



## **SENAITE Community VM**

Version: 1.1

Date: 2018/01/11

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## Summary

This document comes as a quick-start guide for the ready-to-use SENAIITE LIMS VM (SENAITE VM.ova), which you can use for testing in [VirtualBox](#).

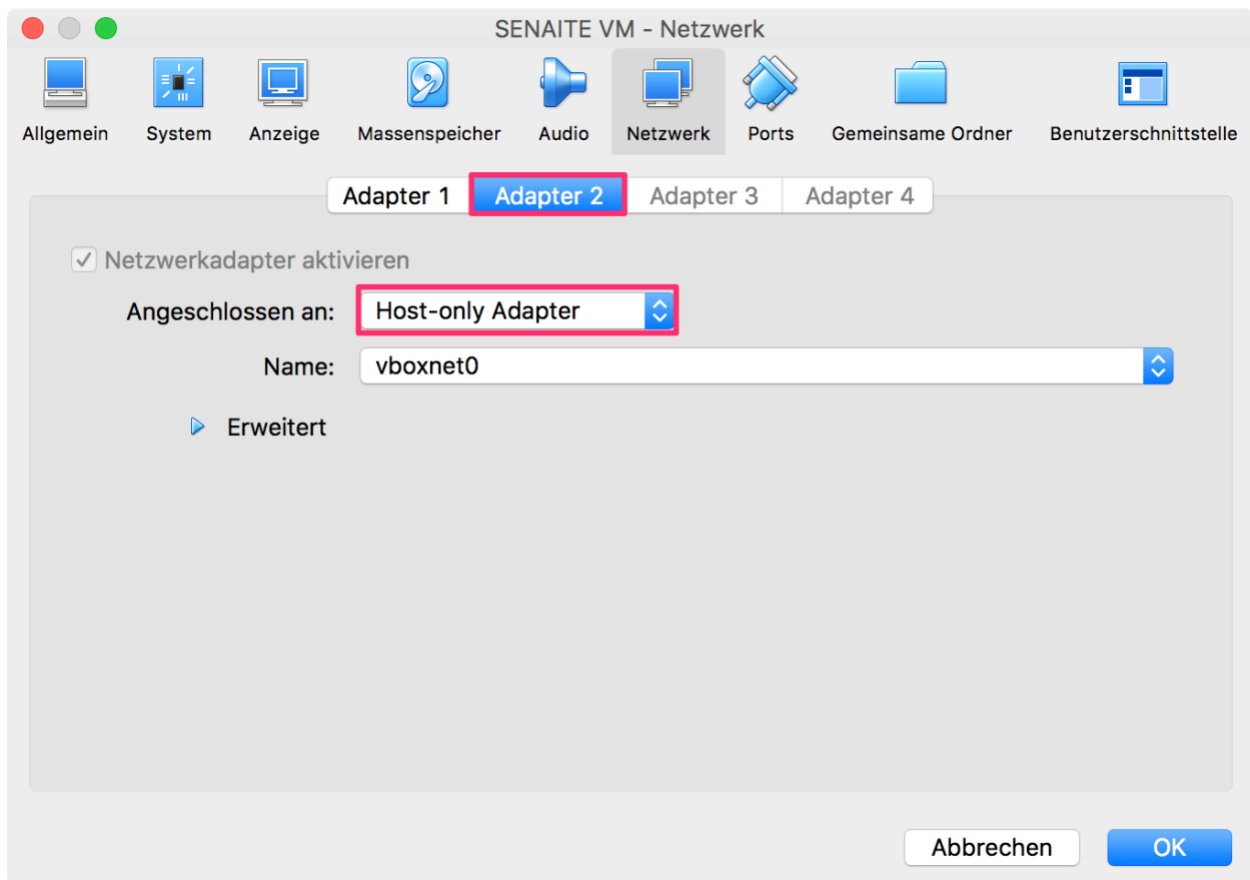
## Quick Start

The VM needs to get imported into [VirtualBox](#) with the configured settings (Network, number of CPU's, RAM ...) as described in the **Technical Details** section.

## Virtual Box Network Settings

It is absolutely important that the VM is configured with **two network adapters**.

