

Step-01 Install Required Software:

```
yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm
```

```
yum install -y net-snmp net-snmp-utils net-snmp-libs rrdtool
```

```
yum install -y mariadb-server mariadb
```

```
yum install -y php php-xml php-session php-sockets php-ldap php-gd php-json php-mysqlnd php-gmp php-mbstring php-posix php-snmp php-intl
```

Step-02 Start Required Services

```
systemctl start httpd
```

```
systemctl start snmpd
```

```
systemctl start mariadb
```

Step-03 Enable Required Services:

```
systemctl enable httpd
```

```
systemctl enable snmpd
```

```
systemctl enable mariadb
```

Step-04 Database Tuning:

Cacti recommend changing MySQL variables settings for better performances.

Edit configuration file depends on the operating system.

```
vi /etc/my.cnf.d/mariadb-server.cnf
```

Add variables in the [mysqld] section.

```
collation-server=utf8mb4_unicode_ci
character-set-server=utf8mb4
max_heap_table_size=32M
tmp_table_size=32M
join_buffer_size=64M
# 25% Of Total System Memory
innodb_buffer_pool_size=1GB
# pool_size/128 for less than 1GB of memory
innodb_buffer_pool_instances=10
innodb_flush_log_at_timeout=3
innodb_read_io_threads=32
innodb_write_io_threads=16
innodb_io_capacity=5000
innodb_io_capacity_max=10000
```

Restart the service.

```
systemctl restart mariadb
```

Step-05 Create CACTI Database:

```
# mysql -u root -p

Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.3.11-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

Create a database for Cacti installation.

```
create database cacti;
```

Grant permission to the newly created database.

```
GRANT ALL ON cacti.* TO cactiuser@localhost IDENTIFIED BY 'cactipassword';

flush privileges;

exit
```

The newly created database user (*cactiuser*) should have access to the `mysql.time_zone_name` table. To do that, import the `mysql_test_data_timezone.sql` to `mysql` database.

```
mysql -u root -p mysql < /usr/share/mariadb/mysql_test_data_timezone.sql
```

Then, log in to MySQL.

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

Grant the permission to *cactiuser*.

```
GRANT SELECT ON mysql.time_zone_name TO cactiuser@localhost;

flush privileges;

exit
```

Step-06 Install and Configure CACTI:

```
yum install -y cacti
```

Import the default database to the `cacti` database.

```
mysql cacti < /usr/share/doc/cacti/cacti.sql -u cactiuser -p
```

Edit the config file to specify the database type, name, hostname, user, and password information.

```
vi /usr/share/cacti/include/config.php
```

Make the changes accordingly.

```
/*
 * Make sure these values reflect your actual database/host/user/password
 */

$database_type = 'mysql';
$database_default = 'cacti';
$database_hostname = 'localhost';
$database_username = 'cactiuser';
$database_password = 'cactipassword';
$database_port = '3306';
```

Edit the Cacti's cron entry in the [crontab](#) file to poll every five minutes.

```
vi /etc/cron.d/cacti
```

Uncomment the below line.

```
*/5 * * * * apache /usr/bin/php /usr/share/cacti/poller.php > /dev/null 2>&1
```

Edit the Apache configuration file to perform the remote installation.

```
vi /etc/httpd/conf.d/cacti.conf
```

```
Alias /cacti /usr/share/cacti

<Directory /usr/share/cacti/>
    <IfModule mod_authz_core.c>
        # httpd 2.4
        Require all granted
    </IfModule>
    <IfModule !mod_authz_core.c>
        # httpd 2.2
        Order deny,allow
        Deny from all
        Allow from localhost
    </IfModule>
</Directory>
```

Set the timezone by editing /etc/php.ini file.

```
vi /etc/php.ini
```

Update the PHP parameters.

```
date.timezone = Asia/Dhaka

memory_limit = 512M

max_execution_time = 300
```

Restart the services.

```
systemctl restart httpd

systemctl restart php-fpm
```

Step-07 Firewall Configuration:

Configure the firewall to allow HTTP service.

