# **limeade Documentation**

Release 1.0

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Willkommen zur Version 1.0 der limeade Dokumentation.

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# **EINFÜHRUNG**

# 1.1 Überblick

limeade ist ein Projekt der SkyLime GbR und wurde von Marc Rochow als Bachelorarbeit bei der Hochschule Augsburg weiterentwickelt.

Das Webinterface stellt eine voll funktionstüchtige Webanwendung dar, die speziell für Webhosting Firmen gedacht ist. Es soll das Verwalten und Administrieren beschleunigen und vereinfachen.

# 1.1.1 Features

Verwalten und Anlegen von

- VHosts
- FTP
- MySQL Datenbanken
- Backups
- Cloud Instanzen
- Domains
- · SSL Zertifikaten
- E-mail Adressen, Weiterleitungen und Mailbboxen
- VNC

# 1.2 Requirements

- Python == 2.7
- Django >= 1.3
- Node.js >= 0.6

# 1.2.1 weitere Anforderungen

- · Celery und django-celery
- pyOpenSSL
- lxml
- Ipy
- libvirt
- RabbitMQ

# 1.2.2 Integrierte Anwendungen (Django)

- South
- · django-uni-form

# 1.3 Installation

Der Source Code kann von Github geladen werden. Entweder per direkten Download oder über Git.

```
git clone git@github.com:fatality/limeade.git
```

# 1.3.1 Installation der Anforderungen

Die Installation der Anforderungen wird beispielhaft für Arch Linux beschrieben.

# Celery und django-celery:

```
pip2 install -U Celery
pip2 install -U django-celery
```

# pyOpenSSL:

```
pacman -S python2-pyopenss1
```

# lxml:

```
pacman -S python2-lxml
```

### **Ipy:**

```
pacman -S python2-ipy
```

## libvirt:

Um libvirt und somit auch KVM benutzen zu können, muss der Computer Virtualisierung unterstützen. Dies lässt sich mit folgendem Befehl testen:

```
grep -E "(vmx|svm)" --color=always /proc/cpuinfo
```

Wenn die Ausgabe korrekt ist und der Computer Virtualisierung unterstützt kann libvirt, KVM und QEMU installiert und eingerichtet werden.

```
pacman -S qemu-kvm libvirt dnsmasq virt-manager
```

Um dnsmasq korrekt einzurichten empfiehlt sich folgende diese Anleitung. Libvirt als Normaluser verwenden zu können ist in dieser Anleitung beschrieben.

#### libvirt und TCP:

Die Datei /etc/libvirt/libvirtd.conf öffnen und folgende Stellen ändern:

```
listen_tls = 0
listen_tcp = 1
auth_tcp=none
```

Die Deamon Datei /etc/conf.d/libvirtd öffnen und den Eintrag LIBVIRTD\_ARGS in LIBVIRTD\_ARGS="-listen" ändern

Als letzter Schritt die QEMU Konfiguration in libvirt (/etc/libvirt/qemu.conf) öffnen und vnc\_listen = "0.0.0.0" eintragen bzw. den Kommentar entfernen.

Als nächstes kann mittels virt-manager eine VM angelegt werden. Die Daten der VM können im Django Admin später eingetragen werden.

# RabbitMQ:

In den Arch User Repositories findet sich ein Paket für RabbitMQ welches installiert werden muss.

Anschließend wird der RabbitMQ als root gestartet:

```
rabbitmq-server
```

Läuft der Server, müssen folgende drei Schritte durchgeführt werden:

```
rabbitmqctl add_user limeade EimequuChuap8aa8ohyo
rabbitmqctl add_vhost limeade
rabbitmqctl set_permissions -p limeade limeade ".*" ".*" ".*"
```

Der Server läuft nun und empfängt Nachrichten, leitet diese aber noch nicht weiter. Dazu muss der Deamon limed mittels Celery gestartet werden. In der *settings.py* müssen dazu noch die Angaben für MySQL gemacht werden, damit völlig automatisch Datenbanken erstellt werden können.