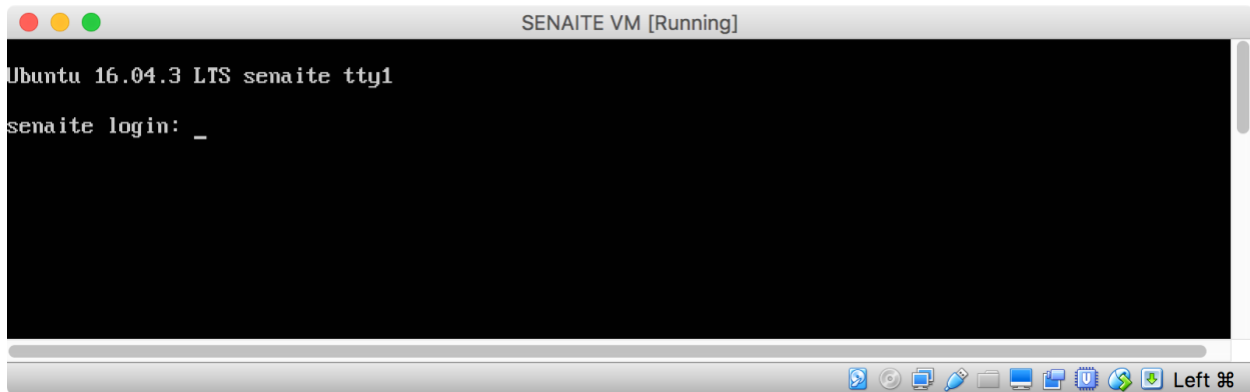
*Adapter 1* as NAT and *Adapter 2* as Host-only Adapter for the network 192.168.33.0.



*Note: The second network adapter needs to be configured as host only in [VirtualBox](#) in the network 192.168.33.0. Also see: [https://www.virtualbox.org/manual/ch06.html - network hostonly](https://www.virtualbox.org/manual/ch06.html-network_hostonly) for further details*

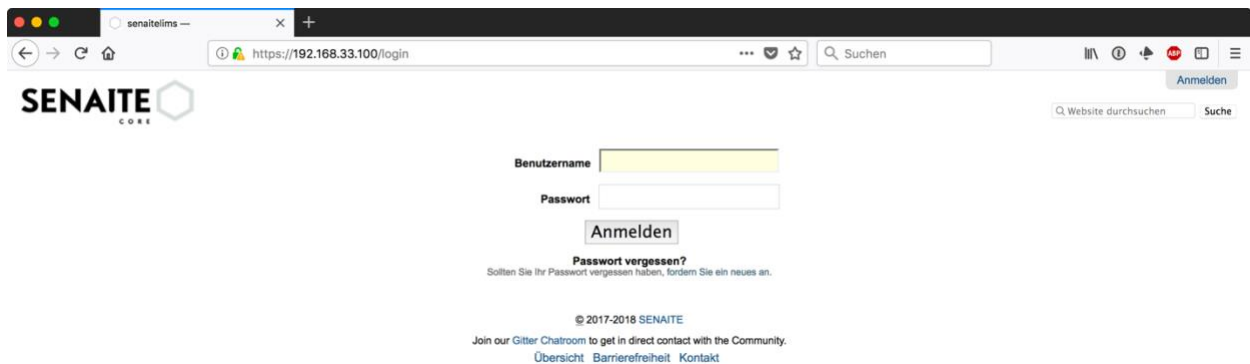
## Starting the VM

After you started the VM, you should see the login screen of the Ubuntu Server.



*Note: You do not have to login to the Server, because all the services started automatically in the background*

You can now open a browser on your Computer and enter `https://192.168.33.100` into the address bar to access the SENAITe LIMS system and the login page.



**Important:** Please confirm in your browser the security message regarding the self-signed security certificate and login with username **admin**, password **admin**.

### User Accounts and Passwords

System	Username	Password
Ubuntu	senaite	senaite
LIMS	admin	admin
Supervisor	admin	admin
HAProxy	admin	admin
Munin	admin	admin

### Technical Details

Name	Value
LIMS Version	Git Repository ( <a href="https://github.com/senaite/senaite.core">https://github.com/senaite/senaite.core</a> )
Plone Version	4.3.15
DB Server (ZEO)	127.0.0.1:8100
Instance 1 (ZOPE)	127.0.0.1:8081
Instance 2 (ZOPE)	127.0.0.1:8082
Installation Root	/home/senaite/senaitelims
Database	/home/senaite/data/senaitelims/
LIMS System User (Linux)	senaite
LIMS Daemon User (Linux)	senaite_daemon
Operating System	Ubuntu 16.04 LTS
Processor	2 Cores
HDD	100 GB (dynamically growing)
RAM	4096 MB
Network Adapter 1 (NAT)	Dynamic assigned over DHCP (NAT)
Network Adapter 2 (host-only)	192.168.33.100
Open Ports	22, 25, 80, 443

