# SELURUH TUTORIAL INI ADALAH HAK CIPTA DARI PT. CILSY FIOLUTION INDONESIA UNTUK EBOOK DAN TUTORIAL BERKUALITAS LAINNYA SILAHKAN KUNJUNGI www.cilsy.id.

SILAHKAN MEMBACA DAN MEMBAGIKAN EBOOK INI TANPA MENGUBAH APAPUN ISI DAN HAK CIPTA DIDALAMNYA.

# EBOOK INSTALASI ICINGA2 DI UBUNTU 16.04 SERVER

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#### Introduction

Tutorial ini akan membahas bagaimana cara membangun server monitoring menggunakan Icinga di Ubuntu Server 16.04. Icinga sendiri adalah versi terbaru Nagios. Icinga dapat digunakan untuk memonitor status-status dari server-server seperti penggunaan cpu, ram, harddisk, dan layanan-layanannya kemudian melaporkannya apakah sedang kondisi OK, Warning, atau Kritis.

# Spesifikasi Server dan Topologi jaringan

Untuk dapat mengikuti ebook ini dengan baik, sebaiknya kalian ikuti spek dan topologi yang digunakan juga di ebook ini dengan sedikit penyesuaian dengan kondisi di tempat kalian masingmasing.

# **Gambar Topologi Jaringan**

```
Internet ---- modem (192.168.10.1) --- switch --- (192.168.10.100) Icinga Server (icinga master)

|----- (192.168.10.200) WebServer (Icinga klien)

|----- (192.168.10.50) Laptop
```

# Spek Server yang digunakan

#### **Host Icinga Master**

OS: Ubuntu 16.04 Server

Spek server: Prosesor dual core, RAM 2gb, hdd 40gb.

Hostname: icinga.rizal.cilsy IP Address: 192.168.10.100 Gateway: 192.168.10.1 DNS: 8.8.8, 8.8.4.4

**Host Icinga Klien** 

OS : Ubuntu 14.04 Server Spek server : Bebas

Hostname: web.rizal.cilsy IP Address: 192.168.10.200 Gateway: 192.168.10.1 DNS: 8.8.8.8, 8.8.4.4

# Instalasi Icinga Server

#### **Install Icinga 2**

```
Tambahkan ppa icinga:

$ sudo add-apt-repository ppa:formorer/icinga

Update repository cache.

# apt-get update

Install paket Icinga 2.

# apt-get install -y icinga2

Jalankan icinga dan buat icinga autostart:

# systemctl start icinga2
```

# **Install Nagios Plugins**

# systemctl enable icinga2

Agar icinga dapat melakukan monitoring, harus menambahkan plugin nagios.

```
# apt-get install -y nagios-plugins
```

# **Membuat IDO MySQL Database**

```
Install mysql database dan plugin ido mysql:
```

```
# apt-get install -y mysql-server mysql-client
# apt-get install -y icinga2-ido-mysql
```

Selama instalasi, akan muncul beberapa pertanyaan :

- 1. Pilih No pada pertanyaan Enabling IDO Modules feature on Icinga 2
- 2. Pilih No pada pertanyaan Configuring IDO modules with Icinga 2

Setelah selesai, Buat database untuk icinga:

```
# mysql -u root -p
```

```
mysql> CREATE DATABASE icinga2;
mysql> grant all privileges on icinga2.* to icinga2@localhost identified by
'icinga123';
mysql> quit
```

Import database ido mysql ke database yang baru dibuat.

```
$ mysql -u root -p icinga2 < /usr/share/icinga2-ido-mysql/schema/mysql.sql</pre>
```

# Mengaktifkan modul IDO MySQL

```
$ icinga2 feature enable ido-mysql
```

\$ icinga2 feature enable command

Tambahkan permission dan hak akses:

```
# usermod -aG nagios www-data
```

# Konfigurasi IDO DB MySQL

```
# vim /etc/icinga2/features-enabled/ido-mysql.conf
user = "icinga2",
password = "icinga123",
host = "localhost",
database = "icinga2"

Terakhir restart icinga
# systemctl restart icinga2
```

Selanjutnya install icinga webnya.

#### **Install PHP 5**

```
$ sudo add-apt-repository ppa:ondrej/php
$ sudo apt-get update
$ sudo apt-get install php5.6
```

# **Install Icinga Web 2**

```
# apt-get install -y icingaweb2
```

# Persiapan Setup Icinga Web 2

Tambahkan user www-data ke grup icingaweb2 agar icinga dapat melakukan proses-proses yang terkait dengan sistem.

```
# addgroup --system icingaweb2
```

```
# usermod -a -G icingaweb2 www-data
```

Restart apache server.