# 1.4 Benutzung

Sollten Node.js, Python, Django und die anderen Abhängigkeiten installiert sein lässt sich die Webanwendung mit Django einrichten. Dazu sollte jedoch eine lokale Konfigurationsdatei erstellt werden. Eine Beispieldatei ist integriert (local\_settings.py.example).

# 1.4.1 Django

Minimal sollte eine Datenbank angelegt werden und folgender Schritt durchgeführt werden:

```
cd web/limeade
python2 manage.py syncdb --migrate
```

Dies erstellt alle Tabellen in der Datenbank und zugleich auch einen Benutzer mit vollen Adminrechten. Starten lässt sich die Anwendung anschließend lokal mit

```
python2 manage.py runserver
```

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Die Webanwendung läuft nun unter http://127.0.0.1:8000/system/ und kann im Admin mit Daten gefüttert werden (http://127.0.0.1:8000/admin/).

# 1.4.2 Node.js Proxy

Der Node.js Proxy wird im *proxy*-Verzeichnis ebenfalls ausgeführt:

node index.js

# 1.4.3 RabbitMQ und Celery

Zum Abschluss muss RabbitMQ und der Deamon im limed-Verzeichnis gestaret werden:

rabbitmq-server
celeryd

# **API DOKUMENTATION**

# 2.1 System

# **2.1.1 Models**

Models for limeade system

```
class limeade.system.models.Contract(*args, **kwargs)
```

Creates a contract for a person with a product.

#### **Parameters**

- **person** the person
- **product** the product

## Example

```
>>> from limeade.system.models import Contract
>>> contract = Contract.objects.get(pk=1)
>>> contract
<Contract: Testuser / Testproduct>
```

# has\_add\_permission(request)

Returns true if user has permission to add a contract.

# has\_change\_permission(request, obj)

Returns true if user has permission to change the contract.

# $\verb|has_delete_permission| (\textit{request}, \textit{obj})|$

Returns true if user has permission to delete the contract.

```
queryset (request)
```

Returns a filtered queryset by request.

```
class limeade.system.models.Domain(*args, **kwargs)
```

Model for a domain, which belongs to a contract.

### **Parameters**

- contract the contract
- name the name of the domain

# **Example**

```
>>> from limeade.system.models import Domain
>>> domain = Domain.objects.get(pk=1)
>>> domain
<Domain: testdomain.com>
```

Note: name of domain must be unique

#### owner()

Returns the owner of the domain.

```
class limeade.system.models.Person(*args, **kwargs)
```

Creates a user profile for any registered person.

#### **Parameters**

- user the user stored in django.auth.models.User
- company if available, the company the user belongs to
- address default address of user
- parent persons can have own customers (e.g. reseller > customer)

# Example

```
>>> from limeade.system.models import Person
             >>> person = Person.objects.get(pk=1)
             >>> person
             <Person: Test User (Test Company)>
     first name()
         Returns the first name of the user.
     last name()
         Returns the last name of the user.
     system_user_home()
         Returns home directory of the user.
     system_user_id()
         Returns the user id.
     system_user_name()
         Returns unicode representation of the username.
     username()
         Returns the username of the user.
class limeade.system.models.Product(*args, **kwargs)
```

# **Parameters**

• **name** – name of the product

Defines a product which belongs to a person.

