



~~*

Mail Policy

memo

v0

~~*

*We are all travelling through space and time,
Earth is our spaceship*

~~*

Save a tree! Don't print

INTRODUCTION

=====

This memo IS NOT a roadmap.

It is just a draft to formalize what i have observed while developping my plugin MailPress during the last 11 years and particularly around how mail is handled in WordPress core.

In this document, all reference to WordPress code is based on WordPress 5.1

COMMUNICATION

=====

* Logo

I designed a logo (see cover) to summarize WP approach about mails and functions around mails. (just kidding!)

* Dashicons

There are dashicons related to mails as listed in ([github](#)).



email.svg



email-alt.svg



email-alt2.svg

I propose 3 other icons



at.svg



stamped.svg



onepenny.svg

DEFINITIONS

=====

A message is initiated by a transmitter, carried by a media to a receiver.
Air is a media that conveys sound.

A mail is a message.

* mail (Merriam-Webster)

1 : *chiefly Scotland* : bag, wallet

2a : material (such as letters and packages) sent or carried in a postal system sorting through the mail also : similar material distributed within an organization interoffice mail

2b : a conveyance that transports mail

* e-mail (Merriam-Webster)

1 : a means or system for transmitting messages electronically (as between computers on a network) communicating by e-mail

2a : messages sent and received electronically through an e-mail system receives a lot of e-mail

2b : an e-mail message sent him an e-mail

An e-mail is not an email address.

* e-mail address (see [wikipedia](#))

ANALYSIS

=====

To make some analogy between a mail and an electronic mail :

* mail

A mail is a letter made of an envelope and optionally a content.

On the envelope, on the recto, you have the recipient address ('To').
On the verso, you can find a return address ('Return-Path').
There might be a stamp that is or will be obliterated with a date. Let's call it 'Date' and maybe a place (the local post office).

Inside the envelope, unless the envelope is empty, you will find a content. We suppose this is a standard business letter.
In the head of the letter, you might find :
Who is writing to the recipient ('From')
The subject of the letter ('Subject')
And the message (content)
Usually at the end of the message, the letter is signed.

There might be some other documents in the envelope.

* e-mail

To make it short, this is not that much different.
The electronic mail is made of

- headers

some are mandatory (Subject, From, To, ...) others are optional (Cc [for carbon copy], Bcc [for Blind cc], Return-Path, Electronic signature such as DKIM, ...)

In an electronic mail, you can send to multiple recipients with the To, Cc and Bcc headers.

- content parts

. text/plain : commonly called plaintext
. text/html : commonly called html. This is a basic html page with a head and a body, without javascript, some styling ... you know what, the core business of wordpress is to build html pages for the front-end !
. and other contents such as images, files, etc ...

* Time to send the mail ...

The sender will put the mail in a post box, the postman (the messenger) will collect it, machines will obliterate it, read the zipcode, sort it, will mobilize a huge network of postmen - and route it to the nearest post office of the recipient. Last step is the mailman putting it into the recipient mailbox. Just imagine the logistics that is mobilized, for the price of a stamp.

Electronic mails have their post box, it is called a SMTP server (Simple Mail Transfer Protocol). The mail is routed through the internet, before

reaching the nearest post office (recipient SMTP server), before it arrives into the recipient inbox. To collect and open the message and view its content, a specific software or web service is required. It will scan your inbox using another protocol (POP3 for Post Office Protocol!). The software or web service will then render the message to make it humanly readable.

* processes

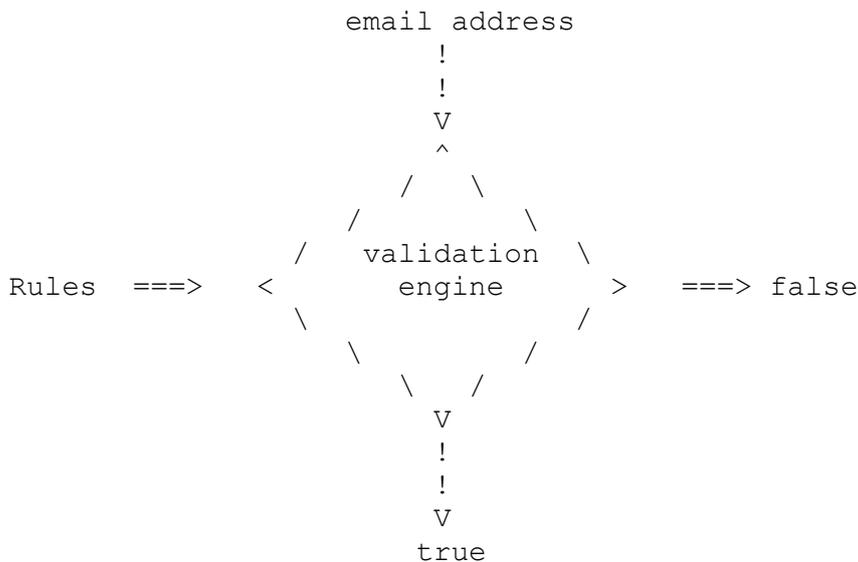
The processes attached to a mail are : Collect address, Validate address, Store address, Write message, Enclose Message, Present Message (to messenger), Route message (to recipient), Deliver message, Process message.

PROCESSES
=====

* Collect address

Before sending a mail, the recipient address has to be collected.

* Validate address



It is important to store a valid address for a recipient, to avoid useless processing. A message sent with a wrong or obsolete address will return the message to the sender or the return address.

For a letter, the usual informations or data required are name, address, zip code of the recipient.

The structure of an e-mail address and its validation, as described in wikipedia, has evolved thru time (RFC's from 1982 to 2013).

For an e-mail, a specific mail enclosing the original mail is sent to the sender (From) or the return address (Return-Path).

This mail is called bounce . The format of a bounce is not standardized.

* Store address

Addresses are stored for future use.

* Write message

```
event (To, ... data)
!
V
*~~~~~*
!      !
!      subject      !
!      !
!      !
!      !
!      !
*~~~~~*
!
V
message
```

* Enclose message

```
message
!
V
*~~~~~*
!      !
!      !
!      !
!      !
!      !
*~~~~~*
!
V
message ready for presentation
```

* Present Message (to messenger)

```
message ready for presentation
!
V
*~~~~~*
!      !
!      MESSENGER      !
!      !
!      !
!      !
*~~~~~*
!
V
message ready for routing
```


IN WORDPRESS

=====

* Collect address

WP collects e-mail addresses when

- registering a user (admin, editor, author, contributor, subscriber)
- a visitor website comments a post

* Validate address ([is_email\(\)](#))

`is_email()` is not pluggable.

- In Trac, when searching for "is_email" (92 results)

- . 76 tickets are listed,
- . 37 tickets seems relevant,
- . 22 are closed (5 fixed)
- . 15 are opened (8 reopened on [2019/02/28](#))

- In Core => `is_email()` :

. defined at:

`/wp-includes/formatting.php` -> line 3244

. referenced 26 times:

`/wp-admin/install.php` -> line 376
`/wp-includes/rest-api.php` -> line 1199
`/wp-includes/user.php` -> line 228
`/wp-includes/user.php` -> line 2459
`/wp-includes/user.php` -> line 2733
`/wp-includes/user.php` -> line 3316
`/wp-admin/includes/user.php` -> line 202
`/wp-admin/includes/user.php` -> line 700
`/wp-admin/includes/schema.php` -> line 999
`/wp-admin/user-edit.php` -> line 154
`/wp-admin/network/site-new.php` -> line 93
`/wp-includes/class-wp-xmlrpc-server.php` -> line 3867
`/wp-mail.php` -> line 133
`/wp-includes/ms-deprecated.php` -> line 171
`/wp-includes/ms-deprecated.php` -> line 172
`/wp-includes/ms-deprecated.php` -> line 343
`/wp-admin/includes/misc.php` -> line 1231
`/wp-includes/formatting.php` -> line 4463
`/wp-includes/ms-functions.php` -> line 479
`/wp-includes/ms-functions.php` -> line 1366
`/wp-includes/ms-functions.php` -> line 1423
`/wp-includes/ms-functions.php` -> line 2657
`/wp-includes/comment.php` -> line 3259
`/wp-admin/includes/file.php` -> line 2019
`/wp-admin/includes/ajax-actions.php` -> line 4468
`/wp-admin/includes/ajax-actions.php` -> line 4651

- In the Code (*truth is in the code used to say one of my boss*) :

```
. comments
```

```
* Verifies that an email is valid.  
* Does not grok il8n domains. Not RFC compliant.  
* @since 0.71
```

As long as `is_email()` do not complies with any RFC rules, it CANNOT validate an email address.

```
. hooks
```

```
apply_filters
```

there is only one filter in this function : 'is_email'
It is called 9 times :

Func	File	Line#	4th parm
apply_filters	formatting.php	3275	email_too_short
		3281	email_no_at
		3291	local_invalid_chars
		3298	domain_period_sequence
		3304	domain_period_limits
		3313	domain_no_periods
		3321	sub_hyphen_limits
		3327	sub_invalid_chars
		3333	null

obviously such a code structure is implemented to manage specific error messages (which btw, wordpress core do not use).

