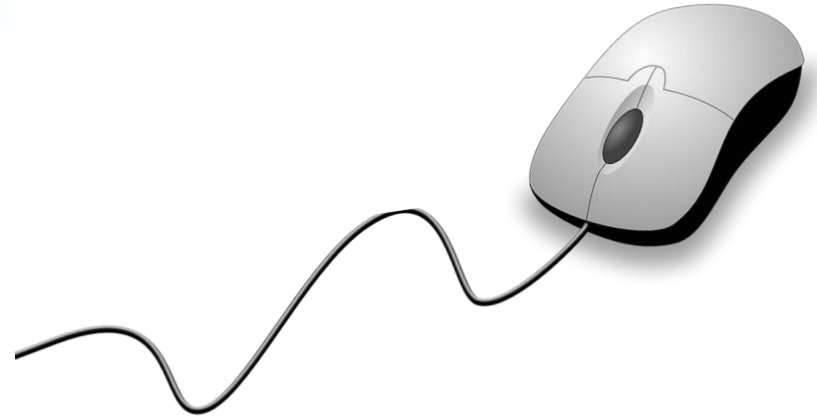


공개SW 솔루션 설치 & 활용 가이드

시스템SW > 자원관리



**ZABBIX**

**제대로 배워보자**

How to Use Open Source Software

---

Open Source Software Installation & Application Guide



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# 1. 개요

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소개	<ul style="list-style-type: none"> <li>• 네트워크나 서버(가상)등을 포함한 서비스들을 감시하고 실시간으로 자원을 체크하여 관리자에게 신속히 알리기 위한 네트워크 관리 솔루션 소프트웨어</li> <li>• zabbix 에이전트를 Unix, Linux, Windows 등의 OS에 설치하여 CPU, MEM, 파일시스템(용량), 특정 TCP 등을 포함한 많은 정보를 감시 할 수 있으며, 장애대비 모니터링으로 탁월</li> </ul>		
주요기능	<ul style="list-style-type: none"> <li>• 모니터링 현황판을 지원(dashboard)</li> <li>• Overview/ Graphs/ 경고 임계치(Trigger)</li> <li>• DBMS 모니터링(Screen 화면)</li> <li>• 웹 서비스 품질(Speed, Response time) 측정 가능</li> <li>• 네트워크 서비스 모니터링 지원</li> </ul>		
대분류	• 시스템SW	소분류	• 자원관리
라이선스형태	• GNU General Public License version 2	사전설치 솔루션	<ul style="list-style-type: none"> <li>• epel-release, mariadb-server</li> <li>• httpd, php, php-mysql, iptables</li> </ul>
운영체제	• Cross-platform	버전	• Zabbix 3.2
특징	<ul style="list-style-type: none"> <li>• 분산 및 확장 모니터링을 지원</li> <li>• 실시간 모니터링으로 경고 발생 시 관리자에게 실시간 통보(E-Mail, 메신저, SMS)</li> <li>• 다양한 모니터링 수단 지원 및 모니터링 데이터를 가공하여 직관적인 그래프 생성</li> </ul>		
보안취약점	<ul style="list-style-type: none"> <li>• 취약점 ID : CVE-2016-10134</li> <li>• 심각도 : 9.8 CRITICAL(V3)</li> <li>• 취약점 설명 : SQL injection 취약점으로 인해 원격 공격자는 latest.php의 toggle_ids 배열 매개 변수를 통해 임의의 SQL 명령을 실행할 수 있음</li> <li>• 대응방안 : 2.2.13, 3.0.3 이상으로 업그레이드</li> <li>• 참고경로 : <a href="https://www.securityfocus.com/bid/95423/info">https://www.securityfocus.com/bid/95423/info</a></li> </ul>		
개발회사/커뮤니티	• Zabbix LLC / Zabbix community		
공식 홈페이지	• <a href="https://www.zabbix.com">https://www.zabbix.com</a>		





## 주요기능

- 모니터링 시스템의 전반적인 상황을 표시해준다.
- 모니터링 대상(Host)수량, 모니터링 항목(Item), 임계치(Trigger) 초과 경고 현황을 알려준다.
- 각 Host별 모니터링 항목(Item)에 설정된 임계치 초과여부 감시가 가능하다.
- 경고가 발생한 항목은 적색 점멸. 관리자에게 통보해준다.
- 모니터링 항목(Item)의 저장된 데이터를 가공하여 Graph로 표시해준다.
- 기간별(1일, 1주, 1달 등) Tracking하여 변화 추이(Trends)를 제공한다.
- 경고 발생 현황을 보여준다.  
예) CPU 90% 사용, DB Active Session 20개 초과, 디스크 가용량 1GB 미만, Ping Timeout
- 경고를 5단계로 분류하여 (Disaster, High, Average, Warning, Information) 표시한다.
- 각 Host의 Graph를 한 화면에 표시해준다. (CPU, Memory, Disk, Swap, Network 등)
- Graph를 선택적으로 편집하여 구성이 가능하다.
- DBMS Health Check  
(Hit Ratio, SGA, PGA, Shared Pool, Session/Process, Event wait, Physical/Logical IO)
- SQL 기반으로 DB 모니터링 항목 확장이 가능하다.
- 웹서비스 네트워크 대역폭 속도와 응답시간 모니터링이 가능하다.
- 웹서버 데몬 Alive Check
- 웹서비스 응답시간이 경고 임계치 초과 시 관리자에게 통보해준다.

# 3. 실행환경

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## 1. OS

CentOS Linux release 7.3.1611 (Core) 환경

## 2. 사전 설치 솔루션

epel-release-7-9.noarch

mariadb-server-5.5.52-1.el7.x86\_64

httpd-2.4.6-45.el7.centos.4.x86\_64

php-5.4.16-42.el7.x86\_64

php-mysql-5.4.16-42.el7.x86\_64

iptables-1.4.21-17.el7.x86\_64

## 3. Zabbix package

zabbix-release-3.2-1.el7.noarch

zabbix-web-3.2.7-1.el7.noarch

zabbix-web-mysql-3.2.7-1.el7.noarch

zabbix-server-mysql-3.2.7-1.el7.x86\_64



# 4. 설치 및 실행

ZABBIX



## 세부 목차

- 4.1 Add EPEL Repository
- 4.2 Install Zabbix daemons
- 4.3 Running and Setting the DB(MariaDB)
- 4.4 Basic setting
- 4.5 DB(MariaDB) connection and setting
- 4.6 Apply Zabbix table value information to DB
- 4.7 Zabbix config settings
- 4.8 PHP config settings
- 4.9 Iptables firewall settings
- 4.10 Start Zabbix Server and HTTPD service
- 4.11 Connect Zabbix Web Page



# 4. 설치 및 실행



## 4.1 Add EPEL Repository

- yum 설치를 위해 EPEL 저장소 추가  
-> yum install epel-release

```
[root@localhost ~]# yum install epel-release
BDB2053 Freeing read locks for locker 0x725: 12870/140391998596928
BDB2053 Freeing read locks for locker 0x727: 12870/140391998596928
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: ftp.kaist.ac.kr
 * extras: ftp.kaist.ac.kr
 * updates: ftp.kaist.ac.kr
Resolving Dependencies
--> Running transaction check
---> Package epel-release.noarch 0:7-9 will be installed
--> Finished Dependency Resolution
```