```
firewall-cmd --permanent --add-service=http  
firewall-cmd --reload
```

Step-08 Setup CACTI Web Interface:

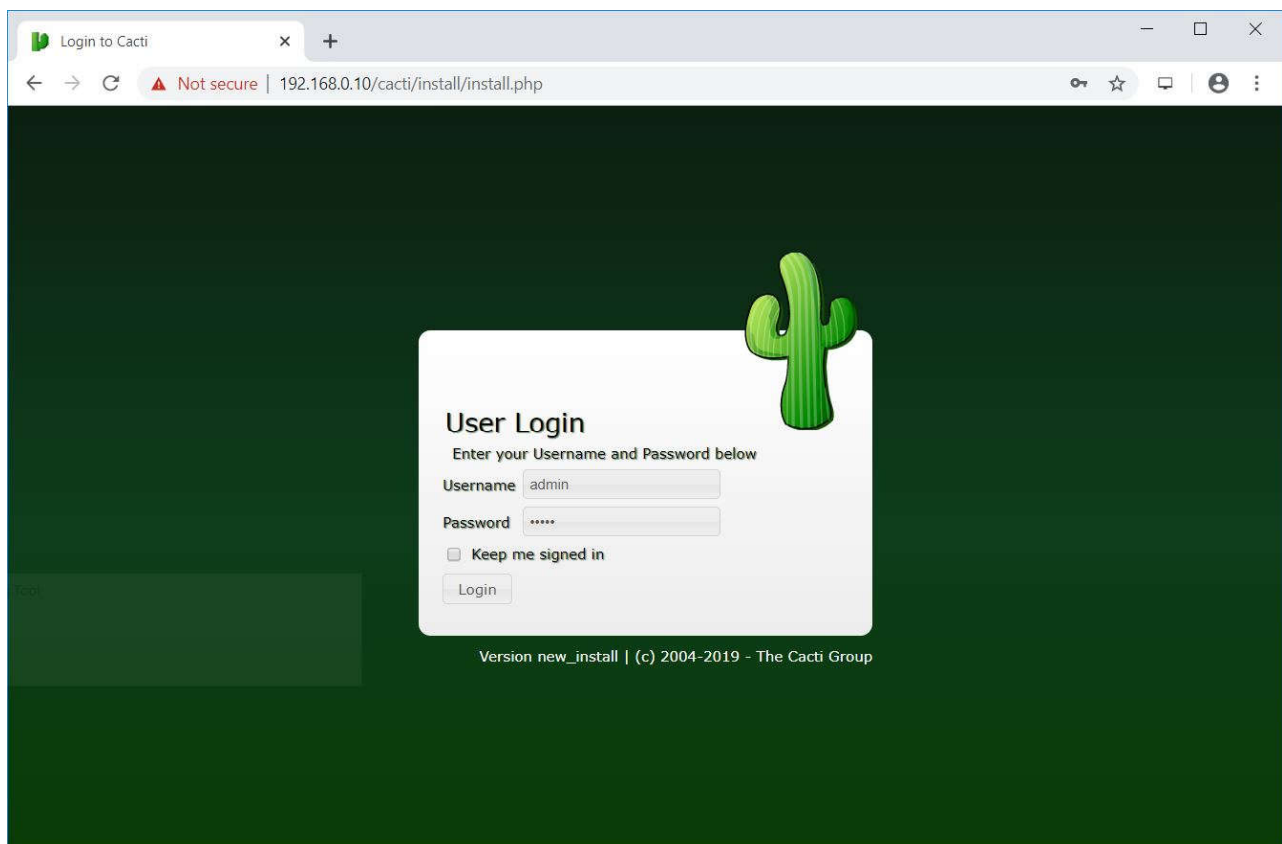
Visit the following URL to start the installation of cacti.

<http://your-ip-address/cacti>

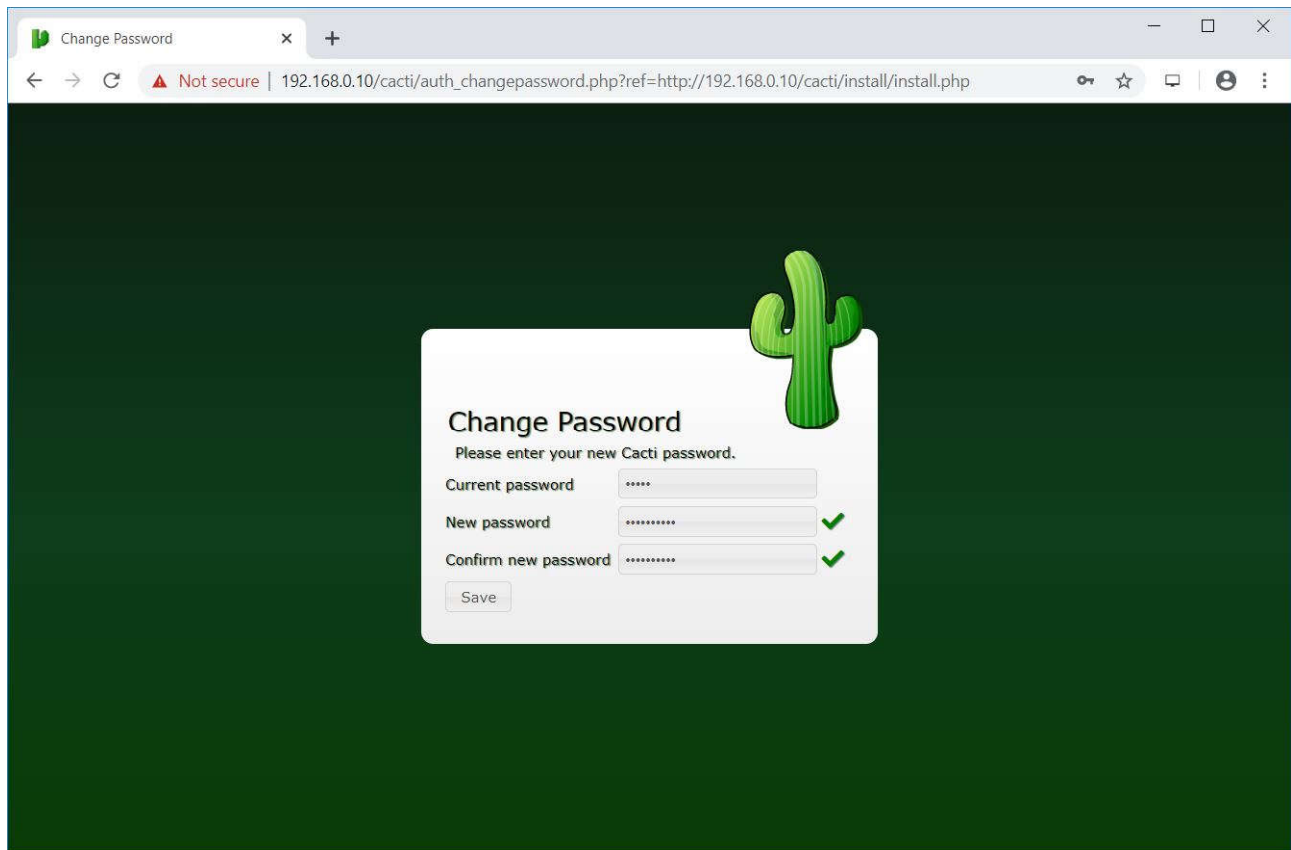
The initial login details:

Username: *admin*

Password: *admin* [new password will be **Security@321**]

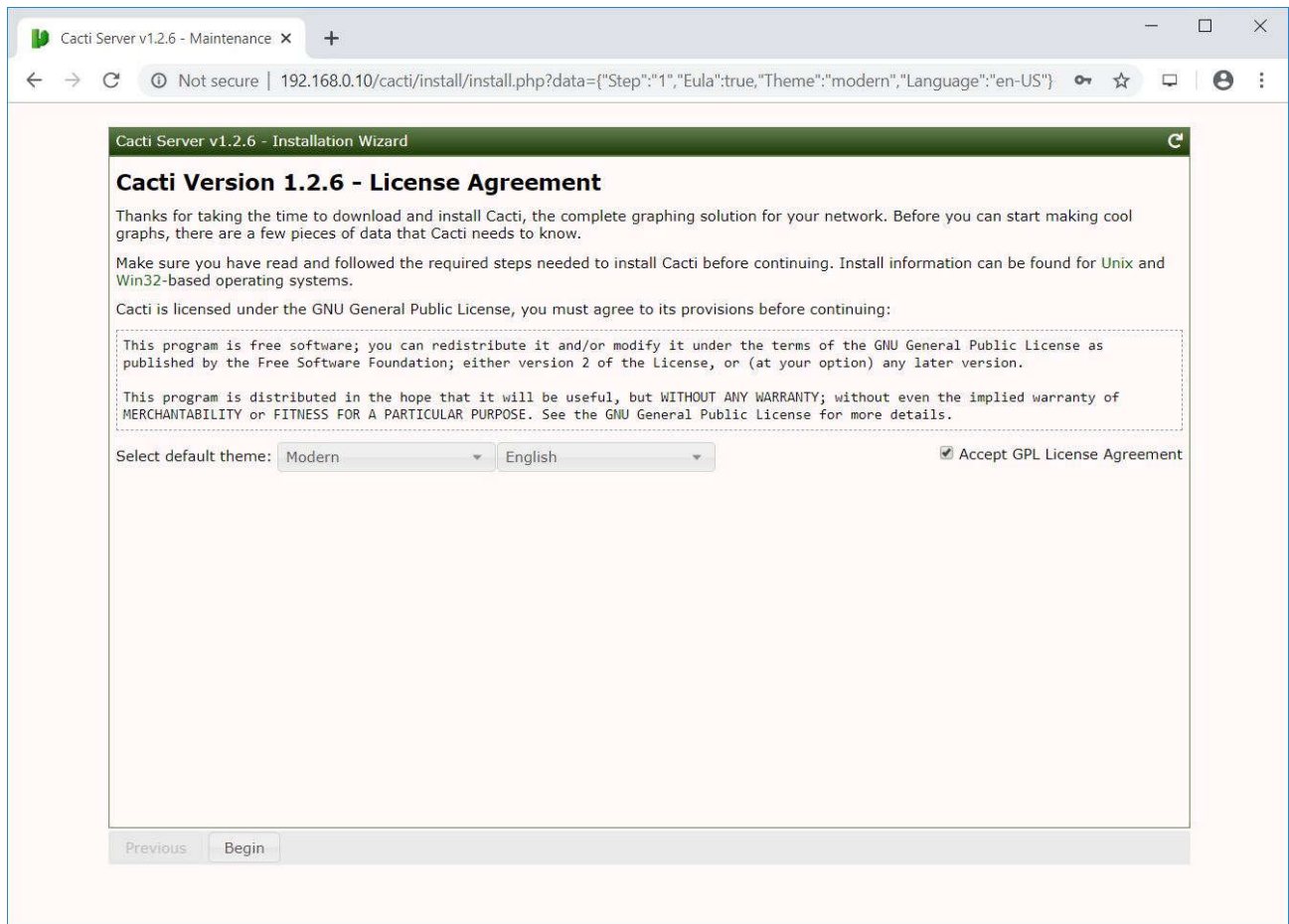


Login To Cacti Monitoring Tool



Change Admin Password

Accept the License Agreement on this page and then click on Next to continue.



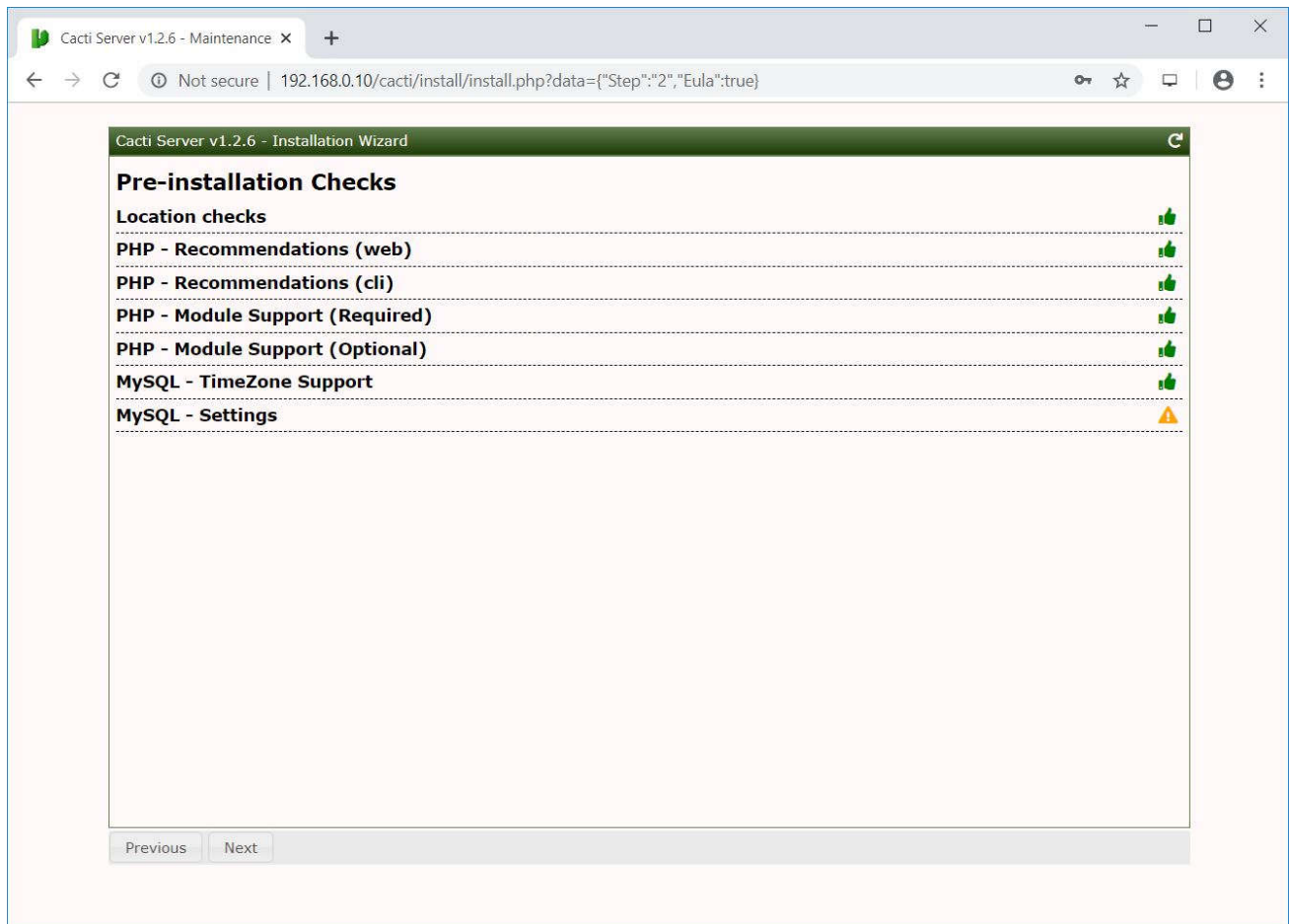
The screenshot shows a web browser window with the title "Cacti Server v1.2.6 - Maintenance". The address bar shows the URL "192.168.0.10/cacti/install/install.php?data={\"Step\":\"1\",\"Eula\":true,\"Theme\":\"modern\",\"Language\":\"en-US\"}". The main content area displays the "Cacti Version 1.2.6 - License Agreement" screen. The screen has a green header bar with the title "Cacti Server v1.2.6 - Installation Wizard". Below the header, the text reads: "Cacti Version 1.2.6 - License Agreement", "Thanks for taking the time to download and install Cacti, the complete graphing solution for your network. Before you can start making