*Note: You can partially adjust these settings via VMWare or directly in the system*

## Services

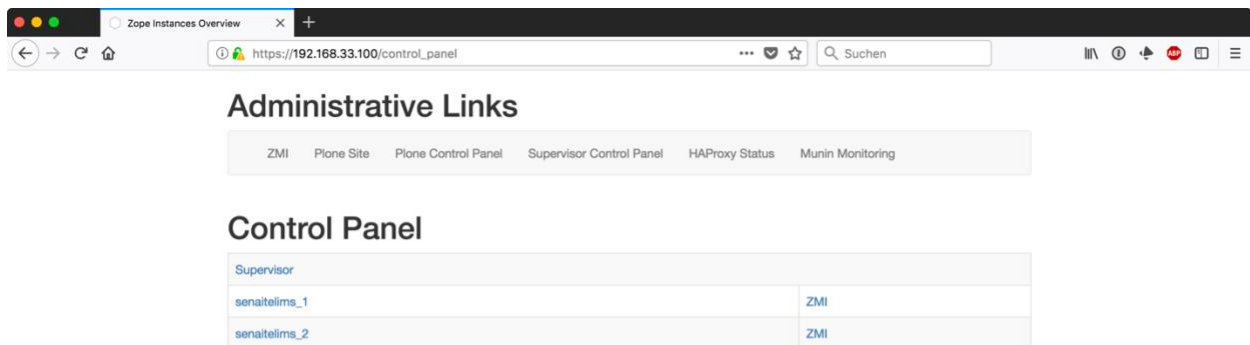
The VM provides administrative links directly through the web interface.

*Note: The IP **192.168.33.100** is only available on the VM Host.*

## Control Panel

The control panel provides an overview of the installed services and allows a quick navigation to their administrative sites, as well as the direct access to the single Zope instances.

[https://192.168.33.100/control\\_panel](https://192.168.33.100/control_panel)