# systemctl restart apache2

# **Wizard Icinga Web 2 Setup**

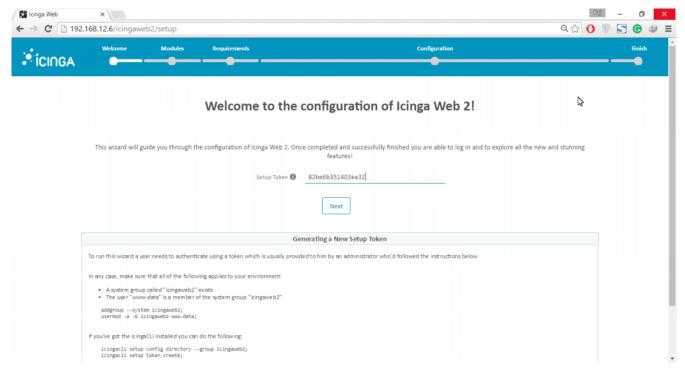
Buka browser dan masuk ke http://ipservericinga/icingaweb2/setup

Generate token dengan perintah ini :

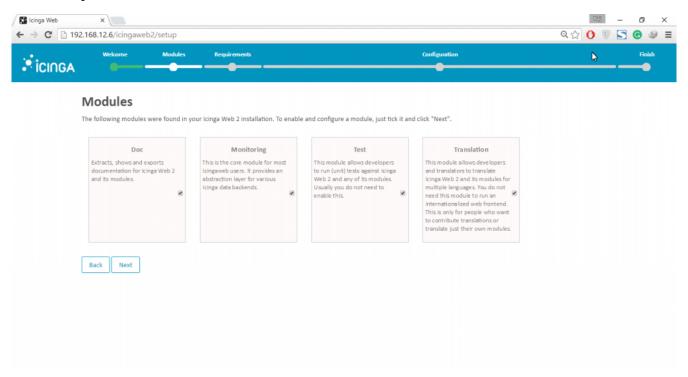
# icingacli setup token create

The newly generated setup token is: 8229eeac93ea7ae3

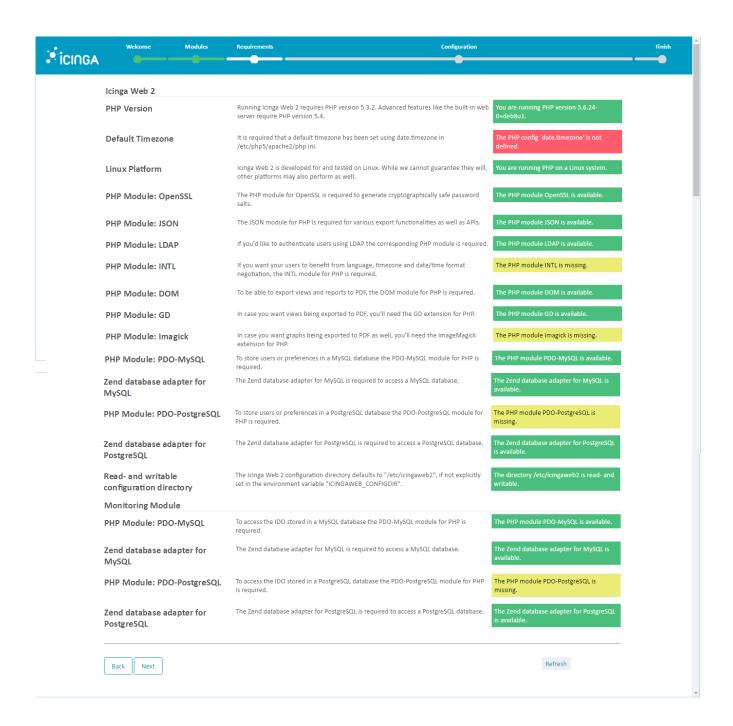
Kopikan token tersebut pada halaman berikut :



#### Pilih Next pada halaman ini:



Akan muncul kalau ada beberapa modul yang kurang:



Untuk mengatasi hal tersebut, Install dulu PHP ekstension yang dibutuhkan :

# apt-get install -y php5.6-gd php5.6-json php5.6-dba php5.6-intl php5.6-ldap php5.6-pdo-mysql php5.6-pgsql php5.6-imagick php5.6-dom

# phpenmod imagick

Dan atur juga timezone pada php.ini :

