BACKEND MEDIA

introduction to PEAR::LiveUser

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BACKEND MEDIA

overview

- introduction
- architecture
- authentication
- permission
  - simple container
  - medium container
  - complex container
- future
- resources

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what LiveUser can do for you

- multiple authentication sources
- permissions: rights, groups etc.
- API scales with your needs!
- flexible architecture
- admin API with SQL generator
- supports multiple backends
- integrates with PEAR::Auth

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some additional metadata

- PEAR Package (since mid 2002)
- Install via:
  - `$> pear install LiveUser-beta`
  - `$> pear install LiveUser_Admin-beta`
- already being used in production
- more than half a dozen active contributors
- over 22.000 total downloads (20 releases)

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overview

- separation of authentication and permission storage and handling
- "client" API: LiveUser.php
- "admin" API: LiveUser/Admin.php
  - separated from client API
  - follows the structure of the client API
- add own containers / extend existing
- add custom code via observers
- RDBMS independent xml based schema

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LiveUser API

```
// create object
$LU = LiveUser::factory(..);
// user logged in?
$LU->isLoggedIn();
// what happend?
$LU->getStatus();
// check a right
$LU->checkRight($right);
// check a right based on ownership
$LU->checkRightLevel($right, $user, $group);
```


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LiveUser Admin API

```
// create object
$LUA = LiveUser_Admin::factory(..);
// add a user
$LUA->addUser();
// get all users in perm with auth data
$LUA->getUser('perm', $filter);
// add a right
$LUA->perm->addRight($data);
// get all rights
$LUA->perm->getRights();
```


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LiveUser Admin API

```
$LUA->perm->getGroups(array(
 'fields' => 'group_id',
 'filters' => array('right_id' => array(1, 5)),
 'select' => 'col',
 'orders' => array('perm_user_id' => 'DESC'),
));
/* generates sql and gets the first column
 SELECT lu_groups.group_id AS group_id
  FROM lu_groups, lu_groupusers, lu_grouprights
  WHERE lu_grouprights.right_id IN (1, 5)
   AND lu_groups.group_id
         = lu_grouprights.group_id
  ORDER BY lu_groupusers.perm_user_id DESC */
```


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overview

- authentication containers
- available containers:

  database, XML and PEAR::Auth
- PEAR::Auth provides:

  plaintext, LDAP, POP3, IMAP, vpopmail, RADIUS, Samba, SOAP
- configurable table name
- user definable columns
- extend to fit your needs

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overview

- permission container:
  simple, medium, complex
- supported backends:
  XML and database
- client containers are stackable
- switch between complexity levels
- entire storage structure configurable
- extend to fit your needs

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simple container

- perm_users

  map auth users to a unique id; user types
- rights

  all rights
- userrights

  assign rights to a user

simple container

- areas

  rights are organized into areas
- applications

  areas are organized into applications
- translations

  metadata for applications, areas, groups and rights

medium container

- groups
  all groups (user groups and roles)
- grouprights
  assigns rights to groups
- groupusers
  assigns users to groups
- area_admin_areas
  assign users to area (area admins)

complex container

- subgroups
- (user|group)rights (revisited)

  assign levels
- rights (revisited)

  right implies other right(s)
- right_implied

  right implies other right(s)

same concepts - different names

- RBAC
  - users
  - roles (groups with rights assigned)
  - permissions (assigned rights)
  - objects (areas)
  - operations (rights)

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what we are planning on adding

- before stable
  - improve right caching
  - move auth admin API over to SQL generator
  - documentation/unit tests
- future
  - remove dependency on session
  - new authentication methods: NTLM, Kerberos..
  - weak/strong authentication
  - single sign on
  - “on the fly” group membership

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where to get more information

- wiki: http://pear.limbourg.com
- website: http://pear.php.net/LiveUser
- mailinglist: liveuser@lists.21st-hq.de
- liveuser article: http://phpmag.net/itr/online_artikel/psecoı
- database schema: http://www.backendmedia.com/LiveUser/liveuser_

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questions? comments? discussions?

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