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Praktikum Cloud Computing

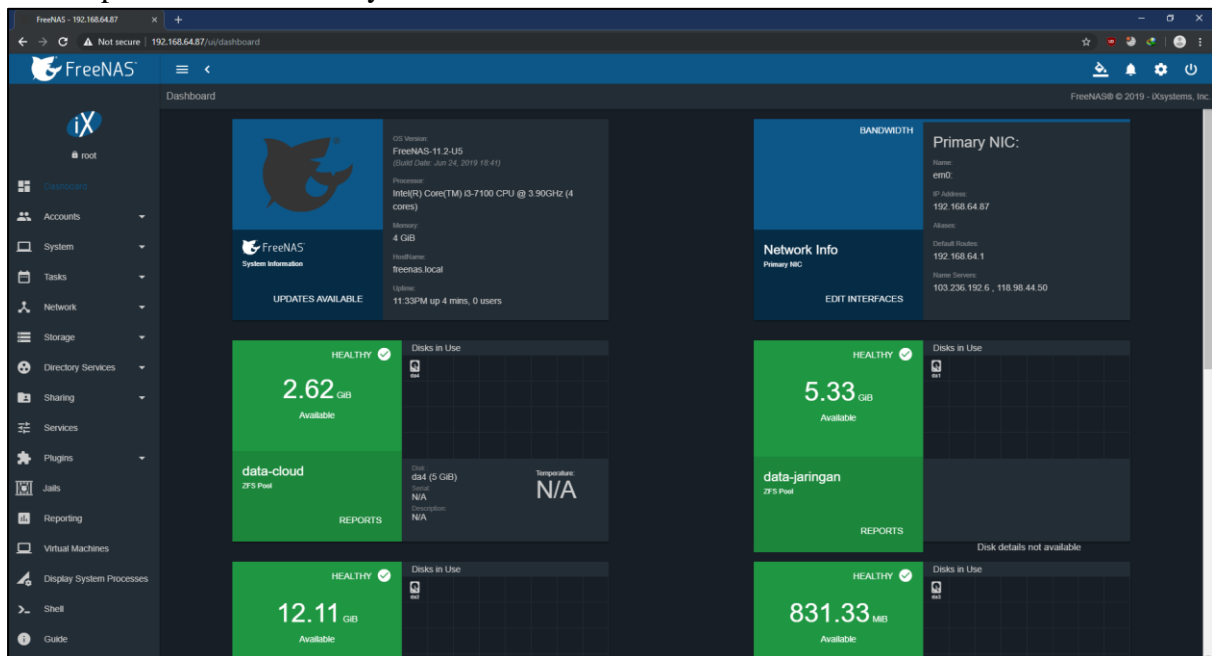
S3 Bucket Service

Protokol penyimpanan berbaikan obyek yang telah digunakan oleh banyak vendor cloud computing, contohnya Amazon Web Service.

KONFIGURASI S3 BUCKET SERVICE

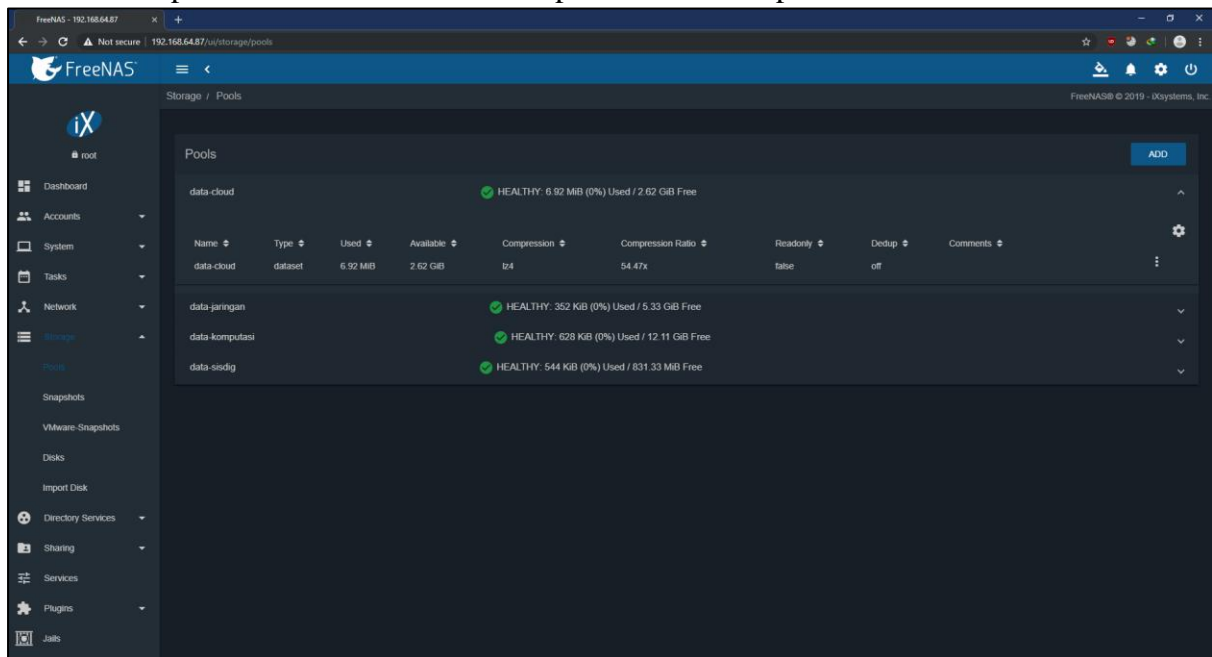
1. Login Dashboard FreeNAS

Gunakan kombinasi username **root** dan password yang telah ditentukan pada pertemuan sebelumnya



