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MaxGauge Architecture

MaxGauge is composed of the following 4 layers.

1. **Data Collection Layer**: Data collection

2. **MaxGauge Application Server Layer**: MaxGauge Exclusive Web Server and Application Server

3. **Data Storage Layer**: Data Storage

4. **Web Client Layer**: Real time monitoring and performance analysis.

**Note.** The distinction of MaxGauge AP Server Layer and the Data Storage Layer is a logical one. The two layers may be configured in the same server. For more information about MaxGauge architecture, please reference “MaxGauge Admin Manual”.
MaxGauge Network Connection

For MaxGauge installation, the following network port is required.

Install Steps and Compatibility

Versions compatible with MaxGauge 5.2 and the order of installation steps are as follows.
1. Install **MaxGauge Agent Set** according to the OS type of the target Database.
2. Install **Data Gatherer** according to the OS type of the Repository Database.
3. Install **Platform.js** on Windows.

### MaxGauge License

The **MaxGauge License Key** is required to run the **MaxGauge Agent Set**.

#### Trial License Key

The Trial License Key is for a trial purpose only and is for a limited time use.

#### Formal License Key

The Formal License Key is issued only after the product agreement has been completed, and to request for a License Key, the following information is required.

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Name</td>
<td>Business Name</td>
</tr>
<tr>
<td>OS Information</td>
<td>Unix Type</td>
</tr>
<tr>
<td></td>
<td>Unix Version</td>
</tr>
<tr>
<td></td>
<td>Unix Bit Level</td>
</tr>
<tr>
<td>Database Information</td>
<td>Oracle Version</td>
</tr>
<tr>
<td></td>
<td>Oracle Bit Level</td>
</tr>
<tr>
<td></td>
<td>Oracle SID</td>
</tr>
<tr>
<td>Host Server Information</td>
<td>IP Address</td>
</tr>
<tr>
<td></td>
<td>Host ID</td>
</tr>
<tr>
<td></td>
<td>ERP</td>
</tr>
<tr>
<td></td>
<td>Real CPU</td>
</tr>
<tr>
<td></td>
<td>Dual Core Count</td>
</tr>
</tbody>
</table>

**Note.** The MaxGauge License policy is the unit of CPU Core, and the validity of the Formal License Key is checked by the database server’s Host ID and the number of CPU Cores. Therefore, the Formal License Key which has been issued may only be used in the applicable server, and in the event the number of CPU Cores has increased, an error will be generated in the Formal License Key validation check and the MaxGauge Agent Set will stop operating normally. In the event you need to increase the number of CPU Cores, you must re-apply for a Formal License Key in advance. (Depending on the circumstance, a new contract agreement may be necessary.)
The MaxGauge Agent Set which is installed in the Data Collecting Server is comprised of RTS, OBSD, and SNDF, and the installation is processed through one file. The MaxGauge Agent Set supports both Windows and Unix/Linux OS versions according to the OS type of the target database.

This chapter contains the following sections:

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2. Data Collecting Server Configuration

MaxGauge Agent Set (Windows based)

Advance Preparation

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard Recommended Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Version</td>
<td>Oracle 9i or higher</td>
</tr>
<tr>
<td>OS Disk Size</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Agent Set Size : 10MB</td>
</tr>
<tr>
<td></td>
<td>• SNDF Logging Space: 1G or more</td>
</tr>
</tbody>
</table>

Oracle Numa Segment

MaxGauge supports both methods of Uniform Memory Access and the Non-uniform Memory Access (NUMA) and hence, it is necessary to check whether the server is NUMA or not. The method through which you can check for NUMA through the SID sequence is as follows.

SQL> select sid from v$session;

Execution Example

<table>
<thead>
<tr>
<th>SID</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>&lt; Where there is an increase in the SID sequence, the Numa Segment is used.</td>
</tr>
<tr>
<td>127</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td></td>
</tr>
</tbody>
</table>

**Note1.** Because NUMA aware server uses distributed segments, the SID sequence increases from 10~100. In general, the NUMA segment is used in most of the versions higher than Oracle 11g.

