

PingER NODEDETAILS

The Guthrie NODEDETAILS table contains a list of all the nodes involved in PingER analysis done from SLAC. It is stored in the SLACPROD Oracle instance IEPM.NODEDETAILS under the IEPM user/schema.

To access the database the URL is <https://oraweb.slac.stanford.edu/apex/slacprod/f?p=123:LOGIN:2700279091073::::>.

User Name
Password

Note: Enter your SLAC Windows userid and password.

After successfully logging in you will get a web page of the form:

NODEDETAILS

Search Display

	Nickname	Projecttype	Sitename	Ipaddress	Fullname
	BD.BDREN.NET.WEB	B	bdren.net.bd	103.28.121.12	Bangladesh Research and Edu
	VN.VNU.EDU	B	vnu.edu.vn	112.137.142.4	Vietnam National University, Hc

You search for information about the node/country/region etc. that you are interested by entering information into the Search box. E.g. entering gzhu gives:

NODEDETAILS

Search Display

	Nickname	Projecttype	Sitename	Ipaddress	Fullname
	CN.GZHU.EDU.PINGER	M	gzhu.edu.cn	202.192.18.52	Schoo
	CN.HEBEINU.EDU.WWW	NOT-SET	hebeinu.edu.cn	60.8.194.163	Hebei

CSV data

To edit an existing node click on the pen and paper image in the left hand column.

NODEDETAILS

Ipaddress
Nodename
Sitename
Nickname
Fullname
Location
Country/Continent
Lat/long
Projecttype
Pingserver
Traceserver
Dataserver
Url
Contacts
Ping Size
Comments

After editing click on Apply Changes. Do NOT use the Delete tab unless you know what you are doing. To Disable a node enter a D in the Projecttype box. If you are just testing or have messed up the editing just hit Cancel.

To create a new node tap on Create in the top level window:

NODEDETAILS

Search
 Display

	Nickname	Projecttype	Sitename	Ipaddress
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The Create window appears as:

NODEDETAILS

Ipaddress
 Nodename
 Sitename
 Nickname
 Fullname
 Location
 Country/Continent
 Latandlong
 Projecttype
 Pingserver
 Traceserver
 Dataserver
 Url
 Contacts
 Ping Size
 Comments

Column specifications

Name	Null?	Data Type	Use
NODENAME	NOT NULL	VARCHAR2(100)	DNS host name
IPADDRESS		VARCHAR2(15)	IPv4 address
SITENAME		VARCHAR2(100)	Domain name of the node
NICKNAME		VARCHAR2(35)	Abstraction of the hostname with the TLD first and the hostname last ¹
FULLNAME		VARCHAR2(100)	Human-friendly description of the node/site/Institute
LOCATION		VARCHAR2(100)	City and/or State/Province/Region for node ²
COUNTRY		VARCHAR2(100)	Country for node
CONTINENT		VARCHAR2(100)	Continent or region where node is thought to be located ³
LATANDLONG		VARCHAR2(25)	Latitude and longitude of node (as signed decimal values separated by a space)
PROJECTTYPE		VARCHAR2(10)	Flags describing how nodes are used ⁴
PINGSERVER		VARCHAR2(100)	URL for requesting a ping from this node to another ⁵
TRACESERVER		VARCHAR2(100)	URL for requesting a traceroute from this node to another ⁵
DATASERVER		VARCHAR2(100)	URL for retrieving PingER data from this node ⁵
URL		VARCHAR2(100)	URL for the home page for the institution running the node
GMT		VARCHAR2(10)	Node's time offset from GMT, not used
COMMENTS		VARCHAR2(4000)	Comments and notes on when and how the node's record was last updated ⁶

APP_USER		VARCHAR2(20)	Windows user name of the last user to edit the node's record through the UI. This is entered automatically.
CONTACTS		VARCHAR2(100)	Name and email address(es) of the node's maintainer(s)
PING_SIZE		NUMBER	Size of pings to be sent to the node - only controls SLAC's PingER install. Usually left blank.