cool graphs, there are a few pieces of data that Cacti needs to know.", "Make sure you have read and followed the required steps needed to install Cacti before continuing. Install information can be found for Unix and Win32-based operating systems.", "Cacti is licensed under the GNU General Public License, you must agree to its provisions before continuing:", and a dashed box containing the text: "This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.", "This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details." Below the dashed box, there are two dropdown menus: "Select default theme:" with "Modern" selected, and "English" selected. To the right of these dropdowns is a checkbox labeled "Accept GPL License Agreement" which is checked. At the bottom of the screen, there are two buttons: "Previous" and "Begin".

Accept Cacti License Agreement

The Cacti installer now performs pre-installation checks to determine whether the system meets the requirements for the Cacti installation.

Ensure all checks are green. Consider fixing any warnings the installer reports on this page.

Move to the next step by clicking the Next button located at the left bottom of the page.

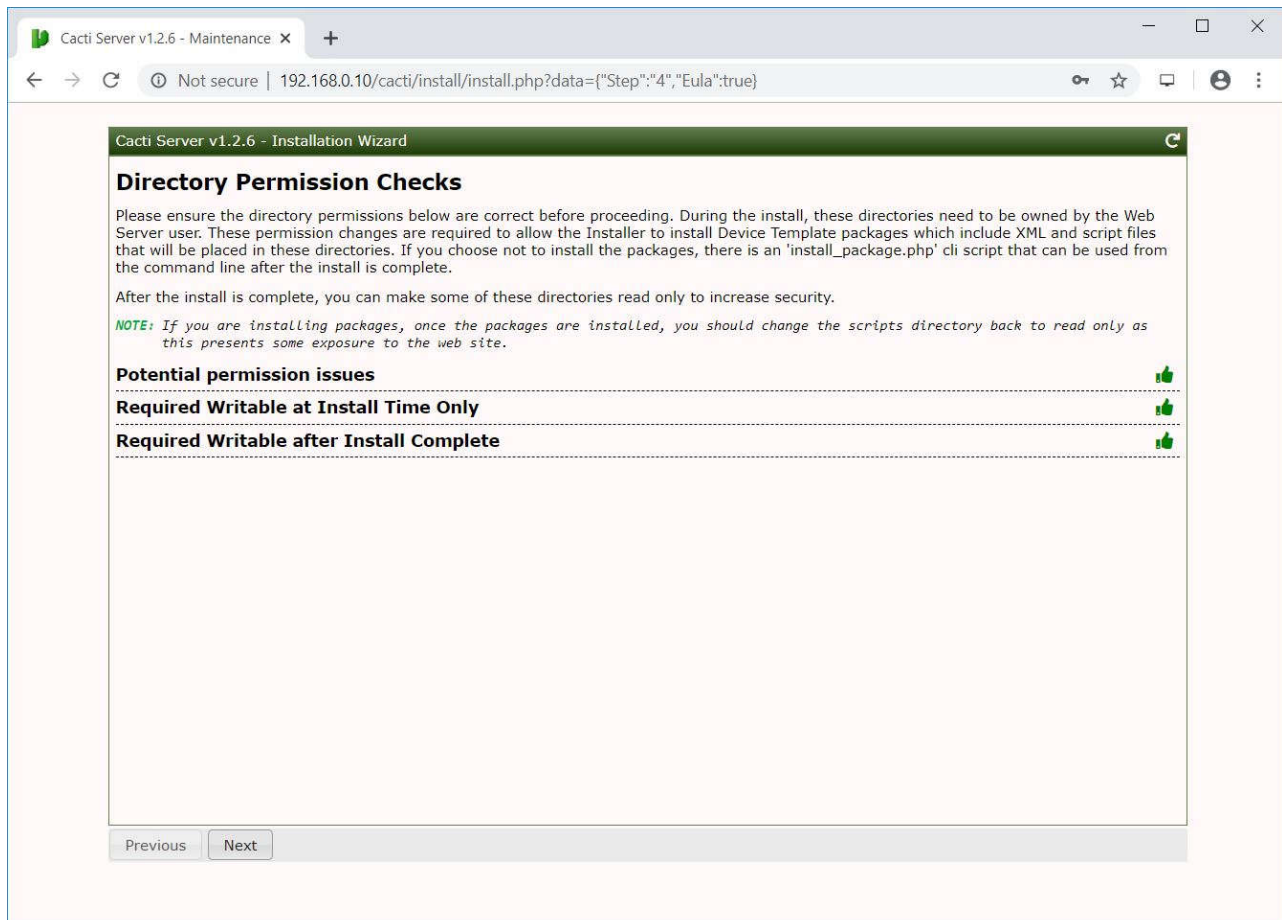


Cacti Pre-Installation Checks

