BLACKDUCK

Installing, Configuring, and Using the Hub Email Extension

Version 1.0.0

This edition of the *Installing, Configuring, and Using the Hub Email Extension* refers to version 1.0.0 of the Black Duck Hub Email Extension.

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Contents

The Black Duck Hub Email Extension runs independently from the Hub and provides additional functionality. It automatically sends email alerts and information that you need to know, based on your preferences.

Triggering events in the Hub generate an email alert. You can select the triggering events based on your personal preferences and workflow needs. Emails are not sent individually or in real-time, but collectively in a digest format. You have the option to receive the email digest on a daily basis.

As a Hub user, the Hub Email Extension enables you to:

- Select the email notifications you want to receive, based on your selected triggering events.
- Opt in or opt out of email notifications.
- Receive daily email digests of triggering event notifications.
- Customize the email template to fit your workflow needs.
- Add your company logo to notification emails.

After installing and configuring the Hub Email Extension, email digests are automatically sent to all users that have opted-in for email notifications. No further user interaction is required. You can change the global configuration as needed, and you can edit your personal preferences at any time.

Setup of the Hub Email Extension consists of two phases:

- Installation
- Configuration

Both phases are detailed in the following sections.

2.1 Installation Prerequisites

Before you install the Hub Email Extensions, ensure that:

- You are running Black Duck Hub version 3.4 or higher.
- You know the host name and port for the Hub server.
- You know the host name and port for your email server.
- You have a user account with administrator privileges on the Hub system.
- You have connectivity to the internet.

2.2 Installing the Hub Email Extension

The Hub Email Extension installer is available as a `.zip` file on the ...... website. Download the .zip file, and then install as follows.

❋ **To download the Hub Email Extension installer:**

1. Navigate to the Git Hub download page at (NOTE: as of 10.17, this page does not yet exist).
2. Download the file `hub-email-extension-1.0.0-SNAPSHOT.zip`.

❋ **To install the Hub Email Extension:**

1. After the file has downloaded, unzip the `.zip` file. The contents are extracted to a folder named `hub-email-extension-v1.0.0`.
2. In the `bin` folder:
   a. Linux: Run the `email.extension.sh` file. Prior to running this shell script, you must give the shell script executable privileges with the `chmod` command; for example, `chmod 755`.
   b. Windows: Using the command line, run the `hub-email-extension.bat` file.
3. In the `config` folder, locate the `extension.properties` file. Open the file in a text editor such as Notepad.
4. In the `extension.properties` file, edit the following properties:

a. `Hub.extension.url`: Enter the IP address of your Hub server and the port number. For example: *http://00.000.0.00:8000*. The default value is 8000, but can be whatever you desire.

b. `Hub.server.timeout = x` (optional), Determine your timeout value, where **x** is the timeout value in seconds. The default value is 120.

c. `hub.email.notifier.variable.dailyDigest.cron.expression`: This is a `cron` job setting in the UTC timezone format that determines the distribution time for the email digest. The default is:

    1. Daily = Daily at 6 AM.
       You can customize the daily distribution time to fit your workflow and preferences. For more information, refer to Cron Reference Information for Hub Extensions on page 13.

d. `Hub.proxy.host` (optional): If you are using a proxy, type in your proxy values.

5. Save and close the `extension.properties` file.

After you have successfully installed the Hub Email Extension, you must authenticate and configure the extension. The steps are:

- Extension authentication
- Hub environment (*global* configuration).
- Individual preferences (*user* configuration).

These procedures are described in the following sections.

Additional configuration options including:

- JavaMail properties
- Using HTTPS with the Hub Email Extension

are also described in the following sections.

3.1 Hub Email Extension Authentication

After installing the Hub Email Extension, you must complete the extension authentication process.

> **Note:** You must have administrator rights to perform authentications.

❋ **To authenticate the Hub Email Extension:**

1. Log in to the Hub as administrator.
2. Click the hamburger menu in the upper left corner, and select **Administration** to open the **Administration** page.
3. On the **Administration** page, click **Extensions**. Note the status message in the green box, stating that the extension has been successfully added to the Hub.
4. In the **Extensions URL** field on the **Extensions** page, type the URL you used in the `Hub.extension.url` field in the `extension.properties` file.