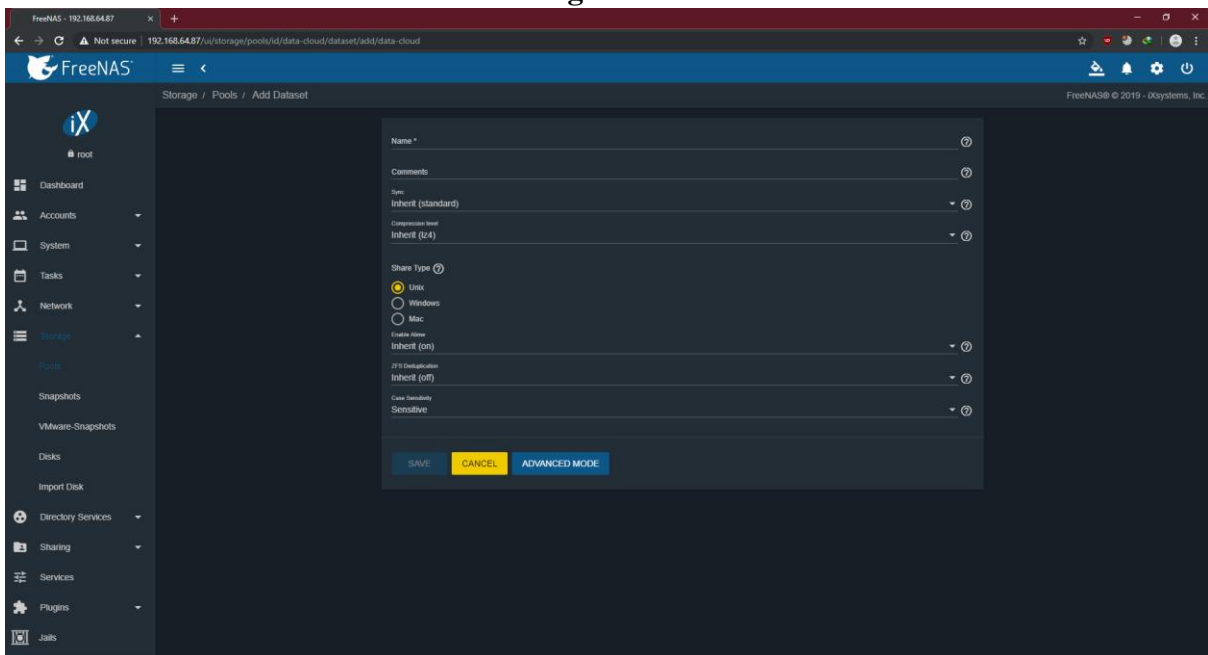
2. Masuk menu storage pool

Pada pool **data-cloud** buka menu options kemudian pilih **Add Dataset**

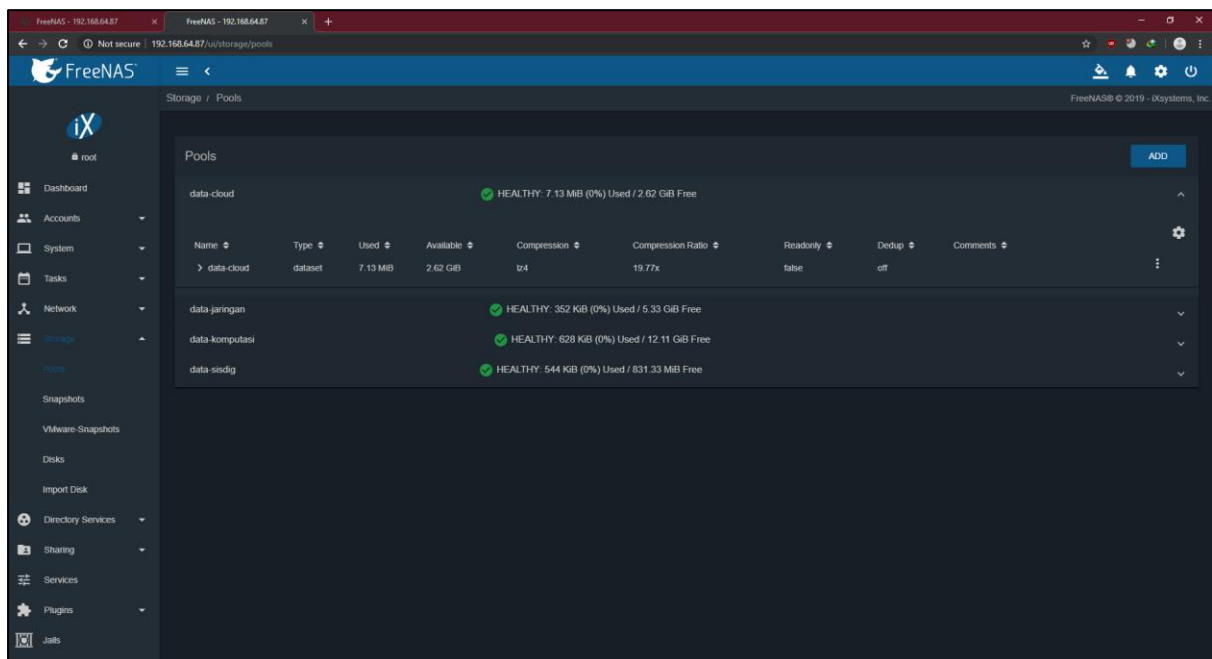