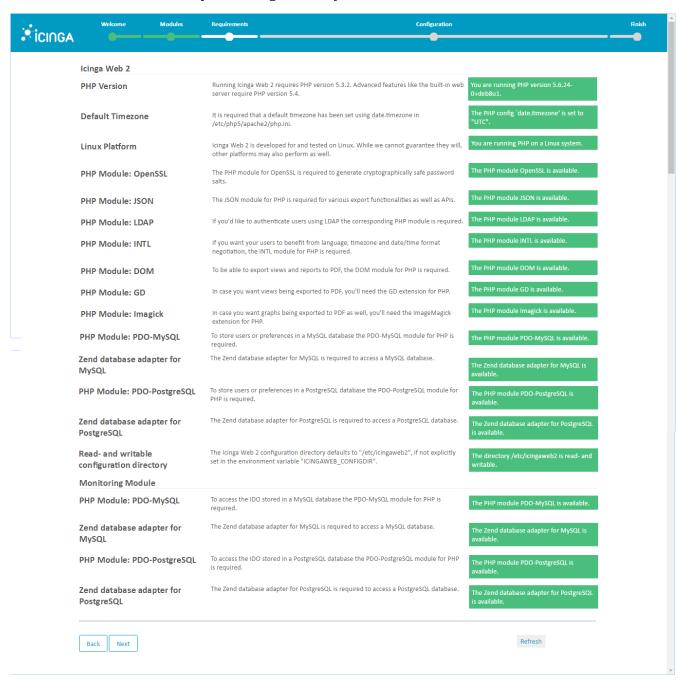
# vi /etc/php/5.6/apache2/php.ini

date.timezone = Asia/Jakarta

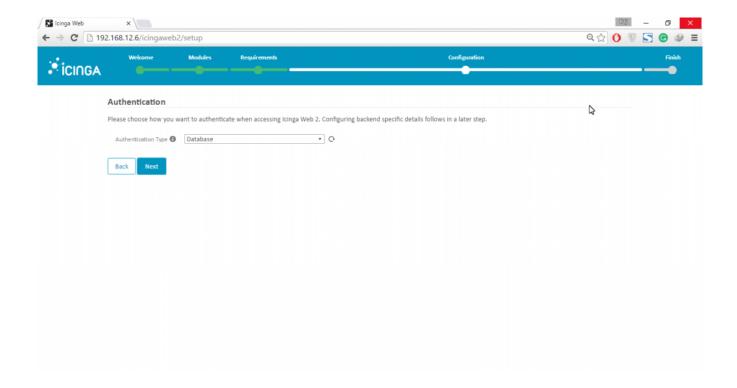
Restart apache server.

# systemctl restart apache2

Klik tombol refresh, seharusnya sekarang sudah hijau semua. Baru klik Next.



Disini kita pilih Local Database. Supaya icinga web punya database sendiri :

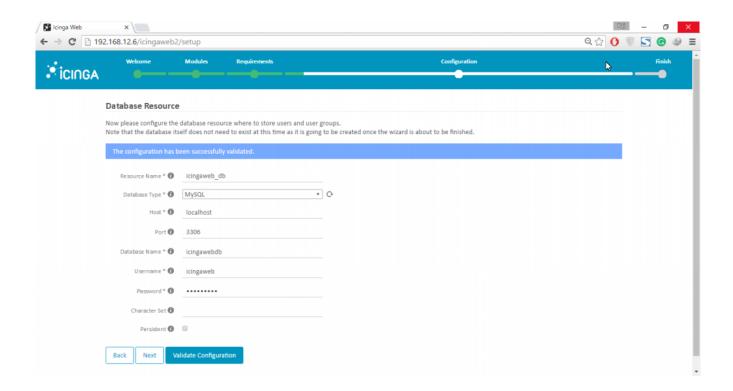


Kita buat terlebih dahulu database untuk icingaweb:

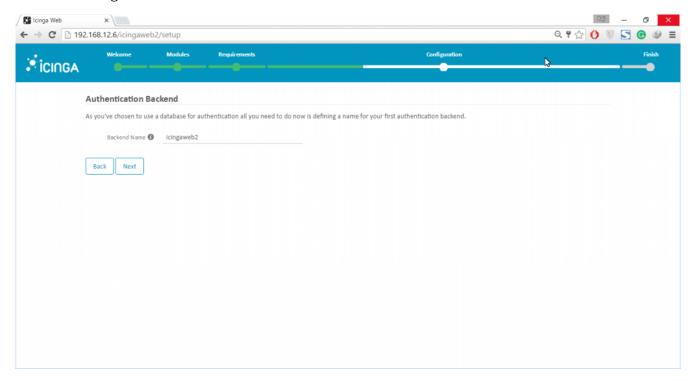
```
# mysql -u root -p

mysql> CREATE DATABASE icingawebdb;
mysql> grant all privileges on icingawebdb.* to icingaweb@localhost identified by
'icinga123';
mysql> quit
```

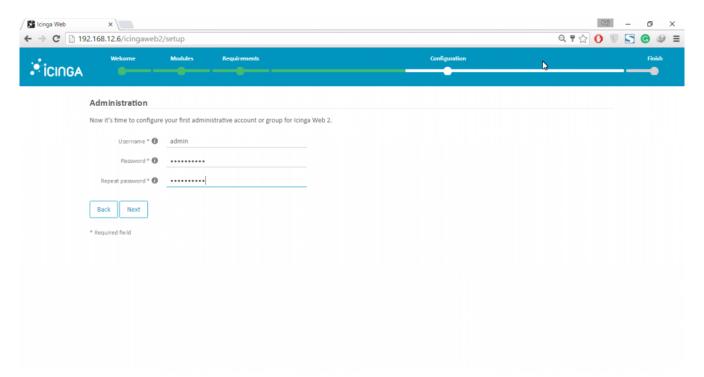
Masukkan data database yang barusan dibuat, ke halaman ini:



