

- 1) Install Ubuntu X64 Server
 - a) SSH Server
 - b) LAMP Server
- 2) apt-get update && apt-get upgrade
- 3) Configure the MySQL Instance
 - a) Enable innodb_file_per_table
 - i) nano /etc/mysql/my.cnf
 - ii) under [mysqld] add: innodb_file_per_table (we need this to make 1 file per table instead of 1 file per db)
 - b) MySQL Tweaking
 - i) under [mysqld] add:
 - 1) innodb_buffer_pool_size = 4G (set this to 50-75% of your system ram. 50% if running zabbix-server here, 75% if it's just the database)
 - 2) innodb_buffer_pool_instances = 4 (change to 8 or 16 on MySQL 5.6)
 - 3) innodb_flush_log_at_trx_commit = 0
 - 4) innodb_flush_method = O_DIRECT
 - 5) innodb_old_blocks_time = 1000
 - 6) innodb_io_capacity = 600 (400-800 for standard drives, change to >= 2000 for SSD)
 - 7) sync_binlog = 0
 - 8) query_cache_size=0
 - 9) query_cache_type=0
 - 10) event_scheduler=ENABLED
 - ii) Run MySQL Tuner
 - 1) wget https://raw.githubusercontent.com/major/MySQLTuner-perl/master/mysqltuner.pl
 - 2) chmod +x mysqltuner.pl
 - 3) ./mysqltuner.pl
 - a) ignore query_cache_type (we set it to 0)
 - b) Ignore InnoDB is enabled but isn't being used (we don't have any tables yet, duh)
 - c) Ignore -FEDERATED (this is deprecated in MySQL >5.5)
 - d) Ignore Key buffer hit rate (just started server)
- 4) Get and install Zabbix Server
 - a) wget http://repo.zabbix.com/zabbix/2.4/ubuntu/pool/main/z/zabbix-release/zabbix-release_2.4-1+trusty_all.deb
 - b) sudo dpkg -i zabbix-release_2.4-1+trusty_all.deb
 - c) sudo apt-get update
 - d) sudo apt-get install zabbix-server-mysql zabbix-frontend-php zabbix-agent
- 5) Web Installation via http://ip/zabbix
 - a) sudo nano /etc/php5/apache2/php.ini
 - i) uncomment ;date.timezone =
 - ii) set date.timezone appropriately ("America/New_York")
 - iii) sudo service apache2 restart
 - b) Test login with admin/zabbix
- 6) Setup partitioning of the SQL Instance
 - a) Guide here: http://zabbix.org/wiki/Docs/howto/mysql_partitioning
 - b) mysql -u root -p
 - c) use zabbix;
 - d) ALTER TABLE housekeeper ENGINE = BLACKHOLE;
 - e) "Getting ready" section


```
ALTER TABLE `acknowledges` DROP PRIMARY KEY, ADD KEY `acknowledges_0`
(`acknowledgeid`);
ALTER TABLE `alerts` DROP PRIMARY KEY, ADD KEY `alerts_0` (`alertid`);
ALTER TABLE `auditlog` DROP PRIMARY KEY, ADD KEY `auditlog_0` (`auditid`);
ALTER TABLE `events` DROP PRIMARY KEY, ADD KEY `events_0` (`eventid`);
ALTER TABLE `service_alarms` DROP PRIMARY KEY, ADD KEY `service_alarms_0`
(`servicealarmid`);
ALTER TABLE `history_log` DROP PRIMARY KEY, ADD INDEX `history_log_0` (`id`);
ALTER TABLE `history_log` DROP KEY `history_log_2`;
ALTER TABLE `history_text` DROP PRIMARY KEY, ADD INDEX `history_text_0` (`id`);
ALTER TABLE `history_text` DROP KEY `history_text_2`;
ALTER TABLE `acknowledges` DROP FOREIGN KEY `c_acknowledges_1`, DROP FOREIGN KEY
`c_acknowledges_2`;
```

```

ALTER TABLE `alerts` DROP FOREIGN KEY `c_alerts_1`, DROP FOREIGN KEY
`c_alerts_2`, DROP FOREIGN KEY `c_alerts_3`, DROP FOREIGN KEY `c_alerts_4`;
ALTER TABLE `auditlog` DROP FOREIGN KEY `c_auditlog_1`;
ALTER TABLE `service_alarms` DROP FOREIGN KEY `c_service_alarms_1`;
ALTER TABLE `auditlog_details` DROP FOREIGN KEY `c_auditlog_details_1`;