3. Buat Dataset baru

Gunakan nama dataset **s3-datastorage** kemudian **save**

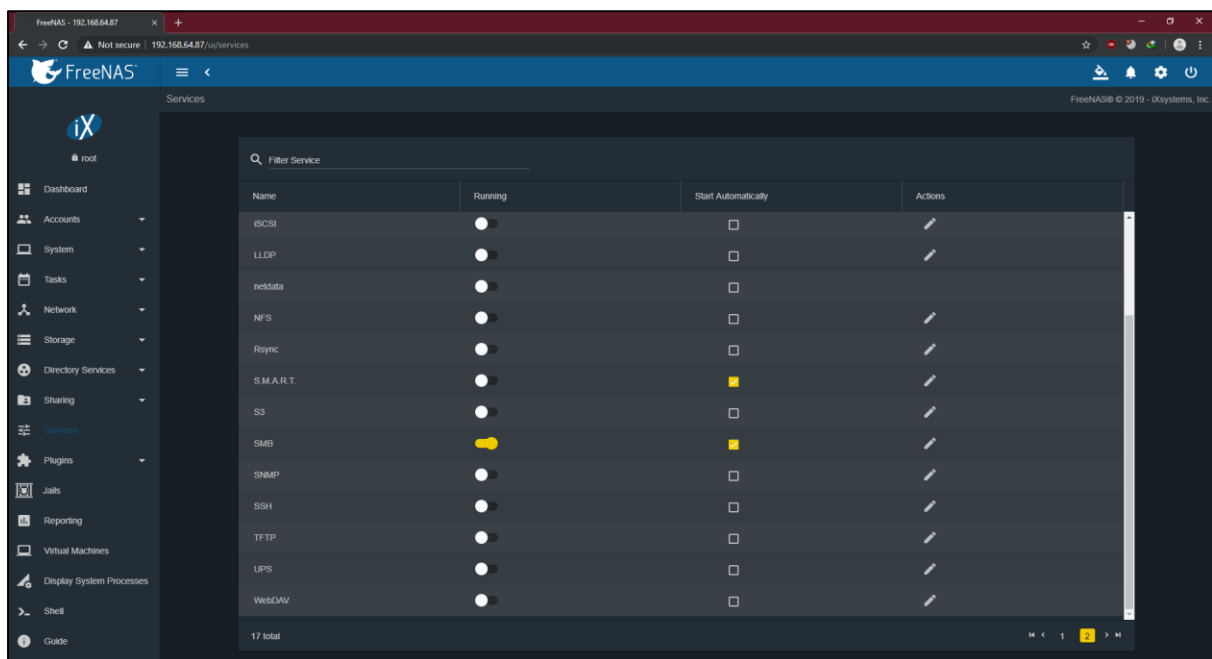


4. Hasil Pembuatan Dataset