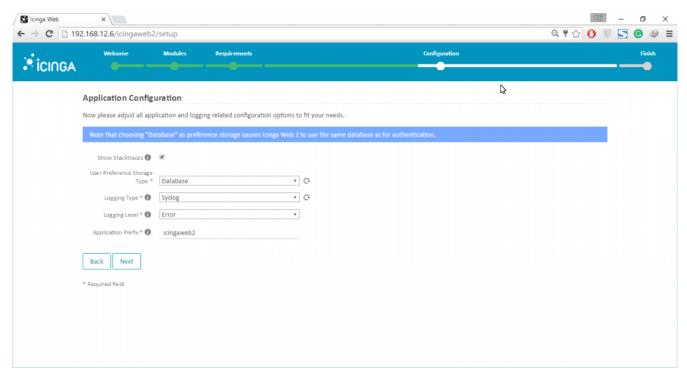
### Masukkan icingaweb2 lalu klik Next:



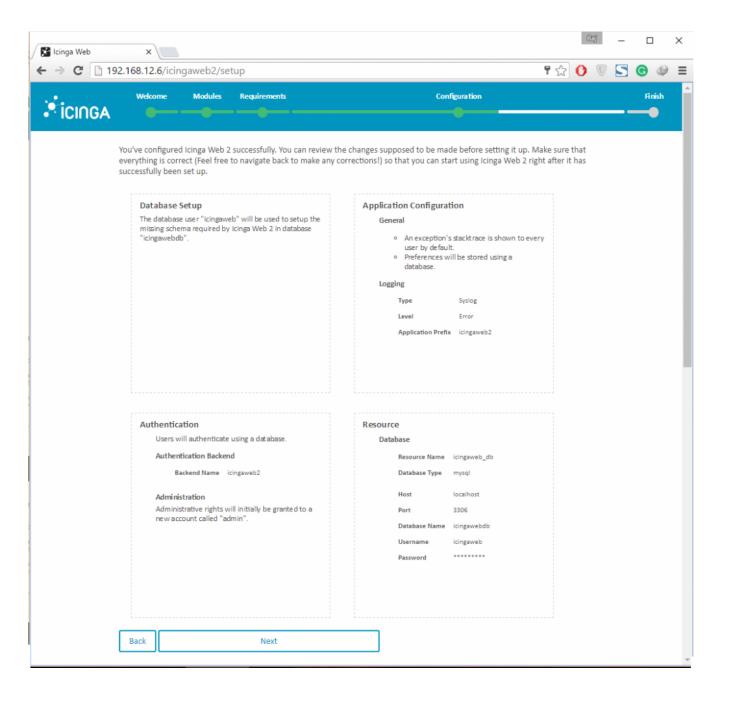
Masukkan data admin baru untuk icingaweb:



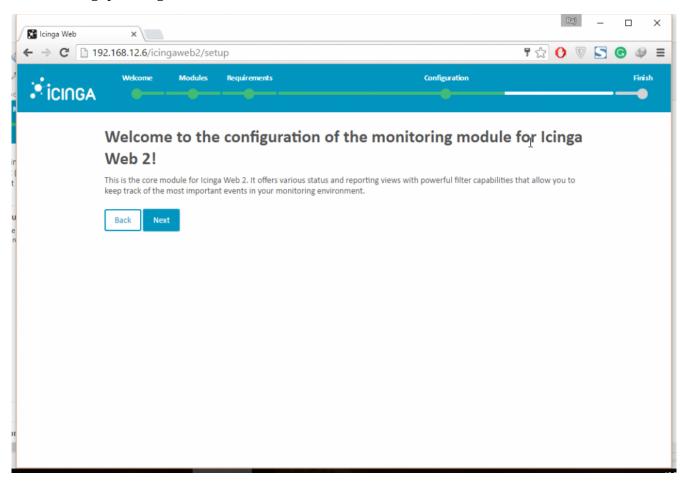
Pada bagian ini biarkan saja default dan klik Next:



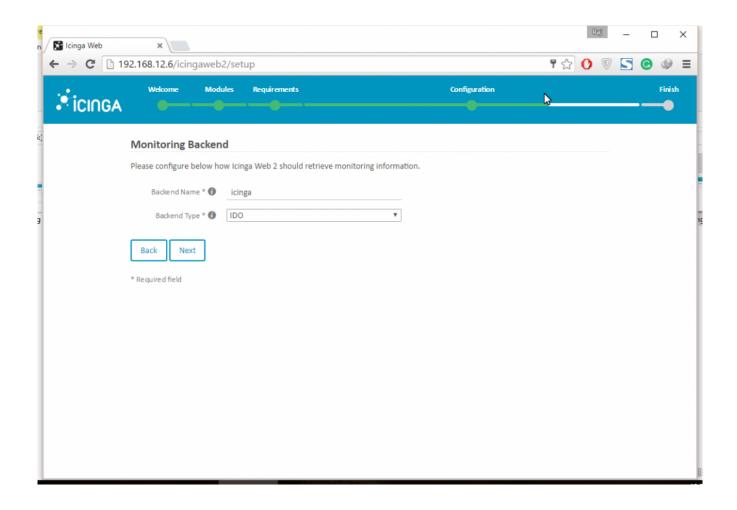
Review konfigurasi yang kita sudah buat, lalu klik NExt



