Email Notification of Ticket Changes

Error: Macro TracGuideToc(None) failed

```
'NoneType' object has no attribute 'find'
```

Trac supports notification of ticket changes via email.

Email notification is useful to keep users up-to-date on tickets of interest, and also provides a convenient way to post all ticket changes to a dedicated mailing list.

Disabled by default, notification can be activated and configured in trac.ini.

Receiving Notification Mails

When reporting a new ticket or adding a comment, enter a valid email address or your Trac username in the *reporter*, *assigned to/owner* or *cc* field. Trac will automatically send you an email when changes are made to the ticket, depending on how notification is configured.

How to use your username to receive notification mails

To receive notification mails, you can either enter a full email address or your Trac username. To get notified with a simple username or login, you need to specify a valid email address in your preferences.

Alternatively, a default domain name (**smtp_default_domain**) can be set in the Trac Ini file, see Configuration Options below. In this case, the default domain will be appended to the username, which can be useful for an "Intranet" kind of installation.

When using apache and mod_kerb for authentication against Kerberos / Active Directory, usernames take the form (**username@EXAMPLE.LOCAL**). To avoid this being interpreted as an email address, add the Kerberos domain to (**ignore_domains**).

Ticket attachment notifications

Since 1.0.3 Trac will send notifications when a ticket attachment is added or deleted. Usually attachment notifications will be enabled in an environment by default. To disable the attachment notifications for an environment the `TicketAttachmentNotifier` component must be disabled:

```
[components]
trac.ticket.notification.TicketAttachmentNotifier = disabled
```

Configuring SMTP Notification

Important: The [trac] base_url option must be configured for links in the notification message to be correctly generated.

Configuration Options

These are the available options for the `[notification]` section in trac.ini:

[notification]

admit_domains	Comma-separated list of domains that should be considered as valid for email addresses (such as localdomain).	(no default)
ambiguous_char_width	Width of ambiguous characters that should be used in the table of the notification mail. If `single`, the same width as characters in US-ASCII. This is expected by most users. If `double`, twice the width of US-ASCII characters. This is expected by CJK users. (*since 0.12.2*)	single
batch_subject_template	Like `ticket_subject_template` but for batch modifications. (*since 1.0*)	${prefix} Batch modify: ${tickets_descr}
default_format.email	Default format to distribute email notifications.	text/plain
email_address_resolvers	Comma separated list of email resolver components in the order they will be called. If an email address is resolved, the remaining resolvers will not be called.	SessionEmailResolver
email_sender	Name of the component implementing `IEmailSender`. This component is used by the notification system to send emails. Trac currently provides `SmtpEmailSender` for connecting to an SMTP server, and `SendmailEmailSender` for running a `sendmail`-compatible executable. (*since 0.12*)	SmtpEmailSender
ignore_domains	Comma-separated list of domains that should not be considered part of email addresses (for usernames with Kerberos domains).	(no default)
message_id_hash	Hash algorithm to create unique Message-ID header. *(since 1.0.13)*	md5
mime_encoding	Specifies the MIME encoding scheme for emails. Supported values are: `none`, the default value which uses 7-bit encoding if the text is plain ASCII or 8-bit otherwise. `base64`, which works with any kind of content but may cause some issues with touchy anti-spam/anti-virus engine. `qp` or `quoted-printable`, which works best for european languages (more compact than base64) if 8-bit encoding cannot be used.	none
sendmail_path	Path to the sendmail executable. The sendmail program must accept the `-i` and `-f` options.	sendmail

	(*since 0.12*)	
smtp_always_bcc	Comma-separated list of email addresses to always send notifications to. Addresses are not public (Bcc:).	(no default)
smtp_always_cc	Comma-separated list of email addresses to always send notifications to. Addresses can be seen by all recipients (Cc:).	(no default)
smtp_default_domain	Default host/domain to append to addresses that do not specify one. Fully qualified addresses are not modified. The default domain is appended to all username/login for which an email address cannot be found in the user settings.	(no default)
smtp_enabled	Enable email notification.	disabled
smtp_from	Sender address to use in notification emails. At least one of `smtp_from` and `smtp_replyto` must be set, otherwise Trac refuses to send notification mails.	trac@localhost
smtp_from_author	Use the author of the change as the sender in notification emails (e.g. reporter of a new ticket, author of a comment). If the author hasn't set an email address, `smtp_from` and `smtp_from_name` are used instead. (*since 1.0*)	disabled
smtp_from_name	Sender name to use in notification emails.	(no default)
smtp_password	Password for authenticating with SMTP server.	(no default)
smtp_port	SMTP server port to use for email notification.	25
smtp_replyto	Reply-To address to use in notification emails. At least one of `smtp_from` and `smtp_replyto` must be set, otherwise Trac refuses to send notification mails.	trac@localhost
smtp_server	SMTP server hostname to use for email notifications.	localhost
smtp_subject_prefix	Text to prepend to subject line of notification emails. If the setting is not defined, then `[$project_name]` is used as the prefix. If no prefix is desired, then specifying an empty option will disable it.	__default__
smtp_user	Username for authenticating with SMTP server.	(no default)
ticket_subject_template	A Genshi text template snippet used to get the notification subject. The template variables are documented on the TracNotification page.	${prefix} #${ticket.id}: ${summary}
use_public_cc		disabled