# 4. 설치 및 실행

ZABBIX



## 4.2 Install Zabbix daemons

- Zabbix, DB(MariaDB), WEB(Apache) / PHP 설치

-> rpm --ivh http://repo.zabbix.com/zabbix/3.2/rhel/7/x86\_64/Zabbix-release-3.2-1.el7.noarch.rpm

-> yum install zabbix-server-mysql zabbix-web-mysql mysql mariadb-server httpd php

```
[root@localhost ~]# rpm -ivh http://repo.zabbix.com/zabbix/3.2/rhel/7/x86_64/zabbix-release-3.2-1.el7.noarch.rpm
Retrieving http://repo.zabbix.com/zabbix/3.2/rhel/7/x86_64/zabbix-release-3.2-1.el7.noarch.rpm
warning: /var/tmp/rpm-tmp.pui8Ev: Header V4 RSA/SHA512 Signature, key ID a14fe591: NOKEY
Preparing...                               ##### [100%]
Updating / installing...
 1:zabbix-release-3.2-1.el7                 ##### [100%]
[root@localhost ~]#
```

```
[root@localhost ~]# yum install zabbix-server-mysql zabbix-web-mysql mysql mariadb-server httpd php
Loaded plugins: fastestmirror, langpacks
epel/x86_64/metalink
epel
zabbix
zabbix-non-supported
(1/3): epel/x86_64/group_gz
(2/3): epel/x86_64/updateinfo
(3/3): epel/x86_64/primary_db
(1/2): zabbix-non-supported/x86_64/primary
(2/2): zabbix/x86_64/primary
```





# 4. 설치 및 실행



## 4.3 Running and Setting the DB(MariaDB)

- DB 실행 및 프로세스 확인

-> systemctl start mariadb  
systemctl enable mariadb  
-> ps --ef | grep mysql

```
[root@localhost ~]# systemctl start mariadb
[root@localhost ~]# systemctl enable mariadb
Created symlink from /etc/systemd/system/multi-user.target.wants/mariadb.service to /usr/lib/systemd/system/mariadb.service.
[root@localhost ~]# ps -ef | grep mysql
mysql  13328    1  0 13:54 ?        00:00:00 /bin/sh /usr/bin/mysqld_safe --basedir=/usr
mysql  13485 13328  0 13:54 ?        00:00:00 /usr/libexec/mysqld --basedir=/usr --datadir=/var/lib/mysql --plugin-dir=/usr/lib64/mysql/plugin
db/mariadb.log --pid-file=/var/run/mariadb/mariadb.pid --socket=/var/lib/mysql/mysql.sock
root   13572 12882  0 13:54 pts/3    00:00:00 grep --color=auto mysql
[root@localhost ~]#
```



# 4. 설치 및 실행



### 4.4 Basic setting

- 기본설정 (DB가 구동된 상태에서 진행가능)  
-> mysql\_secure\_installation

```
[root@localhost ~]# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none): Enter
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] Y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] Y
```

DB Root password 설정

익명의 접근 막기 위해 Y

```
production environment.

Remove anonymous users? [Y/n] Y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] Y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] Y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] Y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
```

DB Root 원격 막기 위해 Y

Test 용으로 생성된 DB 삭제하기 위해 Y

현재 설정 값을 적용하기 위해 Y



# 4. 설치 및 실행

ZABBIX



## 4.5 DB(MariaDB) connection and setting

- DB 접속 및 설정

-> `mysql --u root --p` (mysql\_secure\_installation에서 설정한 Password입력)

-> Create database ZABBIXDB; (데이터베이스 설정)

Grant all privileges on ZABBIXDB \* to Zabbix@localhost identified by 'test123'; (권한생성)

Flush privileges; (적용)

exit

```
[root@localhost ~]# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 11
Server version: 5.5.52-MariaDB MariaDB Server

Copyright (c) 2000, 2016, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> create database ZABBIXDB;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> grant all privileges on ZABBIXDB.* to zabbix@localhost identified by 'test123';
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> exit
Bye
```



# 4. 설치 및 실행

ZABBIX



## 4.6 Apply Zabbix table value information to DB

- Zabbix 테이블 값 정보 데이터베이스에 적용
  - > cd /usr/share/doc/Zabbix-server-mysql-3.2.7/
  - > Gunzip create.sql.gz
  - > Mysql -u root -p ZABBIXDB < create.sql

```
[root@localhost ~]# cd /usr/share/doc/zabbix-server-mysql-3.2.7/
[root@localhost zabbix-server-mysql-3.2.7]# gunzip create.sql.gz
[root@localhost zabbix-server-mysql-3.2.7]# ls
AUTHORS ChangeLog COPYING create.sql NEWS README
[root@localhost zabbix-server-mysql-3.2.7]# mysql -u root -p ZABBIXDB < create.sql
Enter password:
[root@localhost zabbix-server-mysql-3.2.7]#
```



# 4. 설치 및 실행

ZABBIX



## 4.7 Zabbix config settings

- Zabbix config 설정
  - > DBHost=localhost
  - DBName=ZABBIXDB
  - DBUser=zabbix
  - DBPassword=test123

```
[root@localhost zabbix-server-mysql-3.2.7]# vi /etc/zabbix/zabbix_server.conf
```

```
█ This is a configuration file for Zabbix server daemon  
# To get more information about Zabbix, visit http://www.zabbix.com
```

```
##### GENERAL PARAMETERS #####
```

```
### Option: ListenPort  
# Listen port for trapper.  
#
```

```
# Mandatory: no  
# Range: 1024-32767  
# Default:  
# ListenPort=10051
```

```
### Option: SourceIP  
# Source IP address for outgoing connections.  
#
```

```
# Mandatory: no  
# Default:  
# SourceIP=
```

```
### Option: TLSCertFile  
# Full pathname of a file containing the server certificate or certificate chain.  
#  
# Mandatory: no  
# Default:  
# TLSCertFile=
```

```
### Option: TLSKeyFile  
# Full pathname of a file containing the server private key.  
#  
# Mandatory: no  
# Default:  
# TLSKeyFile=
```

```
DBHost=localhost  
DBName=ZABBIXDB  
DBUser=zabbix  
DBPassword=test123
```

```
:wq!
```