¹ This field should be of the form: TLD.Rest of site domain.hostname. For non-US hosts not using their country code TLD, use the country code TLD at the start of the identifier and include the actual TLD in the site domain string. Examples:

- EDU.SLAC.STANFORD.PINGER - node at SLAC,stanford.edu, fully qualified hostname pinger.slac.stanford.edu
- CH.CERN.WANMONINST1 - second node at CERN, fully qualified hostname wanmoninst1.cern.ch
- AO.UCAN.EDU.N1 - first node at the Catholic University of Angola, fully qualified hostname www.ucan.edu
- For IPv6 host we insert IPV6 in front of the hostname:
 - pship02.csc.fi =>NICKNAME=> FI.CSC.IPV6.PSHIP02
- If it is a NET or ORG etc. add the TLD country code at the start:
 - ps-esu-lt.perfsonar.kanren.net =>NICKNAME=>US.NET.KANREN.PERFSONAR.IPV6.PS-ESU-LT

² Location information is either provided by the site or is based off a geographic IP database like GeolIPTool.

³ Some continents are broken up into sub-regions. A list of countries and continents can be seen at <http://www.slac.stanford.edu/comp/net/mon/countries.tsv>.

⁴ The various single character flags are described at: <http://www-iepm.slac.stanford.edu/pinger/slaonly/nodedetails-readme>.

⁵ Unless this is a monitoring node then enter NOT-SET. These URLs should point to the complete URL for the script at the site, including the trailing '?' used to start the list of parameters to the script. An example for a traceroute server is: <http://www.slac.stanford.edu/cgi-bin/traceroute.pl?> and for pingserver is <http://www.slac.stanford.edu/cgi-bin/traceroute.pl?function=ping>

If the script is not installed at the site or the service is not available (i.e. the site is not a PingER monitoring host), set the field to NOT-SET.

⁶ The usual format of the comments is: <Reason>, <action> by <username> <mm/dd/yy>. Followed by an end of line (carriage return etc.)

User interface

A user interface for the table was created in Oracle's HTML DB / Application Express and can be accessed at <https://oraweb.slac.stanford.edu/apex/slacprod/f?p=123:1>. Authorized users are authenticated by their SLAC Windows credentials.

The UI allows for the creation, search, modification, and deletion of nodes. As a rule, nodes should not be deleted from the database for referential integrity reasons -- even though there is only one table in the database, various processes use this table in concert with the flat files that contain the raw and analyzed PingER results.

How to access the UI for updating is described in [Updating NODEDETAILS with SQLPlus](#).

Updating the list of countries in the UI

Inside the UI, the country and continent (region) are set and restricted to a pop-up list of values. The pop-up list is based on a separate table called COUNTRY. New countries can be added to the list by creating new rows in the COUNTRY table with SQL INSERT statements. See [Updating NODEDETAILS with SQLPlus](#)