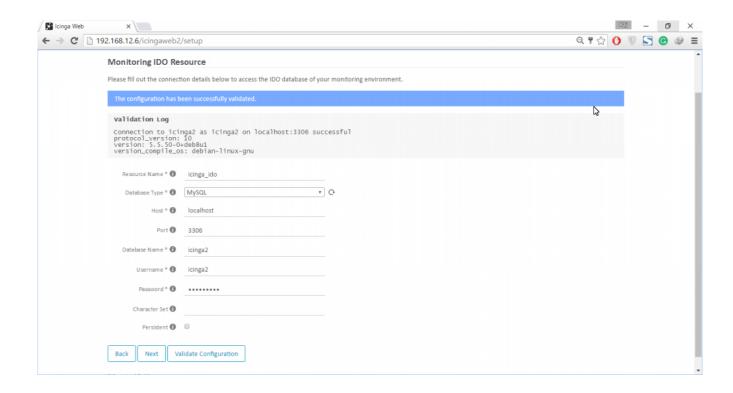
## Klik Next lagi pada bagian ini:



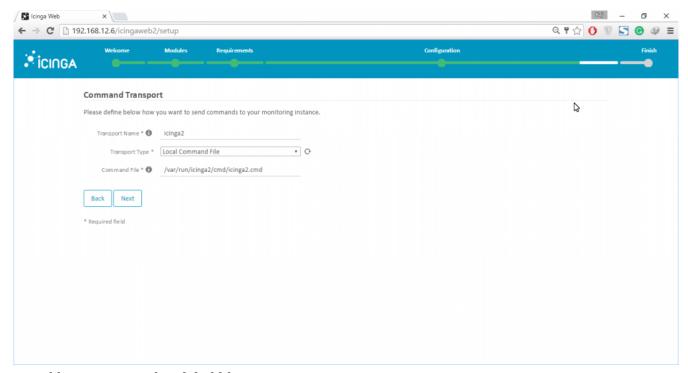
Monitoring backend kita gunakan IDO, masukkan sesuai gambar lalu klik Next.



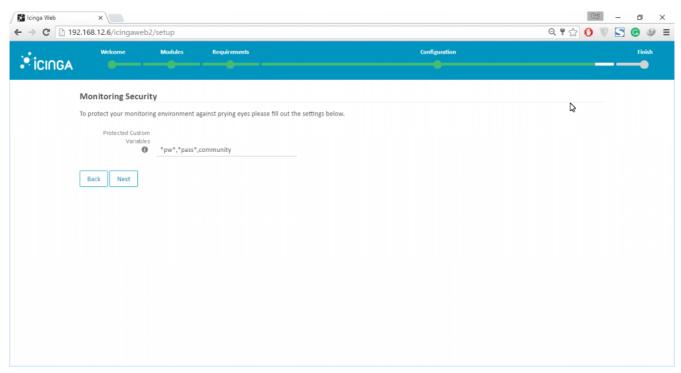
Masukkan database icinga 2 (bukan icinga web) yang sudah dibuat sebelumnya pada halaman ini :



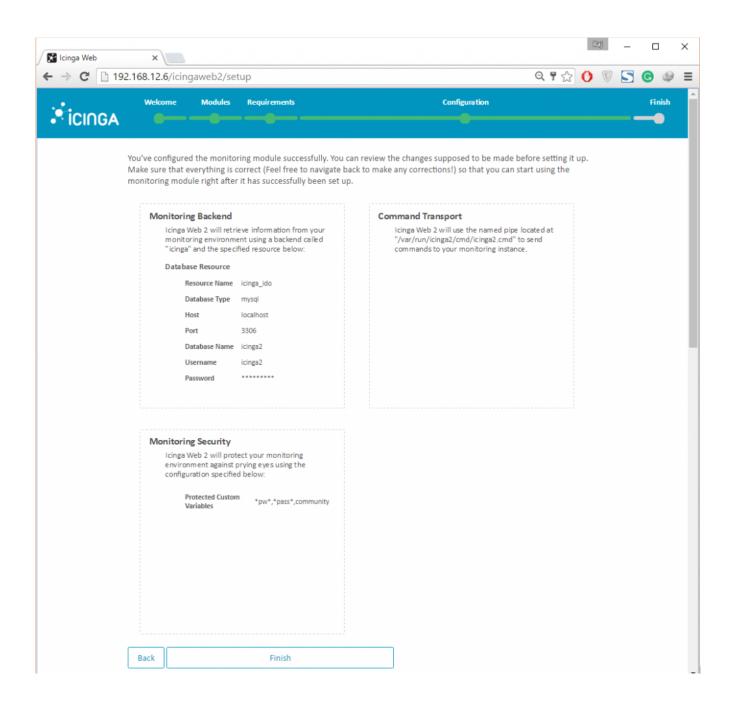
Klik Next saja pada halaman ini:



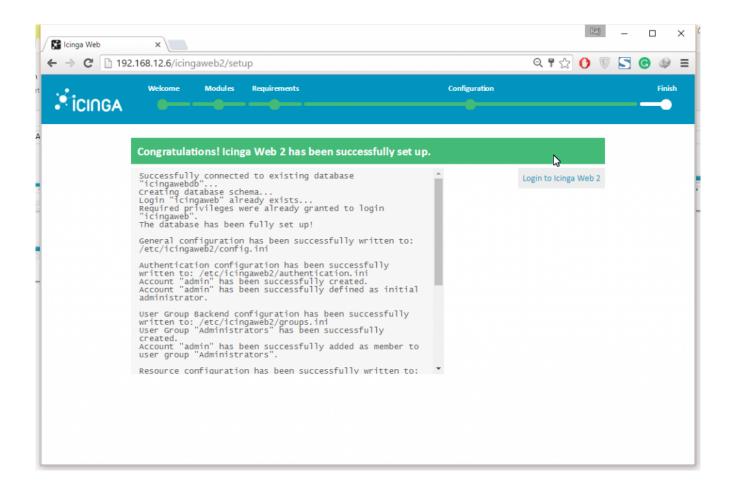
Masukkan sesuai gambar, lalu klik Next



Review semua konfigurasi yang akan dibuat. Klik Next



Berikut tampilan ketika instalasi selesai.



# Cara akses Icinga

Masuk ke dashbor icinga melalui web browser ke <a href="http://ipservericinga/icingaweb2">http://ipservericinga/icingaweb2</a>

# Menambah Host yang akan dimonitoring

Untuk menambahkan Host yang akan di monitoring, konsepnya adalah server yang diinstall icinga menjadi icinga master, lalu host yang mau di monitor adalah icinga client. Pada host icinga master lakukan wizard ini:

```
root@icinga:~# icinga2 node wizard
Welcome to the Icinga 2 Setup Wizard!

We'll guide you through all required configuration details.

Please specify if this is a satellite setup ('n' installs a master setup) [Y/n]: n
Starting the Master setup routine...
Please specify the common name (CN) [icinga.halmahera.local]:
```

```
Checking for existing certificates for common name
'icinga.halmahera.local'...
Certificates not yet generated. Running 'api setup' now.
information/cli: Generating new CA.
information/base: Writing private key to
'/var/lib/icinga2/ca/ca.key'.
information/base: Writing X509 certificate to
'/var/lib/icinga2/ca/ca.crt'.
information/cli: Generating new CSR in
'/etc/icinga2/pki/icinga.halmahera.local.csr'.
information/base: Writing private key to
'/etc/icinga2/pki/icinga.halmahera.local.key'.
information/base: Writing certificate signing request to
'/etc/icinga2/pki/icinga.halmahera.local.csr'.
information/cli: Signing CSR with CA and writing certificate to
'/etc/icinga2/pki/icinga.halmahera.local.crt'.
information/pki: Writing certificate to file
'/etc/icinga2/pki/icinga.halmahera.local.crt'.
information/cli: Copying CA certificate to '/etc/icinga2/pki/ca.crt'.
Generating master configuration for Icinga 2.
information/cli: Adding new ApiUser 'root' in
'/etc/icinga2/conf.d/api-users.conf'.
information/cli: Enabling the 'api' feature.
Enabling feature api. Make sure to restart Icinga 2 for these changes
to take effect.
information/cli: Dumping config items to file
'/etc/icinga2/zones.conf'.
information/cli: Created backup file '/etc/icinga2/zones.conf.orig'.
Please specify the API bind host/port (optional):
Bind Host []:
Bind Port []:
information/cli: Created backup file '/etc/icinga2/features-
available/api.conf.orig'.
information/cli: Updating constants.conf.
information/cli: Created backup file
'/etc/icinga2/constants.conf.orig'.
information/cli: Updating constants file
'/etc/icinga2/constants.conf'.
information/cli: Updating constants file
'/etc/icinga2/constants.conf'.
information/cli: Updating constants file
'/etc/icinga2/constants.conf'.
Done.
```

Now restart your Icinga 2 daemon to finish the installation!