Select New Primary Server or the new installation and then click Next.

Cacti Installation Type

This step checks and reports for permission problems you may have in the Cacti installation directory.



Cacti Directory Permission Checks

It will show you if there is any package is missing that is mandatory for the Cacti.

Cacti Server v1.2.6 - Maintenance

Not secure | 192.168.0.10/cacti/install/install.php?data={"Step":5,"Eula":true}

Cacti Server v1.2.6 - Installation Wizard

Critical Binary Locations and Versions

Make sure all of these values are correct before continuing.

PHP Binary Path	/bin/php	✓
RRDtool Binary Path	/bin/rrdtool	✓
snmpwalk Binary Path	/bin/snmpwalk	✓
snmpget Binary Path	/bin/snmpget	✓
snmpbulkwalk Binary Path	/bin/snmpbulkwalk	✓
snmpgetnext Binary Path	/bin/snmpgetnext	✓
snmptrap Binary Path	/bin/snmptrap	✓
Sendmail Path	/usr/sbin/sendmail	✓
Spine Binary File Location	/usr/local/spine/bin/spine	✓
Spine Config File Path	Enter a valid file path	✓
Cacti Log Path	/usr/share/cacti/log/cacti.log	✓
Poller Standard Error Log Path	/usr/share/cacti/log/cacti_stderr.log	✓
RRDtool Version	RRDtool 1.7+	

Previous

Next

Cacti Critical Binary Locations and Versions

Click **Next**.

Cacti Server v1.2.6 - Maintenance