- personalized true if its, othwerwise false
- owner the person who owns this product

### Example

```
>>> from limeade.system.models import Product
              >>> product = Product.objects.get(pk=1)
              >>> product
              <Product: Testproduct>
     has_add_permission(request)
          Returns true if user has permission to add.
     has_change_permission(request, obj)
          Returns true if user has permission to change.
     has_delete_permission(request, obj)
          Returns true if user has permission to delete.
     queryset (request)
          Returns a filtered queryset.
limeade.system.models.create_user_profile(sender, instance, created, **kwargs)
     This function creates a user profile for Django's get_profile() method, after the user is registered. This works
     with signals.
2.1.2 Views
Views for limeade system
limeade.system.views.account(request, *args, **kwargs)
     Display basic account information.
          Parameters request – the request object
          Returns the account template
limeade.system.views.contract_add(request, *args, **kwargs)
     Add a new contract for a customer.
          Parameters
                • request – the request object
                • slug – the id of the customer
          Returns template for adding a contract
limeade.system.views.contract_customize(request, *args, **kwargs)
```

Personalize a plan for a customer.

## **Parameters**

- request the request object
- slug the id of the customer
- contract\_id the id of the contract

Returns edit form template

limeade.system.views.contract\_delete(request, \*args, \*\*kwargs) Remove a contract.

## **Parameters**

- request the request object
- slug the id of the customer

2.1. System 9 • contract id – the id of the contract

Returns redirect to customer view

limeade.system.views.customer\_add(request, \*args, \*\*kwargs)

Form to add a new customer.

**Parameters request** – the request object

**Returns** the add a customer template

 $\verb|limeade.system.views.customer_delete| (\textit{request}, *args, **kwargs)|$ 

Remove a customer.

### **Parameters**

- **request** the request object
- slug the id of the customer

Returns redirect to customer list

limeade.system.views.customer\_edit(request, \*args, \*\*kwargs)

Edit details of a customer.

#### **Parameters**

- **request** the request object
- slug the id of the customer

Returns a edit form template

limeade.system.views.customer\_list(request, \*args, \*\*kwargs)

Show a list of customers.

Parameters request – the request object

Returns the customer template

limeade.system.views.customer\_manage(request, \*args, \*\*kwargs)

Switch the current user to the customer. This allowes one to interact with the interface as if one was logged into the customers account.

# **Parameters**

- request the request object
- slug the id of the customer

**Returns** redirect to ressources

limeade.system.views.customer\_manage\_return(request, \*args, \*\*kwargs)

Return to the original user.

Parameters request – the request object

**Returns** redirect to ressources

limeade.system.views.customer\_view(request, \*args, \*\*kwargs)

View details of a customer.

# **Parameters**

- **request** the request object
- slug the id of the customer

**Returns** the customer detail template

limeade.system.views.domain\_add(request, slug, contract\_id)
Add a new domain.

#### **Parameters**

- **request** the request object
- slug the id of the customer
- **contract\_id** the id of the contract

Returns a edit form template

limeade.system.views.domain\_delete(request, slug, contract\_id, domain\_id)
 Remove a domain.

#### **Parameters**

- request the request object
- slug the id of the customer
- **contract id** the id of the contract
- domain\_id the id of the domain

**Returns** redirect to customer view

limeade.system.views.product\_add(request, \*args, \*\*kwargs)

Create a new product. A product is a combination of different limitsets.

Parameters request – the request object

**Returns** a edit form template

limeade.system.views.product\_delete(request, \*args, \*\*kwargs)
 Remove a product.

#### **Parameters**

- request the request object
- slug the id of the product

**Returns** a edit form template

#### **Parameters**

- **request** the request object
- slug the id of the product
- **next** redirect to view

**Returns** a edit form template

limeade.system.views.product\_list(request, \*args, \*\*kwargs)
Show a list of products.

Parameters request – the request object

Returns a list of products

limeade.system.views.ressources(request, \*args, \*\*kwargs)

Display the aggregated ressources available to the current user. This depends on the products a user has subscribed to.

