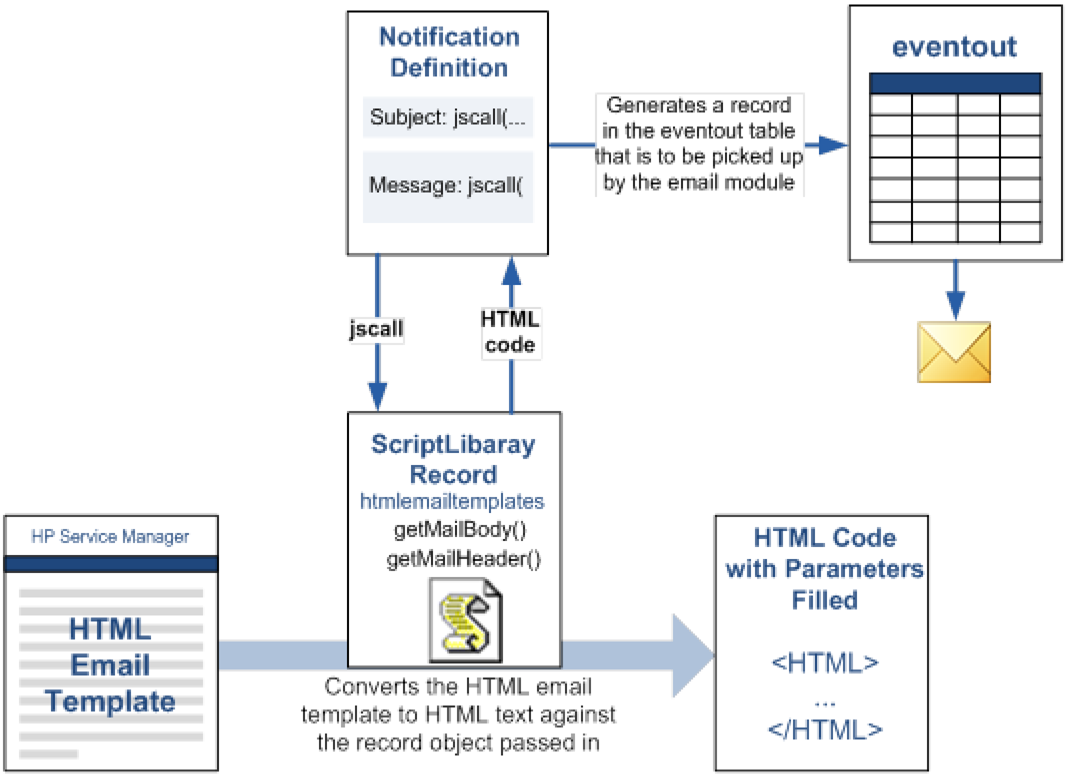
HTML Notification Development - Contents

HTML Notification Development

Components of the solution

The HTML Email Solution uses the following components:

- Notification definitions (in the notifications table)
- HTML templates (in the htmltemplates table)
- JavaScript functions (in the htmlemailtemplate record in the ScriptLibrary)
- The eventout table (available in the existing email notification mechanism)



HTML templates

HTML templates are records saved in the htmltemplates table. Each record defines the common HTML elements that are included in each email message and parameters that are to be replaced with specific values. Each htmltemplates record includes general information, HTML source with parameters, and expressions that are used to evaluate the parameters.

Each HTML template can have multiple language versions. These language versions are defined in separate htmltemplates records with the same name but different language codes, containing localized content. See Localize a template .
Note: To manage or create HTML templates, users must have either the SysAdmin or the HTMLTemplatesAdmin capability word.

Localize a template

To create a language version of an HTML template, follow these steps:

1. Click **Tailoring** > **Notifications** > **HTML Templates**.
2. Use search or advanced search to find the template that you want to localize.

3. On the **General** tab, select a language in the **Language** field for the localized template.
4. Keep the name in the **Name** field as is, because HTML template records with the same name are considered language versions of one template.
5. In the **Mail Title** field, replace the original text with the appropriate translation and make sure all the variables are in the correct positions.
6. On the **HTML Source** tab, replace the original text with the appropriate translation.
7. Click the **Preview** tab to verify that your localized version works as expected.
8. Click **Add** to create the localized template.

Notification definitions

HTML email notifications are also defined in notification records. However, instead of referencing a plain-text message or a predefined format, each HTML email notification record always references a message record with an msg class of HTMLTemp and an id of 1. This message record is only a wrapper. The actual message body and subject are generated by a jscall expression in the **Arguments** field that returns HTML text by evaluating the corresponding HTML template.
The Arguments expression for the message body calls the getMailBody function to obtain the body HTML code, and the Arguments expression for the message subject calls the getMailHeader function to obtain the subject HTML code. The template name and the record that triggers the notification are passed in as arguments.