# 4. 설치 및 실행



### 4.8 PHP config settings(1/3)

- PHP Config 설정

-> vi /etc/php.ini

max\_execution\_time = 600  
max\_input\_time = 600

```
[root@localhost zabbix-server-mysql-3.2.7]# vi /etc/php.ini
```

```
[PHP]
```

```
;;;;;;;;;;;;;;;;;;;;;;;;;;  
; About php.ini ;  
;;;;;;;;;;;;;;;;;;;;;;;;;;  
; PHP's initialization file, generally called php.ini, is responsible for  
; configuring many of the aspects of PHP's behavior.  
  
; PHP attempts to find and load this configuration from a number of locati  
; The following is a summary of its search order:  
; 1. SAPI module specific location.  
; 2. The PHPRC environment variable. (As of PHP 5.2.0)  
; 3. A number of predefined registry keys on Windows (As of PHP 5.2.0)  
; 4. Current working directory (except CLI)  
; 5. The web server's directory (for SAPI modules), or directory of PHP  
; (otherwise in Windows)  
; 6. The directory from the --with-config-file-path compile time option, o  
; Windows directory (C:\windows or C:\winnt)  
; See the PHP docs for more specific information.  
; http://php.net/configuration.file
```

```
;;;;;;;;;;;;;;;;;;;;;;;;;;  
; Resource Limits ;  
;;;;;;;;;;;;;;;;;;;;;;;;;;  
  
; Maximum execution time of each script, in seconds  
; http://php.net/max-execution-time  
; Note: This directive is hardcoded to 0 for the CLI SAPI  
max_execution_time = 600 30 -> 600  
  
; Maximum amount of time each script may spend parsing request data. It's a good  
; idea to limit this time on productions servers in order to eliminate unexpecte  
; long running scripts.  
; Note: This directive is hardcoded to -1 for the CLI SAPI  
; Default Value: -1 (Unlimited)  
; Development Value: 60 (60 seconds)  
; Production Value: 60 (60 seconds)  
; http://php.net/max-input-time  
max_input_time = 600 60 -> 600  
  
; Maximum input variable nesting level  
; http://php.net/max-input-nesting-level  
;max_input_nesting_level = 64  
  
; How many GET/POST/COOKIE input variables may be accepted  
; max_input_vars = 1000  
-- INSERT --
```



# 4. 설치 및 실행



## 4.8 PHP config settings(2/3)

- PHP Config 설정

-> vi /etc/php.ini

memory\_limit = 256M  
post\_max\_size = 32M

```
; long running scripts.
; Note: This directive is hardcoded to -1 for the CLI SAPI
; Default Value: -1 (Unlimited)
; Development Value: 60 (60 seconds)
; Production Value: 60 (60 seconds)
; http://php.net/max-input-time
max_input_time = 600

; Maximum input variable nesting level
; http://php.net/max-input-nesting-level
;max_input_nesting_level = 64

; How many GET/POST/COOKIE input variables may be accepted
; max_input_vars = 1000

; Maximum amount of memory a script may consume (128MB)
; http://php.net/memory-limit
memory_limit = 256M

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Error handling and logging ;
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
```

128M -> 256M

```
; http://php.net/auto-globals-jit
auto_globals_jit = On

; Whether PHP will read the POST data.
; This option is enabled by default.
; Most likely, you won't want to disable this option globally. It causes $_POST
; and $_FILES to always be empty; the only way you will be able to read the
; POST data will be through the php://input stream wrapper. This can be useful
; to proxy requests or to process the POST data in a memory efficient fashion.
; http://php.net/enable-post-data-reading
;enable_post_data_reading = Off

; Maximum size of POST data that PHP will accept.
; Its value may be 0 to disable the limit. It is ignored if POST data reading
; is disabled through enable_post_data_reading.
; http://php.net/post-max-size
post_max_size = 32M

; Automatically add files before PHP document.
; http://php.net/auto-prepend-file
auto_prepend_file =
```

8M -> 32M





# 4. 설치 및 실행



## 4.8 PHP config settings(3/3)

- PHP Config 설정

-> vi /etc/php.ini

upload\_max\_filesize = 16M  
date.timezone = Asia/Seoul

```
; Whether to allow HTTP file uploads.  
; http://php.net/file-uploads  
file_uploads = On  
  
; Temporary directory for HTTP uploaded files (will use system default if not  
; specified).  
; http://php.net/upload-tmp-dir  
;upload_tmp_dir =  
  
; Maximum allowed size for uploaded files.  
; http://php.net/upload-max-filesize  
upload_max_filesize = 16M  
  
; Maximum number of files that can be uploaded via a single request  
max_file_uploads = 20  
  
;;;;;;;;;;;;;;;;;;;;;;;;;  
; Fopen wrappers ;  
;;;;;;;;;;;;;;;;;;;;;;;;;
```

2M -> 16M

```
;;;;;;;;;;;;;;;;;;;;;;;;;  
; Module Settings ;  
;;;;;;;;;;;;;;;;;;;;;;;;;  
  
[CLI Server]  
; Whether the CLI web server uses ANSI color coding in its terminal output.  
cli_server.color = On  
  
[Date]  
; Defines the default timezone used by the date functions  
; http://php.net/date.timezone  
date.timezone = Asia/Seoul  
  
; http://php.net/date.default-latitude  
;date.default_latitude = 31.7667  
  
; http://php.net/date.default-longitude  
;date.default_longitude = 35.2333
```

; 주석 제거 후 한국시간으로 설정





# 4. 설치 및 실행

ZABBIX



## 4.9 Iptables firewall settings(1/3)

- Zabbix 테이블 값 정보 데이터베이스에 적용
  - > cd /usr/share/doc/Zabbix-server-mysql-3.2.7/
  - > Gunzip create.sql.gz
  - > Mysql -u root -p ZABBIXDB < create.sql

```
[root@localhost zabbix-server-mysql-3.2.7]# systemctl stop firewalld
[root@localhost zabbix-server-mysql-3.2.7]# systemctl mask firewalld
Created symlink from /etc/systemd/system/firewalld.service to /dev/null.
[root@localhost zabbix-server-mysql-3.2.7]#
```

- iptables service 관련 package 설치
  - > yum install iptables-service

```
[root@localhost zabbix-server-mysql-3.2.7]# yum install iptables-services
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: ftp.kaist.ac.kr
 * epel: mirror.premi.st
 * extras: ftp.kaist.ac.kr
 * updates: ftp.kaist.ac.kr
Resolving Dependencies
--> Running transaction check
---> Package iptables-services.x86_64 0:1.4.21-17.el7 will be installed
--> Finished Dependency Resolution
```



# 4. 설치 및 실행

ZABBIX



## 4.9 Iptables firewall settings(2/3)

- iptables 방화벽 포트 허용

- > -A INPUT -p tcp -m state --state NEW -m tcp --dport 80 -j ACCEPT (web 포트)
- A INPUT -p tcp -m state --state NEW -m tcp --dport 10050 -j ACCEPT (zabbix server 포트)
- A INPUT -p tcp -m state --state NEW -m tcp --dport 10051 -j ACCEPT (zabbix agent 포트)

```
[root@localhost zabbix-server-mysql-3.2.7]# vi /etc/sysconfig/iptables
# sample configuration for iptables service
# you can edit this manually or use system-config-firewall
# please do not ask us to add additional ports/services to this default configuration
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
-A INPUT -m state --state RELATED,ESTABLISHED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 22 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 80 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 10050 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 10051 -j ACCEPT
-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
COMMIT
```



# 4. 설치 및 실행



## 4.9 Iptables firewall settings(3/3)

- iptables firewall 서버 데몬 재시작

-> service iptables restart

Iptables -nL

```
[root@localhost zabbix-server-mysql-3.2.7]# service iptables restart
Redirecting to /bin/systemctl restart iptables.service
[root@localhost zabbix-server-mysql-3.2.7]# iptables -nL
Chain INPUT (policy ACCEPT)
target     prot opt source                destination           state
ACCEPT     all  --  0.0.0.0/0             0.0.0.0/0             state RELATED,ESTABLISHED
ACCEPT     icmp --  0.0.0.0/0             0.0.0.0/0
ACCEPT     all  --  0.0.0.0/0             0.0.0.0/0
ACCEPT     tcp  --  0.0.0.0/0             0.0.0.0/0             state NEW tcp dpt:22
ACCEPT     tcp  --  0.0.0.0/0             0.0.0.0/0             state NEW tcp dpt:80
ACCEPT     tcp  --  0.0.0.0/0             0.0.0.0/0             state NEW tcp dpt:10050
ACCEPT     tcp  --  0.0.0.0/0             0.0.0.0/0             state NEW tcp dpt:10051
REJECT     all  --  0.0.0.0/0             0.0.0.0/0             reject-with icmp-host-prohibited

Chain FORWARD (policy ACCEPT)
target     prot opt source                destination           reject-with
REJECT     all  --  0.0.0.0/0             0.0.0.0/0             icmp-host-prohibited

Chain OUTPUT (policy ACCEPT)
target     prot opt source                destination
```