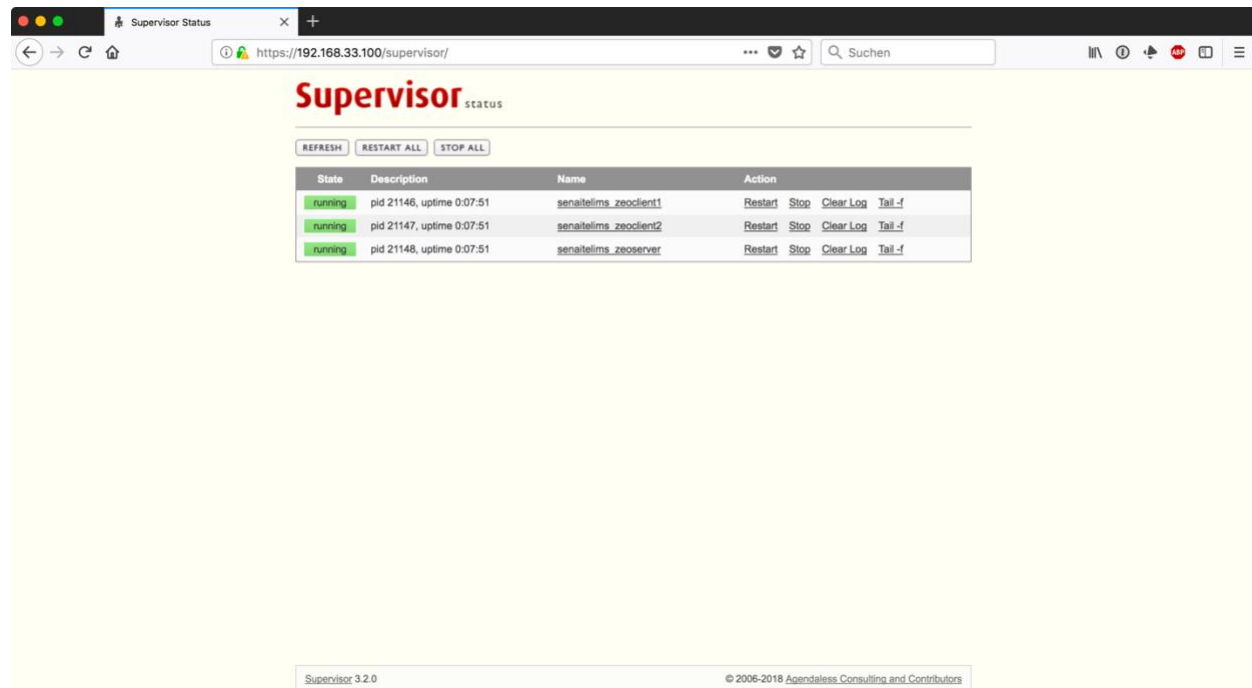


*Note: This page has no access restriction, but the links to each page are secured and only accessible via Basic Authentication over HTTPS.*

## Supervisor

Supervisor (<http://supervisord.org>) allows starting and stopping the LIMS instances and the DB server. It manages the database ZEO Servers (senaitelims\_zeoserver), as well as the 2 connected ZOPE instances (senaitelims\_zeoclient1, senaitelims\_zeoclient2).

<https://192.168.33.100/supervisor/>



### Supervisor Information

IP	127.0.0.1
Port	9001
Daemon User	supervisord
Installation	/etc/supervisor
Configuration	/etc/supervisor/supervisord.conf

*Note: This service starts automatically on system startup*

## HAProxy

HAProxy (<http://www.haproxy.org>) is a load balancer which distributes incoming requests equally to the available LIMS instances.

<https://192.168.33.100/haproxy-status/>

**HAProxy version 1.6.3, released 2015/12/25**  
**Statistics Report for pid 21492**

> General process information

pid = 21492 (process #1, rbtproc = 1)  
 uptime = 0d 0h0m29s  
 system limits: memmax = unlimited; ulimit-n = 4033  
 maxsock = 4033; maxconn = 2000; maxpipes = 0  
 current conns = 1; current pipes = 0/0; conn rate = 1/sec  
 Running tasks: 1/8; idle = 100 %

active UP, backup UP, active or backup DOWN for maintenance (MAINT), active or backup SOFT STOPPED for maintenance, Note: "NOLOADDRAIN" = LP with load-balancing disabled.

Display option:  
 • Scope:   
 • Hide 'DOWN' servers  
 • Disable refresh  
 • Refresh now  
 • CSV export

External resources:  
 • Primary site  
 • Updates (v1.5)  
 • Online manual

senaite_frontend																														
Queue			Session rate			Sessions			Bytes		Denied		Errors		Warnings		Server													
Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp	Req	Conn	Resp	Retr	Rodis	Status	LastChk	Wght	Act	Bck	Chk	Dwn	Dwntms	Thrtle	
Frontend			1	34	-	1	8	2 000	284			195 892	8 721 991	0	0	0	0	0	0	0	0	OPEN								

senaite_backend																													
Queue			Session rate			Sessions			Bytes		Denied		Errors		Warnings		Server												
Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp	Req	Conn	Resp	Retr	Redis	Status	LastChk	Wght	Act	Bck	Chk	Dwn	Dwntms	Thrtle
senaitelims_1	0	0	-	0	34	0	8	-	238	2	5m3s	168 744	6 939 406	0	0	0	0	0	0	0	8m15s UP	L7OK/200 in 12ms	1	Y	-	1	1	146	-
senaitelims_2	0	0	-	0	19	0	7	-	41	1	5m30s	25 655	1 764 564	0	0	0	0	0	0	0	8m14s UP	L7OK/200 in 3ms	1	Y	-	1	1	146	-
Backend	0	0	0	34	-	0	8	200	279	3	5m3s	194 399	8 703 970	0	0	0	0	0	0	0	8m15s UP		2	2	0		1	13s	

### HAProxy Information

IP	127.0.0.1
Port	8080
Daemon user	haproxy
Installation directory	/etc/haproxy
Configuration file	/etc/haproxy/haproxy.cfg

Note: This service starts automatically on system startup



## Munin

Munin (<http://munin-monitoring.org>) is a monitoring tool which monitors the SENAITE LIMS installation, as well as other relevant services of the system.