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Parameters request – the request object

**Returns** the ressource template

# 2.2 Web

# **2.2.1 Models**

Models for limeade web

#### **Parameters**

- doamin the foreign key to the domain
- **vhost** the foreign key to the vhost

## **Parameters**

- name the name of the redirect
- doamin the associated domain
- to the redirect to

#### **Parameters**

- **products** the foreign key to the product
- **vhosts** maximum vhosts
- redirects maximum redirects
- webspace maximum webspace
- cputime maximum cputime

static utilization (user, ressource)

Filters specific ressources.

```
class limeade.web.models.PoolIP(*args, **kwargs)
    The IP address pool.
```

#### **Parameters**

- **ip** the IP
- region the foreign key to the region

# Example

```
>>> from limeade.web.models import PoolIP
>>> ip = PoolIP.objects.get(pk=1)
>>> ip
<Person: 127.0.0.1>
```

#### **Parameters**

- owner the user
- **serial** the ssl cert
- valid not before date of valid
- valid\_not\_after date of valid
- **subject** topic of cert
- cn cert number
- issuer the person
- cert the cert
- **key** key of the cert
- ca the ca of the cert
- **ip** the foreign key to the ip

```
set_cert (cert, key, ca)
```

Saves the certification.

class limeade.web.models.VHost(\*args, \*\*kwargs)
 Creates a vhost.

# **Parameters**

- **name** the name of the Vhost
- domain foreign key to the domain
- style php or python vhost
- cert the ssl cert

# **Example**

```
>>> from limeade.web.models import VHost
>>> vhost = VHost.objects.get(pk=1)
>>> vhost
<Person: Test VHost.testdomain.de>
```

 $\verb|limeade.web.models.get_vhosts| (user)$ 

Returns all vhosts that belongs to one user.

# **2.2.2 Views**

Views for limeade web

limeade.web.views.poolip\_add(request, \*args, \*\*kwargs)
Adds an IP address.

Parameters request – the request object

**Returns** an edit form template

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limeade.web.views.poolip\_list (request, \*args, \*\*kwargs)
Lists IP addresses.

Parameters request – the request object

**Returns** ip address pool template

limeade.web.views.redirect\_add(request, \*args, \*\*kwargs)
Create a new HTTP redirect.

Parameters request – the request object

**Returns** an edit form template

limeade.web.views.redirect\_delete(request, \*args, \*\*kwargs)
Remove a HTTP Redirect.

#### **Parameters**

- request the request object
- slug the id of the redirect

Returns redirect to http redirects list

limeade.web.views.redirect\_edit (request, \*args, \*\*kwargs)
Edit a HTTP redirect.

#### **Parameters**

- **request** the request object
- slug the id of the redirect

**Returns** an edit form template

limeade.web.views.redirect\_list (request, \*args, \*\*kwargs)
List HTTP redirects.

Parameters request – the request object

**Returns** list of http redirects

limeade.web.views.sslcert\_add(request, \*args, \*\*kwargs)
Add a new SSL certificate.

Parameters request – the request object

**Returns** an edit form template

limeade.web.views.sslcert\_delete(request, \*args, \*\*kwargs)
Remove a SSL certificate.

# **Parameters**

- **request** the request object
- slug the id of the ssl cert

**Returns** redirects to ssl cert list

limeade.web.views.sslcert\_list(request, \*args, \*\*kwargs)
List a users SSL certificates.

Parameters request – the request object

**Returns** a list of ssl certificates

```
limeade.web.views.vhost_add(request, *args, **kwargs)
Create a new web-vhost.
```

**Parameters request** – the request object

**Returns** an edit form template

limeade.web.views.whost\_catchall\_delete(request, \*args, \*\*kwargs)
Disable catch-all for this domain.

#### **Parameters**

- request the request object
- slug the id of the vhost

**Returns** redirects to vhost list

limeade.web.views.**vhost\_catchall\_set** (*request*, \*args, \*\*kwargs)

Set this vhost as catch-all for the domain.

### **Parameters**

- **request** the request object
- **slug** the id of the vhost

**Returns** redirects to vhost list

limeade.web.views.whost\_delete(request, \*args, \*\*kwargs)
Remove a web-vhost.