* Store address

WP stores collected e-mail addresses

- in users table, column `user_email` (registering a user)
- in comments table, column `comment_author_email`

(a visitor website comments a post)

e-mail addresses are also stored in

- options table (option name : `admin_email`, `mailserver_login`, `new_admin_email`) (*to be checked by core privacy eraser ?*)

* Write message

All mails issued by WP are plaintext, an environmental friendly choice (less bandwidth, less workload, less space disk. (see also [#13488](#) 2010-05-22))

Mails have been developed at different times of WordPress life. They are not all built with the same code approach. Not all of them can be customized.

- Pluggable : 10 (easy customization).
- In between :
 - . `apply_filters` included in `sprintf` (wpmu legacy),

- . apply_filters for content and optionally subject with some data,
- . apply_filters array with (to, subject, message, headers).
- No filters : 6 (no customization).

see annex I

* Enclose message ([wp_mail\(\)](#))

wp_mail() is pluggable.

This function accepts 5 arguments :

- . to (mixed | string or array),
- . subject (string),
- . message (string),
- . headers (optional, string),
- . attachments (optional, array)

- On Trac, when searching for "wp_mail" (253 results).

- In Core => wp_mail() :

. defined at:

/wp-includes/pluggable.php -> line 145

. referenced 29 times:

/wp-includes/user.php -> line [2011](#)
/wp-includes/user.php -> line [2070](#)
/wp-includes/user.php -> line [2815](#)
/wp-includes/user.php -> line [3117](#)
/wp-includes/user.php -> line [3254](#)
/wp-includes/user.php -> line [3509](#)
/wp-admin/user-new.php -> line [125](#)
/wp-login.php -> line [422](#)
/wp-admin/ms-delete-site.php -> line [81](#)
/wp-includes/functions.php -> line [6526](#)
/wp-includes/pluggable.php -> line [1637](#)
/wp-includes/pluggable.php -> line [1808](#)
/wp-includes/pluggable.php -> line [1863](#)
/wp-includes/pluggable.php -> line [1945](#)
/wp-includes/pluggable.php -> line [2011](#)
/wp-admin/includes/upgrade.php -> line [611](#)
/wp-admin/network/site-new.php -> line [145](#)
/wp-admin/includes/misc.php -> line [1294](#)
/wp-includes/ms-functions.php -> line [987](#)
/wp-includes/ms-functions.php -> line [1092](#)
/wp-includes/ms-functions.php -> line [1401](#)
/wp-includes/ms-functions.php -> line [1453](#)
/wp-includes/ms-functions.php -> line [1611](#)
/wp-includes/ms-functions.php -> line [1702](#)
/wp-includes/ms-functions.php -> line [2719](#)
/wp-includes/ms-functions.php -> line [2814](#)
/wp-admin/includes/file.php -> line [2247](#)
/wp-admin/includes/class-wp-automatic-updater.php -> line [816](#)
/wp-admin/includes/class-wp-automatic-updater.php -> line [987](#)

- In the Code :

```
. comments
```

```
* Send mail, similar to PHP's mail
```

Wrong, wp_mail() is just an interface to PHP mail().
PHP mail() function is called in PHPMailer class.

```
. hooks
```

```
apply_filters
```

```
.. 'wp_mail'
```

Func	File	Line#	Call
apply_filters	pluggable.php	186	
add_filter	default-filters.php	232	wp_staticize_emoji_for_email

- 5 arguments in an array.

- In WP core there is only text/plain content. There is no need to convert text emojis in images. If html content is created, it is thru plugins. It is then the decision of the plugin developer to convert emojis, not WP. For me, this is a **BUG** !

```
.. 'wp_mail_from'
```

- string

- default is 'wordpress@' . \$sitename can only be set by filtering headers. For process like privacy, there might be a need for customization for specific mails (legal team or dpo address and eventually a dedicated Return-Path).

```
.. 'wp_mail_from_name'
```

- string

- default is 'WordPress' can only be set by filtering headers. For process like privacy, there might be a need for customization for specific mails (designation of legal team or dpo).

```
.. 'wp_mail_content_type'
```

Func	File	Line#	Called by
apply_filters	formatting.php	5711	wp_staticize_emoji_for_email
	pluggable.php	431	

- string

- default is 'text/plain'/ can only be set by filtering headers or can be modified

- wp_staticize_emoji_for_email() is also using this filter and may force the content-type in headers which is far beyond its purpose.

For me, this is a **BUG** !

```
.. 'wp_mail_charset'
```

- string

- default is get_bloginfo('charset')/ can only be set by filtering headers

do_action

.. 'wp_mail_failed'

Func	File	Line#
do_action	pluggable.php	366
	pluggable.php	502

- object (WP_Error)

* Present Message

WP is using PHPMailer version 5.2.22 (PHP 5 required)
Current PHPMailer version on github is 6.0.7 (PHP 5.5 required)

The ultimate interface to the SMTP server can be :

. class [SMTP](#), referring to [RFC821](#) (Aug 1982). see hooks hereunder.
Apparently no support to SMTPUTF8 ([RFC6531](#) Feb 2012).

. [mail\(\)](#) php function. Connection parameters are located in php.ini
(out of WP). As far as i remember, in the first versions of wp_mail(), this
function was used directly (no PHPMailer at that time).

This php function is referenced 3 times in PHPMailer :

- [/wp-includes/class-phpmailer.php](#) -> line 698
- [/wp-includes/class-phpmailer.php](#) -> line 700
- [/wp-includes/class-phpmailer.php](#) -> line 1549

- In the Code :

. hooks

wp_mail() has a specific hook for PHPMailer

.. 'phpmailer_init'

Func	File	Line#
do_action_ref_array	pluggable.php	484

- object (reference to current instance of PHPMailer)

This is where a plugin developper may use all the potential of PHPMailer
(for example : to set connection parms to SMTP server).

WP is using this hook for multi-site

Func	File	Line#	Call
add_action	ms-default-filters.php	102	fix_phpmailer_messageid

fix_phpmailer_messageid comment is :

* *Correct From host on outgoing mail to match the site domain*

function name does not correspond to comment and code. Is this a **BUG** ?

see annex II SMTP dialog (for documentation only)

* Route message (out of WP)

This is the job of the SMTP server and Internet.

* Deliver message

POP3 protocol. A [class](#) exists in WP.

see annex III POP3 dialog (for documentation only)

* Process message (out of WP)

Rendering : Do you remember the old times where you had to design your html pages with Firefox, Safari, Internet Explorer in mind to avoid messy rendering ?

To be honest, html mail rendering can become a nightmare : software or web services are not all compliant with the w3c standards (a site like [EmailOnAcid](#) propose to test html mail rendering on 70 different configurations).

If i can give some advice :

- make your html content as simple as possible,
- use tables,
- use inline styles

MISCELLANEOUS

=====

There are other process and functions around mail in WP. Here are listed some of them for documentation.

* Mails (in)

Post publication with mail sent to dedicated e-mail address. (see annex IV)

* function ([sanitize_email\(\)](#))

For me `sanitize_email()` is a nonsense.

An email address is right or wrong and should never be modified.

`sanitize_email()` is not pluggable (who would do that ?).

- On Trac, when searching for `sanitize_email` (32 results).

- In Core => `sanitize_email()` :

. defined at:
/wp-includes/formatting.php -> line 3490

. referenced 8 times:
/wp-includes/user.php -> line 3313
/wp-admin/network/user-new.php -> line 51
/wp-admin/network/site-new.php -> line 92
/wp-mail.php -> line 132
/wp-includes/formatting.php -> line 4462
/wp-includes/ms-functions.php -> line 457
/wp-includes/ms-functions.php -> line 819
/wp-admin/network.php -> line 100

- In the Code :

. comments

* Strips out all characters that are not allowable in an email.

arbitrary WP rules, no reference to whatsoever web standards !

. hooks

apply_filters

there is only one filter in this function : 'sanitize_email'
It is called 8 times ...

Func	File	Line#	
apply_filters	formatting.php	3514	email_too_short
		3520	email_no_at
		3531	local_invalid_chars
		3539	domain_period_sequence
		3546	domain_period_limits
		3555	domain_no_periods
		3578	domain_no_valid_subs
		3589	null

CODE REVIEW

=====

This analysis would not be complete if it did not include a code review of all the functions calling wp_mail(). Two annexes have been produced :

. Annex V, All mails, with the following convention :

===== **[#line of code of wp_mail()] [function or file]**

subject before replacements

content before replacements or sprintf()

```
{{ funny to see all those 'Hi', 'Howdy', }}
{{ with optional [[###]USERNAME[###],] }}
{{ in the same place }}
```

replacements or use of sprintf()

observations (bug, use of @wp_mail(), ...)

=====

. Annex VI, Replacement words

Replacement words are sorted to highlight some vocabulary inconsistency.

- some replacement words are just words in uppercase (REPLACEMENT)
- some of them are enclosed between three hashtags (###REPLACEMENT###)
- some of them are coded but not necessary

None of those replacements are using the **{{mustache}}** standard. ([manual](#))

Because, in fact, mail subject and mail content are templates.

STATE OF THE MAIL (in wp)

=====

- `is_email()` is the gatekeeper.
- Mails are built differently :
 - . Some are pluggable
 - . Some have content filterable
 - . Some have content & subject filterable
 - . Some cannot be modified.
 - . Some are too complicated (`class-wp-automatic-updater.php`).
- Replacement in text are made differently,
 - . `sprintf()` for subject
 - . `sprintf()` or `str_replace()` for content
 - . `str_replace()` with or without hashtags.
- Subject and content are in fact `{{templates}}`

~~*

Due to legislation changes (privacy), mails are becoming more important than ever. They are not just informative stuff anymore. For some of them, they are now legal stuff and could be used in front of a court.