<https://192.168.33.100/munin/>

**HAProxy version 1.6.3, released 2015/12/25**  
**Statistics Report for pid 21492**

> General process information

pid = 21492 (process #1, nproc = 1)  
 uptime = 0d 0h08m29s  
 system limits: memmax = unlimited; ulimit-n = 4033  
 maxsock = 4033; maxconn = 2000; maxpipes = 0  
 current conns = 1; current pipes = 0/0; conn rate = 1/sec  
 Running tasks: 1/8; idle = 100 %

Legend:  
 active UP (green), active UP, going down (yellow), active DOWN, going up (orange), active or backup DOWN for maintenance (MAINT) (red), active or backup SOFT STOPPED for maintenance (purple), backup UP (blue), backup UP, going down (light blue), backup DOWN, going up (dark blue), not checked (grey), Note: "NOLB"/"DRAIN" = UP with load-balancing disabled.

Display option:  
 • Scope:   
 • Hide DOWN servers  
 • Disable refresh  
 • Refresh now  
 • CSV export

External resources:  
 • Primary site  
 • Updates (v1.5)  
 • Online manual

senaio_frontend		Queue		Session rate			Sessions			Bytes		Denied		Errors			Warnings			Server										
	Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LibTot	Last	In	Out	Req	Resp	Conn	Resp	Retr	Redis	Status	LastChk	Wght	Act	Bck	Chk	Dwn	Dwtime	Thrtle	
Frontend	1	34	-	1	8	2 000	284						195 892	8 721 991	0	0	0	0	0	0	OPEN									

senaio_backend		Queue		Session rate			Sessions			Bytes		Denied		Errors			Warnings			Server									
	Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LibTot	Last	In	Out	Req	Resp	Conn	Resp	Retr	Redis	Status	LastChk	Wght	Act	Bck	Chk	Dwn	Dwtime	Thrtle
senaitelims_1	0	0	-	0	34	0	8	-	238	2	5m3s	168 744	6 939 406	0	0	0	0	0	0	0	8m15s UP	L7OK200 in 12ms	1	Y	-	1	1	14s	-
senaitelims_2	0	0	-	0	19	0	7	-	41	1	5m20s	25 655	1 764 564	0	0	0	0	0	0	0	8m14s UP	L7OK200 in 3ms	1	Y	-	1	1	14s	-
Backend	0	0	0	34	0	8	200	279	3	5m3s	194 399	8 703 970	0	0	0	0	0	0	0	0	8m15s UP		2	2	0		1	13s	

### Munin Information

IP	127.0.0.1
Port	4949
Daemon user	munin
Installation directory	/etc/munin
Configuration	/etc/munin/munin.conf

*Note: This service starts automatically on system startup*

## Varnish

Varnish (<https://varnish-cache.org>) is a cache proxy and speeds up server response times. There is no administrative web interface.

### *Varnish Information*

IP	0.0.0.0
Port	8888
Daemon User	varnishd
Installation directory	/etc/varnish
Configuration file	/etc/varnish/default.vcl

*Note: This service starts automatically on system startup*

## NGINX

NGINX (<http://nginx.org>) is a web server. There is no administrative web interface.

### *NGINX Information*

IP	0.0.0.0
Ports	80, 443
Daemon User	nginx
Installation directory	/etc/nginx
Configuration file	/etc/nginx/nginx.cfg; /etc/nginx/sites-enabled/administrative.conf /etc/nginx/sites-enabled/custom_vhosts.conf

*Note: This service starts automatically on system startup*

## Firewall

This VM is protected by a firewall (<https://wiki.ubuntuusers.de/ufw>). Similarly, multiple SSH failures are blocked by Fail2Ban (<http://www.fail2ban.org>).

### *Firewall Ports*

Port	Service	State
22	SSH	open
25	SMTP	open
80	HTTP	open
443	HTTPS	open
*	*	blocked

## Cron Jobs

The VM performs time-controlled tasks independently via Cron Jobs.

### *Configured Cron Jobs*

User	Description	Cron Job Configuration
senaite_daemon	DB Pack	30 1 * * 7 cd /home/senaite/senaitelims && bin/zeopack && echo "zeopack_success for senaitelims"
senaite_daemon	DB Backup	30 2 * * * cd /home/senaite/senaitelims && bin/backup && echo "backup_success for senaitelims"
root	System update	/etc/apt/apt.conf.d/10periodic

## Further Notes

**This VM is for testing only and should not be used for production purposes**

If you would like to use SENAIITE in production, please contact a professional service provider

<http://senaite.com>

## Contact and further questions



Get in touch with the SENAITE Community today

**Gitter Channel:** <https://gitter.im/senaite/Lobby>

**Users List:** <https://sourceforge.net/projects/senaite/lists/senaite-users>

**Website:** <http://senaite.com>