**Note2.** The NUMA used in this context is not referring to the NUMA architecture. It is important to note that depending on whether the Oracle Session Structure Array is located in the continuous memory space or distributed into 2 or more memory space, it is conveniently referred to as UMA or NUMA.
Network Port

The RTS uses the 5080 port to communicate with Platform. JS. In the control panel, enable 5080 port for both Inbound/Outbound.

Installation Process

1. Installation File Upload

To install MaxGauge, the following installation files are required. For Windows version’s MaxGauge Agent, only 2 versions are available. (32bit or 64bit)

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MaxGauge5.2_[OS bit]_Server_Setup.exe</td>
<td>MaxGauge Agent Installation File</td>
</tr>
<tr>
<td>License_5.key</td>
<td>License File</td>
</tr>
</tbody>
</table>
2. Run Installer

Follow the steps below to install with the Installer.

1. Click the **Next** button.

![Installer Next Button](image1)

2. Click the **License Agree** button.

![License Agreement](image2)
3. Select MaxGauge Home Directory. (※ During installation, be sure to have no blank space within the Home Directory.)

4. Select the installed oracle version.

5. Select the Windows Start menu folder name.
6. Choose whether to create a shortcut icon.

7. Click on the Install button to run the installation.

8. Complete the MaxGauge Server Configuration and end the installation process.
3. **MaxGauge Server Configuration Execution**

1. Execute the `MxgConf` file under the `(MaxGauge Home Directory)/bin` with the Administrator privileges.

2. Enter the Oracle SID in the **Conf name** and click on the **Set conf** button.

3. Enter the required configuration information in the **Common Tab**.
4. Enter the required configuration information in the RTS Tab.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>daemon_port</td>
<td>Port to communicate with Platform.JS (5080 Recommended)</td>
</tr>
<tr>
<td>wr_port</td>
<td>Port to communicate with DG Slave Process (7001 Recommended)</td>
</tr>
</tbody>
</table>

5. Enter the required configuration information in the SNDF Tab.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wr_host</td>
<td>DG Slave Process installation IP address.</td>
</tr>
</tbody>
</table>
6. Enter the required configuration information in the Alert Tab.

7. Click on the DB Setup button in the Conf name Tab.
8. In the DB Setup, click button in the order of Setup User, Env, List.conf, and Setup Package.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User to create</td>
<td>Create MaxaGauge DB User</td>
</tr>
<tr>
<td>Password to create</td>
<td>MaxaGauge DB User Password</td>
</tr>
<tr>
<td>Default Tablespace</td>
<td>MaxaGauge User’s Default Tablespace</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>MaxaGauge User’s Temporary Tablespace</td>
</tr>
<tr>
<td>Create XM$ view in sys account</td>
<td>Create a portion of SYS.X$ fixed table in XM$ view.</td>
</tr>
<tr>
<td>User</td>
<td>MaxaGauge DB User which was created in the above.</td>
</tr>
<tr>
<td>Password</td>
<td>MaxaGauge DB User Password which was set in the above.</td>
</tr>
</tbody>
</table>

9. Click the Register button to register as a service.

**Note.** If it does not register, download and install the Visual C++ package and execute the MaxGauge Agent Set again to register as a service.
Run Method

MaxGauge Agent Set Service

The MaxGauge Agent Set is registered as a Windows Local Service in the installation step, and starts running by executing the service in Services (Local).

MaxGauge Agent Set (Unix/Linux based)

Installation Advance Preparation

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard Recommended Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Version</td>
<td>Oracle 9i or higher</td>
</tr>
<tr>
<td>OS Disk Size</td>
<td></td>
</tr>
<tr>
<td>Agent Set Size</td>
<td>10MB</td>
</tr>
<tr>
<td>SNDF Logging Space</td>
<td>1G or more</td>
</tr>
</tbody>
</table>

Shared Memory IPC key

MaxGauge gets SGA direct access into the Shared Memory through the IPC Key address. The IPC Key of the applicable instance can be checked by the method below.

Unix OS:
$ ipcs -m

Linux OS:
$ ipcs -mb

Execution Example

<table>
<thead>
<tr>
<th>Key</th>
<th>shmid</th>
<th>owner</th>
<th>perms</th>
<th>bytes</th>
<th>nattch</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x00000000 3702785</td>
<td>root</td>
<td>644</td>
<td>80</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0x992513cc 4784147</td>
<td>oracle</td>
<td>640</td>
<td>4096</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. In the event 2 or more IPC Key values exist in one instance, the correct IPC Key value is identified by using the Oradebug.