#### Lalu restart service icinga:

root@icinga:~# systemctl restart icinga2

```
Lalu dari host klien, misal ubuntu 14.04 lakukan instalasi icinga2 dulu :
```

```
# sudo add-apt-repository ppa:formorer/icinga
# sudo apt-get update
# sudo apt-get install icinga2
# sudo service icinga2 restart
Kemudian lakukan ini untuk memulai wizard penambahan klien ke master icinga:
root@web:~# icinga2 node wizard
Welcome to the Icinga 2 Setup Wizard!
We'll guide you through all required configuration details.
Please specify if this is a satellite setup ('n' installs a master
setup) [Y/n]: y
Starting the Node setup routine...
Please specify the common name (CN) [web.halmahera.local]:
Please specify the master endpoint(s) this node should connect to:
Master Common Name (CN from your master setup):
icinga.halmahera.local
Do you want to establish a connection to the master from this node?
[Y/n]: y
Please fill out the master connection information:
Master endpoint host (Your master's IP address or FQDN):
icinga.halmahera.local
Master endpoint port [5665]:
Add more master endpoints? [y/N]:
Please specify the master connection for CSR auto-signing (defaults
to master endpoint host):
Host [icinga.halmahera.local]:
Port [5665]:
information/base: Writing private key to
'/etc/icinga2/pki/web.halmahera.local.key'.
information/base: Writing X509 certificate to
'/etc/icinga2/pki/web.halmahera.local.crt'.
information/cli: Fetching public certificate from master
(icinga.halmahera.local, 5665):
Certificate information:
             CN = icinga.halmahera.local
 Subject:
              CN = Icinga CA
 Issuer:
 Valid From: May 17 14:00:03 2017 GMT
 Valid Until: May 13 14:00:03 2032 GMT
 Fingerprint: 1B 0F C5 46 B9 94 3F FE 8A 86 AA C6 86 F6 35 56 34 DA
FF 78
```

```
Is this information correct? [y/N]: y
information/cli: Received trusted master certificate.
Please specify the request ticket generated on your Icinga 2 master.
 (Hint: # icinga2 pki ticket --cn 'web.halmahera.local'):
Saat diminta validasi ticket, maka lakukan perintah yang diminta di icinga master:
root@icinga:~# icinga2 pki ticket --cn 'web.halmahera.local'
fd6431a98e5cdc2cb3a302f61f2cb050e8af8e05
Kopikan tiket yang muncul dari host master tersebut ke host klien lalu ikuti lagi langkah-langkah
berikutnya.
Please specify the request ticket generated on your Icinga 2 master.
 (Hint: # icinga2 pki ticket --cn 'web.halmahera.local'):
fd6431a98e5cdc2cb3a302f61f2cb050e8af8e05
information/cli: Requesting certificate with ticket
'fd6431a98e5cdc2cb3a302f61f2cb050e8af8e05'.
information/cli: Created backup file
'/etc/icinga2/pki/web.halmahera.local.crt.orig'.
information/cli: Writing signed certificate to file
'/etc/icinga2/pki/web.halmahera.local.crt'.
information/cli: Writing CA certificate to file
'/etc/icinga2/pki/ca.crt'.
Please specify the API bind host/port (optional):
Bind Host []:
Bind Port []:
Accept config from master? [y/N]: y
Accept commands from master? [y/N]: y
information/cli: Disabling the Notification feature.
Disabling feature notification. Make sure to restart Icinga 2 for
these changes to take effect.
information/cli: Enabling the Apilistener feature.
Enabling feature api. Make sure to restart Icinga 2 for these changes
to take effect.
information/cli: Created backup file '/etc/icinga2/features-
available/api.conf.orig'.
information/cli: Generating local zones.conf.
information/cli: Dumping config items to file
'/etc/icinga2/zones.conf'.
information/cli: Created backup file '/etc/icinga2/zones.conf.orig'.
information/cli: Updating constants.conf.
information/cli: Created backup file
'/etc/icinga2/constants.conf.orig'.
information/cli: Updating constants file
```

'/etc/icinga2/constants.conf'.

```
information/cli: Updating constants file
'/etc/icinga2/constants.conf'.
Done.
Now restart your Icinga 2 daemon to finish the installation!
Restart icinga di host klien :
root@web:~# service icinga2 restart
Pada komputer host master icinga cek apakah sudah tertambah :
root@icinga:~# icinga2 node list
Warning: CLI command 'node list' is DEPRECATED! Please read the
Changelog.
Node 'web.halmahera.local' (last seen: Wed May 17 21:08:56 2017)
    * Host 'web.halmahera.local'
        * Service 'apt'
        * Service 'disk'
        * Service 'disk /'
        * Service 'http'
        * Service 'icinga'
        * Service 'load'
        * Service 'ping4'
        * Service 'ping6'
        * Service 'procs'
        * Service 'ssh'
        * Service 'swap'
         * Service 'users'
Jika muncul seperti diatas, berarti host klien sudah tertambah. Lalu lakukan perintah ini di host icinga
master untuk menyelesaikan proses penambahan:
root@icinga:~# icinga2 node update-config
Warning: CLI command 'node update-config' is DEPRECATED! Please read
the Changelog.
information/cli: Updating node configuration for
Node 'web.halmahera.local' (last seen: Wed May 17 21:09:26 2017)
    * Host 'web.halmahera.local'
        * Service 'apt'
        * Service 'disk'
        * Service 'disk /'
        * Service 'http'
        * Service 'icinga'
        * Service 'load'
```