# 4. 설치 및 실행

ZABBIX



## 4.10 Start Zabbix Server and HTTPD service(1/2)

- zabbix server 및 httpd 서비스 시작
  - > systemctl start zabbix-server
  - systemctl enable zabbix-server
  - > systemctl start httpd
  - systemctl enable httpd

```
[root@localhost zabbix-server-mysql-3.2.7]# systemctl start zabbix-server
[root@localhost zabbix-server-mysql-3.2.7]# systemctl enable zabbix-server
Created symlink from /etc/systemd/system/multi-user.target.wants/zabbix-server.service to /usr/lib/systemd/system/zabbix-server.service.
[root@localhost zabbix-server-mysql-3.2.7]#
[root@localhost zabbix-server-mysql-3.2.7]# systemctl start httpd
[root@localhost zabbix-server-mysql-3.2.7]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
```



# 4. 설치 및 실행

ZABBIX



## 4.10 Start Zabbix Server and HTTPD service(2/2)

- web, zabbix 프로세스 확인

-> ps -ef | grep httpd

-> ps -ef | grep zabbix

```
[root@localhost zabbix-server-mysql-3.2.7]# ps -ef | grep httpd
root      14142      1  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14149 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14150 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14151 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14152 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14167 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14199 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14200 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14201 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14202 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
apache    14203 14142  0 14:07 ?        00:00:00 /usr/sbin/httpd -DFOREGROUND
root      14218 12739  0 14:08 pts/3    00:00:00 grep --color=auto httpd
```

```
[root@localhost zabbix-server-mysql-3.2.7]# ps -ef | grep zabbix
zabbix    14002      1  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server -c /etc/zabbix/zabbix_server.conf
zabbix    14007 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: configuration syncer [synced configuration in 0.005090 sec, idle 60 sec]
zabbix    14008 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: db watchdog [synced alerts config in 0.005468 sec, idle 60 sec]
zabbix    14009 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: poller #1 [got 0 values in 0.000008 sec, idle 5 sec]
zabbix    14010 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: poller #2 [got 0 values in 0.000005 sec, idle 5 sec]
zabbix    14011 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: poller #3 [got 0 values in 0.000005 sec, idle 5 sec]
zabbix    14012 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: poller #4 [got 0 values in 0.000005 sec, idle 5 sec]
zabbix    14013 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: poller #5 [got 0 values in 0.000007 sec, idle 5 sec]
zabbix    14014 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: unreachable poller #1 [got 0 values in 0.000005 sec, idle 5 sec]
zabbix    14015 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: trapper #1 [processed data in 0.000000 sec, waiting for connection]
zabbix    14016 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: trapper #2 [processed data in 0.000000 sec, waiting for connection]
zabbix    14017 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: trapper #3 [processed data in 0.000000 sec, waiting for connection]
zabbix    14018 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: trapper #4 [processed data in 0.000000 sec, waiting for connection]
zabbix    14019 14002  0 14:06 ?        00:00:00 /usr/sbin/zabbix_server: trapper #5 [processed data in 0.000000 sec, waiting for connection]
```



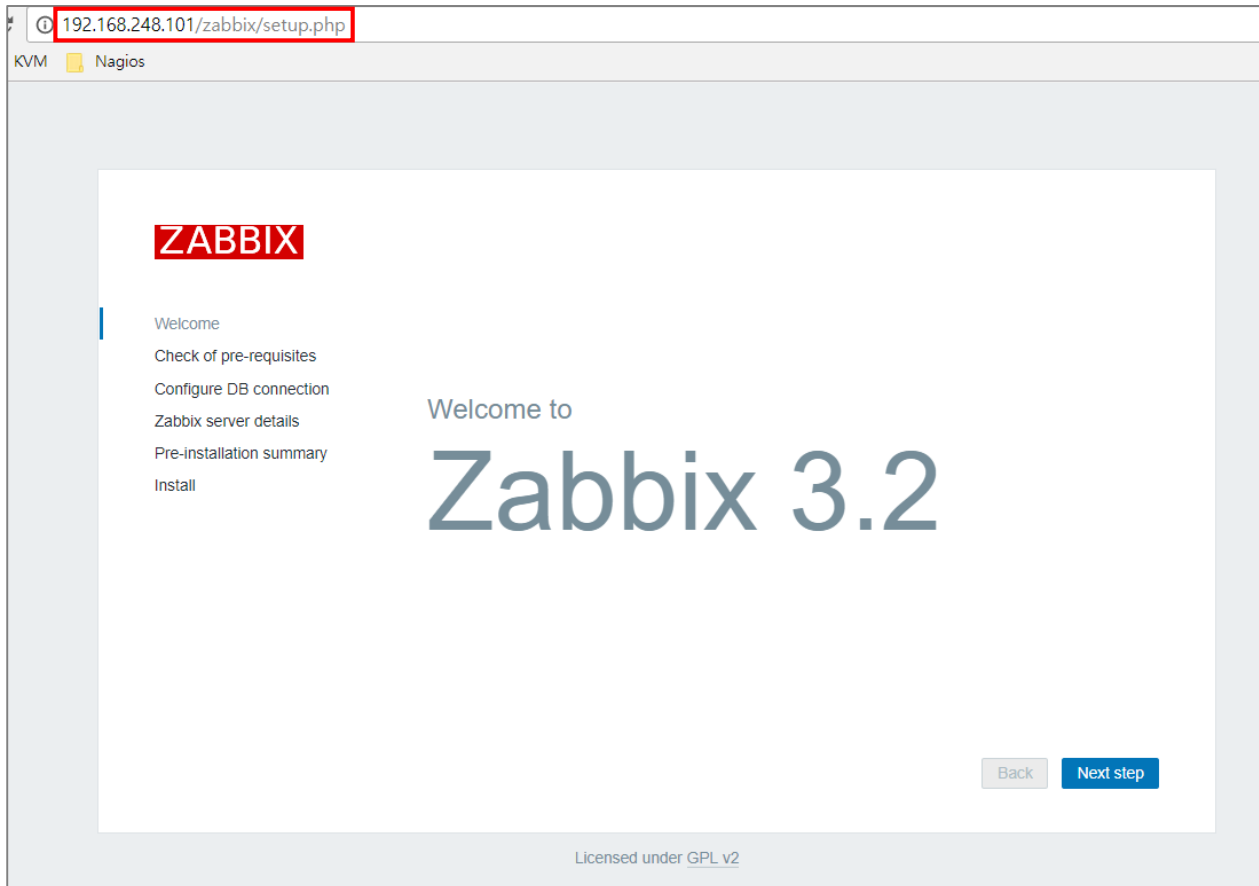
# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(1/9)