[notification]

	Addresses in the To and Cc fields are visible to all recipients.	
	If this option is disabled, recipients are put in the Bcc list.	
	Permit email address without a host/domain (i.e. username only).	
use_short_addr	The SMTP server should accept those addresses, and either append a FQDN or use local delivery. See also smtp_default_domain. Do not use this option with a public SMTP server.	disabled
use_tls	Use SSL/TLS to send notifications over SMTP.	disabled

Example Configuration (SMTP)

```
[notification]
smtp_enabled = true
smtp_server = mail.example.com
smtp_from = notifier@example.com
smtp_replyto = myproj@projects.example.com
smtp_always_cc = ticketmaster@example.com, theboss+myproj@example.com
```

Example Configuration (`sendmail`)

```
[notification]
smtp_enabled = true
email_sender = SendmailEmailSender
sendmail_path = /usr/sbin/sendmail
smtp_from = notifier@example.com
smtp_replyto = myproj@projects.example.com
smtp_always_cc = ticketmaster@example.com, theboss+myproj@example.com
```

Subscriber Configuration

The default subscriptions are configured in the [notification-subscriber] section.

`[notification-subscriber]`

The notifications subscriptions are controlled by plugins. All INotificationSubscriber components are in charge. These components may allow to be configured via this section in the trac.ini file.

See Trac Notification for more details.

Available subscribers:

Subscriber	Description
AlwaysEmailSubscriber	
CarbonCopySubscriber	Ticket that I'm listed in the CC field is modified
NewTicketSubscriber	Any ticket is created
TicketOwnerSubscriber	Ticket that I own is created or modified
TicketPreviousUpdatersSubscriber	Ticket that I previously updated is modified

Subscriber	Description
`TicketReporterSubscriber`	Ticket that I reported is modified
`TicketUpdaterSubscriber`	I update a ticket

Each user can override these defaults in their *Notifications* preferences.

For example to unsubscribe from notifications for one's own changes and comments, the rule "Never notify: I update a ticket" should be added above other subscription rules.

The subscription rule name on the left side of the = can be anything, it has no meaning outside this configuration file. The subscriber name on the right side of the = must be one of the subscribers listed in the above table.

The following attributes of default subscriptions can be configured:

- `.distributor` (Default: `email`)
    - ♦ Other values require plugins. For example `on-site` requires th:OnSiteNotificationsPlugin.
- `.priority` (Default: `100`)
    - ♦ Smaller values override larger values.
    - ♦ If you use `0`, then users will not be able to override this rule.
- `.adverb` (Default: `always`)
    - ♦ `never` can be used to silence other subscription rules with higher values.
- `.format` (Default: `text/plain`)
    - ♦ Other values require plugins. For example `text/html` requires th:TracHtmlNotificationPlugin.

Example Configuration (default subscriptions)

```
[notification-subscriber]
always_notify_owner = TicketOwnerSubscriber
always_notify_owner.distributor = email
always_notify_owner.priority = 100
always_notify_owner.adverb = always
always_notify_owner.format = text/plain

always_notify_previous_updater = TicketPreviousUpdatersSubscriber

never_notify_updater = TicketUpdaterSubscriber
never_notify_updater.adverb = never
never_notify_updater.priority = 0

notify_cc_html = CarbonCopySubscriber
notify_cc_html.format = text/html
```

Customizing the e-mail subject

The e-mail subject can be customized with the `ticket_subject_template` option, which contains a ?Genshi text template snippet. The default value is:

```
${prefix} #${ticket.id}: ${summary}
```

The following variables are available in the template:

- `env`: The project environment object (see ?env.py).
- `prefix`: The prefix defined in `smtp_subject_prefix`.
- `summary`: The ticket summary, with the old value if the summary was edited.