#### **Parameters**

- **request** the request object
- **slug** the id of the vhost

**Returns** redirects to vhost list

limeade.web.views.vhost\_edit(request, \*args, \*\*kwargs)
Edit details of a web-vhost.

# **Parameters**

- **request** the request object
- **slug** the id of the vhost

Returns an edit form template

limeade.web.views.whost\_list(request, \*args, \*\*kwargs)
List of web-vhosts.

**Parameters request** – the request object

**Returns** list of web vhosts

# 2.3 MySQL

# **2.3.1 Models**

Models for limeade mysql

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#### **Parameters**

- **product** the foreign key to the product
- **dbs** the maxmimum databases

# 2.3.2 Views

Views for limeade mysql

```
limeade.mysql.views.db_add(request, *args, **kwargs)
```

Form to add a new Database. Each database has a respective user with its own credentials.

**Parameters request** – the request object

**Returns** an edit form template

limeade.mysql.views.db\_delete(request, \*args, \*\*kwargs)
Drop a database.

#### **Parameters**

- request the request object
- slug the id of the database

Returns redirect to the database list

limeade.mysql.views.db\_edit(request, \*args, \*\*kwargs)

Form to set a new password for the database.

# **Parameters**

- request the request object
- slug the id of the database

**Returns** an edit form template

```
limeade.mysql.views.db_list(request, *args, **kwargs)
```

Show a list of the users databases.

**Parameters** request – the request object

**Returns** a list of databases

Raises TimeoutError

# 2.4 Mail

# **2.4.1 Models**

Models for limeade mail

# **Parameters**

• name – the name of the account

- domain the foreign key to the domain
- password the password of the account

# set\_password(password)

Salt and hashes the password.

#### **Parameters**

- product the foreign key to the product
- accounts the maximum number of mail accounts
- redirects the maximum number of mail redirects
- mailspace the maximum number of space

```
static utilization (user, ressource)
```

Returns the correct ressource.

#### **Parameters**

- **name** the name of the redirect
- domain the foreign key to the domain
- to redirect to

# 2.4.2 Views

Views for limeade mail

```
limeade.mail.views.account_add(request, *args, **kwargs)
Add a new mail account.
```

Parameters request – the request object

**Returns** an edit form template

limeade.mail.views.account\_delete(request, \*args, \*\*kwargs)
 Remove a mail account.

# **Parameters**

- request the request object
- slug the id of the account

Returns redirects to mail account list

limeade.mail.views.account\_edit (request, \*args, \*\*kwargs)
Set a new password for an email account.

# **Parameters**

- **request** the request object
- slug the id of the account

**Returns** an edit form template

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```
limeade.mail.views.account_list (request, *args, **kwargs)
List all mail accounts of a user.
```

Parameters request – the request object

Returns a list of mail accounts

limeade.mail.views.redirect\_add(request, \*args, \*\*kwargs)
Create a new mail redirect.

Parameters request – the request object

**Returns** an edit form template

limeade.mail.views.redirect\_delete(request, \*args, \*\*kwargs)
Remove a mail redirect.

#### **Parameters**

- request the request object
- slug the id of the redirect

**Returns** redirects to a list of mail redirects

limeade.mail.views.redirect\_edit(request, \*args, \*\*kwargs)
Edit a mail redirect.

# **Parameters**

- **request** the request object
- slug the id of the redirect

**Returns** an edit form template

limeade.mail.views.redirect\_list(request, \*args, \*\*kwargs)
List all mail redirects.

Parameters request – the request object

**Returns** a list of mail redirects

# 2.5 FTP

# **2.5.1 Models**

Models for limeade ftp

```
class limeade.ftp.models.Account(*args, **kwargs)
    Creates an ftp account.
```

#### **Parameters**

- name the name of the account
- password the password
- **vhost** the foreign key to the vhost

save (\*\*kwargs)

Saves the ftp account.