Below is an example for notification **ChM Change Approval**:
The **Message** tab

Field	Value

Field	Value
Msg Class	HTMLTemplate
Msg No.	1
Arguments	jscall("htmlemailtemplates.getMailBody", "ChM Change Approval Approved", $L.file, $L.file.save, requested.by in $L.file)
Condition	category in $L.file~="Subscription"
Notify Method	email
Recipient(s)	requested.by in $L.file

The **Email/Mail Subject Line** tab

Field	Value
Msg Class	HTMLTemplate
Msg No.	1
Arguments	jscall("htmlemailtemplates.getMailHeader", "ChM Change Approval Approved", $L.file, $L.file.save, requested.by in $L.file)

ScriptLibrary record

Both the getMailBody and getMailHeader functions are defined in an htmlemailtemplates ScriptLibrary record.

getMailBody

The getMailBody function returns the HTML body for the email message that is sent for a specific record. This function takes the following arguments:

Argument	Required	Description
templateName	Yes	Specifies the name of the HTML template.
$RECORD	Yes	Specifies the record that triggers the email notification. This record contains data that is used to construct the email message. Example: $L.file
$RECORDOLD	Yes	Specifies the pre-update version of the record that triggers the email notification. Example: $L.file.save
recipient	No	This argument is reserved. The email message will always be sent to the recipient defined in the notification record.
lang	No	Specifies the language code of a specific language version of the HTML template. This argument is typically used if you always send this notification in a certain language. If this argument is not specified, Service Manager takes the recipient's default language when determining which language version of the HTML template to use. each recipient, Service Manager detects:

		• The language setting in the recipient's contact record. If this does not exist, then • The language setting in the recipient's operator record. If this does not exist, then • The system default language. If the recipient is a distribution group and all its members have the same default language, the common default language is used. If the members of that distribution have different default languages, the system default language is used. Example: de

Note: The **Arguments** field in the notification record takes only RAD expressions. Therefore, the expression must use a jscall function to call the getMailBody function in the ScriptLibrary. A typical expression resembles the following:

```
jscall("HTMLTemplates.getMailBody", "SM Add", $L.file, $L.file.save)
```

getMailHeader

The getMailHeader function returns the subject for the email message that is sent for a specific record. This function takes the following arguments:

Argument	Required	Description
templateName	Yes	Specifies the name of the HTML template.
$RECORD	Yes	Specifies the record that triggers the email notification. This record contains data that is used to construct the email message. Example: $L.file
$RECORDOLD	Yes	Specifies the pre-update version of the record that triggers the email notification. This record contains data that is used to construct the email message. Example: $L.file.save
recipient	No	This argument is reserved. The email message will always be sent to the recipient defined in the notification record.
lang	No	Specifies the language code of a specific language version of the HTML template. This argument is typically used if you always send this notification in a certain language. If this argument is not specified, Service Manager takes the recipient's default language when determining which language version of the HTML template to use. For each recipient, Service Manager detects: The language setting in the recipient's contact record. If this does not exist, then The language setting in the recipient's operator record. If this does not exist, then The system default language. If the recipient is a distribution group and all its members have the same default language, the common default language is used. If the members of that distribution have different default languages, the system default language is used. Example: de

The **Arguments** field in the notification record takes only RAD expressions. Therefore, the expression must use a jscall function to call the getMailHeader function in the ScriptLibrary. A typical expression resembles the following:

jscall("HTMLTemplates.getMailHeader", "SM Add", $L.file, $L.file.save)

Eventout table

A record is created in the eventout table for each email notification. The eventout record remains until it is picked up by the SCEmail agent.

Customizing HTML email notifications

This chapter describes the most typical scenarios of customizing HTML email notifications. Instead of using the out-of-box set of email notifications and templates, your organization is likely to have its own email templates and include its own fields in email messages. For example, a company may include its company logo and follow its own color schemes in email messages.

In most scenarios, you only need to make some minor changes to an out-of-box HTML template, such as changing the formatting of the message body and including some additional fields in the email message. Therefore, you can use the out-of-box HTML template as a basis and create your own HTML templates by copying from that out-of-box template.

Create your own HTML templates

To create a custom HTML template, follow these steps:

1. Click **Tailoring** > **Notifications** > **HTML Templates**.
2. Search for and select an existing HTML template as the base of the new template.