```

f) Create the managing partition table

```

CREATE TABLE `manage_partitions` (
`tablename` VARCHAR(64) NOT NULL COMMENT 'Table name',
`period` VARCHAR(64) NOT NULL COMMENT 'Period - daily or monthly',
`keep_history` INT(3) UNSIGNED NOT NULL DEFAULT '1' COMMENT 'For how many days or months to
keep the partitions',
`last_updated` DATETIME DEFAULT NULL COMMENT 'When a partition was added last time',
`comments` VARCHAR(128) DEFAULT '1' COMMENT 'Comments',
PRIMARY KEY (`tablename`)
) ENGINE=INNODB;

```

g) Guide here: http://zabbix.org/wiki/Docs/howto/mysql_partition

Copy the 5 procedures from there into mysql console

h) Create the new timing event

```

DELIMITER $$
CREATE EVENT IF NOT EXISTS `zabbix-maint`
ON SCHEDULE EVERY 7 DAY
STARTS '2015-04-29 01:00:00'
ON COMPLETION PRESERVE
ENABLE
COMMENT 'Creating and dropping partitions'
DO BEGIN
    CALL partition_maintenance_all('zabbix');
END$$
DELIMITER ;

```

This will run the partition maintenance procedure on all tables in Zabbix every 7 days (creating 14 days of future partitions as well)

7) Tweak the Zabbix Instance

a) Disable Housekeeping in Config -> General -> Housekeeping.

b) Install snmp utilities

i) `sudo apt-get install snmp snmp-mibs-downloader`

b) `sudo nano /etc/zabbix/zabbix_server.conf`

i) Fix number of pingers: option `StartPingers = 20` (150 hosts, 20 should be sufficient; yields % busy)

ii) Fix number of db syncers: option `StartDBSyncers = 4` (ignus recommendation)

iii) Enable SNMP checks: `StartSNMPTrapper = 1`

iv) Increase CacheSizes

```

CacheSize = 1G
HistoryCacheSize = 256M
TrendCacheSize = 256M
HistoryTextCacheSize = 128M
ValueCacheSize = 256M

```

v) Prepare server for maximum cache size increase

```

sudo nano /etc/sysctl.conf
kernel.shmmax = 1342177280 (1G?)

```

vi) Number of processes fix

Just increase threshold (450)

vii) Enable LDAP

```

sudo apt-get install php5-ldap
sudo service apache2 restart

```

8) Get Zabbix to talk to Cachet

a) Create a file `notifyZabbix` in `/usr/lib/zabbix/alertscripts`

```
#!/bin/bash
```

```

to=$1
compID=$2
statusID=$3

```

```
# Comment this next line out for Production
```

```
#echo "curl -H 'Content-Type: application/json' -H 'X-Cachet-Token:
```

```
0sQcln4x7uQ71VjfaYjT' http://10.200.2.16/api/components/$compID -d '{"status":$statusID}' -X  
PUT"
```

```
# Uncomment this next line for Production
```

```
curl -H 'Content-Type: application/json' -H 'X-Cachet-Token:
```

```
0sQcln4x7uQ71VjfaYjT' http://10.200.2.16/api/components/"$compID" -d "'status':$statusID}" -  
X PUT
```

```
b) Admin -> Media Types -> Create Media Type
```

```
Set Name to whatever
```

```
Type is Script
```

```
Script Name is filename from 8a.
```

```
c) Config -> Actions -> Create Action
```

```
Action Settings
```

```
Default/Recovery Subject: {$CACHET}
```

```
Default Message: 4 (Major Outage)
```

```
Recovery Message: 1 (Operational)
```

```
Conditions
```

```
Add Trigger Severity >= Average
```

```
Operations
```

```
Add a User Group
```

```
Send Only to Zabbix_Notify
```

```
d) In all Hosts for Cachet, you MUST set a macro {$CACHET} = <thecachetidnumber>
```