Not secure | 192.168.0.10/cacti/install/install.php?data={"Step":6,"Eula":true}

Cacti Server v1.2.6 - Installation Wizard

Default Profile

Please select the default Data Source Profile to be used for polling sources. This is the maximum amount of time between scanning devices for information so the lower the polling interval, the more work is placed on the Cacti Server host. Also, select the intended, or configured Cron interval that you wish to use for Data Collection.

Default Profile	5 Minute Collection
Cron Interval	Every 5 Minutes

Default Automation Network

Cacti can automatically scan the network once installation has completed. This will utilise the network range below to work out the range of IPs that can be scanned. A predefined set of options are defined for scanning which include using both 'public' and 'private' communities.

If your devices require a different set of options to be used first, you may define them below and they will be utilized before the defaults

All options may be adjusted post installation

Default Options

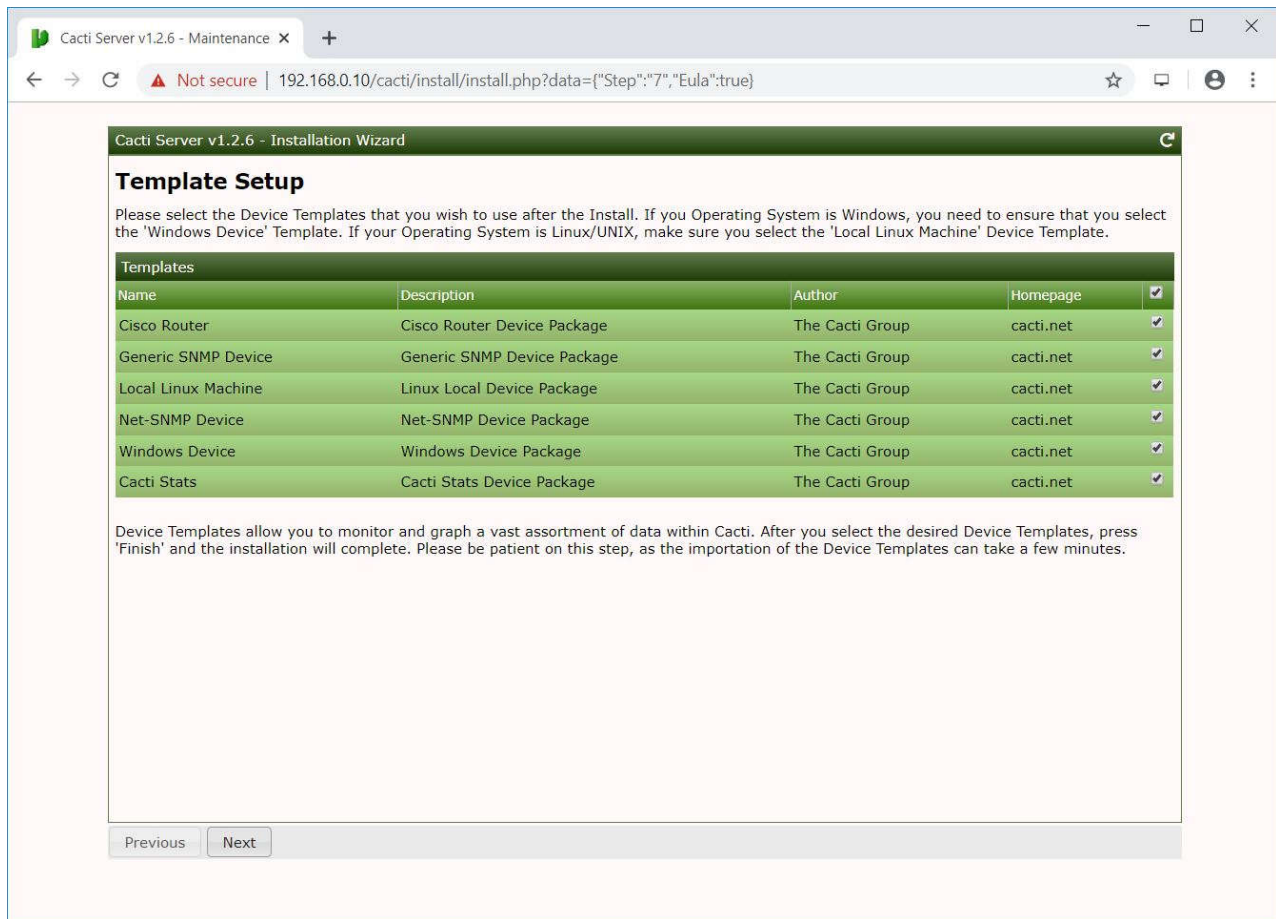
Scan Mode	<input checked="" type="checkbox"/>
Network Range	192.168.0.0/24
Additional Defaults	<input checked="" type="checkbox"/>

Previous

Next