   Example: SM Add

3. On the **General** tab, specify a name for the new template in the **Name** field.
4. Change the **Mail Title** field if necessary.
5. In the **Language** field, select a language for the template.
6. Describe the template in the **Comment** text box.
7. The **Module** and **Test Record** fields combined determine which record is passed in for preview. Select a module in the **Module** field and specify the id of the record in the **Test Record** field.
   Note: The module name is designed to be a general name, it may include multiple tables or refer to nonexistent table. Therefore, not all previews are supported currently.
8. In the text box on the **Expressions** tab, edit the JavaScript code that evaluates the variables that you include in the email message.
   Note: To post certain field values of the record that is passed in, you can add these fields directly in the HTML Source, such as $RECORD.incident_id. However, if you want to add variables computed based on record fields, you must evaluate these variables using JavaScript code on the **Expressions** tab and then post the variables in the HTML Source.
   Only the following simple data types are supported:

   - String
   - Date/Time
   - Logical
   - Number

9. The **HTML Source** tab displays an HTML editor where you can design the message body of your HTML template. You can click **Source** to toggle between the normal view and the source code view. To reference a variable or expression in the message, enclose your variable or expression in braces, such as `{$RECORD.title}`.
10. To generate a preview using the **Module** and **Test Record** fields that you specified in step 7, click the **Preview** tab.
11. Click **Add** to create the new template.

Localize a template

To create a language version of an HTML template, follow these steps:

1. Click **Tailoring** > **Notifications** > **HTML Templates**.
2. Use search or advanced search to find the template that you want to localize.
3. On the **General** tab, select a language in the **Language** field for the localized template.
4. Keep the name in the **Name** field as is, because HTML template records with the same name are considered language versions of one template.
5. In the **Mail Title** field, replace the original text with the appropriate translation and make sure all the variables are in the correct positions.
6. On the **HTML Source** tab, replace the original text with the appropriate translation.
7. Click the **Preview** tab to verify that your localized version works as expected.
8. Click **Add** to create the localized template.

Link an HTML template to a notification

To link an HTML template to a notification, follow these steps:

1. Click **Tailoring** > **Notifications** > **Notifications**.

2. Search for the notification record to which you want to link the HTML template.

3. On the **Message** tab, locate the message with an **Msg Class** of **HTMLTemplate** and an id **Msg No.** of **1**.
4. In the **Arguments** field, replace the second argument of the jscall function with the name of the template that you want to use for this notification.
5. On the **Email/Mail Subject Line** tab, locate the message with an **Msg Class** of **HTMLTemplate** and an id **Msg No.** of **1**.
6. In the **Arguments** field, replace the second argument of the jscall function with the name of the template that you want to use for this notification.
7. Click **Save** to save the changes.

Add commonly used elements in templates

This section describes how to add certain elements that you are likely to include in your email message.

Images

To post images in the message, you must store the images in a location that your email recipients can access and add image tags referencing the corresponding URLs.

Web URL

It is a common practice to include a Web URL in the email message pointing to the corresponding record so that the recipient can follow the link to view the record in a Service Manager web client. You can reference the `web_url` variable that is defined in the expressions of the out-of-box templates.
You can keep one of the following statements and comment out the other one, depending on whether the email message is sent to an ESS user or a regular Web-tier user.

For ESS users:

```
var web_url = lib.urlCreator.getURLFromQuery(file_name,record_query,record_title);
```

For regular Web-tier users:

```
var web_url = lib.urlCreator.getESSURLFromQuery(file_name,record_query,record_title);
```

Disabling individual notification definitions

HTML and non-HTML notifications can coexist. For example, you can:

- Enable all HTML notification definitions and disable their corresponding non-HTML ones
- Enable certain HTML and non-HTML notification definitions

By default, all HTML notification definitions are enabled. You can select to disable individual notification definitions, either non-HTML or HTML.

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Sending HTML email messages manually

In addition to setting up notifications, engineers can manually send HTML email messages for a specific record by using the Notify option when viewing a record.

Send an HTML email message using the Notify option

To send an HTML email message using the Notify option, follow these steps:

1. Open a record.

   Example: Click **Service Desk** > **Search Interaction Records** to search for an interaction record.

2. From the **More Actions** menu, click **Notify**.
3. To send this message to individuals, specify the names of the recipients in the **To** field. To send this message to a distribution group, specify the name of the distribution group in the **Group** field.
4. Leave the **Type** field as **Email**.
5. If multiple language versions of the associated HTML template are available, select a language in the **Language** field to indicate which language version of the template you want to use to send the email message.
6. The **Subject** field displays the default subject text that is generated based on the HTML template associated with your current record type. You can modify the subject as appropriate.
7. The message body area displays the default message body that is generated based on the HTML template associated with your current record type. You can edit the message body as appropriate. You can click **Source** to toggle between the normal view and the source code view.
8. Click **Send** to send the message.

HTML templates used by the Notify option

The Notify option selects an appropriate HTML template to generate the default subject and message body, depending on the type of the record from which you launch the Notify option.