`is_email()` is the gatekeeper of WP mail policy.

As long as this function do not complies with any RFC, we have to understand that this function validates an email for ... some obscure external constraints. This is a subject of controversy, but i still don't understand how WP can manage left to right and right to left writing and is unable to accept international e-mail addresses.

The basics is to support [RFC2822](#) (Apr 2001). For international email address, your SMTP server needs to support SMTPUTF8 as well as your software ([RFC6531](#) Feb 2012) (PHPMailer ?).
A workaround could be to have `is_email()` becoming a pluggable function.

GDPR is just the beginning. Other countries will regulate around data protection. GDPR is the canvas for E.U. data protection regulation. Each E.U. contry has its own history and local specific laws has well, just like in the U.S. with federal and state laws.

There is only one rule, and it is the rule of law !

New requests will arrive and WP might not be able to answer to all of them. I propose a review of how WP generate mails. If this proposal is adopted, mail pluggable functions could get out of `pluggable.php` and come back to core.

And I want to quote here Vince Lombardi : "Gentlemen, we are going to relentlessly chase perfection, knowing full well we will not catch it, because nothing is perfect. But we are going to relentlessly chase it, because in the process we will catch excellence. I am not remotely interested in just being good".

And finally, my fellow coders, I believe that this new frontier is at hand and this is why I declare that :

All mails are coded equal, that they are endowed by their code creator with certain unalienable rights that among these are :

All mails have an id.

All mails have a header and a footer (yes, even for text/plain).

All mails have their subject and content as a template.

All replacements have to use the **{{mustache}}** standard.

All mails could be sent out of wp_mail().

And the gatekeeper, pluggable will become !

- . annex VII - All mails have an id
- . annex VIII - A new way of coding mails
- . annex IX - WP Mail architecture new frontier

~~*

This is a revolution ! Steve Jobs

~~*

Annexe I - Mails

file	wp_mail	function	title
wp-includes/user.php	2011	wp_update_user	'[%s] Notice of Password Change'
wp-includes/user.php	2070	wp_update_user	'[%s] Notice of Email Change'
wp-includes/user.php	2815	send_confirmation_on_profile_email	'[%s] New Email Address'
wp-includes/user.php	3117	_wp_privacy_send_request_confirmation_notification	'[%1\$s] Action Confirmed: %2\$s'
wp-includes/user.php	3254	_wp_privacy_send_request_confirmation_notification	'[%s] Erasure Request Fulfilled'
wp-includes/user.php	3509	wp_send_user_request	'[%1\$s] Confirm Action: %2\$s'
wp-admin/user-new.php	125	access to file	'[%s] Joining confirmation'
wp-login.php	422	retrieve_password	'[%s] Password Reset'
wp-admin/ms-delete-site.php	81	access to file	'Delete My Site'
wp-includes/functions.php	6526	wp_site_admin_email_change_notification	'[%s] Notice of Admin Email Change'
wp-includes/pluggable.php	1637	wp_notify_postauthor	'[%1\$s] Trackback: "%2\$s"'
wp-includes/pluggable.php	1637	wp_notify_postauthor	'[%1\$s] Pingback: "%2\$s"'
wp-includes/pluggable.php	1637	wp_notify_postauthor	'[%1\$s] Comment: "%2\$s"'
wp-includes/pluggable.php	1808	wp_notify_moderator	'[%1\$s] Please moderate: "%2\$s"'
wp-includes/pluggable.php	1863	wp_password_change_notification	'[%s] Password Changed'
wp-includes/pluggable.php	1945	wp_new_user_notification	'[%s] New User Registration'
wp-includes/pluggable.php	2011	wp_new_user_notification	'[%s] Your username and password info'
wp-admin/includes/upgrade.php	611	wp_new_blog_notification	'New WordPress Site'
wp-admin/network/site-new.php	145	access to file	'[%s] New Site Created'
wp-admin/includes/misc.php	1294	update_option_new_admin_email	'[%s] New Admin Email Address'
wp-includes/ms-functions.php	987	wpmu_signup_blog_notification	'[%1\$s] Activate %2\$s'
wp-includes/ms-functions.php	1092	wpmu_signup_user_notification	'[%1\$s] Activate %2\$s'
wp-includes/ms-functions.php	1401	newblog_notify_siteadmin	'New Site Registration: %s'
wp-includes/ms-functions.php	1453	newuser_notify_siteadmin	'New User Registration: %s'
wp-includes/ms-functions.php	1611	wpmu_welcome_notification	'New %1\$s Site: %2\$s'
wp-includes/ms-functions.php	1702	wpmu_welcome_user_notification	'New %1\$s User: %2\$s'
wp-includes/ms-functions.php	2719	update_network_option_new_admin_email	'[%s] New Network Admin Email Address'
wp-includes/ms-functions.php	2814	wp_network_admin_email_change_notification	'[%s] Notice of Network Admin Email Change'
wp-admin/includes/file.php	2247	wp_privacy_send_personal_data_export_email	'[%s] Personal Data Export'
class-wp-automatic-updater.php	816	send_email	'[%1\$s] Your site has updated to WordPress %2\$s'
class-wp-automatic-updater.php	816	send_email	'[%1\$s] WordPress %2\$s is available. Please update!'
class-wp-automatic-updater.php	816	send_email	'[%1\$s] URGENT: Your site may be down due to a failed update'
class-wp-automatic-updater.php	987	send_debug_email	'[%s] There were failures during background updates'
class-wp-automatic-updater.php	987	send_debug_email	'[%s] Background updates have finished'

Annexe II - SMTP dialog (sample)

```
<< 220 smtp.gmail.com ESMTP session_id
>> EHLO [127.0.0.1]

<< 250-smtp.gmail.com at your service, [256.256.256.256]
250-SIZE 35882577
250-8BITMIME
250-AUTH LOGIN PLAIN XOAUTH2 PLAIN-CLIENTTOKEN OAUTHBEARER XOAUTH
250-ENHANCEDSTATUSCODES
250-PIPELINING
250-CHUNKING
250 SMTPUTF8

>> AUTH LOGIN

<< 334 VXNlcm5hbWU6 (base64_encoded 'Username:')
>> bm9yZXBseUBteWRvbWVpbi50bGQ= (base64_encoded 'noreply@mydomain.tld')
<< 334 UGFzc3dvcmQ6 (base64_encoded 'Password:')
>> KioqKioqKioq (base64_encoded '*****')

<< 235 2.7.0 Accepted

>> MAIL FROM:<me@mydomain.tld> SMTPUTF8

>> RCPT TO:<you@yourdomain.tld>

>> DATA

<< 250 2.1.0 OK session_id
<< 250 2.1.5 OK session_id
<< 354 Go ahead session_id

>>
.

<< 250 2.0.0 OK 1553967509 session_id
```

Annexe III - POP3 dialog (sample)

privacy request inserted based on mail subject key word

(source : extract of MailPress log report)

```
<< ssl://pop.gmail.com:995
>> +OK Gpop ready for requests from 256.256.256.256 abcdef0123456

<< USER privacy@mydomain.tld
>> +OK send PASS

<< PASS *****
>> +OK Welcome.

<< LIST
>> +OK 4 messages (1554326 bytes)

<< TOP 1 0
>> +OK message follows

<< DELE 1                                     subject == key word => message deleted
>> +OK message follows

(-----)
( email      ! me@somewhe.re
( action     ! export_personal_data
(-----)

<< TOP 2 0
>> +OK message follows

<< TOP 3 0
>> +OK message follows

<< DELE 3                                     subject == key word => message deleted
>> +OK message follows

(-----)
( email      ! me@somewhe.re
( action     ! export_personal_data
( error      ! A request for this email address already exists.
(-----)

<< TOP 4 0
>> +OK message follows

<< QUIT
>> +OK Farewell.
```

Annexe IV – Mails (in)

WordPress Writing settings

Writing Settings Help ▾

Formatting

Convert emoticons like :-) and :-P to graphics on display

WordPress should correct invalidly nested XHTML automatically

Default Post Category

Default Post Format

Default Link Category

Default editor for all users

Classic Editor

Block Editor

Allow users to switch editors

Yes

No

Post via email

To post to WordPress by email you must set up a secret email account with POP3 access. Any mail received at this address will be posted, so it's a good idea to keep this address very secret. Here are three random strings you could use: `3vueqJiT`, `AWzn1J1E`, `GLRan61H`.

Mail Server Port

Login Name

Password

Default Mail Category

Annex V - Code review

```
===== 2011 wp_update_user
'[%s] Notice of Password Change'
```

```
Hi ###USERNAME###,
```

```
This notice confirms that your password was changed on ###SITENAME###.
```

```
If you did not change your password, please contact the Site Administrator at
###ADMIN_EMAIL###
```

```
This email has been sent to ###EMAIL###
```

```
Regards,
All at ###SITENAME###
###SITEURL###
```

```
###USERNAME###      $user['user_login']
###ADMIN_EMAIL###   get_option( 'admin_email' )
###EMAIL###         $user['user_email']
###SITENAME###      $blog_name // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###       home_url()
```

```
===== 2070 wp_update_user
'[%s] Notice of Email Change'
```

```
Hi ###USERNAME###,
```

```
This notice confirms that your email address on ###SITENAME### was changed to ###NEW_EMAIL###.
```

```
If you did not change your email, please contact the Site Administrator at
###ADMIN_EMAIL###
```

```
This email has been sent to ###EMAIL###
```

```
Regards,
All at ###SITENAME###
###SITEURL###
```

```
###USERNAME###      $user['user_login']
###ADMIN_EMAIL###   get_option( 'admin_email' )
###NEW_EMAIL###     $userdata['user_email']
###EMAIL###         $user['user_email']
###SITENAME###      $blog_name // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###       home_url()
```

===== [2815](#) **send_confirmation_on_profile_email**

'[%s] New Email Address'

Howdy ###USERNAME###,

You recently requested to have the email address on your account changed.