Default Profile

Select all templates and click Next.



Cacti Server v1.2.6 - Maintenance x

Not secure | 192.168.0.10/cacti/install/install.php?data={"Step":7,"Eula":true}

Cacti Server v1.2.6 - Installation Wizard

Template Setup

Please select the Device Templates that you wish to use after the Install. If your Operating System is Windows, you need to ensure that you select the 'Windows Device' Template. If your Operating System is Linux/UNIX, make sure you select the 'Local Linux Machine' Device Template.

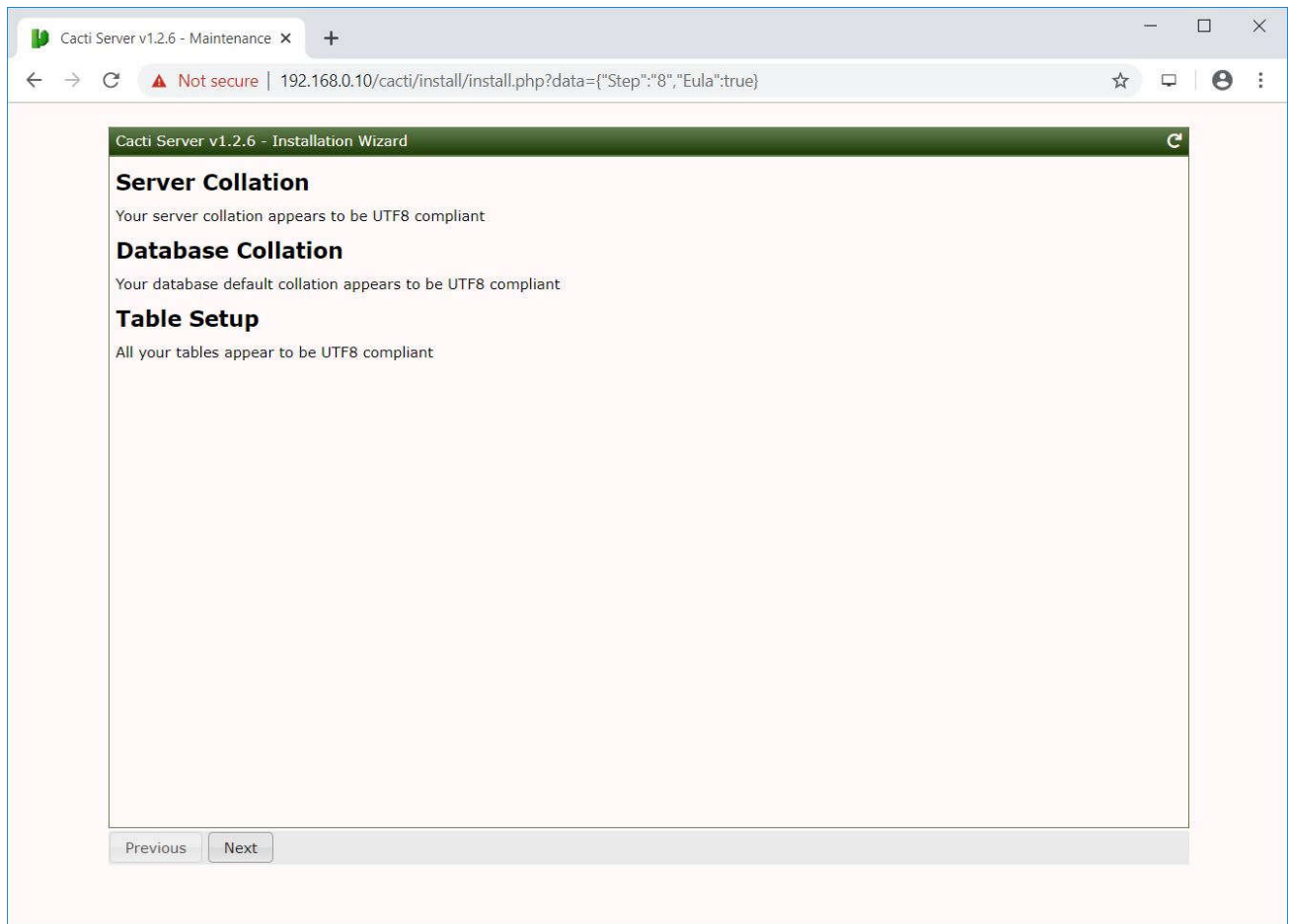
Name	Description	Author	Homepage	<input checked="" type="checkbox"/>
Cisco Router	Cisco Router Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>
Generic SNMP Device	Generic SNMP Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>
Local Linux Machine	Linux Local Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>
Net-SNMP Device	Net-SNMP Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>
Windows Device	Windows Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>
Cacti Stats	Cacti Stats Device Package	The Cacti Group	cacti.net	<input checked="" type="checkbox"/>