5. Click **Save**.

6. Below the **Extensions URL** field, click the drop-down selector at the right of the email extension entry, and select **Authorize**. This option is only available in the drop-down menu if the extension is installed, but not yet authorized. Note that an authorization status of **No** displays at the right of the extensions table in the **Authenticated** column.

7. In the confirmation box, click **Authorize**. The email extension is now authenticated, and you can complete the global configuration process. Note that an authorization status of **Yes** displays at the right of the extensions table in the **Authenticated** column.

3.2 Hub Email Extension Global Configuration

After you have successfully installed and authenticated the Hub Email Extension, you must configure it for your environment. This is referred to as the *global* configuration. You must have administrator rights to configure the email extension.

> **Note:** If the Hub Email Extension is not running, then the **Hub Email Extension** > **Extension Configuration** section does not display.

✳ **To globally configure and authenticate the Hub Email Extension:**

1. Log in to the Hub.

2. In the hamburger menu on the left, select **Administration**.

3. On the **Administration** page, select **Hub Extensions**.

4. On the **Hub Extensions** page, select **Hub Email Extension**.

5. On the **Hub Email Extension** page in the **Extension Configuration** section, complete the following fields:

Extension Configuration

Mail SMTP Server Host	The SMTP server host to send emails	
Mail SMTP Server Port	The SMTP server port to send emails	
Email From Address	The From address for the email messages that are sent	
Email Reply To Address	The email address to reply to if the user chooses to reply	
Default Subject Line	The default Subject line for all templates if none is specified	
Default Timezone	The default Timezone to use when calculating date ranges to process notification data. Please note if no Timezone is specified then UTC will be used by default.	
Default Logo Image	The template for email rendering	Ducky-80.png

Save

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a. **Mail SMTP Server Host**: Type the URL for your email server. For authenticated SMTP servers, the user name and password must be manually configured in the `extension.properties` file.

b. **Mail SMTP Server Port**: Type the SMTP port number for your email server.

c. **Email From Address**: Type the name which is seen by the email recipient as the email sender.

d. **Email Reply To Address**: Type the email *from* address which is seen by the email recipient. This is used as the reply address if the recipient chooses to reply.

e. **Default Subject Line**: Type the email subject line. It can be helpful to recipients if you specify *Daily* digest in the subject line.

    f. **Default Timezone**: The default timezone used for sending email. For example, if your email server is on the west coast, but your users are located on the east coast, you can specify US Eastern Time as the timezone by which emails are sent. If no timezone is specified, then UTC is used by default. This is based on a Java specification. For more information and the Java API documentation, refer to http://docs.oracle.com/javase/8/docs/api/index.html. For more information and examples of valid timezone strings to use in this field, refer to http://joda-time.sourceforge.net/timezones.html.

    g. **Default Logo Image**(optional): Type the path to the image to be used for your custom logo that appears in emails. If no custom logo is specified, the default logo image is the Black Duck logo. If only a file name is provided, then the system looks to see if the file exists in the `Images` folder of the Hub Email Extension. If the full path for the image is provided, the system verifies that the image file exists at the path specified on the system where the extension is running.

6. Click **Save**.

The default email digest distribution setting is that all users are opted in. Administrator users can edit the `user.configuration.json` file to globally opt all users in or out. Users can configure their personal settings to opt-in or opt-out on an individual basis. For more information, refer to Hub Email Extension User Configuration on page 10.

3.3 Hub Email Extension User Configuration

After you have successfully installed and authenticated the Hub Email Extension, and configured it for your environment, you can configure it according to your personal preferences. This is referred to as the *user* configuration. You can change your personal notification email preferences at any time.

❋ **To configure your user preferences for the Hub Email Extension:**

1. Log in to the Hub.

2. In the username drop-down menu on the right, select **My Profile**.

3. On the **Profile** page, under **Extensions**, click **Email Extension** to open the **Email Extension** page. Note that if the Hub Email Extension is not available, the **Extensions** > **Email Extension** option does not display.