If this is correct, please click on the following link to change it:

###ADMIN_URL###

You can safely ignore and delete this email if you do not want to take this action.

This email has been sent to ###EMAIL###

Regards,

All at ###SITENAME###

###SITEURL###

```
###USERNAME###      $current_user->user_login
###ADMIN_URL###     esc_url( admin_url( 'profile.php?newuseremail=' . $hash ) )
###EMAIL###         $_POST['email']
###SITENAME###      $sitename //wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###       home_url()
```

===== [3117](#) **_wp_privacy_send_request_confirmation_notification**

'[%1\$s] Action Confirmed: %2\$s'

Howdy,

A user data privacy request has been confirmed on ###SITENAME###:

User: ###USER_EMAIL###
Request: ###DESCRIPTION###

You can view and manage these data privacy requests here:

###MANAGE_URL###

Regards,
All at ###SITENAME###
###SITEURL###

```
###USER_EMAIL### // $request->email,  
###DESCRIPTION### // wp_user_request_action_description( $request->action_name );  
###MANAGE_URL### // add_query_arg( 'page', $request->action_name, admin_url( 'tools.php' ) );  
###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );  
###SITEURL### // home_url()
```

===== [3254](#) _wp_privacy_send_request_confirmation_notification
'[%s] Erasure Request Fulfilled'

Howdy,

Your request to erase your personal data on ###SITENAME### has been completed.

If you have any follow-up questions or concerns, please contact the site administrator.

Regards,
All at ###SITENAME###
###SITEURL###

~~~~~ OR ~ OR ~ OR ~ OR ~~~~~~  
'[%s] Erasure Request Fulfilled'

Howdy,

Your request to erase your personal data on ###SITENAME### has been completed.

If you have any follow-up questions or concerns, please contact the site administrator.

For more information, you can also read our privacy policy: `###PRIVACY_POLICY_URL###`

Regards,  
All at `###SITENAME###`  
`###SITEURL###`

```
###PRIVACY_POLICY_URL### // get_privacy_policy_url()
###SITENAME###           // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###            // home_url()
```

```
===== 3509 wp\_send\_user\_request
'[%1$s] Confirm Action: %2$s'
```

Howdy,

A request has been made to perform the following action on your account:

`###DESCRIPTION###`

To confirm this, please click on the following link:  
`###CONFIRM_URL###`

You can safely ignore and delete this email if you do not want to take this action.

Regards,  
All at `###SITENAME###`  
`###SITEURL###`

```
###DESCRIPTION### // wp_user_request_action_description( $request->action_name );
###CONFIRM_URL### // add_query_arg( array( 'action' => 'confirmaction', 'request_id' => $request_id, 'confirm_key' =>
// wp_generate_user_request_key( $request_id ), ), wp_login_url() )
###EMAIL###       // **** this replacement is not necessary
###SITENAME###    // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###     // home_url()
```

```
===== 125 wp-admin/user-new.php
'[%s] Joining confirmation'
```

Hi,

You've been invited to join `'%1$s'` at  
`%2$s` with the role of `%3$s`.

Please click the following link to confirm the invite:  
`%4$s`

```
printf( $message, get_option( 'blogname' ), home_url(), wp_specialchars_decode( translate_user_role( $role['name'] ) ), home_url(
"/newbloguser/$newuser_key/" ) )
```

=====[422 retrieve\\_password](#)

'`[%s] Password Reset`'

```
$message = __( 'Someone has requested a password reset for the following account:' ) . "\r\n\r\n";
/* translators: %s: site name */
$message .= sprintf( __( 'Site Name: %s' ), $site_name ) . "\r\n\r\n";
/* translators: %s: user login */
$message .= sprintf( __( 'Username: %s' ), $user_login ) . "\r\n\r\n";
$message .= __( 'If this was a mistake, just ignore this email and nothing will happen.' ) . "\r\n\r\n";
$message .= __( 'To reset your password, visit the following address:' ) . "\r\n\r\n";
$message .= '<' . network_site_url( "wp-login.php?action=rp&key=$key&login=" . rawurlencode( $user_login ), 'login' ) . ">\r\n";
```

=====[81 wp-admin/ms-delete-site.php](#)

'Delete My Site'

Howdy `###USERNAME###`,

You recently clicked the 'Delete Site' link on your site and filled in a form on that page.

If you really want to delete your site, click the link below. You will not be asked to confirm again so only click this link if you are absolutely certain:

`###URL_DELETE###`

If you delete your site, please consider opening a new site here some time in the future! (But remember your current site and username are gone forever.)

Thanks for using the site,

```

Webmaster
###SITE_NAME###

###USERNAME###           // $user->user_login
###URL_DELETE###        // esc_url( admin_url( 'ms-delete-site.php?h=' . $hash ) );
###SITE_NAME###         // get_network()->site_name

===== 6526 wp_site_admin_email_change_notification
'[%s] Notice of Admin Email Change'

Hi,

This notice confirms that the admin email address was changed on ###SITENAME###.

The new admin email address is ###NEW_EMAIL###.

This email has been sent to ###OLD_EMAIL###

Regards,
All at ###SITENAME###
###SITEURL###

###NEW_EMAIL###         // $new_email
###OLD_EMAIL###         // $old_email
###SITENAME###         // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL###          // home_url()

===== 1637 wp_notify_postauthor [PLUGGABLE]
'[%1$s] Trackback: "%2$s"'

/* translators: %s: post title */
$notify_message = sprintf( __( 'New trackback on your post "%s"', $post->post_title ) . "\r\n";
/* translators: 1: trackback/pingback website name, 2: website IP address, 3: website hostname */
$notify_message .= sprintf( __( 'Website: %1$s (IP address: %2$s, %3$s)', $comment->comment_author, $comment->comment_author_IP,
$comment_author_domain ) . "\r\n";
/* translators: %s: trackback/pingback/comment author URL */
$notify_message .= sprintf( __( 'URL: %s', $comment->comment_author_url ) . "\r\n";
/* translators: %s: comment text */
$notify_message .= sprintf( __( 'Comment: %s', "\r\n" . $comment_content ) . "\r\n\r\n";
$notify_message .= __( 'You can see all trackbacks on this post here:' ) . "\r\n";

```

```
use @wp_mail()
```

```
===== 1637 wp_notify_postauthor [PLUGGABLE]
```

```
'[%1$s] Pingback: "%2$s"'
```

```
/* translators: %s: post title */
```

```
$notify_message = sprintf(__( 'New pingback on your post "%s"' ), $post->post_title ) . "\r\n";
```

```
/* translators: 1: trackback/pingback website name, 2: website IP address, 3: website hostname */
```

```
$notify_message .= sprintf(__( 'Website: %1$s (IP address: %2$s, %3$s)' ), $comment->comment_author, $comment->comment_author_IP, $comment_author_domain ) . "\r\n";
```

```
/* translators: %s: trackback/pingback/comment author URL */
```

```
$notify_message .= sprintf(__( 'URL: %s' ), $comment->comment_author_url ) . "\r\n";
```

```
/* translators: %s: comment text */
```

```
$notify_message .= sprintf(__( 'Comment: %s' ), "\r\n" . $comment_content ) . "\r\n\r\n";
```

```
$notify_message .= __( 'You can see all pingbacks on this post here:' ) . "\r\n";
```

```
===== 1637 wp_notify_postauthor [PLUGGABLE]
```

```
'[%1$s] Comment: "%2$s"'
```

```
/* translators: %s: post title */
```

```
$notify_message = sprintf(__( 'New comment on your post "%s"' ), $post->post_title ) . "\r\n";
```

```
/* translators: 1: comment author's name, 2: comment author's IP address, 3: comment author's hostname */
```

```
$notify_message .= sprintf(__( 'Author: %1$s (IP address: %2$s, %3$s)' ), $comment->comment_author, $comment->comment_author_IP, $comment_author_domain ) . "\r\n";
```

```
/* translators: %s: comment author email */
```

```
$notify_message .= sprintf(__( 'Email: %s' ), $comment->comment_author_email ) . "\r\n";
```

```
/* translators: %s: trackback/pingback/comment author URL */
```

```
$notify_message .= sprintf(__( 'URL: %s' ), $comment->comment_author_url ) . "\r\n";
```

```
/* translators: %s: comment text */
```

```
$notify_message .= sprintf(__( 'Comment: %s' ), "\r\n" . $comment_content ) . "\r\n\r\n";
```

```
$notify_message .= __( 'You can see all comments on this post here:' ) . "\r\n";
```

```
===== 1808 wp_notify_moderator trackback [PLUGGABLE]
```

```
'[%1$s] Please moderate: "%2$s"'
```

```
/* translators: %s: post title */
```

```
$notify_message = sprintf(__( 'A new trackback on the post "%s" is waiting for your approval' ), $post->post_title ) . "\r\n";
```