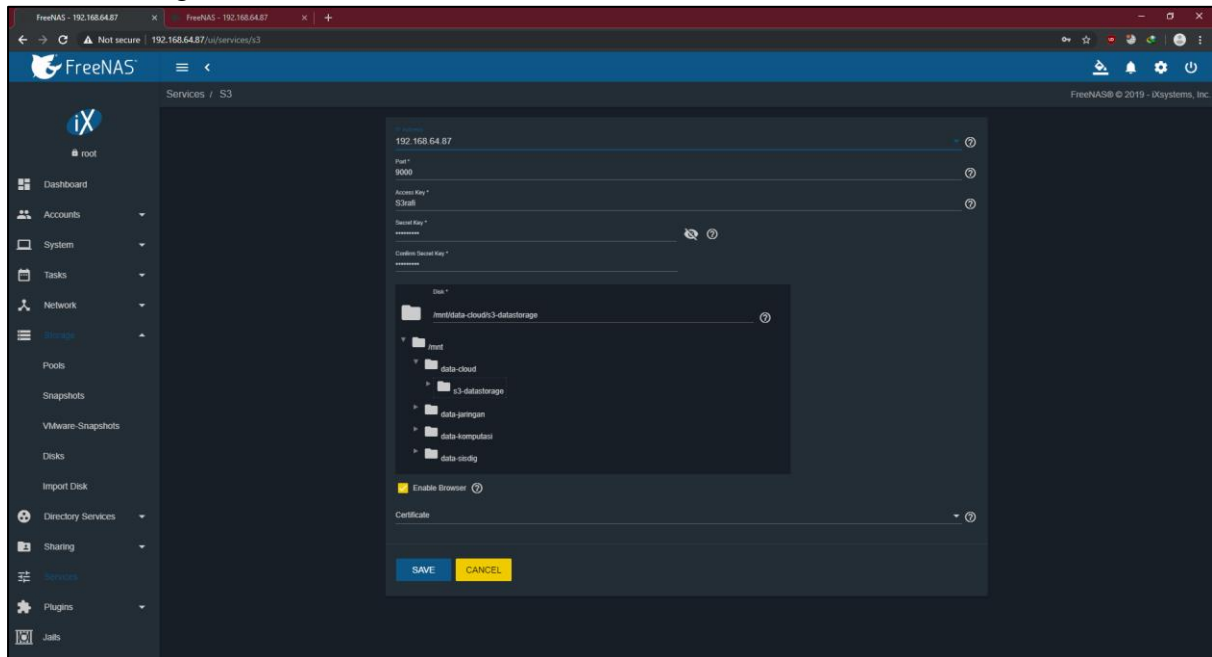


5. Masuk ke Menu Services

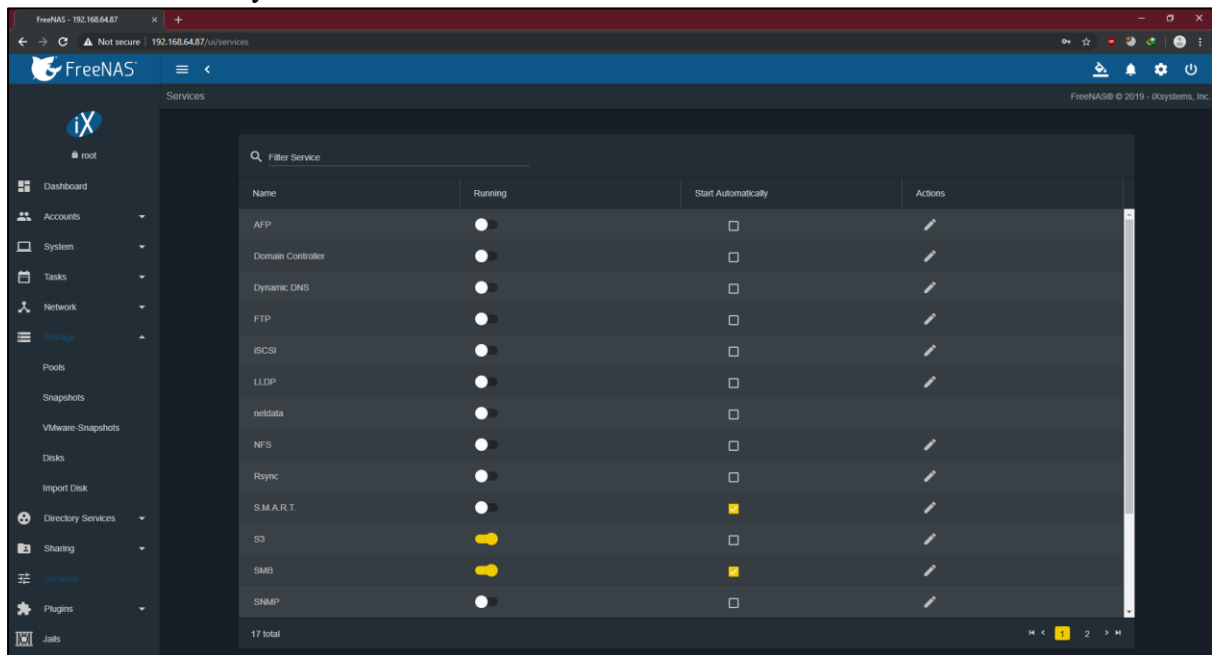
Kemudian cari service dengan nama S3, klik pada gambar ikon pensil (Configure)