The method through which you can identify the IPC Key by using the Oradebug is as follows.
SYS> oradebug setmypid
Statement processed.
SYS> oradebug ipc
Information written to trace file.
SYS> oradebug tracefile name
/u01/app/oracle/admin/orcl/udump/orcl_ora_00000.trc
SYS> ! cat /u01/app/oracle/admin/orcl/udump/orcl_ora_00000.trc

Execution Example

---
Area #5 'skgm overhead' containing Subareas 5-5
Total size 0000000000003000 Minimum Subarea size 00000000
Area Subarea Shmid Stable Addr Actual Addr
5 5 4784147 0x00000092000000 0x00000092000000
---

**Note.** Check the shmid value in the 'skgm overhead' area, and identify the corresponding shmid's IPC Key value by using the ipcs command.

**Oracle Version**

Identify the Oracle Version information of the corresponding instance. The method is as follows.

SQL> select * from v$version

Execution Example

<table>
<thead>
<tr>
<th>BANNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production</td>
</tr>
<tr>
<td>PL/SQL Release 11.2.0.1.0 - Production</td>
</tr>
<tr>
<td>CORE 11.2.0.1.0 - Production</td>
</tr>
<tr>
<td>TNS for Linux: Version 11.2.0.1.0 - Production</td>
</tr>
<tr>
<td>NLSRTL Version 11.2.0.1.0 - Production</td>
</tr>
</tbody>
</table>

**Oracle PMON**

Identify the Oracle PMON’s name and owner of the corresponding instance. The method is as follows.

$ ps -ef | grep pmon

Execution Example

<table>
<thead>
<tr>
<th>oracle</th>
<th>45410</th>
<th>1 0 10:12 ? 00:00:01 ora_pmon_ord</th>
</tr>
</thead>
<tbody>
<tr>
<td>oracle</td>
<td>50915</td>
<td>47737 0 13:47 pts/2 00:00:00 grep pmon</td>
</tr>
</tbody>
</table>
Oracle Numa Segment

MaxGauge supports both methods of Uniform Memory Access and the Non-uniform Memory Access (NUMA) and hence, it is necessary to check whether the server is NUMA or not. The method through which you can check for NUMA through the SID sequence is as follows.

```sql
SQL> select sid from v$session;
```

Execution Example

<table>
<thead>
<tr>
<th>SID</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
</tr>
<tr>
<td>22</td>
</tr>
</tbody>
</table>
| 126   |- Where there is an increase in the SID sequence, the Numa Segment is used.
| 127   |
| 128   |

**Note1.** Because NUMA aware server uses distributed segments, the SID sequence increases from 10~100. In general, the NUMA segment is used in most of the versions higher than Oracle 11g.

**Note2.** The NUMA used in this context is not referring to the NUMA architecture. It is important to note that depending on whether the Oracle Session Structure Array is located in the continuous memory space or distributed into 2 or more memory space, it is conveniently referred to as UMA or NUMA.

Network Port

The RTS uses the 5080 port to communicate with Platform JS, and 7001 port to communicate with Slave Data Gatherer. The method for checking which port is used is as follows.

```
$ netstat -an | grep 5080
$ netstat -an | grep 7001
```

MaxGauge OS User

Create a MaxGauge OS User. A MaxGauge user must belong to the dba Group, and use Bash for Linux line and use Ksh for Unix line. The create method is as follows.

```
# useradd -d {home-dir} -s {shell Path} -g {oracle gid} -G {oracle groups} maxgauge
# passwd maxgauge
```

Maxgauge Profile Setting

For DBMS access, among the oracle user’s .profile, add ORACLE_HOME, ORACLE_BASE, ORACLE_SID, PATH to the maxgauge .profile.

```
PATH=$PATH:$HOME/bin
export PATH
```
**Installation Process**

1. **Installation File Upload**

MaxGauge needs the following installation files, and the corresponding files are uploaded in a binary format.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rts_MXG52_[OS Ver]<em>[Bit]</em>[Oracle Ver]_[NUMA].tar</td>
<td>MaxGauge Agent Set Installation File</td>
</tr>
<tr>
<td>License_4.key</td>
<td>License File</td>
</tr>
</tbody>
</table>