The following table lists the HTML templates that the Notify option uses to generate email messages:

Module	Record type	Template
Service Desk	Interaction records (incidents)	SD.incident.notify
Incident Management	Incident records (probsummary)	IM.update.incident
Change Management	Change records (cm3r)	The templates named after the Default and Close views of the Change Phase Record (on the **Scripts/Views** tab of each Change Phase record). **Note:** If the out-of-box Default and Close views have the same name, only one HTML template is used. For example, for change records in the Change Review phase, the **CM.change.review** HTML template is used. If you have modified the out-of-box view settings of a Change Phase record, you need to create one or two (depending on whether the Default and Close views have the same name) HTML templates named after your customized names of the Default and Close views.
Change Management	Change task records (cm3t)	The templates named after the Default and Close views of the Task Phase record (on the **Scripts/Views** tab of each Task Phase record). **Note:** If the out-of-box Default and Close views have the same name, only one HTML template is used. For example, for change task records in the Software phase, the **CM.change.review** HTML template is used. If you have modified the out-of-box view settings of a Task Phase record, you need to create one or two (depending on whether the Default and Close views have the same name) HTML templates named after your customized names of the Default and Close views.

Reference for Out-of-Box HTML email templates

The follow table lists the out-of box HTML email templates.

Module	Template name
Change Management	ChM Change Approval Approved

Change Management	ChM Change Approval Pending
Change Management	ChM Change Close
Change Management	ChM Change Close2
Change Management	ChM Change Denial
Change Management	ChM Change Move
Change Management	ChM Change Open
Change Management	ChM Change Open Subscriptions
Change Management	ChM Change Open2
Change Management	ChM Change Pending
Change Management	ChM Change Retract
Change Management	ChM Change Subscription Approved
Change Management	ChM Change Subscription Close
Change Management	ChM Change Subscription Denied
Change Management	ChM Change Subscription Open
Change Management	ChM Change Subscription Retract
Change Management	ChM Change Update
Change Management	ChM Change Update Reassigned
Change Management	ChM Change Update Returned
Change Management	ChM Change Update Returned2
Change Management	ChM Change Update Subscriptions
Change Management	ChM Final Approval
Change Management	ChM Final Denial
Change Management	ChM not assigned
Change Management	ChM notice
Change Management	ChM Retract All
Change Management	ChM Retract One
Change Management	ChM SLA.alert
Change Management	ChM SLA.max
Change Management	ChM SLA.target
Change Management	ChM Task Approval
Change Management	ChM Task Close
Change Management	ChM Task Denial

Change Management	ChM Task Not Approved
Change Management	ChM Task not assigned
Change Management	ChM Task notice
Change Management	ChM Task Open
Change Management	ChM Task Pending
Change Management	ChM Task Pending Approval
Change Management	ChM Task Retract
Change Management	ChM Task Update
Change Management	CM.change.logging
Change Management	CM.task
Incident Management	IM Alert Reassign
Incident Management	IM Close
Incident Management	IM Open
Incident Management	IM Reopen
Incident Management	IM Resolved
Incident Management	IM.update.incident
Incident Management	IM Update
Service Desk	Contacts Details
Service Desk	Interaction Preview
Service Desk	SD.incident.notify
Service Desk	SM Add
Service Desk	SM Add ESS
Service Desk	SM Close
Service Desk	SM Escalate
Service Desk	SM Update

Email setup notes

This solution requires that you have an email infrastructure in place, including a properly configured SMTP server and configurations in some HP Service Manager files.

Sm.ini configurations

Open the sm.ini file using a text editor and verify that the following parameters are correctly configured.

Parameter	Description
querysecurity:1	Enforces the HP Service Manager server to require a security hash with Web tier URL queries.

queryhashcode:hostname:port	Enables all Service Manager processes to consistently generate a unique hash code, which can be accepted and properly decoded by the Web tier. The parameter value must be a combination of the Service Manager hostname and communications port. If you provide the fully qualified domain name (FQDN) of a server host in web.xml, you need to provide the same value in this parameter. **Example:** `queryhashcode:smserverhost:13080`
smtphost:smtpserverhost	Specifies the name of the SMTP server host for client requests. The value for the parameter can be the IP address, machine name, or DNS name of the SMTP server uses for sending notifications. **Example:** `smtphost:smtpserverhost`
smtpport:port	Specifies the communications port the SMTP server uses. **Example:** `smtpport:25`
mailFrom:EmailAddress	Specifies the descriptive name or other identifier of the sender of an e-mail. This parameter should be set in the format of email address. **Example:** `mailFrom:accountname@hp.com`

Web.xml configuration

Open the web.xml file that is located in the $TOMCAT_HOME\webapps\webtier-9.40\WEB-INF folder using a text editor, and add the following text at the end of the file if it does not exist.

```
<init-param>
<param-name>querySecurity</param-name>
<param-value>true</param-value>
</init-param>
```

When this parameter is enabled, the HP Service Manager Web tier embeds a security key in all queries generated by the Web client. The Service Manager server verifies the security key and, if valid, authorizes the query.