- Zabbix Web 설치 페이지 접속  
-> <http://192.168.248.101/zabbix>



# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(2/9)

- 기본 설정 후 NEXT 버튼 클릭

2.168.248.101/zabbix/setup.php

Nagios

### ZABBIX

#### Check of pre-requisites

	Current value	Required	
PHP version	5.4.16	5.4.0	OK
PHP option "memory_limit"	128M	128M	OK
PHP option "post_max_size"	16M	16M	OK
PHP option "upload_max_filesize"	2M	2M	OK
PHP option "max_execution_time"	300	300	OK
PHP option "max_input_time"	300	300	OK
PHP option "date.timezone"	Asia/Seoul		OK
PHP databases support	MySQL		OK
PHP bcmath	on		OK
PHP mbstring	on		OK
PHP option "mbstring.func_overload"	off	off	OK

Back **Next step**

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# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(3/9)

- DB 환경 설정 정보 입력 후 NEXT 버튼 클릭

전하지 않음 | 192.168.248.101/zabbix/setup.php

Nagios

### ZABBIX

Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database. Press "Next step" button when done.

Database type	MySQL ▾
Database host	localhost
Database port	0 0 - use default port
Database name	ZABBIXDB
User	zabbix
Password	.....

Back Next step

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# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(4/9)

- 서버 입력 후 NEXT 버튼 클릭

192.168.248.101/zabbix/setup.php

Nagios

### ZABBIX

Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

Pre-installation summary

Install

### Zabbix server details

Please enter the host name or host IP address and port number of the Zabbix server, as well as the name of the installation (optional).

Host

Port

Name

Back

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# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(5/9)

- 사전 설치 정보 확인 후 NEXT 버튼 클릭

192.168.248.101/zabbix/setup.php

Nagios

### ZABBIX

Welcome

- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

#### Pre-installation summary

Please check configuration parameters. If all is correct, press "Next step" button, or "Back" button to change configuration parameters.

Database type	MySQL
Database server	localhost
Database port	default
Database name	ZABBIXDB
Database user	zabbix
Database password	*****
Zabbix server	localhost
Zabbix server port	10051
Zabbix server name	Zabbix monitoring

Back Next step

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# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(6/9)

- 설치 완료

192.168.248.101/zabbix/setup.php

Nagios

### ZABBIX Install

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

**Congratulations! You have successfully installed Zabbix frontend.**

Configuration file "/etc/zabbix/web/zabbix.conf.php" created.

Back Finish

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# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(7/9)

- 설치 후 처음 웹 관리자 로그인 ( 기본 설정 값 ID : admin / Pass : zabbix )

192.168.248.101/zabbix/index.php

**ZABBIX**

Username  
admin

Password  
.....

Remember me for 30 days

Sign in

or sign in as guest

[Help](#) • [Support](#)



# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(8/9)

- 웹 관리자 한글 언어 설정
  - > Zabbix 3.0 부터 정식으로 한글 언어 지원한다.
  - Password : 암호 변경하는 것을 권고한다.
  - Language : 한국어

192.168.248.101/zabbix/profile.php

ZABBIX Monitoring Inventory Reports Configuration Administration

Zabbix monitoring

### User profile: Zabbix Administrator

User Media Messaging

Password

Language  ▼

Theme  ▼

Auto-login

Auto-logout (min 90 seconds)

Refresh (in seconds)

Rows per page

URL (after login)

# 4. 설치 및 실행

ZABBIX



## 4.11 Connect Zabbix Web Page(9/9)

- 한글이 적용된 관리자 페이지

대시보드

즐거찾기의 그래프  
그래프가 추가되어 있지 않습니다.  
[그래프](#)

즐거찾기의 스크린  
스크린이 추가되어 있지 않습니다.  
[스크린 슬라이드쇼](#)

즐거찾기의 맵  
맵이 추가되어 있지 않습니다.  
[맵](#)

**ZABBIX 서버 상태**

파라미터	값	자세히
Zabbix 서버 가동 중	예	localhost:10051
호스트수 (활성/비활성/템플릿)	39	0 / 1 / 38
아이템수 (활성/비활성/습득불가)	0	0 / 0 / 0
트리거 수 (활성/비활성 [장애/정상])	0	0 / 0 [0 / 0]
유저 수 (온라인)	2	1
1초간의 감시할록수 (Zabbix서버의 요구 퍼포먼스)	0	

갱신시간: 14:13:22

**시스템상태**

호스트 그룹	심각한 장애	중증 장애	가벼운 장애	경고	정보	미분류
데이터를 찾을 수 없음.						

갱신시간: 14:13:22

**호스트 상태**

호스트 그룹	장애 없음	장애 있음	합계
데이터를 찾을 수 없음.			

갱신시간: 14:13:22



# 5. 기능소개

ZABBIX



## 세부 목차

5.1 Zabbix Monitoring Dashboard

5.2 Zabbix Bar Reports

5.3 Zabbix Administration Audit



# 5. 기능소개

ZABBIX



## 5.1 Zabbix Monitoring Dashboard

- Zabbix Monitoring Dashboard

→ 각종 모니터링 되고 있는 정보와 graph, screen 등을 한 화면에서 볼 수 있는 기능을 제공한다

**ZABBIX**

Monitoring | Inventory | Reports | Configuration | Administration

Dashboard | Overview | Web | Latest data | Triggers | Events | Graphs | Screens | Maps | Discovery | IT services

History: Dashboard » Status of Zabbix » Availability report » Most busy triggers top 100 » Bar reports

PERSONAL DASHBOARD

Favourite graphs: Zabbix server:CPU Loads, Zabbix server:Disk usage

Favourite screens: Zabbix server

Favourite maps: ...

### Status of Zabbix

Parameter	Value	Details
Zabbix server is running	Yes	10.65.50.30:10051
Number of hosts (monitored/not monitored/templates)	44	2 / 0 / 42
Number of items (monitored/disabled/not supported)	102	94 / 0 / 8
Number of triggers (enabled/disabled)[problem/unknown/ok]	42	42 / 0 [8 / 0 / 34]
Number of users (online)	2	1
Required server performance, new values per second	3.29	-

Updated: 09:53:29

### System status

Host group	Disaster	High	Average	Warning	Information	Not classified
Zabbix servers	0	1	7	0	0	0

Updated: 09:53:29

### Host status

Host group	Without problems	With problems	Total
Zabbix servers	1	1	2

Updated: 09:53:29

### Last 20 issues

Host	Issue	Last change	Age	Ack	Actions
Zabbix server	POP3 server is down on Zabbix server	05 Sep 2017 17:09:30	16h 43m 59s	No	-
Zabbix server	News (NNTP) server is down on Zabbix server	05 Sep 2017 17:09:29	16h 44m	No	-
Zabbix server	IMAP server is down on Zabbix server	05 Sep 2017 17:09:28	16h 44m 1s	No	-
Zabbix server	FTP server is down on Zabbix server	05 Sep 2017 17:09:26	16h 44m 3s	No	-
Zabbix server	Too many processes on Zabbix server	05 Sep 2017 17:08:41	16h 44m 48s	No	-
Zabbix server	Zabbix_server is not running on Zabbix server	05 Sep 2017 17:08:40	16h 44m 49s	No	-
Zabbix server	Syslogd is not running on Zabbix server	05 Sep 2017 17:08:38	16h 44m 51s	No	-
Zabbix server	Inetd is not running on Zabbix server	05 Sep 2017 17:08:35	16h 44m 54s	No	-

Updated: 09:53:29

### Web monitoring

Host group	Ok	Failed	In progress	Unknown
...				

