# Instructions for the bigsql\_precheck tool

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## Tool name

bigsql\_precheck.sh

## Packaged in

bigsql-dist\_\*

BI-Analyst-\*

The tool has been available since V4.0 GA, however, new tests have been added in the most recent releases.

## Install location

Can run in standalone mode.

## Requires

bigsql-util.sh

## Usage

Options:

-A Run the prechecker on all hosts

-b hbase user Username for hbase

-d Show parameters that will be used by the script

-f bigsql port Big SQL port number

-F Force warnings to errors

-h Help screen

-H bigsqlhome Provides the path to BIGSQL\_DIST\_HOME

-i hive user Username for hive

-l hostlist Path and filename listing bigsql hosts

-L logdir Specify the name of the log directory

-M mode Check phase: ( PRE\_ADD\_HOST )

-N namenode Namenode host name

-p DB2 port DB2 FCM port

-P Parallel mode for large cluster (if using Verbose, prints asynch)

-R hdfs principal Principal name for hdfs user when using kerberos

-s security type Security feature user (ldap, kerberos, ldap\_kerberos)

-t timestamp Timestamp used for file cretion consistency

-T hdfs keytab Keytab for hdfs user when using kerberos

-u bigsql user Username for BigSQL

-v vardir Path to the "var" directory (the value of \$BIGSQL\_DIST\_VAR)

-V Verbose mode. Display individual test results to stdout.

-x hdfs user Username for hdfs

-z uid check Bigsql User id test string (internal use)

-h This help

## Example command

./bigsql-precheck.sh -M PRE\_ADD\_HOST -u bigsql -l mick\_nodes\_list.cfg -z bigsql,2824,hadoop,515 -s os -x hdfs -b hbase -i hive -p 32051 -f 28051 -V

(output shown below)

## Defaults

+-------------------------------------------------+  
 + CONSTANTS +  
 +-------------------------------------------------+  
  
 BIGSQL\_USER : bigsql  
 HBASE\_USER : hbase  
 HDFS\_USER : hdfs  
 HIVE\_USER : hive  
 NON\_DEFAULT\_HOST\_LIST :   
 SSH\_HOSTLIST\_FILE : /tmp/bigsqlSSHHostList  
 THIS\_HOST\_NAME : bdls000.svl.ibm.com  
 HEADNODE : bdls000.svl.ibm.com  
 NAMENODE :   
 SCRIPT\_LOG\_DIR : /tmp/bigsql/logs  
 SCRIPT\_LOG : /tmp/bigsql/logs/bigsql-precheck-1-2016-01-29\_08.38.59.5273.log  
 TIMESTAMP : 2016-01-29\_08.38.59.5273  
 BIGSQL\_HOME : /usr/ibmpacks/current/bigsql/bigsql  
 BIGSQL\_VAR : /var/ibm/bigsql  
 BIGSQL\_PORT :   
 DB2\_PORT :   
 SECURITY\_TYPE :   
 HDFS\_PRINCIPAL :   
 HDFS\_KEYTAB :   
 MODE : PRE\_ADD\_HOST  
 PARALLEL : 0  
 VERBOSE : 0  
 SHOW\_DEFAULTS : 1  
 ALL\_HOSTS : 0  
 FORCE\_ERR :   
 BIGSQL\_UID\_CHECK ? :

## List of current tests

The tool will perform data collection on all hosts specified by the –h parameter. On each host, the script