4. On the **Email Extension** page, complete the following steps:

    a. **Opt In / Opt Out**: While the global default is that all users are opted in for email notifications, you can elect to opt out to stop receiving notification emails. Select **Opt In** to receive notification emails; select **Opt Out** to stop receiving notification emails.

    b. **Template Name**: Select the preferred email formatting template for your email digests. The template has no effect on the contents of your notification emails; only the formatting of the information contained within the emails. The values for template names correspond to the template files located in the `Templates` folder in the Hub Email Extension installation location.

    c. **Email Notification Events**: Select the notification events for which your emails are sent.

> Clicking in this field displays a drop-down selector with notification events; click one or more events to select. Selected email notification events display in this field. To remove notification events, click the **X** at the right of the notification event to remove.

5. Click **Save**.

3.4 JavaMail Configuration

The Hub Email Extension supports JavaMail configuration properties. This is achieved by adding properties to the `extension.properties` file beginning with the prefix `hub.email.javamail.config`. This allows an administrator of the extension to configure the full set of JavaMail properties as outlined on the Oracle website:

https://docs.oracle.com/javaee/7/api/javax/mail/package-summary.html

If you are using an authenticated SMTP server, specify the following properties in your `extension.properties` file to configure the user name and password.

- `hub.email.javamail.config.mail.smtp.username=<username>`
- `hub.email.javamail.config.mail.smtp.password=<password>`
- `hub.email.javamail.config.mail.smtp.auth=true`

3.5 HTTPS Configuration

The Hub Email Extension supports SSL communication between the Hub and the extension. The certificate used by the extension must be signed by a certificate authority (CA) that the Hub server recognizes in its keystore for the Hub server to create a Secure Socket Layers (SSL) handshake between the Hub and the extension.

In the `extension.properties` file, the property `hub.extension.url` must contain `https` as the protocol scheme in the URL. For example, `https://localhost:8000`.

Next, the optional SSL parameters in the `extension.properties` file must contain valid values as follows:

- `hub.extension.ssl.keyStorePath` = The full path to the keystore file containing the certificate for the extension.
- `hub.extension.ssl.keyStorePassword` = The password of the keystore containing the certificate.
- `hub.extension.ssl.keyPassword` = The password of the key used in the certificate. Note that if the keystore type is `PKCS12`, then values for the `keyPassword` and the `keyStorePassword` are the same.
- `hub.extension.ssl.keyStoreType` = The type of keystore of the keystore file. For example, `JKS` or `PKCS12`.

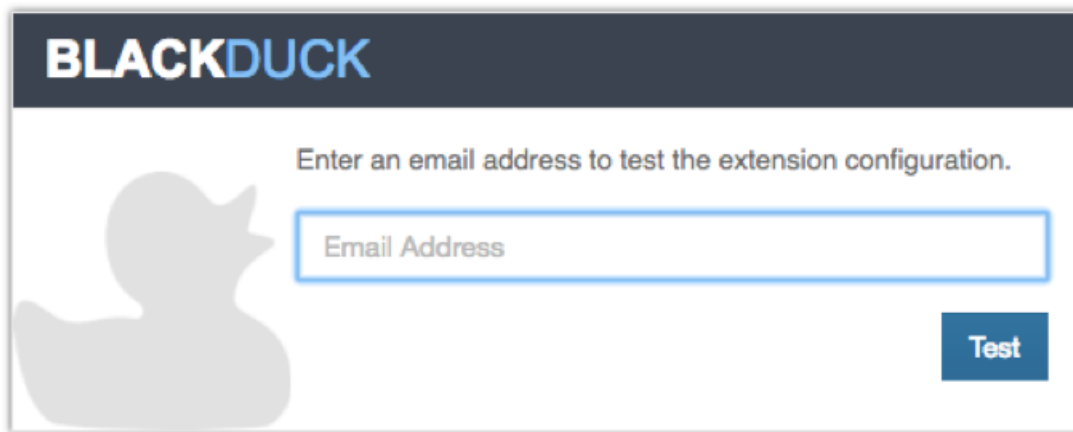For more information, refer to the *Restlet* documentation located at:

https://restlet.com/technical-resources/restlet-framework/guide/2.3/core/security/https

3.6 Testing Your Email Configuration

The Hub Email Extension features a test page that is hosted by the extension. After authorizing and configuring the extension, you can use the test page to verify that your configuration is correct. The test page is accessed using the URL *http://<extension_host_and_port>/extension/test*. For example, *http://mailextension.company.com:8000/extension/test*.