Updated: 09:53:29





# 5. 기능소개

ZABBIX



## 5.2 Zabbix Bar Reports

- Zabbix Bar Reports

→ 사용자가 모니터링을 원하는 Item을 모아서 저장한 후 일괄 Report 기능을 제공한다.

**ZABBIX**

Monitoring | Inventory | **Reports** | Configuration | Administration

Status of Zabbix | Availability report | Most busy triggers top 100 | **Bar reports**

History: Dashboard » Status of Zabbix » Availability report » Most busy triggers top 100 » Bar reports

Bar reports

**REPORT**

Filter

Title: Report 1

X Label: day

Y Label: memory free

Legend:

Scale: Weekly

Period: From 05 / 09 / 2017 09 : 44 To 06 / 09 / 2017 09 : 44

Item	Label	Scale	Color	
<input type="checkbox"/> Free memory	Zabbix server: Free memory	avg	Left	Green
<input type="checkbox"/> Free swap space	Zabbix server: Free swap space	avg	Left	Blue
<input type="checkbox"/> Buffers memory	Zabbix server: Buffers memory	avg	Left	Cyan
<input type="checkbox"/> Cached memory	Zabbix server: Cached memory	avg	Left	Red

Add | Delete selected

Show | Reset

**Report 1 (7d)**

memory free

29.19 GB

26.27 GB

23.35 GB

20.43 GB

17.51 GB

14.59 GB

11.68 GB

8.76 GB

5.84 GB

2.92 GB

0.0

day

Generated in 0.01 sec



# 5. 기능소개

ZABBIX



## 5.3 Zabbix Administration Audit

- Zabbix Administration Audit

→ 사용자 로그인, 로그아웃, 호스트 서버의 변경내역 등을 추적 할 수 있는 기능을 제공한다.

The screenshot shows the Zabbix Administration Audit page. At the top, there's a navigation bar with 'Monitoring', 'Inventory', 'Reports', 'Configuration', and 'Administration'. The 'Administration' section is active, with sub-menus like 'General', 'DM', 'Authentication', 'Users', 'Media types', 'Scripts', 'Audit', 'Queue', 'Notifications', 'Locales', and 'Installation'. A search bar is on the right. Below the navigation, there's a 'History' breadcrumb and an 'AUDIT LOGS' section with a 'Logs' dropdown. The main content area shows 'LOGS' with 'Displaying 1 to 14 of 14 found'. There are filter options for 'User', 'Action', and 'Resource'. A zoom control is at the bottom left, and a time range selector is at the bottom right. The main part of the page is a table of audit logs.

Time	User	IP	Resource	Action	ID	Description	Details
06 Sep 2017 09:42:21	Admin	10.64.20.49	User	Login	0		Correct login [admin]
06 Sep 2017 09:42:15	guest	10.64.20.49	User	Logout	0		Manual Logout
06 Sep 2017 09:14:33	guest	10.64.23.18	User	Logout	0		Manual Logout
06 Sep 2017 09:07:16	Admin	10.64.20.49	User	Login	0		Correct login [admin]
06 Sep 2017 09:07:03	guest	10.64.20.49	User	Logout	0		Manual Logout
05 Sep 2017 17:34:57	Admin	10.64.23.18	User	Login	0		Correct login [admin]
05 Sep 2017 17:34:55	guest	10.64.23.18	User	Logout	0		Manual Logout
05 Sep 2017 16:56:00	Admin	10.64.20.49	Host	Updated	10017	Zabbix server	hosts.port: 10051 => 10050
05 Sep 2017 16:55:55	Admin	10.64.20.49	Host	Updated	10047	test server	hosts.port: 10051 => 10050
05 Sep 2017 16:46:11	Admin	10.64.23.18	User	Login	0		Correct login [admin]
05 Sep 2017 16:40:41	Admin	10.64.20.49	Host	Updated	10047	test server	hosts.port: 10050 => 10051
05 Sep 2017 16:40:36	Admin	10.64.20.49	Host	Updated	10017	Zabbix server	hosts.port: 10050 => 10051
05 Sep 2017 16:26:09	Admin	10.64.20.49	Host	Added	10047	test server	
05 Sep 2017 16:24:31	Admin	10.64.20.49	Host	Updated	10017	Zabbix server	hosts.status: 1 => 0

# 6. 활용예제

ZABBIX



## 세부 목차

- 6.1 예제 소개
- 6.2 Zabbix Monitoring Screens
- 6.3 Zabbix Monitoring Events
- 6.4 Zabbix Monitoring Triggers
- 6.5 Zabbix Reports Status
- 6.6 Zabbix Monitoring Latest data



# 6. 활용예제

ZABBIX



## 6.1 예제 소개

- 본 예제는 Zabbix를 사용하여 웹 화면에서 간단한 모니터링을 보여주는 것을 목표로 한다.



