

Sympa Mailinglist Manager

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About Sympa

- Mailing list manager
- Almost 23 years old
- Legacy Perl

Applications

- Mailing list manager
- Newsletter
- Marketing

Users

- Universities
- Riseup (riseup.net)
 - 20 thousand lists
 - 3.3 million users
 - 4.8 million subscriptions

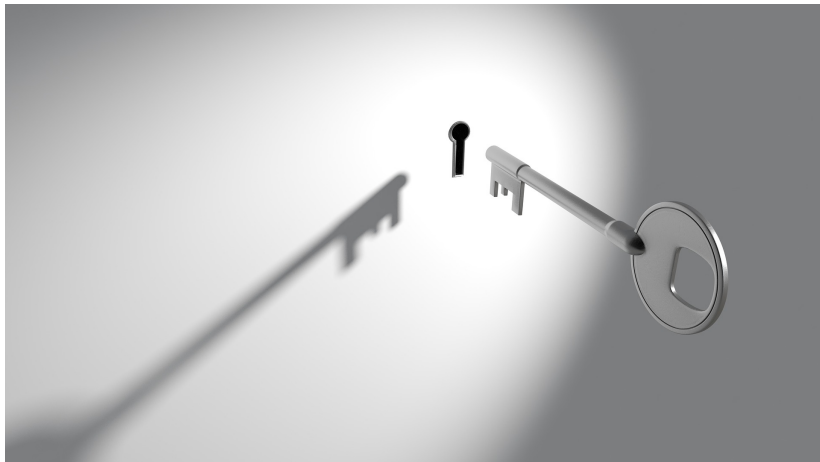
Customers

- HTWK Leipzig
- Open Hardware Repository (CERN)
- Shop for riders
- eShop (US government)
- Social Security Law (USA)

Email Marketing



Motivation



Motivation

- Privacy
- Infrastructure
- Open Source
- Flexibility
- Costs

Flexibility

- Configuration
- Templates
- Scenarios
- Plugins

Sympa basics

- List types
- List creation templates
- Scenarios

List types

- Public discussion mailing list
- Newsletter
- Confidential list
- ...

Template files

- config.tt2 (Configuration)
- comment.tt2 (Description)

Extract of newsletter configuration

```
visibility noconceal
```

```
send newsletter
```

```
process_archive on
```

```
archive
```

```
    web_access public
```

```
    mail_access owner
```

```
subscribe open
```

```
unsubscribe open,notify
```

Incoming email for newsletters

```
# send.newsletter scenario
```

```
title.gettext Newsletter, restricted to moderators
```

```
is_editor([listname],[sender])  
    smtp,dkim,smime,md5 -> do_it
```

```
true()  
    smtp,dkim,smime,md5 -> reject(reason='send_editor')
```

Authentication methods

smtp	From: address in email
md	Web interface authentication
dkim	Valid DKIM signature
smime	Valid S/MIME signature

Sympa in production

- HTWK Leipzig
- Sympa university wide

Installation

- Sympa 6.2.16
- PostgreSQL 9.4
- Postfix
- Nginx

Requirements

- Migration from Majordomo
- Authentication AD/LDAP
- Automated mailing lists
- Listmasters
- Adaption of CD

Authentication AD/LDAP

- LDAP only

Authentication AD/LDAP

```
ldap
  regexp                .*
  host                  ldap.htwk-leipzig.de:636
  bind_dn               itsz-sympa@htwk-leipzig.de
  bind_password         nevairbe
  suffix               dc=htwk-leipzig,dc=de
  get_dn_by_uid_filter  (uid=[sender])
  get_dn_by_email_filter
    (&(objectcategory=person)(mail=[sender])
    (! (userAccountControl:1.2.840.113556.1.4.803:=2)))
  email_attribute       mail
  scope                 sub
  use_tls               ldaps
  ca_file               /etc/ssl/certs/htwk-chain.pem
  ca_verify             required
```