✻ **To test your Hub Email Extension configuration:**

1. The Hub Email Extension can only be accessed after the Hub Email Extension is authorized.

2. In a web browser, type the URL: *http://mailextension.company.com:8000/extension/test*, replacing the *company* and port values as appropriate for your environment.

3. On the test page in the **Email Address** text box, type an email address to which a sample test email is sent. This process retrieves the global configuration options from the Hub configuration of the extension, and then sends an email to the address specified in the text box.

4. Click **Test**.

3.7 Removing the Hub Email Extension

If the Hub Email Extension is no longer required, you can delete it.

✻ **To delete the Hub Email Extension:**

1. Log in to the Hub.

2. In the hamburger menu on the left, select **Administration**.

3. On the **Administration** page, select **Hub Extensions**.

4. On the **Hub Extensions** page, select **Hub Email Extension**.

5. On the **Hub Email Extension** page in **Extension Configuration** > **Extension Details**, click **Delete Extension**.

Extension Details

Description
A Hub Extension to send emails based on notifications.

Extension Url
http://10.1.6.83:8000/extension/info

Delete Extension

Deleting the extension will revoke the extension's authorization to access the Hub as well as any configuration changes that have been made. The extension itself will not be deleted and will continue to run.

🗑 Delete Extension

Note: After removing the Hub Email Extension, the installation and configuration files remain on your system. Therefore, you can reinstall the Hub Email Extension at any time. For more information, refer to Hub Email Extension Installation on page 5.

3.8 Cron Reference Information for Hub Extensions

`cron` is a Unix tool with an established history. Its scheduling capabilities are both powerful and proven. The `CronTrigger` class is based on the scheduling capabilities of `cron`.

`CronTrigger` uses `cron` expressions, which are able to create distribution schedules such as:

- At 5:00 am every day.
- At 1:30 am every Friday.

Although the only option for scheduling the distribution of the email digest is daily, you can configure the time for the distribution. Because the Hub Extensions require `cron` job settings using `cron` expressions and syntax, the following reference websites are provided.

Description	URL
Reference information for the Quartz scheduler used by the Hub.	http://www.quartz-scheduler.org/documentation/quartz-2.x/tutorials/crontrigger.html
A reference of cron expressions.	https://docs.oracle.com/cd/E12058_01/doc/doc.1014/e12030/cron_expressions.htm
A site for building your cron expression.	http://www.cronmaker.com/

If you have questions or find issues, contact Black Duck Software.

For the latest in web-based support, access the Black Duck Software Customer Support Web Site: https://www.blackducksoftware.com/support/contact-support

To access a range of informational resources, services and support, as well as access to Black Duck experts, visit the Black Duck Customer Success portal at: https://www2.blackducksoftware.com/support/customer-success

You can also contact Black Duck Support in the following ways:

- **Email**: support@blackducksoftware.com
- **Phone**: +1 781.891.5100, ext. 5
- **Fax**: +1 781.891.5145
- **Standard working hours**: Monday through Friday 8:00 AM to 8:00 PM EST

Note: Customers on the **Enhanced Customer Support Plan** are able to contact customer support 24 hours a day, 7 days a week to obtain Tier 1 support.

If you are reporting an issue, please include the following information to help us investigate your issue:

- Name and version of the plugin.
- Black Duck product name and version number.
- Third-party integrated product and version; for example, Artifactory, Eclipse, Jenkins, Maven, and others. For Black Duck Hub, only Jenkins, TeamCity, and Bamboo is supported.
- Java version.
- Black Duck KnowledgeBase version, where applicable.
- Operating system and version.
- Source control management system and version.
- If possible, the log files, configuration files, and Project Object Model (POM) XML files.

4.1 Training

Black Duck training courses are available for purchase. Learn more at https://www.blackducksoftware.com/services/training.

View the full catalog of our online offerings: https://www.blackducksoftware.com/academy-catalog.

When you are ready to learn, you can log in or sign up for an account: https://www.blackducksoftware.com/academy.

4.2 Services

If you would like someone to perform Black Duck Software tasks for you, please contact the Black Duck Services group. They offer a full range of services, from planning, to implementation, to analysis. They also offer a variety of training options on all Black Duck products. Refer to https://www.blackducksoftware.com/services/ for more information.