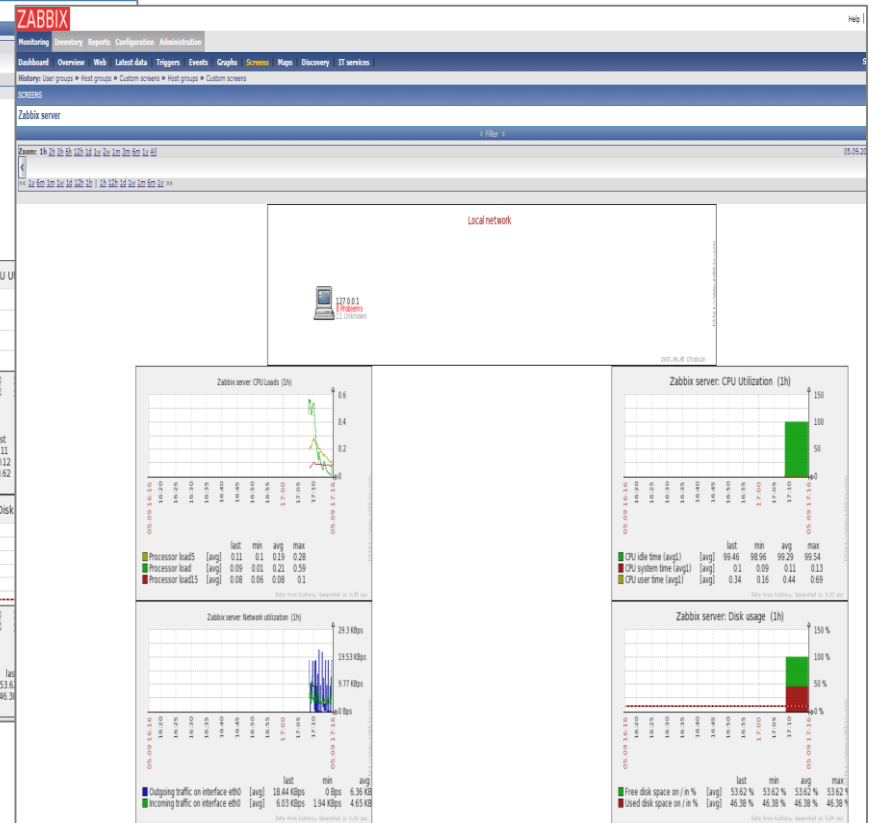
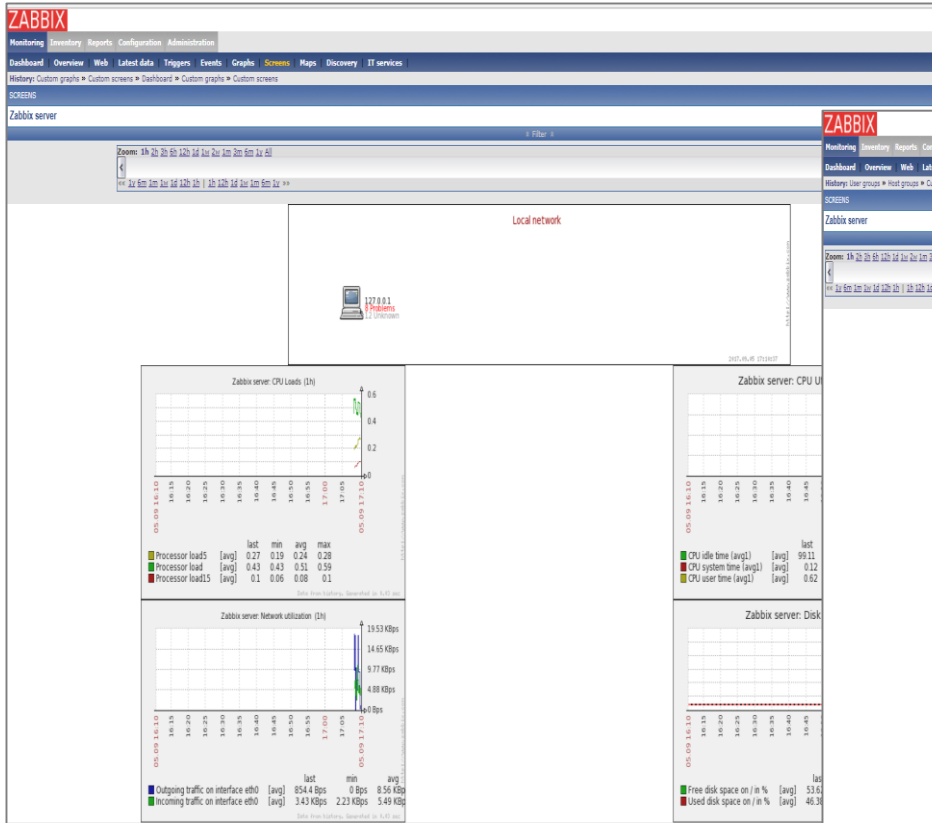
# 6. 활용예제

# ZABBIX



## 6.2 Zabbix Monitoring Screens

- 모니터링 현황을 그래프 형태로 볼 수 있는 화면을 제공한다.



# 6. 활용예제

ZABBIX



## 6.3 Zabbix Monitoring Events

- 모니터링 중인 호스트의 Event(알람)를 누적하여 확인 가능하다.

Displaying 1 to 32 of 32 found

Time	Host	Description	Status	Severity	Duration	Ack
05 Sep 2017 17:09:32	Zabbix server	Email (SMTP) server is down on Zabbix server	OK	Average	2m 30s	No
05 Sep 2017 17:09:30	Zabbix server	POP3 server is down on Zabbix server	PROBLEM	Average	2m 32s	No
05 Sep 2017 17:09:29	Zabbix server	News (NNTP) server is down on Zabbix server	PROBLEM	Average	2m 33s	No
05 Sep 2017 17:09:28	Zabbix server	IMAP server is down on Zabbix server	PROBLEM	Average	2m 34s	No
05 Sep 2017 17:09:27	Zabbix server	WEB (HTTP) server is down on Zabbix server	OK	Average	2m 35s	No
05 Sep 2017 17:09:26	Zabbix server	FTP server is down on Zabbix server	PROBLEM	Average	2m 36s	No
05 Sep 2017 17:09:02	Zabbix server	Too many users connected on server Zabbix server	OK	Average	3m	No
05 Sep 2017 17:09:00	Zabbix server	Low free disk space on Zabbix server volume /home	OK	High	3m 2s	No
05 Sep 2017 17:08:57	Zabbix server	Lack of free swap space on Zabbix server	OK	High	3m 5s	No
05 Sep 2017 17:08:55	Zabbix server	Low free disk space on Zabbix server volume /	OK	High	3m 7s	No
05 Sep 2017 17:08:54	Zabbix server	Lack of free memory on server Zabbix server	OK	Average	3m 8s	No
05 Sep 2017 17:08:52	Zabbix server	Low number of free inodes on Zabbix server volume /usr	OK	High	3m 10s	No
05 Sep 2017 17:08:49	Zabbix server	Low free disk space on Zabbix server volume /var	OK	High	3m 13s	No
05 Sep 2017 17:08:49	Zabbix server	Low number of free inodes on Zabbix server volume /tmp	OK	High	3m 13s	No
05 Sep 2017 17:08:46	Zabbix server	Low number of free inodes on Zabbix server volume /opt	OK	High	3m 16s	No
05 Sep 2017 17:08:44	Zabbix server	Low free disk space on Zabbix server volume /usr	OK	High	3m 18s	No
05 Sep 2017 17:08:43	Zabbix server	Low number of free inodes on Zabbix server volume /home	OK	High	3m 19s	No
05 Sep 2017 17:08:41	Zabbix server	Too many processes on Zabbix server	PROBLEM	High	3m 21s	No
05 Sep 2017 17:08:40	Zabbix server	Low number of free inodes on Zabbix server volume /	OK	High	3m 22s	No
05 Sep 2017 17:08:40	Zabbix server	Zabbix_server is not running on Zabbix server	PROBLEM	Average	3m 22s	No

# 6. 활용예제

ZABBIX



## 6.4 Zabbix Monitoring Triggers

- 모니터링을 원하는 Triggers 추가 및 변경 가능하다.

**ZABBIX**

Monitoring | Inventory | Reports | Configuration | Administration

Dashboard | Overview | Web | Latest data | **Triggers** | Events | Graphs | Screens | Maps | Discovery | IT services

History: Host groups » Custom screens » Overview » Status of Web monitoring » Latest data

STATUS OF TRIGGERS [05 Sep 2017 17:17:16]

