
Lago Documentation

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Lago module

1.1 lago

```
class lago.Prefix(prefix)
    Bases: object
    _add_nic_to_mapping (net, dom, nic)
    _allocate_ips_to_nics (conf)
    _allocate_subnets (conf)
    _check_predefined_subnets (conf)
    _config_net_topology (conf)
    _create_disk (name, spec, template_repo=None, template_store=None)
    _create_paths ()
    _create_ssh_keys ()
    _create_virt_env ()
    _get_metadata ()
    _init_net_specs (conf)
    _register_preallocated_ips (conf)
    _save_metadata ()
    _use_prototype (spec, conf)
    cleanup ()
    create_snapshots (name)
    initialize ()
    paths
    revert_snapshots (name)
    save ()
    start ()
    stop ()
    virt_conf (conf, template_repo=None, template_store=None)
```

virt_env

`lago._create_ip(subnet, index)`

`lago._ip_in_subnet(subnet, ip)`

1.2 lago.brctl

`lago.brctl._brctl(command, *args)`

`lago.brctl._set_link(name, state)`

`lago.brctl.create(name, stp=True)`

`lago.brctl.destroy(name)`

`lago.brctl.exists(name)`

1.3 lago.config

`lago.config._get_environ()`

`lago.config._get_from_dir(path, key)`

`lago.config._get_from_env(key)`

`lago.config._get_from_files(paths, key)`

`lago.config._get_providers()`

`lago.config.get(key, default=<object object>)`

1.4 lago.constants

1.5 lago.dirlock

`lago.dirlock._lock_path(path)`

`lago.dirlock.lock(path, excl, key_path)`

`lago.dirlock.trylock(path, excl, key_path)`

`lago.dirlock.unlock(path, key_path)`

1.6 lago.paths

class `lago.paths.Paths(prefix)`

Bases: `object`

`_prefixed(*args)`

`images(*path)`

`logs()`


```
metadata()  
prefix()  
ssh_id_rsa()  
ssh_id_rsa_pub()  
uuid()  
virt(*path)
```

1.7 lago.subnet_lease

```
lago.subnet_lease._acquire(*args, **kwargs)  
lago.subnet_lease._lease_owned(path, current_uuid_path)  
lago.subnet_lease._lease_valid(path)  
lago.subnet_lease._locked(func)  
lago.subnet_lease._release(*args, **kwargs)  
lago.subnet_lease._take_lease(path, uuid_path)  
lago.subnet_lease._validate_lease_dir_present(func)  
lago.subnet_lease.acquire(uuid_path)  
lago.subnet_lease.is_leasable_subnet(subnet)  
lago.subnet_lease.release(subnet)
```

1.8 lago.sysprep

```
lago.sysprep._config_net_interface(iface, **kwargs)  
lago.sysprep._upload_file(local_path, remote_path)  
lago.sysprep._write_file(path, content)  
lago.sysprep.add_ssh_key(key)  
lago.sysprep.config_net_interface_dhcp(iface, hwaddr)  
lago.sysprep.set_hostname(hostname)  
lago.sysprep.set_iscsi_initiator_name(name)  
lago.sysprep.set_root_password(password)  
lago.sysprep.set_selinux_mode(mode)  
lago.sysprep.sysprep(disk, mods)
```

1.9 lago.templates

```
class lago.templates.FileSystemTemplateProvider(root)
```

```
    _prefixed(*path)
    download_image(handle, dest)
    get_hash(handle)
    get_metadata(handle)
class lago.templates.HttpTemplateProvider(baseUrl)

    download_image(handle, dest)
    get_hash(handle)
    get_metadata(handle)
class lago.templates.Template(name, versions)

    get_latest_version()
    get_version(ver_name=None)
class lago.templates.TemplateRepository(dom)

    _get_provider(spec)
    classmethod from_file(path)
    get_by_name(name)
    name
class lago.templates.TemplateStore(path)

    _init_users(temp_ver)
    _prefixed(*path)
    download(temp_ver, store_metadata=True)
    get_path(temp_ver)
    get_stored_hash(temp_ver)
    get_stored_metadata(temp_ver)
    mark_used(temp_ver, key_path)
class lago.templates.TemplateVersion(name, source, handle, timestamp)

    download(destination)
    get_hash()
    get_metadata()
    timestamp()
lago.templates.__locked(func)
lago.templates.find_repo_by_name(name, repo_dir=None)
```

1.10 lago.utils

class `lago.utils.CommandStatus`

Bases: `lago.utils.CommandStatus`

class `lago.utils.EggTimer` (*timeout*)

elapsed ()

class `lago.utils.RollbackContext` (**args*)

Bases: `object`

A context manager for recording and playing rollback. The first exception will be remembered and re-raised after rollback

Sample usage: > with RollbackContext() as rollback: > step1() > rollback.prependDefer(lambda: undo step1) > def undoStep2(arg): pass > step2() > rollback.prependDefer(undoStep2, arg)