```
$notify_message .= get_permalink( $comment->comment_post_ID ) . "\r\n\r\n";
```

```
/* translators: 1: trackback/pingback website name, 2: website IP address, 3: website hostname */
```

```

$notify_message .= sprintf( __( 'Website: %1$s (IP address: %2$s, %3$s)' ), $comment->comment_author, $comment->comment_author_IP,
$comment_author_domain ) . "\r\n";
/* translators: %s: trackback/pingback/comment author URL */
$notify_message .= sprintf( __( 'URL: %s' ), $comment->comment_author_url ) . "\r\n";
$notify_message .= __( 'Trackback excerpt: ' ) . "\r\n" . $comment_content . "\r\n\r\n";

```

use @wp\_mail()

```

===== 1808 wp_notify_moderator pingback [PLUGGABLE]

```

```

'[%1$s] Please moderate: "%2$s"'

```

```

/* translators: %s: post title */
$notify_message = sprintf( __( 'A new pingback on the post "%s" is waiting for your approval' ), $post->post_title ) . "\r\n";
$notify_message .= get_permalink( $comment->comment_post_ID ) . "\r\n\r\n";
/* translators: 1: trackback/pingback website name, 2: website IP address, 3: website hostname */
$notify_message .= sprintf( __( 'Website: %1$s (IP address: %2$s, %3$s)' ), $comment->comment_author, $comment->comment_author_IP,
$comment_author_domain ) . "\r\n";
/* translators: %s: trackback/pingback/comment author URL */
$notify_message .= sprintf( __( 'URL: %s' ), $comment->comment_author_url ) . "\r\n";
$notify_message .= __( 'Pingback excerpt: ' ) . "\r\n" . $comment_content . "\r\n\r\n";

```

use @wp\_mail()

```

===== 1808 wp_notify_moderator comment [PLUGGABLE]

```

```

'[%1$s] Please moderate: "%2$s"'

```

```

/* translators: %s: post title */
$notify_message = sprintf( __( 'A new comment on the post "%s" is waiting for your approval' ), $post->post_title ) . "\r\n";
$notify_message .= get_permalink( $comment->comment_post_ID ) . "\r\n\r\n";
/* translators: 1: comment author's name, 2: comment author's IP address, 3: comment author's hostname */
$notify_message .= sprintf( __( 'Author: %1$s (IP address: %2$s, %3$s)' ), $comment->comment_author, $comment->comment_author_IP,
$comment_author_domain ) . "\r\n";
/* translators: %s: comment author email */
$notify_message .= sprintf( __( 'Email: %s' ), $comment->comment_author_email ) . "\r\n";
/* translators: %s: trackback/pingback/comment author URL */
$notify_message .= sprintf( __( 'URL: %s' ), $comment->comment_author_url ) . "\r\n";
/* translators: %s: comment text */
$notify_message .= sprintf( __( 'Comment: %s' ), "\r\n" . $comment_content ) . "\r\n\r\n";

```

use @wp\_mail()

```

===== 1863 wp_password_change_notification [PLUGGABLE]
'[%s] Password Changed'

$message = sprintf( __( 'Password changed for user: %s' ), $user->user_login ) . "\r\n";

===== 1945 wp_new_user_notification [PLUGGABLE]
'[%s] New User Registration'

/* translators: %s: site title */
$message = sprintf( __( 'New user registration on your site %s:' ), $blogname ) . "\r\n\r\n";
/* translators: %s: user login */
$message .= sprintf( __( 'Username: %s' ), $user->user_login ) . "\r\n\r\n";
/* translators: %s: user email address */
$message .= sprintf( __( 'Email: %s' ), $user->user_email ) . "\r\n";

use @wp_mail();

===== 2011 wp_new_user_notification [PLUGGABLE]
'[%s] Your username and password info'

/* translators: %s: user login */
$message = sprintf( __( 'Username: %s' ), $user->user_login ) . "\r\n\r\n";
$message .= __( 'To set your password, visit the following address:' ) . "\r\n\r\n";
$message .= '<' . network_site_url( "wp-login.php?action=rp&key=$key&login=" . rawurlencode( $user->user_login ), 'login' ) . ">\r\n\r\n";
$message .= wp_login_url() . "\r\n";

===== 611 wp_new_blog_notification
'New WordPress Site'

Your new WordPress site has been successfully set up at:

%1$s

You can log in to the administrator account with the following information:

Username: %2$s
Password: %3$s
Log in here: %4$s

```

We hope you enjoy your new site. Thanks!

--The WordPress Team  
<https://wordpress.org/>

sprintf()

use @wp\_mail()

===== [145](#) wp-admin/network/site-new.php  
'[%s] New Site Created'

New site created by %1\$s

Address: %2\$s  
Name: %3\$s

sprintf()

===== [1294](#) update\_option\_new\_admin\_email  
'[%s] New Admin Email Address'

Howdy ###USERNAME###,

You recently requested to have the administration email address on your site changed.

If this is correct, please click on the following link to change it:  
###ADMIN\_URL###

You can safely ignore and delete this email if you do not want to take this action.

This email has been sent to ###EMAIL###

Regards,  
All at ###SITENAME###  
###SITEURL###

###USERNAME### // \$current\_user->user\_login

```
###ADMIN_URL### // esc_url( self_admin_url( 'options.php?adminhash=' . $hash ) )
###EMAIL### // get_option( 'admin_email' )
###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL### // home_url()
```

```
===== 987 wpmu_signup_blog_notification
```

```
'[%1$s] Activate %2$s'
```

To activate your blog, please click the following link:\n\n%1\$s\n\nAfter you activate, you will receive \*another email\* with your login.\n\nAfter you activate, you can visit your site here:\n\n%2\$s

```
sprintf()
```

```
===== 1092 wpmu_signup_user_notification
```

```
'[%1$s] Activate %2$s'
```

To activate your user, please click the following link:\n\n%s\n\nAfter you activate, you will receive \*another email\* with your login.

```
sprintf()
```

```
===== 1401 newblog_notify_siteadmin
```

```
'New Site Registration: %s'
```

```
New Site: %1$s
```

```
URL: %2$s
```

```
Remote IP address: %3$s
```

```
Disable these notifications: %4$s
```

```
sprintf()
```

```
===== 1453 newuser_notify_siteadmin
```

```
'New User Registration: %s'
```

```
New User: %1$s
```

```
Remote IP address: %2$s
```

```
Disable these notifications: %3$s
```

```
sprintf()
```

===== [1611](#) **wpmu\_welcome\_notification**

On multi-site install, this message is translated and inserted in the db.  
The same message is in wp-admin/includes/schema.php and in ms-functions.php.  
It can be modified anytime by the network admin in its language.

New %1\$s User: %2\$s'

Howdy USERNAME,

Your new SITE\_NAME site has been successfully set up at:  
BLOG\_URL

You can log in to the administrator account with the following information:

Username: USERNAME  
Password: PASSWORD  
Log in here: BLOG\_URLwp-login.php

We hope you enjoy your new site. Thanks!

--The Team @ SITE\_NAME

```
SITE_NAME          // get_network()->site_name;  
BLOG_TITLE  
BLOG_URL           // get_blogaddress_by_id( $blog_id ); // BLOG_URLwp-login.php be serious !  
USERNAME  
PASSWORD
```

===== [1702](#) **wpmu\_welcome\_user\_notification**

New %1\$s User: %2\$s'

Howdy USERNAME,

Your new account is set up.

You can log in with the following information:  
Username: USERNAME  
Password: PASSWORD

LOGINLINK

Thanks!

--The Team @ SITE\_NAME

```
SITE_NAME          // get_network()->site_name;
USERNAME
PASSWORD
LOGINLINK          // wp_login_url()    // better than BLOG_URLwp-login.php don't you think
```

```
===== 2719 update_network_option_new_admin_email
'[%s] New Network Admin Email Address'
```

Howdy ###USERNAME###,

You recently requested to have the network admin email address on your network changed.

If this is correct, please click on the following link to change it:

###ADMIN\_URL###

You can safely ignore and delete this email if you do not want to take this action.

This email has been sent to ###EMAIL###

Regards,

All at ###SITENAME###

###SITEURL###

```
###USERNAME###    // $current_user->user_login
###ADMIN_URL###   // esc_url( network_admin_url( 'settings.php?network_admin_hash=' . $hash ) )
###EMAIL###       // get_site_option( 'admin_email' )
###SITENAME###    // wp_specialchars_decode( get_site_option( 'site_name' ), ENT_QUOTES )
###SITEURL###     // network_home_url()
```

```
===== 2814 wp_network_admin_email_change_notification
'[%s] Notice of Network Admin Email Change'
```

Hi,

This notice confirms that the network admin email address was changed on ###SITENAME###.

The new network admin email address is ###NEW\_EMAIL###.

This email has been sent to ###OLD\_EMAIL###

Regards,

All at ###SITENAME###

###SITEURL###

```
###NEW_EMAIL### // $new_email
###OLD_EMAIL### // $old_email
###SITENAME### // wp_specialchars_decode( get_site_option( 'site_name' ), ENT_QUOTES );
###SITEURL### // home_url()
```

===== [2247 wp\\_privacy\\_send\\_personal\\_data\\_export\\_email](#)

'[%s] Personal Data Export'

Howdy,

Your request for an export of personal data has been completed. You may download your personal data by clicking on the link below. For privacy and security, we will automatically delete the file on ###EXPIRATION###, so please download it before then.

###LINK###

Regards,

All at ###SITENAME###

###SITEURL###