- `ticket`: The ticket model object (see ?model.py). Individual ticket fields can be accessed by appending the field name separated by a dot, eg `${ticket.milestone}`.

Customizing the e-mail content

The notification e-mail content is generated based on `ticket_notify_email.txt` in `trac/ticket/templates`. You can add your own version of this template by adding a `ticket_notify_email.txt` to the templates directory of your environment. The default is:

```
$ticket_body_hdr
$ticket_props
{% choose ticket.new %}\
{%   when True %}\
$ticket.description
{%   end %}\
{%   otherwise %}\
{%     if changes_body %}\
${_('Changes (by %(author)s:', author=change.author)}

$changes_body
{%     end %}\
{%     if changes_descr %}\
{%       if not changes_body and not change.comment and change.author %}\
${_('Description changed by %(author)s:', author=change.author)}
{%       end %}\
$changes_descr
--
{%     end %}\
{%     if change.comment %}\

${_('Comment:') if changes_body else _('Comment (by %(author)s:', author=change.author)}

$change.comment
{%     end %}\
{%   end %}\
{% end %}\

${'-- '}
${_('Ticket URL: <%(link)s>', link=ticket.link)}
$project.name <${project.url or abs_href()}>
$project.descr
```

See the ?cookbook for additional template customization recipes.

Sample Email

```
#42: testing
--------------------------+------------------------------------------------
        Id:  42           |      Status:  assigned
 Component:  report system |    Modified:  Fri Apr  9 00:04:31 2004
  Severity:  major         |   Milestone:  0.9
  Priority:  lowest        |     Version:  0.6
     Owner:  anonymous     |    Reporter:  jonas@example.com
--------------------------+------------------------------------------------
Changes:
  * component:  changeset view => search system
  * priority:  low => highest
  * owner:  jonas => anonymous
  * cc:  daniel@example.com =>
         daniel@example.com, jonas@example.com
  * status:  new => assigned
```

```
        Comment:
        I'm interested too!

        --
        Ticket URL: <http://example.com/trac/ticket/42>
        My Project <http://myproj.example.com/>
```

Using GMail as the SMTP relay host

Use the following configuration snippet:

```
        [notification]
        smtp_enabled = true
        use_tls = true
        mime_encoding = base64
        smtp_server = smtp.gmail.com
        smtp_port = 587
        smtp_user = user
        smtp_password = password
```

where *user* and *password* match an existing GMail account, ie the ones you use to log in on ?http://gmail.com.

Alternatively, you can use `smtp_port = 25`.
You should not use `smtp_port = 465`. Doing so may deadlock your ticket submission. Port 465 is reserved for the SMTPS protocol, which is not supported by Trac. See ?#7107 for details.

Troubleshooting

If notifications are not working, inspect the log for error messages.

Notification errors are not always reported through the web interface, so the user who submits a change or creates a ticket may not get notified about a notification failure. The Trac administrator needs to look at the log to find the error message and traceback.

Permission denied error

Typical error message:

```
      ...
     File ".../smtplib.py", line 303, in connect
       raise socket.error, msg
     error: (13, 'Permission denied')
```

This error usually comes from a security settings on the server: many Linux distributions do not allow the web server (Apache, ...) to post email messages to the local SMTP server.

Many users get confused when their manual attempts to contact the SMTP server succeed:

```
        telnet localhost 25
```

This is because a regular user may connect to the SMTP server, but the web server cannot:

```
        sudo -u www-data telnet localhost 25
```

In such a case, you need to configure your server so that the web server is authorized to post to the SMTP server. The actual settings depend on your Linux distribution and current security policy. You may find help in the Trac

?MailingList archive.

Relevant ML threads:

- SELinux: ?http://article.gmane.org/gmane.comp.version-control.subversion.trac.general/7518

For SELinux in Fedora 10:

```
$ setsebool -P httpd_can_sendmail 1
```

Suspected spam error

Some SMTP servers may reject the notification email sent by Trac.

The default Trac configuration uses Base64 encoding to send emails to the recipients. The whole body of the email is encoded, which sometimes trigger *false positive* spam detection on sensitive email servers. In such an event, change the default encoding to "quoted-printable" using the `mime_encoding` option.

Quoted printable encoding works better with languages that use one of the Latin charsets. For Asian charsets, stick with the Base64 encoding.

See also: Trac Tickets, Trac Ini, Trac Guide, ?TracDev/NotificationApi