Execution Example

Ex) OS : Linux 6.2, Oracle Version : 11.2.0.1, Numa Segment

FTP> put rts_MXG52_linux_64_ora_112_numa_141128.tar
FTP> put License_4.key

2. **Unzip Installation Files**

Unzip the uploaded files in the MaxGauge user home directory. The unzip method is as follows.

```
$ tar --xvf rts_MXG52_[OS Ver]_[Bit]_[Oracle Ver]_[NUMA].tar
```

Execution Example

```
$ tar --xvf rts_MXG52_linux_64_ora_112_numa_141128.tar
```

Copy the newly created MaxGauge folder with the corresponding instance’s Oracle SID (Upper Case Letters). The copy method is as follows.

```
$ cp maxgauge $ORACLE_SID
```

3. **MaxGauge Environment File Configuration**

Edit the MaxGauge environment variable (mxgrc) file and configure the MaxGauge home directory path.
DATA COLLECTING SERVER CONFIGURATION

$ vi $HOME/$ORACLE_SID/.mxgrc.

Execution Example

# MaxGauge home directory
MXG_HOME={MaxGauge Home Directory}/[ORACLE SID]

Execution Example

Ex) Maxgauge USER Home = /home/maxgauge, Oracle_SID = ORCL

$ vi /home/maxgauge/ORCL/.mxgrc

# MaxGauge home directory
MXG_HOME=/home/maxgauge/ORCL

After configuring the path, add the .mxgrc path to the user’s .profile and apply. The application method is as follows.

$ vi $HOME/.profile

PATH=$PATH:$HOME/bin
export PATH
. [MaxGauge Home Directory]/[ORACLE SID]/.mxgrc
...
:wq!
$ . (MaxGauge Home Directory)/[ORACLE SID]/.mxgrc

Execution Example

$ vi /home/maxgauge/.profile

PATH=$PATH:$HOME/bin
export PATH
. /home/maxgauge/ORCL/.mxgrc
...
:wq!
$ . /home/maxgauge/ORCL/.mxgrc

4. Install Script Execution

Use the install.sh in the Install folder and run the automatic installation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database owner</td>
<td>The Oracle user who ran the Oracle Instance</td>
</tr>
<tr>
<td>Conf name</td>
<td>Enter $ORACLE_SID in upper case letters.</td>
</tr>
<tr>
<td>IPC Key</td>
<td>Installation Requirement Checklist’s Oracle Shared Memory Key</td>
</tr>
</tbody>
</table>
**PMON process** | Installation Requirement Checklist’s Oracle PMON Name  
---|---  
RTS TCP port | Port to communicate with Platform.JS (5080 Recommended)  
Data Gather IP address | DG Slave Process’ installation IP address  
Data Gather Port | Port to communicate with DG Slave Process (7001 Recommended)  
Oracle sys password | Oracle sys User Password (1)  
Oracle MaxGauge user | Create MaxGauge DB User  
Oracle MaxGauge Password | MaxGauge DB User Password  
Default Tablespace | MaxGauge User’s Default Tablespace  
Temporary Tablespace | MaxGauge User’s Temporary Tablespace  
Conf file | Create Server Agent Configuration File  
Password file | Create Agent Password File Select Corresponding Server OS (1:Unix 2:Linux, Windows)  
Run_by_sys | Create MaxGauge DB User and Grant Privileges  
Expkg package | Install package to be used by MaxGauge DB user.  
Env | Create Agent’s required environment file  
List.conf | Create Agent’s required environment file

**Execution Example**

```
$ cd $MXG_HOME/install
$. install.sh

Welcome to MaxGauge5 Daemon setup
Enter Database owner: [oracle]
oracle

Enter Maxgauge conf name: [orcl]
ORCL

1) 0xd3ac6c80
Select ipc key: 1
ipc key: d3ac6c80

========== ora_pmon_orcl
ora_pmon_orcl
Select pmon process name: 1
pmon name: ora_pmon_orcl

LISTENER INFO: [ *.1521 | *.1521 | 127.0.0.1:1521 | 127.0.0.1:1521 ]
*.1521

RTS TCP Port number: [5080]
```
DATA COLLECTING SERVER CONFIGURATION