TRIGGERS

Displaying 1 to 33 of 33 found

<input type="checkbox"/>	Severity	Status	Last change	Age	Acknowledged	Host	Name
<input type="checkbox"/>	Information	OK	05 Sep 2017 17:13:01	4m 15s	Acknowledged	Zabbix server	Zabbix server has just been restarted
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:09:32	7m 44s	Acknowledged	Zabbix server	Email (SMTP) server is down on Zabbix server
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:09:30	7m 46s	Acknowledged (1)	Zabbix server	POP3 server is down on Zabbix server
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:09:29	7m 47s	Acknowledged (1)	Zabbix server	News (NNTP) server is down on Zabbix server
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:09:28	7m 48s	Acknowledged (1)	Zabbix server	IMAP server is down on Zabbix server
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:09:27	7m 49s	Acknowledged	Zabbix server	WEB (HTTP) server is down on Zabbix server
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:09:26	7m 50s	Acknowledged (1)	Zabbix server	FTP server is down on Zabbix server
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:09:02	8m 14s	Acknowledged	Zabbix server	Too many users connected on server Zabbix server
<input type="checkbox"/>	High	OK	05 Sep 2017 17:09:00	8m 16s	Acknowledged	Zabbix server	Low free disk space on Zabbix server volume /home
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:57	8m 19s	Acknowledged	Zabbix server	Lack of free swap space on Zabbix server
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:55	8m 21s	Acknowledged	Zabbix server	Low free disk space on Zabbix server volume /
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:08:54	8m 22s	Acknowledged	Zabbix server	Lack of free memory on server Zabbix server
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:52	8m 24s	Acknowledged	Zabbix server	Low number of free inodes on Zabbix server volume /usr
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:49	8m 27s	Acknowledged	Zabbix server	Low free disk space on Zabbix server volume /var
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:49	8m 27s	Acknowledged	Zabbix server	Low number of free inodes on Zabbix server volume /tmp
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:46	8m 30s	Acknowledged	Zabbix server	Low number of free inodes on Zabbix server volume /opt
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:44	8m 32s	Acknowledged	Zabbix server	Low free disk space on Zabbix server volume /usr
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:43	8m 33s	Acknowledged	Zabbix server	Low number of free inodes on Zabbix server volume /home
<input type="checkbox"/>	High	PROBLEM	05 Sep 2017 17:08:41	8m 35s	Acknowledged (1)	Zabbix server	Too many processes on Zabbix server
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:08:40	8m 36s	Acknowledged (1)	Zabbix server	Zabbix server is not running on Zabbix server
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:40	8m 36s	Acknowledged	Zabbix server	Low number of free inodes on Zabbix server volume /
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:08:39	8m 37s	Acknowledged	Zabbix server	Zabbix_agentd is not running on Zabbix server
<input type="checkbox"/>	High	OK	05 Sep 2017 17:08:39	8m 37s	Acknowledged	Zabbix server	Low free disk space on Zabbix server volume /tmp
<input type="checkbox"/>	Average	PROBLEM	05 Sep 2017 17:08:38	8m 38s	Acknowledged (1)	Zabbix server	Syslogd is not running on Zabbix server
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:08:37	8m 39s	Acknowledged	Zabbix server	Sshd is not running on Zabbix server
<input type="checkbox"/>	Average	OK	05 Sep 2017 17:08:36	8m 40s	Acknowledged	Zabbix server	Mysql is not running on Zabbix server



# 6. 활용예제

ZABBIX



## 6.5 Zabbix Reports Status

- 호스트의 모니터링 되고 있는 Item, trigger, 상태 정보 등을 확인 할 수 있다.

**ZABBIX**

Monitoring | Inventory | **Reports** | Configuration | Administration

Status of Zabbix | Availability report | Most busy triggers top 100 | Bar reports |

History: Status of discovery » Network maps » Custom screens » Custom graphs » Host profiles

STATUS OF ZABBIX

REPORT

Parameter	Value	Details
Zabbix server is running	Yes	10.65.50.30:10051
Number of hosts (monitored/not monitored/templates)	44	2 / 0 / 42
Number of items (monitored/disabled/not supported)	102	96 / 0 / 6
Number of triggers (enabled/disabled)[problem/unknown/ok]	44	44 / 0 [8 / 11 / 25]
Number of users (online)	2	1
Required server performance, new values per second	3.29	-

Updated: 17:17:40





# 6. 활용예제

ZABBIX



## 6.6 Zabbix Latest Data

- 항목별로 수집된 최신 데이터를 보거나 항목에 대한 다양한 그래프를 액세스 할 수 있다.

The screenshot shows the Zabbix web interface. The 'Latest data' menu item is highlighted with a red box. Below it, a table lists various system components grouped by host. The table has columns for Host, Description, Last check, Last value, Change, and History.

Host	Description	Last check	Last value	Change	History
Zabbix server	Availability (43 Items)				
Zabbix server	CPU (8 Items)				
Zabbix server	Filesystem (37 Items)				
Zabbix server	General (5 Items)				
Zabbix server	Memory (5 Items)				
Zabbix server	Network (4 Items)				
Zabbix server	OS (5 Items)				
Zabbix server	Performance (12 Items)				
Zabbix server	Processes (9 Items)				
Zabbix server	Services (7 Items)				



**Q 온도, 팬, 전력 등과 같은 하드웨어 특성을 모니터링 할 수 있나요?**

&

**A** Zabbix는 HP, Sun, Dell과 같은 대부분의 컴퓨터 서버 공급 업체에서 지원하는 IPMI를 지원합니다.

서버의 BIOS에서 일반적으로 Lights Out Management 카드에 IPMI 관리를 설정한 다음 IPMI(Intelligent Platform Management Interface) tools로 테스트 해야합니다.

Zabbix의 IPMI 구성은 Configuration->Hosts 아래에 있으며 서버 LOM의 IP 주소와 서버에 설정한 인증/권한 부여 정보가 필요합니다.





**Q** Zabbix에서는 SSL 인증서를 어떻게 관리합니까?

&

**A** 웹 사이트 URL 또는 서비스와 동일한 호스트 이름으로 Zabbix에서 새 호스트 항목을 만듭니다. '기본 템플릿' 호스트 그룹에 대한 읽기 전용 액세스 권한을 요청해야 합니다.

해당 호스트 그룹 내에서 기존 'SSL 인증서 확인' 템플릿 중 하나를 복제하고 이름을 수정하여 적절한 호스트 그룹에 배치합니다. 이렇게 하면 14일전에 경고로, 1일전에 높은 우선 순위로 설정되는 2개의 트리거가 선택됩니다.





용어	설명
iptables	<ul style="list-style-type: none"><li>• iptables는 시스템 관리자가 리눅스 커널 방화벽이 제공하는 테이블들과 그것을 저장하는 체인, 규칙들을 구성할 수 있게 해주는 사용자 공간 응용 프로그램이다.</li><li>• 각기 다른 커널 모듈과 프로그램들은 현재 다른 프로토콜을 위해 사용되는데, iptables는 IPv4에, ip6tables는 IPv6에, arptables는 ARP에, ebtables는 이더넷 프레임에 적용된다.</li><li>• iptables는 동작을 위해 상승된 권한을 요구하며 사용자 루트가 실행하여야 하는데, 그렇지 않으면 작동하지 않는다.</li><li>• 리눅스 시스템에서 iptables는 /usr/sbin/iptables에 설치된다.</li></ul>
httpd	<ul style="list-style-type: none"><li>• HTTP 데몬은 웹 서버의 백그라운드에서 실행되고 들어오는 서버 요청을 기다리는 소프트웨어 프로그램이다.</li><li>• 데몬은 요청에 자동으로 응답하고 HTTP를 사용하여 인터넷을 통해 하이퍼 텍스트 및 멀티 미디어 문서를 제공한다.</li></ul>



# Open Source Software Installation & Application Guide

**nipa** 공개SW역량프라자



이 저작물은 크리에이티브 커먼즈 [저작자표시-비영리-동일조건 변경허락 2.0 대한민국 라이선스]에 따라 이용하실 수 있습니다.