Example:

```
Arash 5/25/2023 (see Incident INC0407886) recommends:
cottrell@pinger ~]$
[cottrell@pinger ~]$ setenv ORACLE_HOME /afs/slac.stanford.edu/package/oracle/f/19.3.0
[cottrell@pinger ~]$ $ORACLE_HOME/bin/sqlplus iepm@slacprod
SQL*Plus: Release 19.0.0.0.0 - Production on Fri May 26 16:14:30 2023
Version 19.3.0.0.0
Copyright (c) 1982, 2019, Oracle. All rights reserved.
Enter password: #See escrow edit -c iepm iepmacct
Last Successful login time: Fri May 26 2023 15:30:55 -07:00
Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.17.0.0.0
SQL> insert into country (country_id, country, continent, tld)
  2 values (country_seq.nextval, 'Western Samoa', 'Oceania', 'ws'); #Don't forget semi-colon (; Good idea to
edit and save this document
1 row created.
SQL> commit;
Commit complete.
SQL> exit;
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.17.0.0.0
[cottrell@pinger ~]$
```

```
On the new host pinger-test use:
[cottrell@pinger-test ~]$ setenv ORACLE_HOME /afs/slac.stanford.edu/package/oracle/f/19.3.0
[cottrell@pinger-test ~]$ $ORACLE_HOME/bin/sqlplus iepm@slacprod
SQL*Plus: Release 19.0.0.0.0 - Production on Fri Jan 21 20:20:38 2022
Version 19.3.0.0.0
Copyright (c) 1982, 2019, Oracle. All rights reserved.
Enter password:
SQL> insert into country (country_id, country, continent, tld)
  2 values (country_seq.nextval, 'Bermuda', 'Latin America', 'bm');
1 row created.
SQL> commit;
Commit complete;
SQL> exit;
Disconnected from Oracle Database 10g Enterprise Edition Release 10.2.0.5.0 - 64bit Production
With the Partitioning and Real Application Testing options
52cottrell@pinger:~>
```

```
Or on the old host pinger use:
[cottrell@pinger ~]$ setenv ORACLE_HOME /usr/oracle
[cottrell@pinger ~]$ sqlplus iepm@slacprod
SQL*Plus: Release 11.1.0.6.0 - Production on Fri Jan 21 13:13:48 2022
Copyright (c) 1982, 2007, Oracle. All rights reserved.
Enter password:
[cottrell@pinger ~]$ echo $ORACLE_HOME
/usr/oracle
[cottrell@pinger ~]$ setenv ORACLE_HOME /usr/oracle
[cottrell@pinger ~]$ sqlplus iepm@slacprod
SQL*Plus: Release 11.1.0.6.0 - Production on Fri Jan 21 13:32:15 2022
Copyright (c) 1982, 2007, Oracle. All rights reserved.
Enter password:
Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
SQL> insert into country (country_id, country, continent, tld)
  2 values (country_seq.nextval, 'Fiji', 'Oceania', 'fj');
1 row created.
SQL> commit;
Commit complete.
SQL> exit;
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
[cottrell@pinger ~]$
[cottrell@pinger ~]$ date
Fri Jan 21 13:40:21 PST 2022
```

The COUNTRY table is not used except by the list of values in the UI. Note that if a country name needs to be changed or if a country was placed in the wrong region, it must be updated on all the nodes in the NODEDETAILS table as well as on the COUNTRY table.

To update the COUNTRY table to fix the list of values, get the COUNTRY_ID for the location that needs correction:

```
select country_id, country, continent from country
where country like 'Demo%';
```

Then update the COUNTRY table:

```
update country set country = 'Democratic Republic of Congo'
where country_id = 461;

commit;
```

Finally, fix any incorrect entries in the actual NODEDETAILS table by putting the correct country in the set clause and the incorrect value in the where clause.

```
update nodedetails set country = 'Democratic Republic of Congo'
where country = 'Democratic Repulic of Congo';

commit;
```

To re-assign a country from one region to another, change the CONTINENT value in both tables.

```
update country set continent = 'Europe' where country = 'Latvia';

update nodedetails set continent = 'Europe' where country = 'Latvia';

commit;
```

Problems

The checking the validity of the data is not particularly robust, especially when creating a new entry. It can complain that there is an error in the data (invalid IPv4 address, extra spaces in the field, duplicate nodename (i.e. it already exists)). The error messages are not very instructive. In this case, you may be able to correct the entry or you may have to cancel the entry and re-create it.

When accessing <https://oraweb.slac.stanford.edu/apex/slacprod/f?p=123:1:433331252041196::::> and entering 119.31.233.174 in the search field the right entry comes up, however, when I try to edit it I get

```
ORA-01403: no data found
OK
```

The entry is corrupted. It is probably a space (e.g. a trailing blank) in the key field (Nodename) of the record containing 119.31.233.174 in IEPM. NODEDETAILS. Workspace IEPM on SLACPROD.