Device Templates allow you to monitor and graph a vast assortment of data within Cacti. After you select the desired Device Templates, press 'Finish' and the installation will complete. Please be patient on this step, as the importation of the Device Templates can take a few minutes.

Previous Next

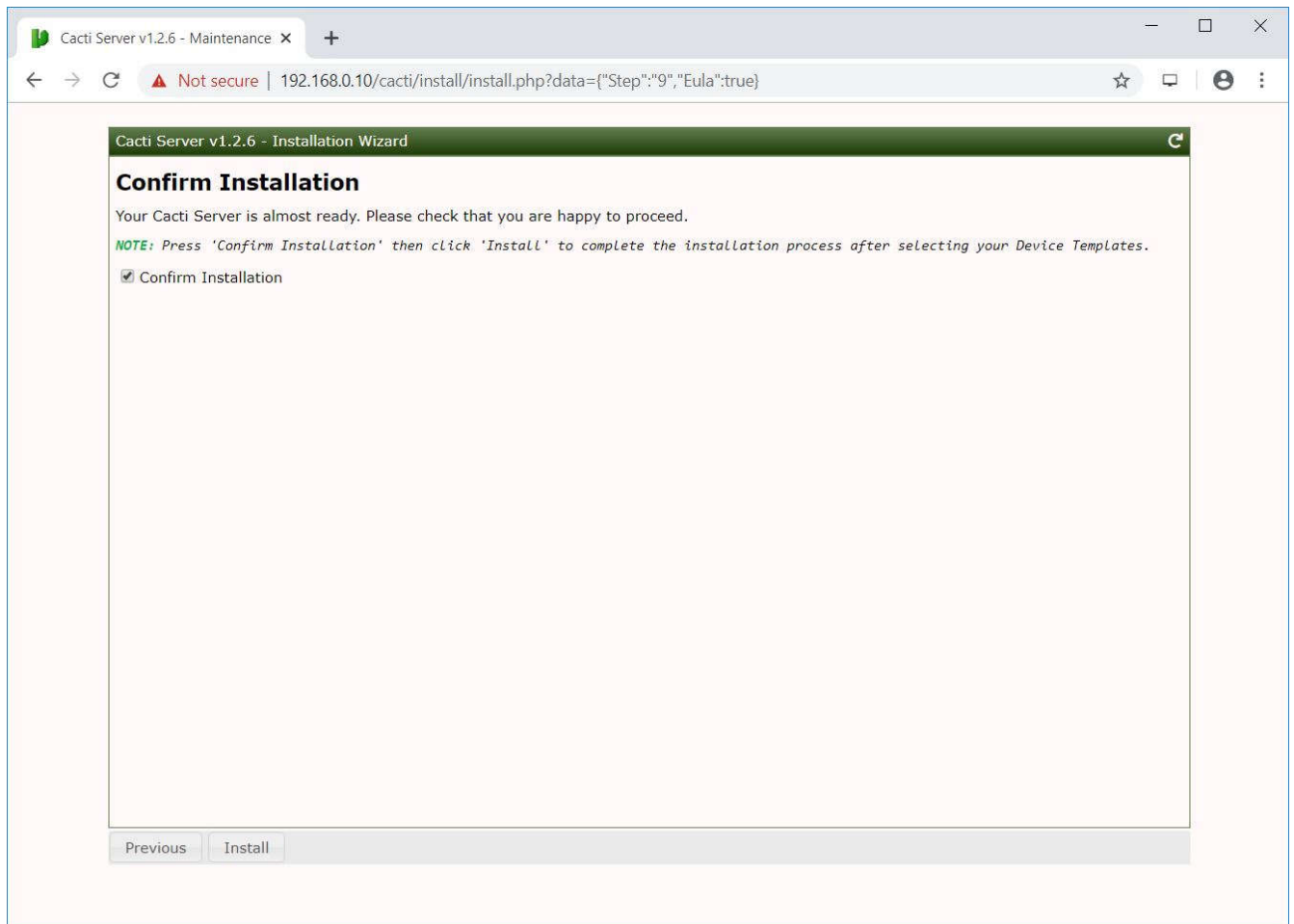
Cacti Templates

This step reports if the database is not UTF8 compliant.



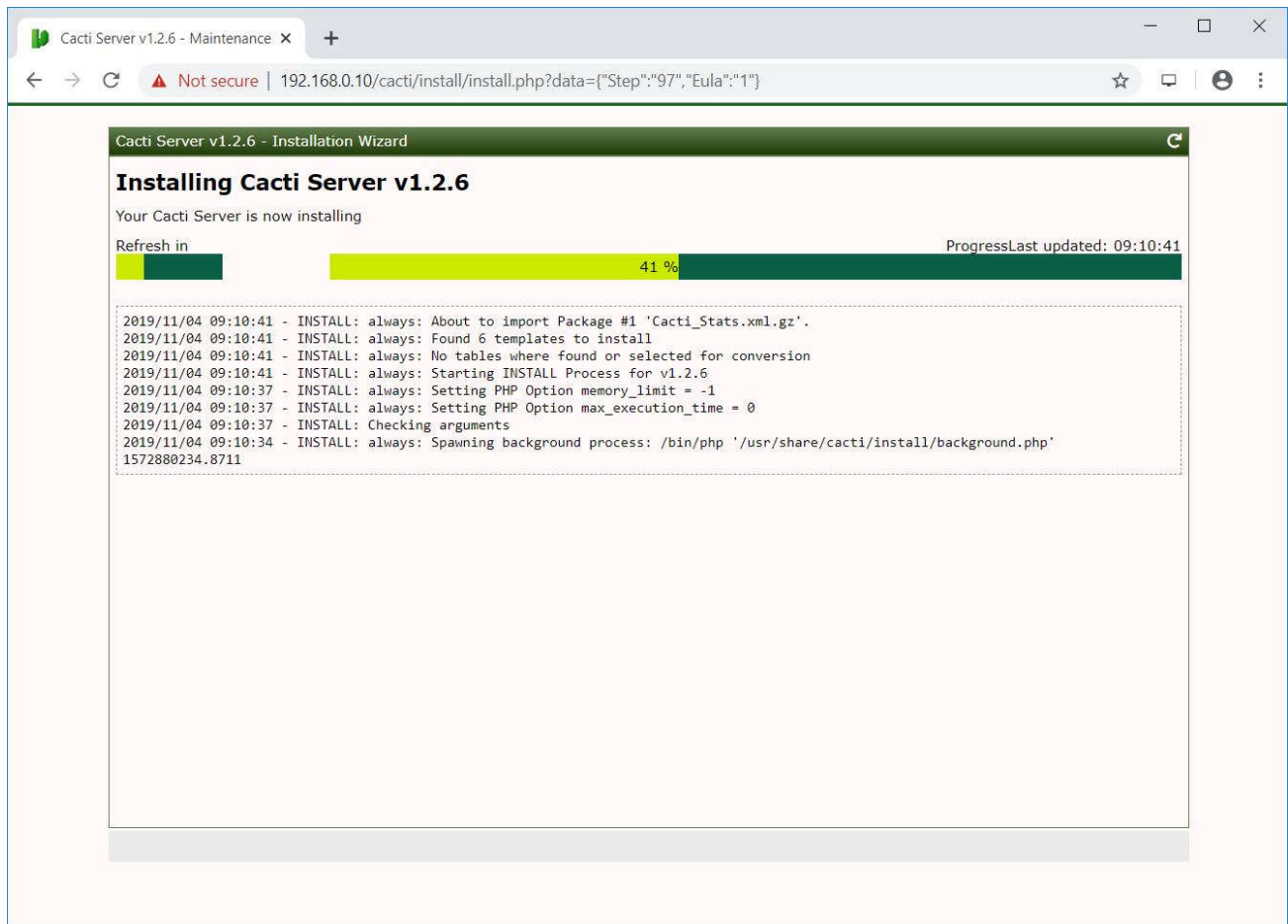
Database Check

Press **Confirm Installation** and then click **Install** begin the Cacti installation.



Confirm Cacti Installation

The installation is in progress.



The screenshot shows a web browser window with the address bar displaying "192.168.0.10/cacti/install/install.php?data={\"Step\":\"97\",\"Eula\":\"1\"}". The page title is "Cacti Server v1.2.6 - Maintenance". The main content area is titled "Cacti Server v1.2.6 - Installation Wizard" and "Installing Cacti Server v1.2.6". It states "Your Cacti Server is now installing". A progress bar shows 41% completion. Below the progress bar, a log of installation steps is visible, including importing packages, finding templates, and setting PHP options.

Cacti Server v1.2.6 - Installation Wizard

Installing Cacti Server v1.2.6

Your Cacti Server is now installing

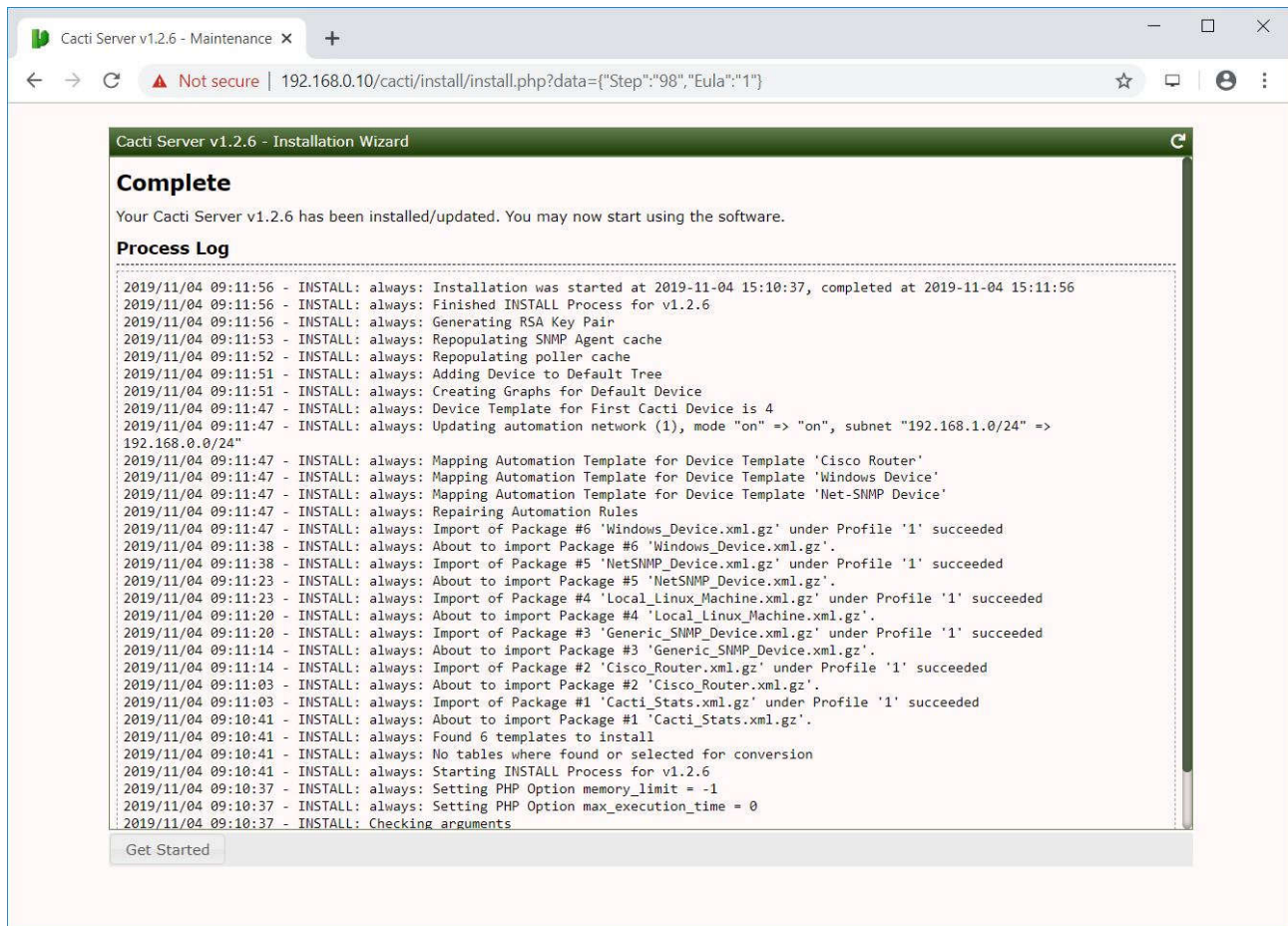
Refresh in ProgressLast updated: 09:10:41

41 %