################################################################################

# Checking functions

################################################################################

#

# 01 - Check that /bin/ksh exist in all hosts

# 02 - Test db2set DB2RSHCMD is set / userprofile is not empty [post install ]

# 03 - Look at userprofile sanity check - more than x bytes

# 04 - If it is ldap make sure bigsql id & group that matches local or local

# must not exist or same ie hadoop group of ldap if locally defined , that

# must match ldap one if existed.

# 05 - Disk space

# 06 - Ensure that /etc/hosts/ has both long and short name of the host . ie.

# blah.domain.com and blah for ip addr. make sure db2nodes.cfg included in

# each not /etc/host and resolves ok

# 07 - Verify that the timediff between nodes is less than MAX\_TIME\_DIFF else create db wont work.

# 08 - bigsql userid is same or possible to have same in all boxes

# 09 - /tmp/bigsql is writable for bigsql

# 10 - Check that /etc/sudoers has requiretty commented out

# 11 - bigsql home is same on all boxes ie. path resolves to same string

# 12 - Make sure hdfs is available

# 13 - Check db data directory permissions by testing if they are writable by bigsql user

# 14 - Check if a sqllib already exists in bigsql user home

# 15 - Check if there are db2 entries in /etc/services

# 16 - Probable cause of db2ckgpfs error

# 17 - Validate passwordless ssh

# 18 - Validate client requirements

# 19 - Validate bigsql username length

# 20 - TSA resources check

# 21 - Check if the FCM port is in use

# 22 - Check if the DB2 comm port is in use

# 23 - Check that the hbase user has a valid login shell

# 24 - Check the hive primary group

# 25 - Check umask

# 26 - Check upper case in hostname

# 27 - Ensure bigsql home is not mounted with "nosuid" option

# 28 - Ensure that pam.i686 is installed

# 29 - Check HA package required on rhel 7

# 30 - Check Ping

# 31 - Add a warning for RHEL 6/7 based on repo

# 32 - Check that SELinux is in permisive mode

# 33 - Check that /tmp and /var has noexec and nosuid off

# 34 - Validate xml file syntax with xmllint:

# 35 - Check that RemoveIPC=no is set on rhel 7

# 36 - Check sudo access

# 37 - Check passwordless from head to hive metastores

# 38 - Check permissions of /dev/shm

# 39 - Check that prelink is disabled

# 40 - Validate that the first head hostname is in the /etc/hosts file

# 41 - Check the ownership of bigsql user env files

# 42 - Check that the shell of the bigsql user is bash

# 43 - Check that a non-root admin user has cron access ################################################################################

## Notes

* The tests can be run in parallel on all the hosts.
* When running manually

## Future items

The following features are being considered:

1. More tests may be added as appropriate
2. Provide other modes, such as a post install validation.

## Example of execution:

# ./bigsql-precheck.sh -M PRE\_ADD\_HOST -u bigsql -l mick\_nodes\_list.cfg -z bigsql,2824,hadoop,515 -s os -x hdfs -b hbase -i hive -p 32051 -f 28051 -V

Log file of this shell is: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.37.36.9629.log

Userid check **[** **OK** **]**

Big SQL user name length **[** **OK** **]**

KSH check **[** **OK** **]**

Disk space check **[** **OK** **]**

Hosts file check **[** **OK** **]**

tmp and log dir permission check **[** **OK** **]**

Sudoers check **[** **OK** **]**

User umask check **[** **OK** **]**

HDFS check **[** **OK** **]**

Dir permission check **[** **OK** **]**

Bigsql entries in /etc/services **[** **WARNING** **]**

Sqllib existence check **[** **WARNING** **]**

Issues with gpfs utilities **[** **OK** **]**

Passwordless ssh test **[** **OK** **]**

TSA resources **[** **OK** **]**

BigSQL FCM service port **[** **FAIL** **]**

BigSQL service port **[** **FAIL** **]**

Client requirement check **[** **OK** **]**

Client requirement check **[** **OK** **]**

Hbase user shell **[** **OK** **]**

Uppercase hostname check **[** **OK** **]**

Prechecker reported: 17 success(es), 2 error(s) and 2 warning(s) and 0 skipped.

See REPORT\_LOG for more information.

REPORT\_LOG: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.37.36.9629.report

Precheck on bdls000.svl.ibm.com is complete with rc=1. More information can be found in the logfile.

LOG\_FILE: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.37.36.9629.log

## Example of execution – force warnings (-F) as errors

[root@host.com:/script\_dir]

# ./bigsql-precheck.sh -M PRE\_ADD\_HOST -u bigsql -l mick\_nodes\_list.cfg -z bigsql,2824,hadoop,515 -s os -x hdfs -b hbase -i hive -p 32051 -f 28051 -V -F

Log file of this shell is: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.29.40.3705.log

Userid check **[** **OK** **]**

Big SQL user name length **[** **OK** **]**

KSH check **[** **OK** **]**

Disk space check **[** **OK** **]**

Hosts file check **[** **OK** **]**

tmp and log dir permission check **[** **OK** **]**

Sudoers check **[** **OK** **]**

User umask check **[** **OK** **]**

HDFS check **[** **OK** **]**

Dir permission check **[** **OK** **]**

Bigsql entries in /etc/services **[** **FAIL** **]**

Sqllib existence check **[** **FAIL** **]**

Issues with gpfs utilities **[** OK **]**

Passwordless ssh test **[** OK **]**

TSA resources **[** OK **]**

BigSQL FCM service port **[** **FAIL** **]**

BigSQL service port **[** **FAIL** **]**

Client requirement check **[** **OK** **]**

Client requirement check **[** **OK** **]**

Hbase user shell **[** **OK** **]**

Uppercase hostname check **[** **OK** **]**

Prechecker reported: 17 success(es), 4 error(s) and 0 warning(s) and 0 skipped.

See REPORT\_LOG for more information.

REPORT\_LOG: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.29.40.3705.report

Precheck on bdls000.svl.ibm.com is complete with rc=1. More information can be found in the logfile.

LOG\_FILE: /tmp/bigsql/logs/bigsql-precheck-1-2016-02-01\_08.29.40.3705.log