6. Konfigurasi S3 Service



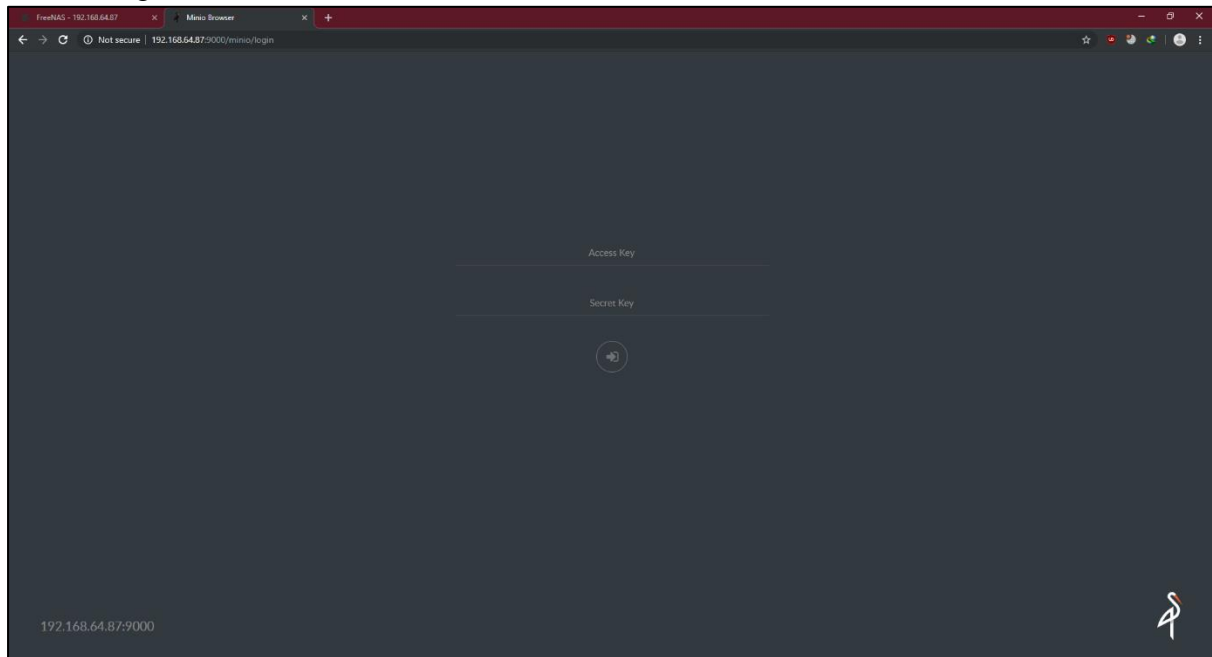
7. Aktivasi Layanan S3



8. Akses layanan S3 dengan MinIO Web Based

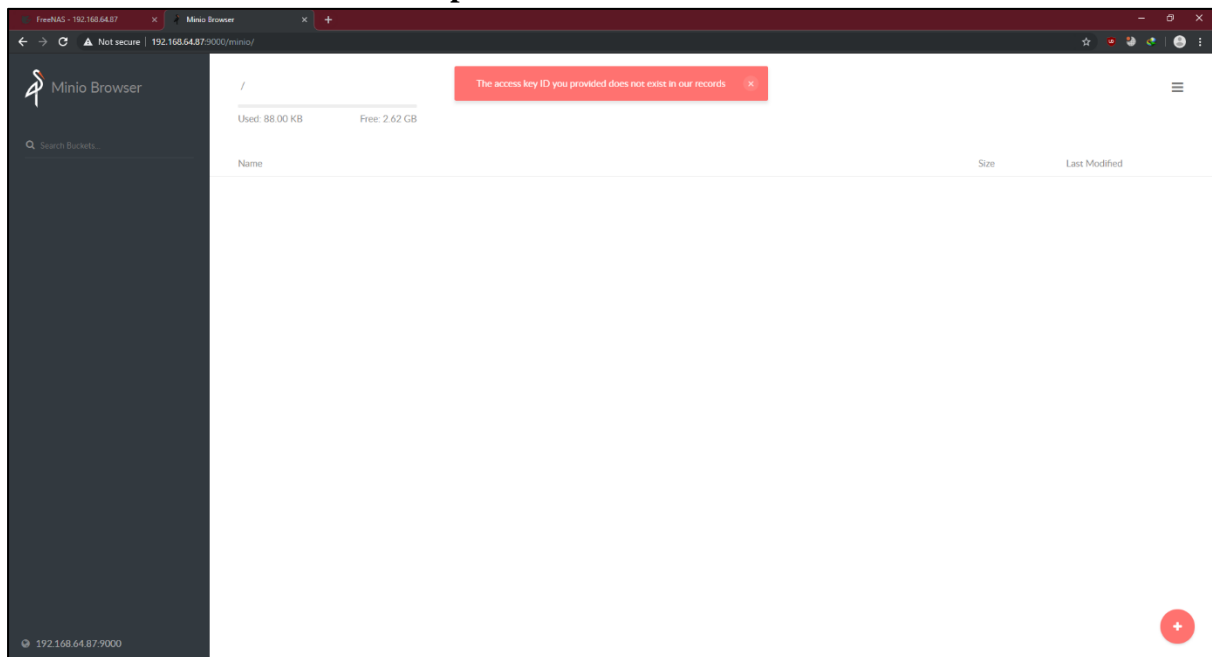
Buka browser dengan IP Adress:9000 ex:192.168.64.87:9000

9. Login MinIO

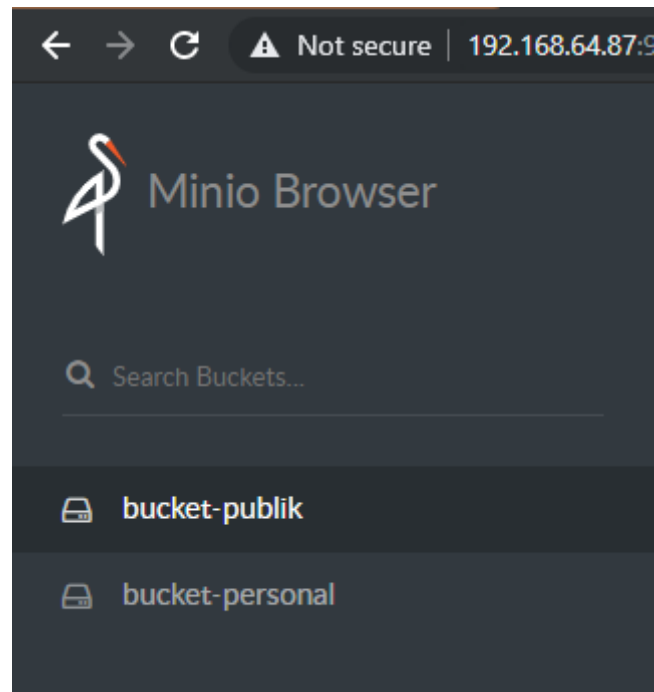


10. Tampilan Dashboard MinIO

Klik **add** kemudian **create bucket**, beri nama **personal-bucket** dan kemudian kembali beri nama **bucket-publik**.