Automated mailing lists

- LDAP queries
- List templates

LDAP query for specific seminar groups

```
(&(objectcategory=person)(extensionAttribute3=08F0015)  
(mail=*)(!(userAccountControl:1.2.840.113556.1.4.803:=2)))
```

Get all seminar groups

```
(&(objectcategory=person)(extensionAttribute3=*)(mail=*)  
(!(userAccountControl:1.2.840.113556.1.4.803:=2)))
```

LDAP with Perl

- Net::LDAP
- Net::LDAP::Control

LDAP with Perl

```
# apply page and sort controls
```

```
$page = Net::LDAP::Control::Paged->new( size => 500 );
```

```
$sort = Net::LDAP::Control::Sort->new( order => "cn" );
```

Adjust list names

```
# replace / and ä ö ü ß
use Encode 'decode';
use Lingua::DE::ASCII 'to_ascii';

$group =~ s/\\/_/g;
$group = lc( to_ascii( decode( 'UTF-8', $attribute ) ) );
```

List creation

- List directory
- List from template
- Sync subscribers
- Update email aliases

Adaption of CD

- Title and Logo

```
logo_html_definition
```

```
<a title="HTWK home" href="http://www.htwk-leipzig.de/">  
  
</a>
```

- CSS template

```
web_tt2/css.tt2
```

- Header template

```
web_tt2/header.tt2
```

Synchronisation problem

- lots of lists at the same time
- LDAP/AD server error

Synchronisation problem

- ttl 3 hours
- random 0-59 minutes

Caching problem

- stale data
- owners, moderators
- permissions

Integration

- Authentication
- Data Sources

Authentication

- LDAP
- CAS
- SSO
- TLS
- Shibboleth

Data Sources

- LDAP
- SQL
- Sympa List
- File

Data Sources

- Subscribers
- Moderators
- Owners

Data Sources

- Update in regular intervals (ttl, distribution_ttl)
- Marker for included records
- User can unsubscribe

Data Sources

```
include_file /home/sympa/subscribers.txt
```

```
test@linuxia.de Test Tester
```

```
bar@linuxia.de Foo Bar
```

```
nobody@linuxia.de
```

Features

- Personalization
- Protection
- Hierarchy
- Scenarios
- Plugins

Enable personalization

Web interface: Sending/receiving setup

List config: `merge_feature` on

Example

<p>

Welcome to our great workshop, [% user.gecos %] !

</p>

Example

<p>

Welcome to our great workshop, Stefan Hornburg!

</p>

Add custom attributes

```
custom_attribute  
id level  
name Your game level  
type integer
```

Add custom attributes

```
<p>  
  Welcome to our great workshop, [% user.gecos %]  
</p>  
<p>  
  Your game level is [% user.custom_attribute.level.value %].  
</p>
```

Add custom attributes

```
<p>  
  Welcome to our great workshop, Stefan Hornburg!  
</p>  
<p>  
  Your game level is 25.  
</p>
```

Protection

- DKIM
- DMARC / ARC
- S/MIME

Hierarchy

- Server
- Virtual hosts (Robots)
- List

Plugins

- Template plugins
- Modlist/Whitelist plugin
- Distribution notification plugin
 - `message_hook`
 - `post_archive` `DistributionNotification`

Challenges

- Reverse DNS
- SPF/DKIM
- Bounces
- Address verification
- Log parsing (Sisimai)
- Blocking

Vetting email addresses

```
my $validator = Email::Valid->new(  
    -mxcheck => 1,  
);  
  
unless ($validator->address($email)) {  
    warn "Email $email invalid: " .  
        $validator->details . "\n";  
}
```

Projects

- REST / GraphQL API
- Container
- Ansible
- Archive search

API

- ~~SOAP API~~
- REST API
- GraphQL API
- DBIx::Class schema

Container

- Sympa
- Database (PostgreSQL, MySQL, ...)
- MTA / IMAP / getmail
- Web frontend

Ansible

- Provisioning
- Testing

Archive Search

- setup Elasticsearch and index structure
- write indexer that parses the emails in the archive
- setup very simple website for search
- authentication for website is list membership

Questions



The end