```
###EXPIRATION### // date
###LINK### // link to export file
###EMAIL### // **** this replacement is not necessary
###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );
###SITEURL### // home_url()
```

The mails built in *class-wp-automatic-updater.php* are from simple ( Hello! There is a new version ) from over-complicated ( Something went wrong and here are all the errors ... ).

Each update or upgrade process should produce a log report ( core/plugins/themes/translations ). This log report should be temporarily held in a simple txt file. Once produced, this file should be attached in a mail with a much shorter text.

The log report should be saved in the database and could be helpfull for further wordpress support. [ [LOAD\\_FILE\(\)](#) ]

===== **816 send\_email**

```
'[%1$s] Your site has updated to WordPress %2$s'
```

```
/* translators: 1: Home URL, 2: WordPress version */
```

```
$body.= sprintf(__('Howdy! Your site at %1$s has been updated automatically to WordPress %2$s.'), home_url(), $core_update->current);
```

```
$body.= "\n\n";
```

```
if (!$newer_version_available) $body.= __('No further action is needed on your part.') . ' ';
```

```
// Can only reference the About screen if their update was successful.
```

```
list($about_version) = explode('-', $core_update->current, 2);
```

```
/* translators: %s: WordPress core version */
```

```
$body.= sprintf(__('For more on version %s, see the About WordPress screen:'), $about_version);
```

```
$body.= "\n" . admin_url('about.php');
```

```
if ($newer_version_available) {
```

```
    /* translators: %s: WordPress core latest version */
```

```
    $body.= "\n\n" . sprintf(__('WordPress %s is also now available.'), $next_user_core_update->current) . ' ';
```

```
    $body.= __('Updating is easy and only takes a few moments:');
```

```
    $body.= "\n" . network_admin_url('update-core.php');
```

```
}
```

```
// Add a note about the support forums.
```

```
$body.= "\n\n" . __('If you experience any issues or need support, the volunteers in the WordPress.org support forums may be able to help.');
```

```

$body.= "\n" . __('https://wordpress.org/support/'); // Do we need to translate that ?
// If things are successful and we're now on the latest, mention plugins and themes if any are out of date.
if ($type == 'success' && !$newer_version_available && (get_plugin_updates() || get_theme_updates())) {
    $body.= "\n\n" . __('You also have some plugins or themes with updates available. Update them now:');
    $body.= "\n" . network_admin_url();
}
$body.= "\n\n" . __('The WordPress Team') . "\n";

===== 816 send_email
'[%1$s] WordPress %2$s is available. Please update!'

/* translators: 1: Home URL, 2: WordPress core latest version */
$body.= sprintf(__('Please update your site at %1$s to WordPress %2$s.') , home_url() , $next_user_core_update->current);
$body.= "\n\n";
// Don't show this message if there is a newer version available.
// Potential for confusion, and also not useful for them to know at this point.
if ('fail' == $type && !$newer_version_available) $body.= __('We tried but were unable to update your site automatically.') . ' ';
$body.= __('Updating is easy and only takes a few moments:');
$body.= "\n" . network_admin_url('update-core.php');
// Add a note about the support forums.
$body.= "\n\n" . __('If you experience any issues or need support, the volunteers in the WordPress.org support forums may be able to help.');
```

```

$body.= "\n" . __('https://wordpress.org/support/'); // Do we need to translate that ?
$body.= "\n\n" . __('Keeping your site updated is important for security. It also makes the internet a safer place for you and your readers.');
```

```

$body.= "\n\n" . __('The WordPress Team') . "\n";

===== 816 send_email
'[%1$s] URGENT: Your site may be down due to a failed update'

if ($newer_version_available) {
    /* translators: 1: Home URL, 2: WordPress core latest version */
    $body.= sprintf(__('Your site at %1$s experienced a critical failure while trying to update WordPress to version %2$s.') ,
home_url() , $core_update->current);
}
else {
    /* translators: 1: Home URL, 2: Core update version */
    $body.= sprintf(__('Your site at %1$s experienced a critical failure while trying to update to the latest version of WordPress,
%2$s.') , home_url() , $core_update->current);
}

```

```

$body.= "\n\n" . __("This means your site may be offline or broken. Don't panic; this can be fixed.");
$body.= "\n\n" . __("Please check out your site now. It's possible that everything is working. If it says you need to update, you
should do so:");
$body.= "\n" . network_admin_url('update-core.php');
$critical_support = 'critical' === $type && !empty($core_update->support_email);
if ($critical_support) {
    // Support offer if available.
    /* translators: %s: Support e-mail */
    $body.= "\n\n" . sprintf(__("The WordPress team is willing to help you. Forward this email to %s and the team will work with you to
make sure your site is working."), $core_update->support_email);
}
else {
    // Add a note about the support forums.
    $body.= "\n\n" . __("If you experience any issues or need support, the volunteers in the WordPress.org support forums may be able to
help.");
    $body.= "\n" . __("https://wordpress.org/support/");
}
$body.= "\n\n" . __("Keeping your site updated is important for security. It also makes the internet a safer place for you and your
readers.");

if ($critical_support) {
    $body.= ' ' . __("If you reach out to us, we'll also ensure you'll never have this problem again.");
}
$body.= "\n\n" . __("The WordPress Team") . "\n";
if ('critical' === $type && is_wp_error($result)) {
    $body.= "\n***\n\n";
    /* translators: %s: WordPress version */
    $body.= sprintf(__("Your site was running version %s."), get_bloginfo('version'));
    $body.= ' ' . __("We have some data that describes the error your site encountered.");
    $body.= ' ' . __("Your hosting company, support forum volunteers, or a friendly developer may be able to use this information to
help you:");
    // If we had a rollback and we're still critical, then the rollback failed too.
    // Loop through all errors (the main WP_Error, the update result, the rollback result) for code, data, etc.
    if ('rollback_was_required' === $result->get_error_code()) {
        $errors = array(
            $result,
            $result->get_error_data()->update,
            $result->get_error_data()->rollback
        );
    }
}

```

```

else {
    $errors = array(
        $result
    );
}
foreach($errors as $error) {
    if (!is_wp_error($error)) {
        continue;
    }
    $error_code = $error->get_error_code();
    /* translators: %s: Error code */
    $body.= "\n\n" . sprintf(__( 'Error code: %s' ) , $error_code);
    if ('rollback_was_required' == $error_code) {
        continue;
    }
    if ($error->get_error_message()) {
        body.= "\n" . $error->get_error_message();
    }
    $error_data = $error->get_error_data();
    if ($error_data) {
        $body.= "\n" . implode(', ', (array)$error_data);
    }
}
$body.= "\n";
}

```

=====[987](#) **send\_debug\_email**

'[%s] There were failures during background updates'

```

$body[] = sprintf( __( 'WordPress site: %s' ), network_home_url( '/' ) );
$body[] = sprintf( __( 'FAILED: WordPress failed to update to %s' ), $result->name );
list of plugin successfully updated or failed to update
list of theme successfully updated or failed to update
list of translation successfully updated or failed to update
/* $body[] = ' * ' . sprintf( __( 'SUCCESS: %s' ), $name ); */
/* $body[] = ' * ' . sprintf( __( 'FAILED: %s' ), $name ); */
$body[] = trim( __( "BETA TESTING?"
=====

```

This debugging email is sent when you are using a development version of WordPress.  
If you think these failures might be due to a bug in WordPress, could you report it?

```

* Open a thread in the support forums: https://wordpress.org/support/forum/alphabeta
* Or, if you're comfortable writing a bug report: https://core.trac.wordpress.org/
Thanks! -- The WordPress Team" ) );
$body[] = '';
$body[] = trim( __( 'UPDATE LOG
===== ' ) );
$body[] = '';
/* complex code just showing what is punched */
/* for core, plugin, theme, translation */
$body[] = ' ' . html_entity_decode( str_replace( '&#8230;', '...', $message ) ); // BUG ! no htmlentities in text/plain
'body' => implode( "\n", $body ),

===== 987 send_debug_email
'[%s] Background updates have finished'

$body[] = sprintf( __( 'WordPress site: %s' ), network_home_url( '/' ) );
$body[] = sprintf( __( 'SUCCESS: WordPress was successfully updated to %s' ), $result->name );
list of plugin/theme/translation successfully updated
/* $body[] = ' * ' . sprintf( __( 'SUCCESS: %s' ), $name ); */
$body[] = trim( __( 'UPDATE LOG
===== ' ) );
$body[] = '';
/* complex code just showing what is punched */
/* for core, plugin, theme, translation */
$body[] = ' ' . html_entity_decode( str_replace( '&#8230;', '...', $message ) ); // BUG ! ( Same line as above )
/* complex code just showing what is punched */
/* translators: 1: Error code, 2: Error message. */
$body[] = ' ' . sprintf( __( 'Rollback Error: [%1$s] %2$s' ), $result->get_error_code(), $result->get_error_message() );
/* translators: 1: Error code, 2: Error message. */
$body[] = ' ' . sprintf( __( 'Error: [%1$s] %2$s' ), $result->get_error_code(), $result->get_error_message() );
$body[] = ' ' . implode( ', ', (array) $result->get_error_data() );
$body[] = '';
'body' => implode( "\n", $body ),