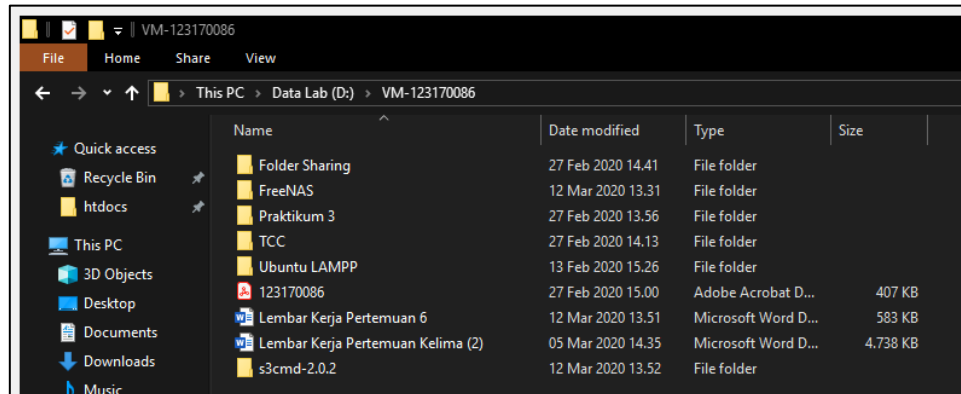


11. Hasil Pembuatan Bucket

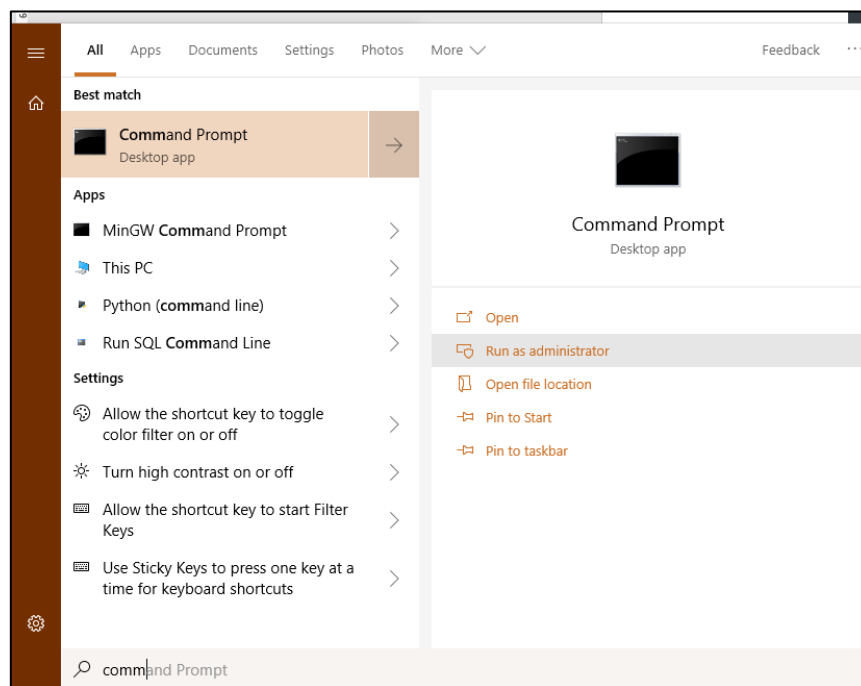


12. Mencoba s3cmd untuk upload data

Buka situs <http://link.upnyk.ac.id/s3cmd> kemudian unduh paket aplikasi s3cmd dalam bentuk zip. Ekstrak ke folder **VM-NIM**



13. Install s3cmd dengan python



14. Working Directory ke folder s3 hasil unduh

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.678]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Windows\system32>D:
D:\>cd vm-123170086
D:\VM-123170086>cd s3cmd-2.0.2
D:\VM-123170086\s3cmd-2.0.2>python setup.py install
```

```
Administrator: Command Prompt
writing requirements to c:\program files (x86)\python37-32\lib\site-packages\python_dateutil-2.8.1-py3.7.egg\EGG-INFO\re
quires.txt
Adding python-dateutil 2.8.1 to easy-install.pth file

Installed c:\program files (x86)\python37-32\lib\site-packages\python_dateutil-2.8.1-py3.7.egg
Searching for six>=1.5
Reading https://pypi.org/simple/six/
Downloading https://files.pythonhosted.org/packages/65/eb/1f97cb97bfc2390a276969c6fae16075da282f5058082d4cb10c6c5c1dba/s
ix-1.14.0-py2.py3-none-any.whl#sha256=8f3cd2e254d8f793e7f3d6d9df77b92252b52637291d0f0da013c76ea2724b6c
Best match: six 1.14.0
Processing six-1.14.0-py2.py3-none-any.whl
Installing six-1.14.0-py2.py3-none-any.whl to c:\program files (x86)\python37-32\lib\site-packages
Adding six 1.14.0 to easy-install.pth file

Installed c:\program files (x86)\python37-32\lib\site-packages\six-1.14.0-py3.7.egg
Finished processing dependencies for s3cmd==2.0.2

D:\VM-123170086\s3cmd-2.0.2>
```

15. Konfigurasi sc3md

```
Administrator: Command Prompt - python s3cmd --configure
D:\VM-123170086\s3cmd-2.0.2>python s3cmd --configure
ERROR: Option --preserve is not yet supported on MS Windows platform. Assuming --no-preserve.
ERROR: Option --progress is not yet supported on MS Windows platform. Assuming --no-progress.

Enter new values or accept defaults in brackets with Enter.
Refer to user manual for detailed description of all options.

Access key and Secret key are your identifiers for Amazon S3. Leave them empty for using the env variables.
Access Key: S3rafi
Secret Key: 123170086
Default Region [US]:

Use "s3.amazonaws.com" for S3 Endpoint and not modify it to the target Amazon S3.
S3 Endpoint [s3.amazonaws.com]: 192.168.64.87:9000

Use "%(bucket)s.s3.amazonaws.com" to the target Amazon S3. "%(bucket)s" and "%(location)s" vars can be used
if the target S3 system supports dns based buckets.
DNS-style bucket+hostname:port template for accessing a bucket [% (bucket)s.s3.amazonaws.com]:

Encryption password is used to protect your files from reading
by unauthorized persons while in transfer to S3
Encryption password:
Path to GPG program:

When using secure HTTPS protocol all communication with Amazon S3
servers is protected from 3rd party eavesdropping. This method is
slower than plain HTTP, and can only be proxied with Python 2.7 or newer
Use HTTPS protocol [Yes]: No

On some networks all internet access must go through a HTTP proxy.
Try setting it here if you can't connect to S3 directly
HTTP Proxy server name:

New settings:
  Access Key: S3rafi
  Secret Key: 123170086
  Default Region: US
  S3 Endpoint: 192.168.64.87:9000
  DNS-style bucket+hostname:port template for accessing a bucket: %(bucket)s.s3.amazonaws.com
  Encryption password:
  Path to GPG program: None
  Use HTTPS protocol: False
  HTTP Proxy server name:
  HTTP Proxy server port: 0

Test access with supplied credentials? [Y/n] Y
Please wait, attempting to list all buckets...
Success. Your access key and secret key worked fine :-))

Now verifying that encryption works...
Not configured. Never mind.

