

# PingER Meta Database

## Database Schema

The revised schema of the meta database [[nodedetails-schema.sql](#)] is as follows:

```
#DROP DATABASE IF EXISTS `IEPM`;
#CREATE DATABASE `IEPM`;

DROP TABLE IF EXISTS `USERS`;
CREATE TABLE `USERS`
(
  `username`    varchar(10) NOT NULL,
  `password`    VARCHAR(32) NOT NULL,
  `email`       VARCHAR(50) NOT NULL,
  PRIMARY KEY (`username`)
);

INSERT INTO `USERS` VALUES ('kalim', md5('password'), 'kalim@slac.stanford.edu');
INSERT INTO `USERS` VALUES ('cottrell', md5('password'), 'cottrell@slac.stanford.edu');
INSERT INTO `USERS` VALUES ('fahad', md5('password'), 'fahad@slac.stanford.edu');

DROP TABLE IF EXISTS `COUNTRY`;
CREATE TABLE `COUNTRY`
(
  `COUNTRY_ID`  SMALLINT NOT NULL,
  `COUNTRY`     VARCHAR(80) NOT NULL,
  `CONTINENT`   VARCHAR(20) NOT NULL,
  `TLD`         VARCHAR(10) NOT NULL,
  `REMARK`      VARCHAR(256),
  UNIQUE (`COUNTRY`),
  PRIMARY KEY (`COUNTRY_ID`)
);

#DROP INDEX `IDX_COUNTRY` on `COUNTRY`;
CREATE INDEX `IDX_COUNTRY` on `COUNTRY` (`COUNTRY`);

DROP TABLE IF EXISTS `NODEDETAILS`;
CREATE TABLE `NODEDETAILS`
(
  `NODENAME`    VARCHAR(100) NOT NULL,
  `IPADDRESS`   VARCHAR(15) NOT NULL,
  `SITENAME`    VARCHAR(100) NOT NULL,
  `NICKNAME`    VARCHAR(35) NOT NULL,
  `FULLNAME`    VARCHAR(100) NOT NULL,
  `LOCATION`     VARCHAR(100) NOT NULL,
  `COUNTRY_ID`  SMALLINT NOT NULL,
  `LAT`         FLOAT NOT NULL,
  `LONG`        FLOAT NOT NULL,
  `PROJECTTYPE` VARCHAR(10) NOT NULL,
  `PINGSERVER`  VARCHAR(100) NOT NULL,
  `TRACESERVER` VARCHAR(100) NOT NULL,
  `DATASERVER`  VARCHAR(100) NOT NULL,
  `URL`         VARCHAR(100),
  `GMT`         VARCHAR(10),
  `COMMENTS`    VARCHAR(4000),
  `APP_USER`    VARCHAR(20),
  `CONTACTS`    VARCHAR(150),
  `PING_SIZE`   SMALLINT,
  # PRIMARY KEY (`NODENAME`),
  FOREIGN KEY (`COUNTRY_ID`) REFERENCES COUNTRY(COUNTRY_ID)
);

#DROP INDEX `IDX_NODEDETAILS` on `NODEDETAILS`;
CREATE INDEX `IDX_NODEDETAILS` on `NODEDETAILS` (`NODENAME`);

DROP TABLE IF EXISTS `GROUPS`;
CREATE TABLE `GROUPS`
```

```
(
  `nodenm`      VARCHAR(100) NOT NULL,
  `groupname`   VARCHAR(100) NOT NULL
);

DROP TABLE IF EXISTS `PINGEDFROM`;
CREATE TABLE `PINGEDFROM`
(
  `nodenm`      VARCHAR(100) NOT NULL,
  `sitename`    VARCHAR(100) NOT NULL
);
```

## Scripts - Transforming raw data to SQL commands

The data loaded into the database was obtained from the following files:

- Country List [[csv](#)] (July 2009)
- PingER NODEDETAILS [[csv](#)] (March 2009)

I wrote two scripts (listed below) to generate SQL commands from this raw data. The resulting SQL commands were then coalesced into a single sql file [[nodedetails-schema.sql](#)] which was used to setup the server at NUST. The GROUPS and PINGEDFROM tables are populated separately [[groups.sql](#)].

- generate-sql-from-country-data [[.pl](#)]
- generate-sql-from-pinger-nodedetails-data [[.pl](#)]

A copy of all the code is available at:

```
/afs/slac/package/pinger/pinger-archive/src/schema-meta-database/schema.tar.gz
```

## Downsites

The schema of the database is as follows:

```
#DROP DATABASE IF EXISTS `downsites`;
#CREATE DATABASE `downsites`;

DROP TABLE IF EXISTS `downsites`;
CREATE TABLE `downsites`
(
  `down_timestamp`      INT(10) UNSIGNED DEFAULT 0,
  `up_timestamp`        INT(10) UNSIGNED DEFAULT 0,
  `monitoring_site`     VARCHAR(50),
  `remote_site`         VARCHAR(50),
  `site_status`         VARCHAR(50),
  `downdays`          INT(10) UNSIGNED DEFAULT 0,
  `monitoring_country`  VARCHAR(50),
  `remote_country`      VARCHAR(50),
  `monitoring_region`   VARCHAR(50),
  `remote_region`       VARCHAR(50),
  `remote_node`         VARCHAR(50),
  `beacon_status`       VARCHAR(50),
  PRIMARY KEY (`down_timestamp`, `monitoring_site`, `remote_site`, `downdays`)
);

DROP TABLE IF EXISTS `beacons`;
CREATE TABLE `beacons`
(
  `site`                VARCHAR(50),
  `beacon_status`       VARCHAR(50),
  PRIMARY KEY (`site`, `beacon_status`)
);
```

```
mysql> desc dbminrtt;
```

Field	Type	Null	Key	Default	Extra
MonitoringSite	varchar(50)		PRI		
RemoteSite	varchar(50)		PRI		
minrtt	float unsigned			0	
regminrtt	float unsigned			0	
sdrtt	float unsigned			0	
anomalydate	varchar(50)		PRI		
MonitoringCountry	varchar(50)				
RemoteCountry	varchar(50)				
MonitoringRegion	varchar(50)				
RemoteRegion	varchar(50)				

```
10 rows in set (0.00 sec)
```

```
mysql> desc downsites_new;
```

Field	Type	Null	Key	Default	Extra
down_timestamp	int(10)		PRI	0	
up_timestamp	int(10)			0	
monitoring_site	varchar(50)		PRI		
remote_site	varchar(50)		PRI		
site_status	varchar(50)				
downdays	int(10)		PRI	0	
monitoring_country	varchar(50)				
remote_country	varchar(50)				
monitoring_region	varchar(50)				
remote_region	varchar(50)				
remote_node	varchar(50)				
beacon_status	varchar(50)				
remote_node_type	varchar(5)	YES		NULL	

```
13 rows in set (0.00 sec)
```