```
2019/11/04 09:10:41 - INSTALL: always: About to import Package #1 'Cacti_Stats.xml.gz'.
2019/11/04 09:10:41 - INSTALL: always: Found 6 templates to install
2019/11/04 09:10:41 - INSTALL: always: No tables where found or selected for conversion
2019/11/04 09:10:41 - INSTALL: always: Starting INSTALL Process for v1.2.6
2019/11/04 09:10:37 - INSTALL: always: Setting PHP Option memory_limit = -1
2019/11/04 09:10:37 - INSTALL: always: Setting PHP Option max_execution_time = 0
2019/11/04 09:10:37 - INSTALL: Checking arguments
2019/11/04 09:10:34 - INSTALL: always: Spawning background process: /bin/php '/usr/share/cacti/install/background.php'
1572880234.8711
```

Installation In Progress

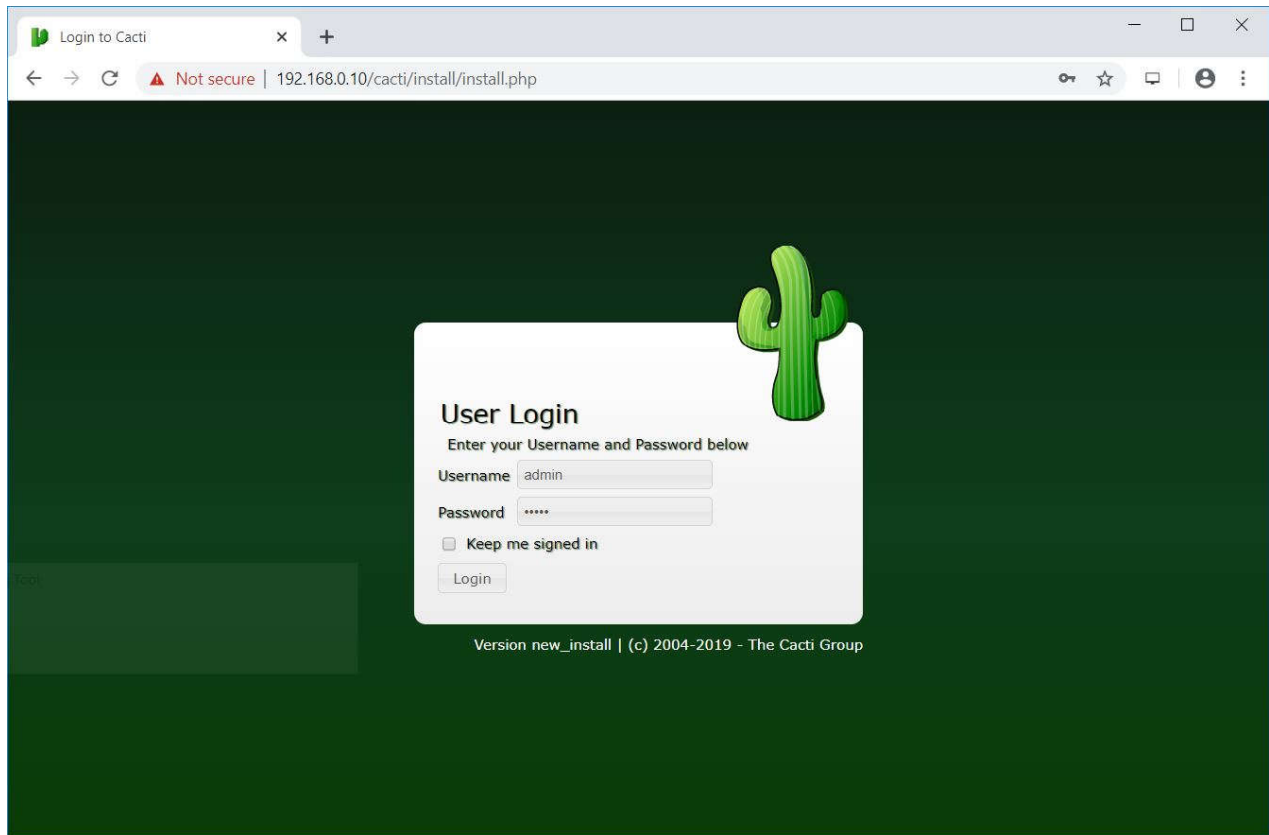
The Cacti installation is now complete. Click **Get Started** to access the Cacti dashboard.



Installation Complete

Access Cacti Dashboard

Enter the Username and password to login to Cacti.

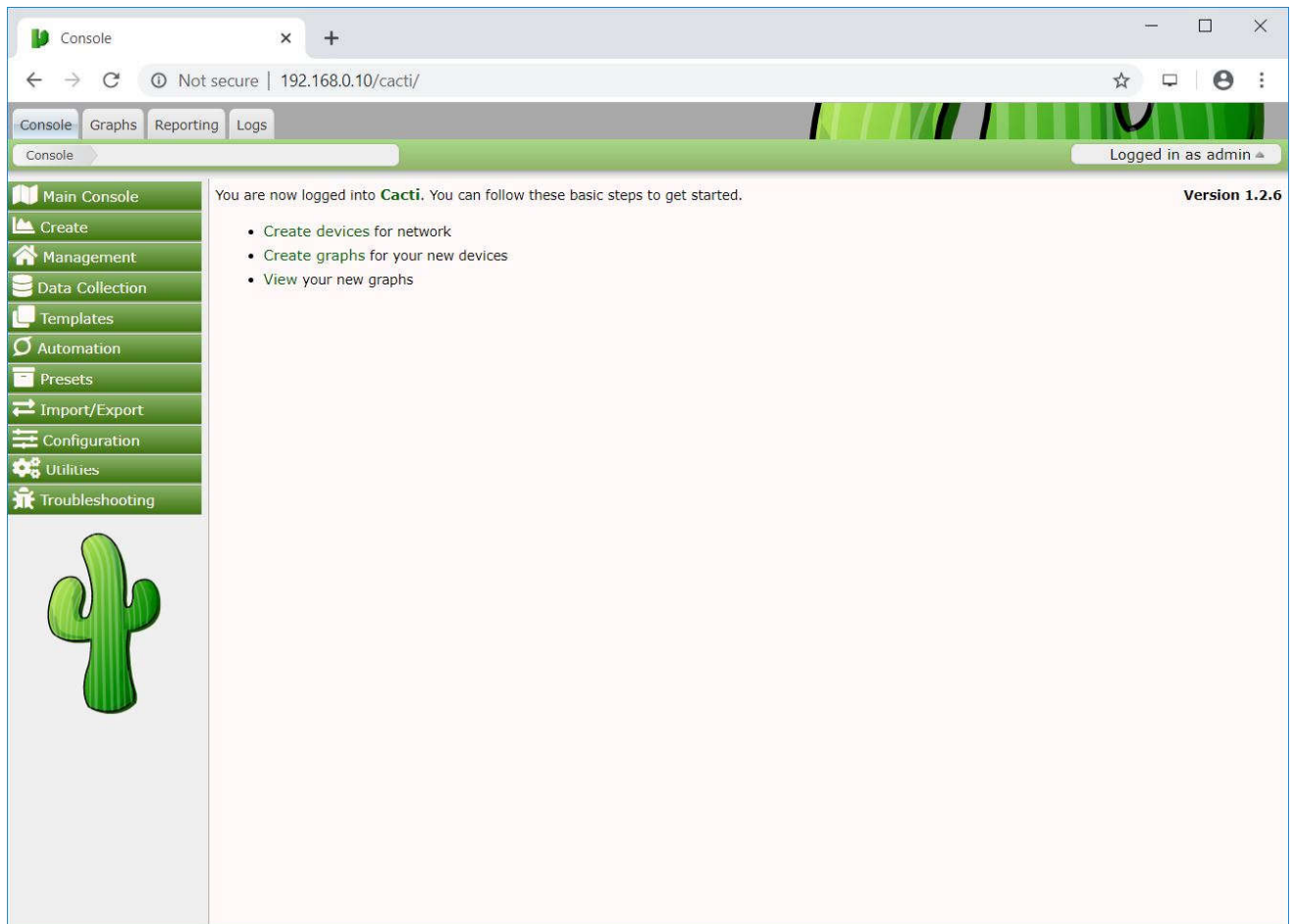


The screenshot shows a web browser window with the title "Login to Cacti". The address bar displays "192.168.0.10/cacti/install/install.php" with a "Not secure" warning. The main content area has a dark green background. In the center, there is a white login box titled "User Login" with a green cactus icon. The box contains the text "Enter your Username and Password below", followed by input fields for "Username" (containing "admin") and "Password" (containing "*****"). Below these fields is a checkbox labeled "Keep me signed in" and a "Login" button. At the bottom of the page, the text "Version new_install | (c) 2004-2019 - The Cacti Group" is visible.

Version new_install | (c) 2004-2019 - The Cacti Group

Login To Cacti Monitoring Tool

Cacti Dashboard:

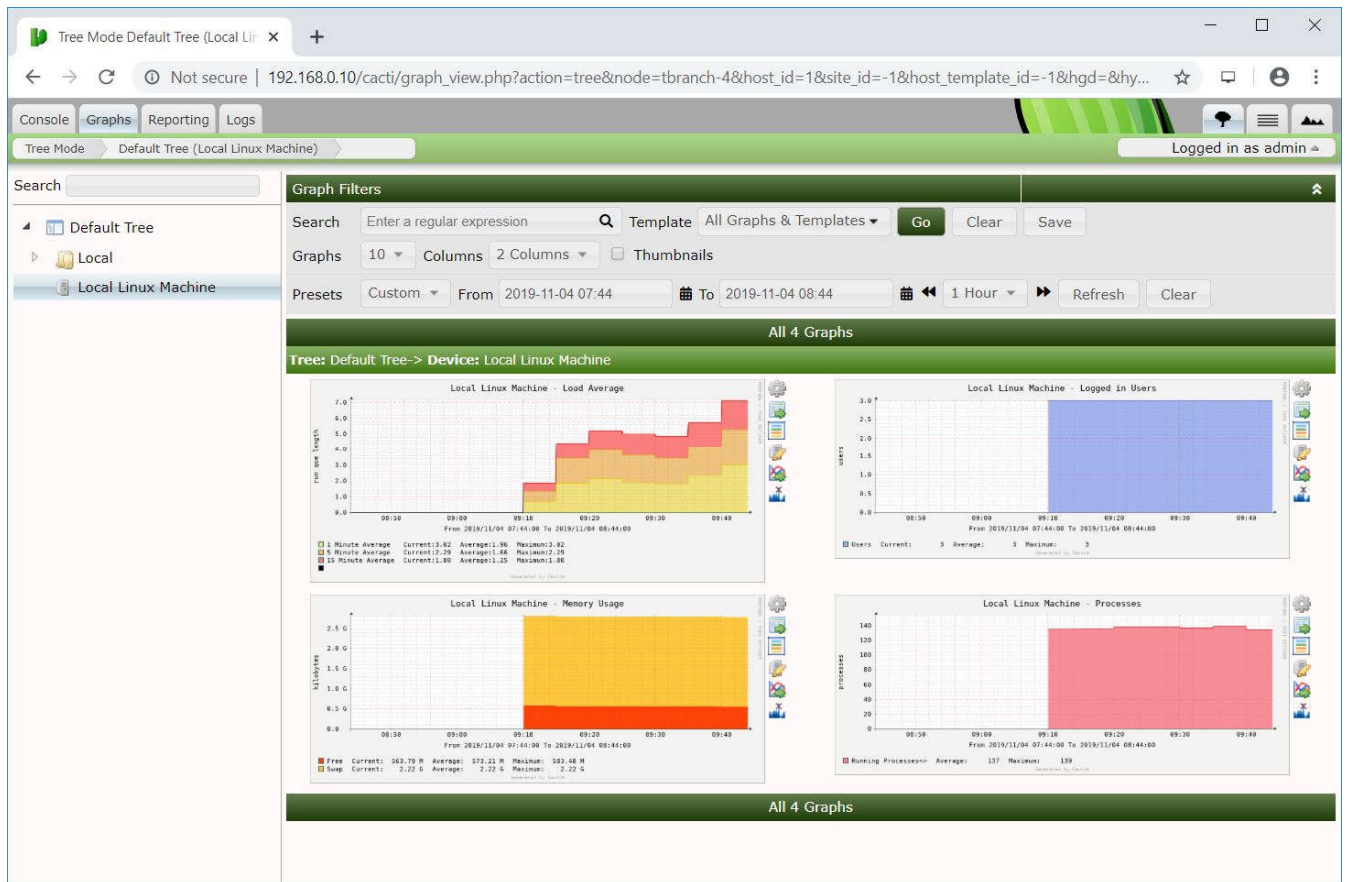


Cacti Dashboard

By default, Cacti creates resource usage graphs for the local machine where you have the Cacti installed.

To view the graphs, go to **Graph >> Default Tree >> Local >> Choose Your Device**.

Wait at least 15 – 30 minutes to let Cacti populate the usage graph of your device for you.



Device Graph