Save settings? [y/N]
```


16. Mencoba perintah s3cmd

Mengetikkan python s3cmd ls untuke mengetahui listing isi dari bucket pada s3 FreeNAS

```
HTTP Proxy server name:

New settings:
  Access Key: S3rafi
  Secret Key: 123170086
  Default Region: US
  S3 Endpoint: 192.168.64.87:9000
  DNS-style bucket+hostname:port template for accessing a bucket: %(bucket)s.s3.amazonaws.com
  Encryption password:
  Path to GPG program: None
  Use HTTPS protocol: False
  HTTP Proxy server name:
  HTTP Proxy server port: 0

Test access with supplied credentials? [Y/n] Y
Please wait, attempting to list all buckets...
Success. Your access key and secret key worked fine :)

Now verifying that encryption works...
Not configured. Never mind.

Save settings? [y/N] y
Configuration saved to 'C:\Users\Lab Informatika\AppData\Roaming\s3cmd.ini'

D:\VM-123170086\s3cmd-2.0.2> python s3cmd ls
2020-03-12 06:48  s3://bucket-personal
2020-03-12 06:48  s3://bucket-publik

D:\VM-123170086\s3cmd-2.0.2>
```

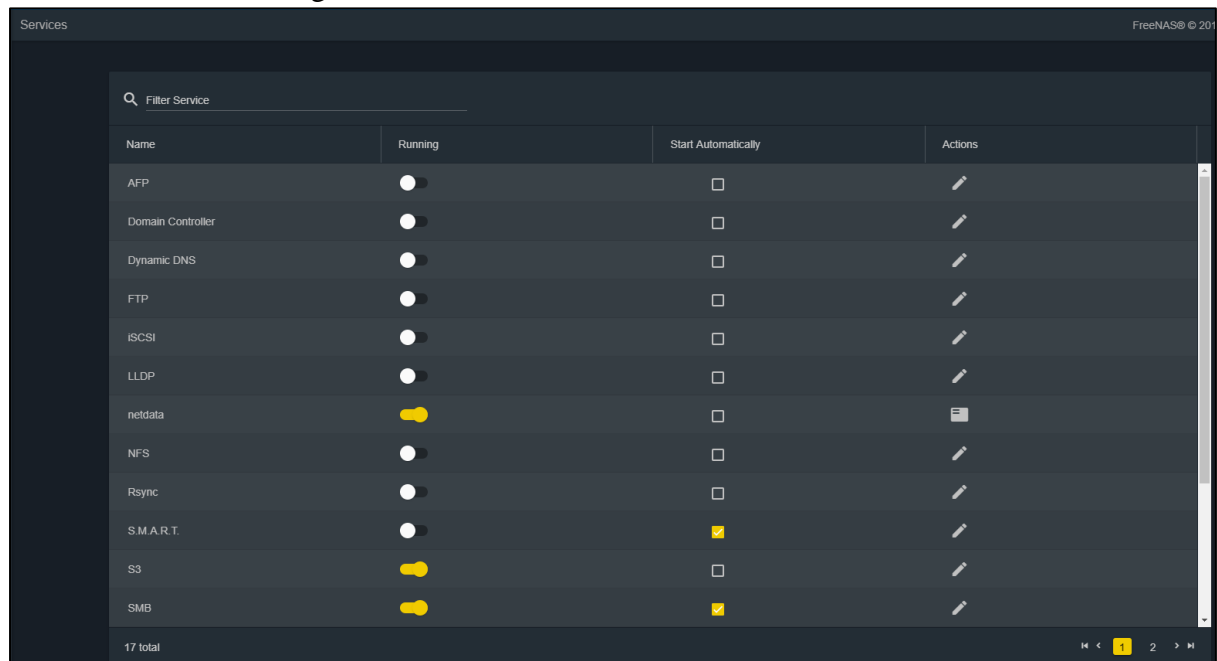
17. Dokumentasi command s3cmd

To make a bucket	<pre>s3cmd mb s3://mybucket Bucket 's3://mybucket/' created</pre>	Copy