===== End Of File =====

```

## Annex VI - Vocabulary Consistency

|                                                                                                |                                                                         |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| ###ADMIN_EMAIL### get_option( 'admin_email' )                                                  | <a href="#">2011</a> wp_update_user                                     |
| ###ADMIN_EMAIL### get_option( 'admin_email' )                                                  | <a href="#">2070</a> wp_update_user                                     |
| ###ADMIN_URL### // esc_url( network_admin_url( 'settings.php?network_admin_hash=' . \$hash ) ) | <a href="#">2719</a> update_network_option_new_admin_email              |
| ###ADMIN_URL### // esc_url( self_admin_url( 'options.php?adminhash=' . \$hash ) )              | <a href="#">1294</a> update_option_new_admin_email                      |
| ###ADMIN_URL### // esc_url( admin_url( 'profile.php?newuseremail=' . \$hash ) )                | <a href="#">2815</a> send_confirmation_on_profile_email                 |
| ###CONFIRM_URL### // add_query_arg( array( 'action' => 'confirmation', ...                     | <a href="#">3509</a> wp_send_user_request                               |
| ###DESCRIPTION### // wp_user_request_action_description( \$request->action_name );             | <a href="#">3117</a> _wp_privacy_send_request_confirmation_notification |
| ###DESCRIPTION### // wp_user_request_action_description( \$request->action_name );             | <a href="#">3509</a> wp_send_user_request                               |
| ###EMAIL### // \$_POST['email']                                                                | <a href="#">2815</a> send_confirmation_on_profile_email                 |
| ###EMAIL### // \$user['user_email']                                                            | <a href="#">2011</a> wp_update_user                                     |
| ###EMAIL### // \$user['user_email']                                                            | <a href="#">2070</a> wp_update_user                                     |
| ###EMAIL### // get_option( 'admin_email' )                                                     | <a href="#">1294</a> update_option_new_admin_email                      |
| ###EMAIL### // get_site_option( 'admin_email' )                                                | <a href="#">2719</a> update_network_option_new_admin_email              |
| ###EMAIL### // <b>this replacement is not necessary</b>                                        | <a href="#">2247</a> wp_privacy_send_personal_data_export_email         |
| ###EMAIL### // <b>this replacement is not necessary</b>                                        | <a href="#">3509</a> wp_send_user_request                               |
| ###EXPIRATION### // date                                                                       | <a href="#">2247</a> wp_privacy_send_personal_data_export_email         |
| ###LINK### // link to export file                                                              | <a href="#">2247</a> wp_privacy_send_personal_data_export_email         |
| ###MANAGE_URL### // add_query_arg( 'page', \$request->action_name, admin_url( 'tools.php' ) ); | <a href="#">3117</a> _wp_privacy_send_request_confirmation_notification |
| ###NEW_EMAIL### \$userdata['user_email']                                                       | <a href="#">2070</a> wp_update_user                                     |
| ###NEW_EMAIL### // \$new_email                                                                 | <a href="#">6526</a> wp_site_admin_email_change_notification            |
| ###NEW_EMAIL### // \$new_email                                                                 | <a href="#">2814</a> wp_network_admin_email_change_notification         |
| ###OLD_EMAIL### // \$old_email                                                                 | <a href="#">6526</a> wp_site_admin_email_change_notification            |
| ###OLD_EMAIL### // \$old_email                                                                 | <a href="#">2814</a> wp_network_admin_email_change_notification         |
| ###PRIVACY_POLICY_URL### // get_privacy_policy_url()                                           | <a href="#">3254</a> _wp_privacy_send_request_confirmation_notification |
| ###SITENAME### \$blog_name // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );  | <a href="#">2011</a> wp_update_user                                     |
| ###SITENAME### \$blog_name // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );  | <a href="#">2070</a> wp_update_user                                     |
| ###SITENAME### \$sitename //wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );    | <a href="#">2815</a> send_confirmation_on_profile_email                 |
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );              | <a href="#">3117</a> _wp_privacy_send_request_confirmation_notification |
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );              | <a href="#">3254</a> _wp_privacy_send_request_confirmation_notification |

|                                                                                         |                                                                         |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );       | <a href="#">3509</a> wp_send_user_request                               |
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );       | <a href="#">6526</a> wp_site_admin_email_change_notification            |
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );       | <a href="#">1294</a> update_option_new_admin_email                      |
| ###SITENAME### // wp_specialchars_decode( get_option( 'blogname' ), ENT_QUOTES );       | <a href="#">2247</a> wp_privacy_send_personal_data_export_email         |
| ###SITENAME### // wp_specialchars_decode( get_site_option( 'site_name' ), ENT_QUOTES )  | 2719 update_network_option_new_admin_email                              |
| ###SITENAME### // wp_specialchars_decode( get_site_option( 'site_name' ), ENT_QUOTES ); | <a href="#">2814</a> wp_network_admin_email_change_notification         |
| ###SITE_NAME### // get_network()->site_name                                             | <a href="#">81</a> wp-admin/ms-delete-site.php                          |
| SITE_NAME // get_network()->site_name;                                                  | <a href="#">1611</a> wpmu_welcome_notification                          |
| SITE_NAME // get_network()->site_name;                                                  | <a href="#">1702</a> wpmu_welcome_user_notification                     |
| BLOG_TITLE                                                                              | <a href="#">1611</a> wpmu_welcome_notification                          |
| ###SITEURL### // home_url()                                                             | <a href="#">3117</a> _wp_privacy_send_request_confirmation_notification |
| ###SITEURL### // home_url()                                                             | <a href="#">3254</a> _wp_privacy_send_request_confirmation_notification |
| ###SITEURL### // home_url()                                                             | <a href="#">3509</a> wp_send_user_request                               |
| ###SITEURL### // home_url()                                                             | <a href="#">6526</a> wp_site_admin_email_change_notification            |
| ###SITEURL### // home_url()                                                             | <a href="#">1294</a> update_option_new_admin_email                      |
| ###SITEURL### // home_url()                                                             | <a href="#">2814</a> wp_network_admin_email_change_notification         |
| ###SITEURL### // home_url()                                                             | <a href="#">2247</a> wp_privacy_send_personal_data_export_email         |
| ###SITEURL### // network_home_url()                                                     | 2719 update_network_option_new_admin_email                              |
| ###SITEURL### home_url()                                                                | <a href="#">2011</a> wp_update_user                                     |
| ###SITEURL### home_url()                                                                | <a href="#">2070</a> wp_update_user                                     |
| ###SITEURL### home_url()                                                                | <a href="#">2815</a> send_confirmation_on_profile_email                 |
| ###URL_DELETE### // esc_url( admin_url( 'ms-delete-site.php?h=' . \$hash ) );           | <a href="#">81</a> wp-admin/ms-delete-site.php                          |
| ###USER_EMAIL### // \$request->email,                                                   | <a href="#">3117</a> _wp_privacy_send_request_confirmation_notification |
| ###USERNAME### \$current_user->user_login                                               | <a href="#">2815</a> send_confirmation_on_profile_email                 |
| ###USERNAME### \$user['user_login']                                                     | <a href="#">2011</a> wp_update_user                                     |
| ###USERNAME### \$user['user_login']                                                     | <a href="#">2070</a> wp_update_user                                     |
| ###USERNAME### // \$current_user->user_login                                            | <a href="#">1294</a> update_option_new_admin_email                      |
| ###USERNAME### // \$current_user->user_login                                            | 2719 update_network_option_new_admin_email                              |
| ###USERNAME### // \$user->user_login                                                    | <a href="#">81</a> wp-admin/ms-delete-site.php                          |
| USERNAME                                                                                | <a href="#">1611</a> wpmu_welcome_notification                          |
| USERNAME                                                                                | <a href="#">1702</a> wpmu_welcome_user_notification                     |

|                                                                                                   |                                                     |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| PASSWORD                                                                                          | <a href="#">1611</a> wpmu_welcome_notification      |
| PASSWORD                                                                                          | <a href="#">1702</a> wpmu_welcome_user_notification |
| <code>BLOG_URL // get_blogaddress_by_id( \$blog_id ); // BLOG_URLwp-login.php be serious !</code> | <a href="#">1611</a> wpmu_welcome_notification      |
| <code>LOGINLINK // wp_login_url() // better than BLOG_URLwp-login.php don't you think</code>      | <a href="#">1702</a> wpmu_welcome_user_notification |

## annex VII - All mails have an id

Nomenclature

=====

All mails have an id build with

***name\_of\_event[\_emitter]***

*name\_of\_event*: *verb[\_object[\_complementary]]*

- verb : 'confirm', 'changed' ...  
          'new' accepted instead of 'inserted' or 'created' ...
- object : 'pwd', 'site' ...  
          'email' for email address (!) ...
- complementary : *complementary[\_complementary]*  
                  any adequate information (to be scarcely used)

emitter :

- list of emitters :
  - . *null* for blog
  - . 'ms' for multi-site
  - . 'nw' for network
  - . 'priv' for privacy (considered as an emitter for legal purpose)
  - . 'wp' for wordpress.org

## Mails sorted by id

| id                            | title                                                          | wp_mail              | function                                                          |
|-------------------------------|----------------------------------------------------------------|----------------------|-------------------------------------------------------------------|
| changed_email                 | '[%s] Notice of Email Change'                                  | <a href="#">2070</a> | <a href="#">wp_update_user</a>                                    |
| changed_email_admin           | '[%s] Notice of Admin Email Change'                            | <a href="#">6526</a> | <a href="#">wp_site_admin_email_change_notification</a>           |
| changed_email_admin_nw        | '[%s] Notice of Network Admin Email Change'                    | <a href="#">2814</a> | <a href="#">wp_network_admin_email_change_notification</a>        |
| changed_pwd                   | '[%s] Notice of Password Change'                               | <a href="#">2011</a> | <a href="#">wp_update_user</a>                                    |
| changed_pwd_notif             | '[%s] Password Changed'                                        | <a href="#">1863</a> | <a href="#">wp_password_change_notification</a>                   |
| confirm_{action_name}[_priv]  | '[%1\$s] Confirm Action: %2\$s'                                | <a href="#">3509</a> | <a href="#">wp_send_user_request</a>                              |
| confirm_email_admin_change    | '[%s] New Admin Email Address'                                 | <a href="#">1294</a> | <a href="#">update_option_new_admin_email</a>                     |
| confirm_email_admin_change_nw | '[%s] New Network Admin Email Address'                         | <a href="#">2719</a> | <a href="#">update_network_option_new_admin_email</a>             |
| confirm_email_change          | '[%s] New Email Address'                                       | <a href="#">2815</a> | <a href="#">send_confirmation_on_profile_email</a>                |
| confirmed_{action_name}_priv  | '[%1\$s] Action Confirmed: %2\$s'                              | <a href="#">3117</a> | <a href="#">wp_privacy_send_request_confirmation_notification</a> |
| delete_site_ms                | 'Delete My Site'                                               | <a href="#">81</a>   | <a href="#">access to file</a>                                    |
| erased_data_ok_priv           | '[%s] Erasure Request Fulfilled'                               | <a href="#">3254</a> | <a href="#">wp_privacy_send_request_confirmation_notification</a> |
| export_data_ok_priv           | '[%s] Personal Data Export'                                    | <a href="#">2247</a> | <a href="#">wp_privacy_send_personal_data_export_email</a>        |
| install                       | 'New WordPress Site'                                           | <a href="#">611</a>  | <a href="#">wp_new_blog_notification</a>                          |
| install_ms                    | '[%s] New Site Created'                                        | <a href="#">145</a>  | <a href="#">access to file</a>                                    |
| install_nw                    | 'New Site Registration: %s'                                    | <a href="#">1401</a> | <a href="#">newblog_notify_siteadmin</a>                          |
| invite                        | '[%s] Joining confirmation'                                    | <a href="#">125</a>  | <a href="#">aces to file</a>                                      |
| moderate_{comment_type}       | '[%1\$s] Please moderate: "%2\$s"'                             | <a href="#">1808</a> | <a href="#">wp_notify_moderator</a>                               |
| new_{comment_type}            | '[%1\$s] Comment: "%2\$s"'                                     | <a href="#">1637</a> | <a href="#">wp_notify_postauthor</a>                              |
|                               | '[%1\$s] Pingback: "%2\$s"'                                    | <a href="#">1637</a> | <a href="#">wp_notify_postauthor</a>                              |
|                               | '[%1\$s] Trackback: "%2\$s"'                                   | <a href="#">1637</a> | <a href="#">wp_notify_postauthor</a>                              |
| new_user                      | '[%s] New User Registration'                                   | <a href="#">1945</a> | <a href="#">wp_new_user_notification</a>                          |
| new_user_ms                   | '[%1\$s] Activate %2\$s'                                       | <a href="#">1092</a> | <a href="#">wpmu_signup_user_notification</a>                     |
| new_user_nw                   | 'New User Registration: %s'                                    | <a href="#">1453</a> | <a href="#">newuser_notify_siteadmin</a>                          |
| reset_pwd                     | '[%s] Password Reset'                                          | <a href="#">422</a>  | <a href="#">retrieve_password</a>                                 |
| welcome                       | '[%s] Your username and password info'                         | <a href="#">2011</a> | <a href="#">wp_new_user_notification</a>                          |
| welcome_admin_ms              | '[%1\$s] Activate %2\$s'                                       | <a href="#">987</a>  | <a href="#">wpmu_signup_blog_notification</a>                     |
| welcome_ms                    | 'New %1\$s User: %2\$s'                                        | <a href="#">1702</a> | <a href="#">wpmu_welcome_user_notification</a>                    |
| welcome_nw                    | 'New %1\$s Site: %2\$s'                                        | <a href="#">1611</a> | <a href="#">wpmu_welcome_notification</a>                         |
| failed_bckgrd_wp              | '[%s] There were failures during background updates'           | <a href="#">987</a>  | <a href="#">send_debug_email</a>                                  |
| failed_site_wp                | '[%1\$s] URGENT: Your site may be down due to a failed update' | <a href="#">816</a>  | <a href="#">send_email</a>                                        |
| update_site_wp                | '[%1\$s] WordPress %2\$s is available. Please update!'         | <a href="#">816</a>  | <a href="#">send_email</a>                                        |
| updated_bckgrd_wp             | '[%s] Background updates have finished'                        | <a href="#">987</a>  | <a href="#">send_debug_email</a>                                  |
| updated_site_wp               | '[%1\$s] Your site has updated to WordPress %2\$s'             | <a href="#">816</a>  | <a href="#">send_email</a>                                        |

## Annex VIII - A new way of coding mails

