

# **Simple OpenStack Monitoring Tool**

## **Installation Document**

### **Version 1.1**

**Team Name:** Oceans11

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## 1) GLOSSARY AND ABBREVIATIONS:

### 1. CPAN ( Comprehensive Perl Archive Network):

It is an archive of modules of software written in the Perl programming language. The required perl module is downloaded and installed from the cpan.

### 2. PERL (Practical Extraction and Report Language):

Perl stands for **Practical Extraction and Report Language**. Perl is a high-level, general-purpose, interpreted, dynamic programming language.

## 2) Purpose:

This document provides the instructions for installing the software on the user machine. The following sections provide steps to install the basic prerequisites and modifications needed for the tool to function.

The installation instructions should be followed to install a fully working tool and prevent installation errors.

#### A. Release Version 1.1 on 2015-06-01:

- Minor changes in (Section II, III, V).

#### B. Release Version 1.0 on 2015-05-20:

- Initial Release.

## 3) Scope:

This document pertains to the OpenStack based cloud hosting company (Customer). The tool facilitates the monitoring of various OpenStack services deployed on the nodes in the OpenStack environment. Please refer other documents for detailed information.

## 4) Pre-Requisites:

- This tool works on UBUNTU 14.04 LTS platform.
- Minimum RAM of 2GB.
- MySQL server needs to be on port **3306** for successful functioning of the tool.

## 5) Installing the Tool:

### a. Manual Installation:

- **Installing Pre-Requisites:**

- Enter the following command in the terminal to install Apache Web Server ,

*sudo apt-get install apache2*

- Enter the following command in the terminal to install MySQL ,

*sudo apt-get install mysql-server*

- Enter the following command in the terminal to install PHP5 ,

*sudo apt-get install php5*

- **Installing Perl modules:**

- **Install Perl-MySQL module:** Enter the following command in the terminal

*sudo apt-get install libdbi-perl*

- **Installing CPAN:** Enter the following command in the terminal to install CPAN,

*sudo CPAN*

- **Installing Net::OpenSSH module:** Enter the following command in the terminal to install *Net::OpenSSH* module from CPAN,

*sudo CPAN install Net::OpenSSH*

- **Installing “libgd-graph-perl” perl library:** Enter the following command in the terminal to install

*sudo apt-get install libgd-graph-perl*

- **Setting-Up the Tool:**

- The tool is provided to the customer as **Oceans11.tar.gz** package.
- The package should be extracted using the following command in the terminal,

*tar -xvzf Oceans11\_tool.tar.gz*

- The uncompressed package contains,
  - Directories **frontend**, **backend** and **keys**.
  - **db.conf** which contains MySQL database credentials and default user credentials.
  - “**install.sh**” and “**run.sh**” scripts
  - readme.txt
- Perform the following changes if **apache2** is configure in a different directory:
  - Open **/etc/apache2/sites-enabled/000-default.conf** from the terminal  
*gedit /etc/apache2/sites-enabled/000-default.conf*
  - Now replace the following,  
*<DocumentRoot >/var/www/html*  
by,  
*<DocumentRoot> /var/www*
- Place the Frontend folder in the ‘**/var/www/**’ directory.
- The frontend directory contains the following scripts,
  - *bargraph.php*
  - *db.php*
  - *home.php*
  - *login.php*
  - *monitor.php*
  - *statistics.php*

And the other files corresponding to the functionality of above files.

- The backend directory contains the following scripts,
  - *BackEnd.pl*
  - *createtablei.pl*
  - *restart.pl*
  - *sshcon.pl*
  - *status.pl*
  - *dbpath.pl*
- Change the MySQL database credentials in the ‘db.conf’ file.
- Execute the “run.sh” script
- Use the default login credentials used in ‘db.conf’ ,
- Start the Web-GUI by typing the following in the browser URL,

*Localhost/frontend/index.php*

**b. Automatic Installation:**

- The tool is provided to the customer as **Oceans11.tar.gz** package.
- The package should be extracted using the following command in the terminal,  
*tar -xvzf Oceans11.tar.gz*
- The uncompressed package contains,
  - Four directories **frontend**, **backend**, **keys** and **manuals**.
  - **db.conf** which contains MySQL database credentials
  - “**install.sh**” and “**run.sh**” scripts
  - Readme.txt
  - keys folder consists of the key pair used for ssh connection establishment
- Change the MySQL database credentials in the ‘**db.conf**’ file in Oceans11 directory.
- Execute “**install.sh**”,

*\$/install.sh*

- For later use, execute “**run.sh**” ,

*\$/run.sh*

- Use the default login credentials used in db.conf ,
- Start the Web-GUI by typing the following in the browser URL,

*localhost/frontend/index.php*

**6) References:**

- [1]. <http://www.cpan.org/>: CPAN (Comprehensive Perl Archive Network)
- [2]. <https://metacpan.org/pod/Net::OpenSSH> : Perl Net::OpenSSH