```
set_password(password)
```

Salt and hashes the password.

class limeade.ftp.models.Limitset(\*args, \*\*kwargs)

Saves the maximum number of ftp accounts.

# **Parameters**

- **product** the foreign key to the product
- accounts maximum number of ftp accounts

static utilization (user, ressource)

Returns the correct ressource.

# 2.5.2 Views

Views for limeade ftp

```
limeade.ftp.views.account_add(request, *args, **kwargs)
Add a new FTP account.
```

Parameters request – the request object

**Returns** an edit form template

```
limeade.ftp.views.account_delete(request, *args, **kwargs)
    Remove an ftp account.
```

#### **Parameters**

- request the request object
- slug the id of the ftp account

Returns redirects to a list of ftp accounts

```
limeade.ftp.views.account_edit(request, *args, **kwargs)
Change an ftp accounts password.
```

# **Parameters**

- request the request object
- slug the id of the ftp account

**Returns** an edit form template

```
limeade.ftp.views.account_list(request, *args, **kwargs)
Show a list of FTP accounts.
```

Parameters request – the request object

Returns a list of ftp accounts

# 2.6 Cluster

# **2.6.1 Models**

Models for limeade cluster

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# **Parameters name** – name of the region

```
class limeade.cluster.models.Server(*args, **kwargs)
    Creates a cluster server.
```

#### **Parameters**

- **hostname** name of the region
- **ip** the ip of the server
- region foreign key to cluster region
- services foreign key to cluster service
- enabled indicates if this server is enabled

class limeade.cluster.models.Service(\*args, \*\*kwargs)
 Creates a cluster service.

Parameters name – name of the service

# 2.6.2 Views

Views for limeade cluster

```
limeade.cluster.views.region_add(request, *args, **kwargs)
Add a new region to the cluster.
```

Parameters request – the request object

**Returns** an edit form template

```
limeade.cluster.views.region_delete(request, *args, **kwargs)
Remove a region from the cluster
```

### **Parameters**

- **request** the request object
- slug the id of the region

**Returns** redirect to list of regions

### **Parameters**

- request the request object
- slug the id of the region

**Returns** an edit form template

```
limeade.cluster.views.region_list(request, *args, **kwargs)
Show a list of regions.
```

Parameters request – the request object

**Returns** a list of regions

limeade.cluster.views.server\_add(request, \*args, \*\*kwargs)
Add a new server to the cluster.

Parameters request – the request object

**Returns** an edit form template

limeade.cluster.views.server\_delete(request, \*args, \*\*kwargs)

Remove a server from the cluster.

#### **Parameters**

- request the request object
- slug the id of the server

**Returns** redirect to server list

limeade.cluster.views.server\_disable (request, \*args, \*\*kwargs)

Put a server into maintenance.

#### **Parameters**

- **request** the request object
- slug the id of the server

**Returns** redirect to server list

limeade.cluster.views.server\_edit (request, \*args, \*\*kwargs)
Edit a server.

### **Parameters**

- **request** the request object
- slug the id of the server

**Returns** an edit form template

 $\verb|limeade.cluster.views.server_enable| (\textit{request}, *args, **kwargs)|$ 

Enable a server after a maintenance is over.

#### **Parameters**

- request the request object
- slug the id of the server

**Returns** redirect to server list

limeade.cluster.views.server\_list(request, \*args, \*\*kwargs)
Show a list of servers.

Parameters request – the request object

**Returns** a list of servers

# 2.7 Cloud

# **2.7.1 Models**

class limeade.cloud.models.Instance(\*args, \*\*kwargs)
 Creates a cloud instance

### **Parameters**

• **hostname** – the hostname of the instance

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- sshkeys foreign key to the ssh keys
- owner the owner of the instance
- domain domain of the instance
- node foreign key to the cloud node
- active indicates if the instance is active
- mac addr the mac address of the instance

# generate\_mac\_addr()

Creates a mac address.

save (\*\*kwargs)

Saves the instance.

class limeade.cloud.models.Limitset(\*args, \*\*kwargs)

Maxmimum limit for an cloud instance.

#### **Parameters**

- **product** foreign key to the product
- cpu\_cores max number of cpu cores
- **memory** max number of memory
- storage max number of storage

### static utilization (user, ressource)

Returns the correct ressource.

class limeade.cloud.models.Node(\*args, \*\*kwargs)

Creates a new node in the cloud.

# **Parameters**

- name the name of the node
- uri the unique resource identifier of the node

class limeade.cloud.models.SSHKey (\*args, \*\*kwargs)

Creates a SSH Key for the cloud instance.

## **Parameters**

- **comment** comment for this key
- **key** the ssh key
- owner the owner of this key

# 2.7.2 Views

Views for limeade cloud API calls

limeade.cloud.views.api.instance\_activate(request)

Called when an instance is done provisioning.

Parameters request – the request object

Requires two GET Parameters:

•site\_api\_key: for security reasons

•instance: ID of the instance to activate

**Returns** a http response with data

limeade.cloud.views.api.instance\_info(request, slug)

Returns information an instance can use to configure itself.

### **Parameters**

- request the request object
- slug the mac address of the instance

It includes:

- •the hostname
- •SSH Keys

Returns a http response with data

Views for limeade cloud Instances