To copy an object to bucket	<pre>s3cmd put newfile s3://testbucket upload: 'newfile' -> 's3://testbucket/newfile'</pre>	Copy
To copy an object to local system	<pre>s3cmd get s3://testbucket/newfile download: 's3://testbucket/newfile' -> './newfile'</pre>	Copy
To sync local file/directory to a bucket	<pre>s3cmd sync newdemo s3://testbucket upload: 'newdemo/newdemofile.txt' -> 's3://testbucket/newdemo/newdemofile.txt'</pre>	Copy

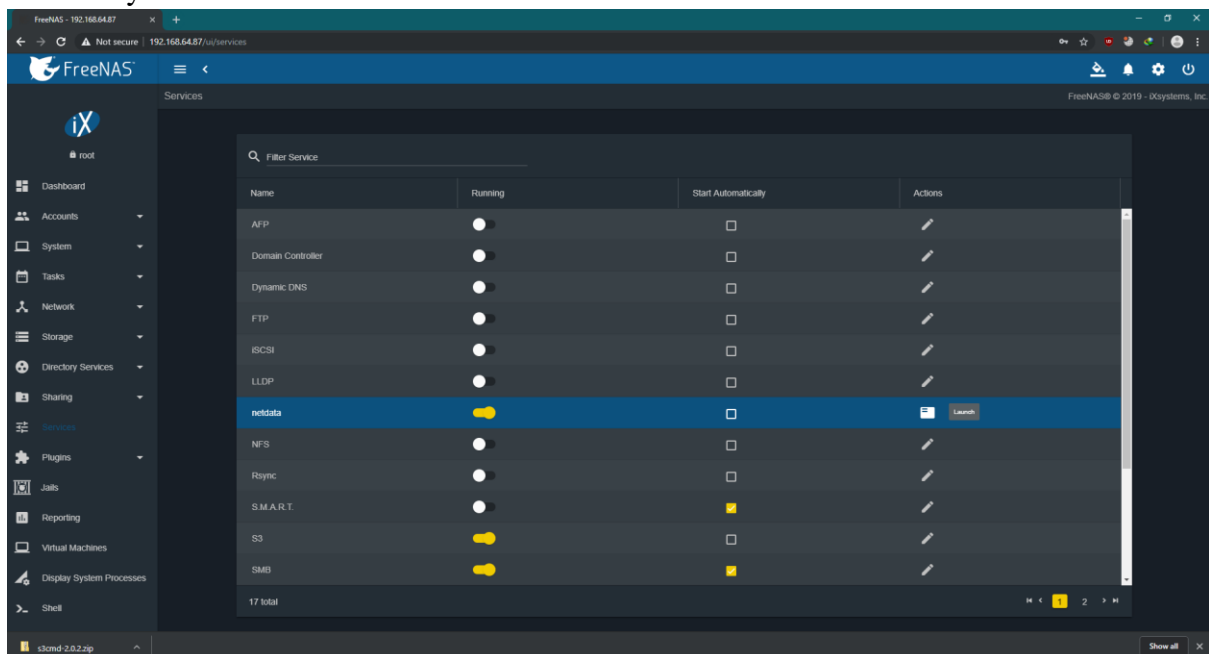
MONITORING DENGAN NETDATA SERVICE

Netdata merupakan sistem layanan monitoring performa sistem secara real-time. Tampilan yang disediakan dalam bentuk web-based dashboard.

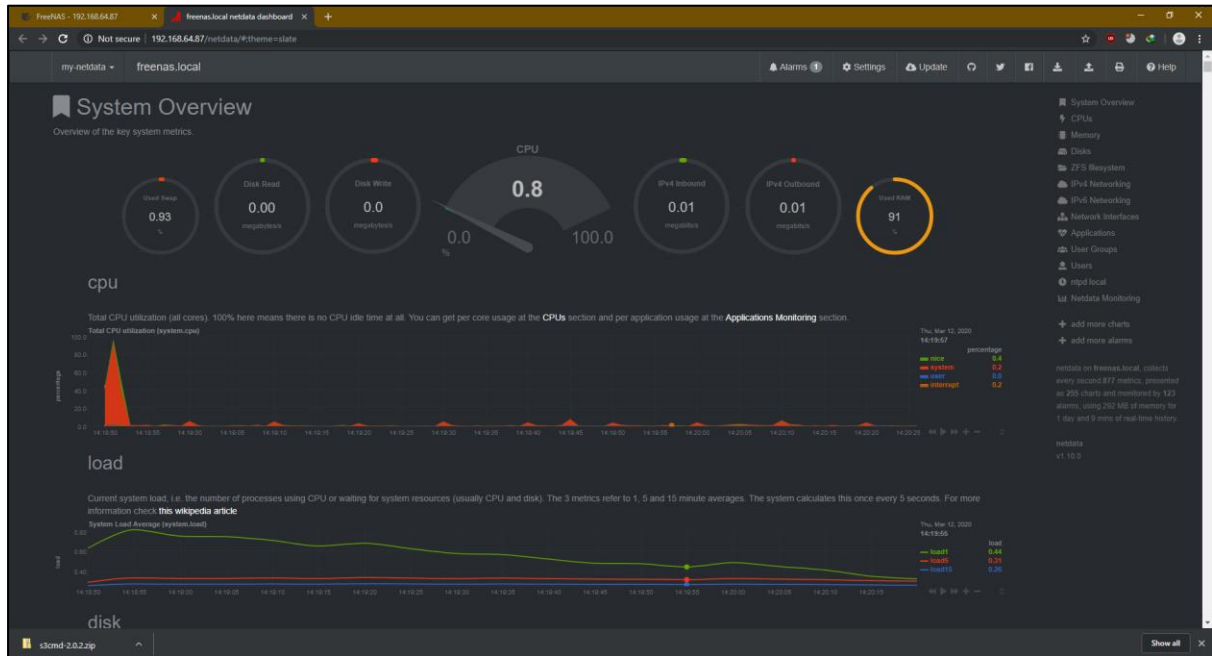
1. Login ke FreeNAS
2. Masuk menu Services
Cari service dengan nama netdata



3. Nyalakan services netdata



4. Tampilan dashboard netdata



5. Dokumentasi netdata

<https://netdata.cloud> untuk informasi mengenai penggunaan netdata dan integrasinya.

MENCOBA JAILS DENGAN TRANSMISSION

Selain digunakan untuk file sharing, FreeNAS juga dapat digunakan untuk mesin downloader torrent dengan menggunakan aplikasi Transmission.