```
$wp_mail = array();

$wp_mail['id'] = 'changed_pwd'; /* mail id */

$wp_mail['to'] = 'the_newbie@somewhe.re'; /* 1st arg of wp_mail and followings */

$wp_mail['subject'] = __( '{{SITENAME}} This is the subject for {{USERNAME}}' );

$wp_mail['message'] = __( '{{HEADER}}',
    This notice confirms that your password was changed on {{SITENAME}}.
    If you did not change your password, please contact the Site Administrator at
    {{ADMIN_EMAIL}}
    This email has been sent to {{EMAIL}}
    {{FOOTER}}' );

$wp_mail['headers'] = array();
$wp_mail['headers']['From'] = '' . $from_name . '' < . $admin_email . '>';
$wp_mail['headers']['Content-Type'] = 'text/plain; charset=' . get_option( 'blog_charset' );

$wp_mail['attachments'] = array();
$wp_mail['args'] = func_get_args(); /* function arguments */

/* Replacements */
$wp_mail['replacements'] = array(); /* header and footer ALWAYS first */
$wp_mail['replacements']['{{HEADER}}'] = __( 'Howdy {{USERNAME}}' );
$wp_mail['replacements']['{{FOOTER}}'] = __( "Regards,
All at {{SITENAME}}
{{SITEURL}}" );

$wp_mail['replacements']['{{ADMIN_EMAIL}}'] = get_option( 'admin_email' );
$wp_mail['replacements']['{{EMAIL}}'] = $current_user->user_email;
$wp_mail['replacements']['{{USERNAME}}'] = $current_user->user_login;
$wp_mail['replacements']['{{SITENAME}}'] = wp_specialchars_decode( get_site_option( 'site...' );
$wp_mail['replacements']['{{SITEURL}}'] = home_url();

/* a generic filter to replace header and footer content only */
echo '$wp_mail = apply_filters( 'build_mail', $wp_mail );';
/* a filter suffixed by the mail id for specific use */
echo '$wp_mail = apply_filters( "build_mail_{$wp_mail['id']}", $wp_mail );';

/* a generic filter as an alternative to send mails out of wp_mail() for all mails */
if ( apply_filters( 'send_build_mail', false, $wp_mail ) return true;
/* a filter suffixed by the mail id for a specific mail - like a privacy related one */
if ( apply_filters( "send_build_mail_{$wp_mail['id']}", false, $wp_mail ) return true;

$search = array_keys( $wp_mail['replacements'] );
$wp_mail['subject'] = str_replace( $search, $wp_mail['replacements'], $wp_mail['subject'] );
$wp_mail['message'] = str_replace( $search, $wp_mail['replacements'], $wp_mail['message'] );

$headers = '';
foreach( $wp_mail['headers'] as $key => $value ) {
    $headers .= trim( $key ) . ': ' . trim( $value ) . "\n";
}

return wp_mail(
    $wp_mail['to'],
    $wp_mail['subject'],
    $wp_mail['message'],
    $headers,
    $wp_mail['attachments']
);
```

\$wp\_mail content after running the above code [before calling wp\_mail()]

```
Array
(
    [id] => changed_pwd
    [to] => the_newbie@somewhe.re

    [subject] => [My Beautiful Site] This is the subject for newbie

    [message] => Howdy newbie,
```

This notice confirms that your password was changed on My Beautiful Site.

If you did not change your password, please contact the Site Administrator at admin@mybeautifulsi.te

This email has been sent to the\_newbie@somewhe.re

Regards,  
All at My Beautiful Site  
<https://127.0.0.1>

```
[headers] => Array
(
    [From] => "toto" <toto@toto.com>
    [Content-Type] => text/plain; charset=UTF8
)
```

```
[attachments] => Array
(
)
```

```
[args] => Array
(
)
```

```
[replacements] => Array
(
    [{{HEADER}}] => Howdy {{USERNAME}}
    [{{FOOTER}}] => Regards,
```

All at {{SITENAME}}

{{SITEURL}}

```
[{{ADMIN_EMAIL}}] => admin@mybeautifulsi.te
[{{EMAIL}}] => the_newbie@somewhe.re
[{{USERNAME}}] => newbie
[{{SITENAME}}] => My Beautiful Site
[{{SITEURL}}] => http://127.0.0.1
)
```

```
)
```

wp\_mail() 4th argument (headers) should be ( mixed | string or array)