```
limeade.cloud.views.instance.instance_add(request, *args, **kwargs)

View for adding a new instance.
```

Parameters request – the request object

**Returns** an edit form template

limeade.cloud.views.instance.instance\_delete(request, \*args, \*\*kwargs)

Delete a instance.

## **Parameters**

- request the request object
- slug the id of the instance

**Returns** redirect to a list of cloud instances

```
limeade.cloud.views.instance.instance_list(request, *args, **kwargs)
Show a list of the current users instances.
```

Parameters request – the request object

**Returns** list of instances

```
limeade.cloud.views.instance.instance_restart(request, *args, **kwargs)
    Restart a instance.
```

# **Parameters**

- request the request object
- slug the id of the instance

**Returns** redirect to a list of cloud instances

```
limeade.cloud.views.instance.instance_start (request, *args, **kwargs)
Start a instance.
```

# **Parameters**

- request the request object
- **slug** the id of the instance

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**Returns** redirect to a list of cloud instances

limeade.cloud.views.instance.instance\_stop(request, \*args, \*\*kwargs)
Stop a instance.

#### **Parameters**

- **request** the request object
- **slug** the id of the instance

**Returns** redirect to a list of cloud instances

Views for limeade cloud SSH Keys

limeade.cloud.views.ssh.sshkey\_add(request, \*args, \*\*kwargs)
Form to add a new SSH Key.

Parameters request – the request object

Returns an edit form template

limeade.cloud.views.ssh.sshkey\_delete(request, \*args, \*\*kwargs)
Delete a SSH Key.

#### **Parameters**

- **request** the request object
- slug the id of the ssh key

**Returns** redirect to a list of ssh keys

limeade.cloud.views.ssh.sshkey\_list(request, \*args, \*\*kwargs)
Show a list of the Users SSH Keys.

Parameters request – the request object

**Returns** a list of ssh keys

Views for limeade cloud VNC

limeade.cloud.views.vnc.instance\_vnc(request, \*args, \*\*kwargs)

Lets view the authenticated user a VNC console.

# **Parameters**

- request the request object
- slug the virtual machine id

**Returns** the vnc template

Raises DoesNotExist

limeade.cloud.views.vnc.instance\_vnc\_auth(request, slug, token)
API call for websocket to tcp proxy to get the settings.

### **Parameters**

- request the request object
- slug the virtual machine id
- token the session id from the requesting user

Returns dictionary containing proxy settings

Raises ObjectDoesNotExist

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**THREE** 

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- genindex
- search

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