\* Service 'ping4'
\* Service 'ping6'

```
* Service 'procs'
        * Service 'ssh'
        * Service 'swap'
        * Service 'users'
information/cli: Adding host 'web.halmahera.local' to the repository.
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.111212-Host-
6b1459a145f193f5ac96c9075f43410dab51d400310f9cebf69c10e45bf4605d.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.112300-Service-
5009a047a11fbd680bb40d2f23cd3fcd626ac2d672c38e16f53bd622c3961534.chan
ge'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.112647-Service-
1044dec7206e8d7c9fbb4ae8f766668406d2567fc7fc1a160a9d4700fcf8f8e9.chan
ge'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.113001-Service-
6a29594f8e9a9bd6e6c13fdd4a19c333b3f5cf35377811c8671a1a271d7364ae.chan
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.113372-Service-
e0603c499aae47eb89343ad0ef3178e044c62e70ae2309b35591d1d49a3211ec.chan
ge'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.113702-Service-
2eb9c534258d20f7c437141670d7c09d7afbab65b2ac9cd2034be27b122cbb41.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.114025-Service-
Ocf67fc72b3c86c7a454f6d86b43ed245a8e491d0e5288d4da8c7ff43a7bcdb0.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.114333-Service-
571605952ba28ee6740b5a9b50f1e76393f1e4cdaf3115438bcdeddf8e473065.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.114645-Service-
d7535967c0481dbeb28afe542a40e2f0687f4fc5b5fc5abafacbd4c24ff0d9cf.chan
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.114954-Service-
277d2f898036fa83a8f790fd6680e3c89e2cceaa4921a17b6ccb6c8f464ebb97.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.115281-Service-
7f5a55cf3f88be936fb9440249cb449f3067ccee4b525d0027dc9278a29c32c1.chan
ae'
```

```
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.115599-Service-
da47c2f450a4f9d538d86d600d55149afd39d6672fdd1f30c68ad5be21cadad8.chan
ae'
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.115930-Service-
7dfb4cf67742cb0660305e56ef816c53fcec892cae7f6ee39b75f34e659d672c.chan
ae'
information/cli: Adding endpoint 'web.halmahera.local' to the
repository.
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.116277-Endpoint-
6b1459a145f193f5ac96c9075f43410dab51d400310f9cebf69c10e45bf4605d.chan
ae'
information/cli: Adding zone 'web.halmahera.local' to the repository.
information/cli: Dumping changelog items to file
'/var/lib/icinga2/repository/changes/1495030230.117338-Zone-
6b1459a145f193f5ac96c9075f43410dab51d400310f9cebf69c10e45bf4605d.chan
ae'
information/cli: Committing node configuration.
Changes to be committed:
Adding host 'web.halmahera.local'
    check command = "cluster-zone"
    import = [ "satellite-host" ]
Adding service 'apt'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'disk'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'disk /'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'http'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'icinga'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
```

```
zone = "web.halmahera.local"
Adding service 'load'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'ping4'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'ping6'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'procs'
    check_command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'ssh'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'swap'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding service 'users'
    check command = "dummy"
    host name = "web.halmahera.local"
    import = [ "satellite-service" ]
    zone = "web.halmahera.local"
Adding endpoint 'web.halmahera.local'
Adding zone 'web.halmahera.local'
    endpoints = [ "web.halmahera.local" ]
    parent = "icinga.halmahera.local"
information/cli: Writing config object 'web.halmahera.local' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local.conf'
information/cli: Writing config object 'apt' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/apt.conf'
information/cli: Writing config object 'disk' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/disk.conf'
information/cli: Writing config object 'disk /' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/disk %2F.conf'
```

```
information/cli: Writing config object 'http' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/http.conf'
information/cli: Writing config object 'icinga' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/icinga.conf'
information/cli: Writing config object 'load' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/load.conf'
information/cli: Writing config object 'ping4' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/ping4.conf'
information/cli: Writing config object 'ping6' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/ping6.conf'
information/cli: Writing config object 'procs' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/procs.conf'
information/cli: Writing config object 'ssh' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/ssh.conf'
information/cli: Writing config object 'swap' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/swap.conf'
information/cli: Writing config object 'users' to file
'/etc/icinga2/repository.d/hosts/web.halmahera.local/users.conf'
information/cli: Writing config object 'web.halmahera.local' to file
'/etc/icinga2/repository.d/endpoints/web.halmahera.local.conf'
information/cli: Writing config object 'web.halmahera.local' to file
'/etc/icinga2/repository.d/zones/web.halmahera.local.conf'
Make sure to reload Icinga 2 for these changes to take effect.
```

#### Restart server icinga di host master icinga:

```
root@icinga:~# systemctl restart icinga2
```

Lalu bisa dicek saja di dashboard icinga harusnya sudah muncul klien yang barunya. kalau misal masih down, tidak apa-apa ditunggu saja. Terkadang memang agak lama munculnya.