More examples see tests/utilsTests.py @ vdsms code

clear ()

defer (*func, *args, **kwargs*)

prependDefer (*func, *args, **kwargs*)

class `lago.utils.VectorThread` (*targets*)

join_all (*raise_exceptions=True*)

start_all ()

`lago.utils._CommandStatus`

alias of `CommandStatus`

`lago.utils._read_nonblocking` (*f*)

`lago.utils._ret_via_queue` (*func, queue*)

`lago.utils.drain_ssh_channel` (*chan, stdin=None, stdout=<open file '<stdout>', mode 'w'>, stderr=<open file '<stderr>', mode 'w'>*)

`lago.utils.func_vector` (*target, args_sequence*)

`lago.utils.interactive_ssh_channel` (*chan, command=None, stdin=<open file '<stdin>', mode 'r'>*)

`lago.utils.invoke_in_parallel` (*func, *args_sequences*)

`lago.utils.json_dump` (*obj, f*)

`lago.utils.run_command` (*command, input_data=None, env=None, **kwargs*)

`lago.utils.service_is_enabled` (*name*)

`lago.utils.setup_logging` (*logdir*)

1.11 lago.virt

class `lago.virt.BridgeNetwork` (*env, spec*)

Bases: `lago.virt.Network`

```
    _libvirt_xml ()
    start ()
    stop ()
class lago.virt.NATNetwork (env, spec)
    Bases: lago.virt.Network
    _libvirt_xml ()
class lago.virt.Network (env, spec)
    Bases: object
    _libvirt_name ()
    add_mapping (name, ip, save=True)
    add_mappings (mappings)
    alive ()
    gw ()
    is_management ()
    name ()
    resolve (name)
    save ()
    start ()
    stop ()
class lago.virt.ServiceState

    ACTIVE = 2
    INACTIVE = 1
    MISSING = 0
class lago.virt.VM (env, spec)
    Bases: object
    VM properties: * name * cpus * memory * disks * metadata * network/mac addr
    _check_alive (func)
    _create_dead_snapshot (name)
    _create_live_snapshot (name)
    _detect_service_manager ()
    _get_ssh_client (*args, **kwargs)
    _libvirt_name ()
    _libvirt_xml ()
    classmethod _normalize_spec (spec)
    _open_ssh_client ()
    _reclaim_disk (path)
```

```

_reclaim_disks ()
_sftp (*args, **kws)
_template_metadata ()
alive ()
bootstrap ()
copy_from (remote_path, local_path)
copy_to (local_path, remote_path)
create_snapshot (name)
distro ()
extract_paths (paths)
guest_agent ()
interactive_ssh (*args, **kwargs)
ip ()
iscsi_name ()
metadata
name ()
nics ()
revert_snapshot (name)
root_password ()
save (path=None)
service (*args, **kwargs)
ssh (command, data=None, show_output=True)
ssh_script (path, show_output=True)
start ()
stop ()
virt_env ()
vnc_port (*args, **kwargs)
wait_for_ssh (connect_retries=50)
class lago.virt.VirtEnv (prefix, vm_specs, net_specs)
    Bases: object
    Env properties: * prefix * vms * net
        •libvirt_con
    _create_net (net_spec)
    _create_vm (vm_spec)
    bootstrap ()
    create_snapshots (name)

```

```
classmethod from_prefix (prefix)
get_net (name=None)
get_nets ()
get_vm (name)
get_vms ()
libvirt_con
prefixed_name (unprefixed_name)
revert_snapshots (name)
save ()
start ()
stop ()
virt_path (*args)
class lago.virt.__Service (vm, name)

    alive ()
    exists ()
    classmethod is_supported (vm)
    start ()
    stop ()
class lago.virt.__SysVInitService (vm, name)
    Bases: lago.virt.__Service
    BIN_PATH = '/sbin/service'
    _request_start ()
    _request_stop ()
    state ()
class lago.virt.__SystemdContainerService (vm, name)
    Bases: lago.virt.__Service
    BIN_PATH = '/usr/bin/docker'
    HOST_BIN_PATH = '/usr/bin/systemctl'
    _request_start ()
    _request_stop ()
    state ()
class lago.virt.__SystemdService (vm, name)
    Bases: lago.virt.__Service
    BIN_PATH = '/usr/bin/systemctl'
    _request_start ()
    _request_stop ()
```

```
state()  
lago.virt._gen_ssh_command_id()  
lago.virt._guestfs_copy_path(g, guest_path, host_path)  
lago.virt._ip_to_mac(ip)  
lago.virt._path_to_xml(basename)
```

oVirt lago plugin module

2.1 ovirtlago

2.2 ovirtlago.constants

2.3 ovirtlago.paths

2.4 ovirtlago.repoverify

2.5 ovirtlago.testlib

2.6 ovirtlago.utils

2.7 ovirtlago.virt

Getting started

Check out the awesome README!

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