exchange Gateway web service.
23953	TCP	In/Out	Communication with other SXG Interceptors.
23955	TCP	In/Out	LDAP access to SXG configuration store.