5080

DataGather IP Address : []
192.168.0.10

DataGather Port number : [7001]
7001

Oracle sys pass: 1

Oracle maxgauge user : [maxgauge]
maxgauge

Oracle maxgauge pass: ******

Default Tablespace for MaxGauge: [USERS]
USERS

Temporary Tablespace for MaxGauge: [TEMP]
TEMP

====================== Confirm Variables =======================
Conf name ORCL
IPCs key d3ac6c80
pmon name ora_pmon_orcl
TCP port 5080
DataGather IP 192.168.0.10
DataGather port 7000
Maxgauge user maxgauge
Oracle sys user sys

===============================================

conf directory created.
Make conf files (rts.conf) ? (y/n) [y]

Select passwd File (1:Unix 2:Linux\Win) ? [2]
run run_by_sys ? (y/n) [y]
Install expkg package ? (y/n) [y]
make env ? (y/n) [y]
make list.conf ? (y/n) [y]

...
5. Apply License File

Move the License file to $MXG_HOME/bin directory.

```
... $ mv $HOME/License5.key $MXG_HOME/bin ...
...```
Run Method

RTSCTL Command

RTSCTL is a utility for controlling the MaxGauge Agent Set, and there are two methods – the Non Interactive Mode method which is used in the OS command line, and the Interactive Mode method which is used in the RTSCTL utility. The RTSCTL utility’s method is as follows.

```
# Non Interactive Mode Usage:
$ rtsctl <start | stop | status | restart > [config_name]
$ rtsctl version

# Interactive Mode Usage:
$ rtsctl
RTSCTL> < start | stop | status | restart > [config_name]
RTSCTL> <version | quit | exit >
```

<table>
<thead>
<tr>
<th>Operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>start</td>
<td>Start MaxGauge Agent Set</td>
</tr>
<tr>
<td>stop</td>
<td>Stop MaxGauge Agent Set</td>
</tr>
<tr>
<td>status (stat)</td>
<td>Check status of MaxGauge Agent Set</td>
</tr>
<tr>
<td>restart</td>
<td>Restart MaxGauge Agent Set</td>
</tr>
<tr>
<td>version (ver)</td>
<td>Output MaxGauge Agent Set version information</td>
</tr>
<tr>
<td>quit (q)</td>
<td>exit (e)</td>
</tr>
</tbody>
</table>

**Note.** For details about RTSCTL utility and execution examples, please reference “MaxGauge Admin Manual”.

User Defined Option

SNDF Logging Space Configuration

The SNDF manages the Temp File logged by the RTS, and executes the sending function. To change the Storage Space Size of the Temp File, the method is as follows.

```
$ vi $MXG_HOME/conf/sndf.conf

# sndf configuration
sndf_interval=10
sndf_checksizeinterval=30
sndf_sizelimit=1024
: wq!
```

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntax</td>
<td>sndf_sizelimit=integer (MB)</td>
</tr>
<tr>
<td>Registration Category</td>
<td>Automatic Registration</td>
</tr>
</tbody>
</table>
### Exceptions

#### MakeConf Script Error

When executing `Install.sh`, if it doesn’t create the Conf file, reference the items below.

<table>
<thead>
<tr>
<th>Script Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makealertconf</td>
<td>Creates the environment file for Oracle Alert Log’s path information, and among the corresponding Script’s variables, use the results of <code>get_alert_name.sql</code> for the Alert Log. {ORACLE_SID} {Oracle Alert Log Path &amp; Name}</td>
</tr>
<tr>
<td>Makecommonconf</td>
<td>Create the required environment file for Direct Memory Access in the Oracle SGA. {ORACLE_SID} {IPC_KEY} {PMON_NAME}</td>
</tr>
<tr>
<td>Makertsconf</td>
<td>Create real time data and log data sending environment file. {ORACLE_SID} {RTS_PORT} {DG_IP_ADDRESS} {DG_PORT}</td>
</tr>
<tr>
<td>Makesndfconf</td>
<td>When RTS Logging is abnormal, create an environment file to prevent log omission. {ORACLE_SID} {DG_IP_ADDRESS} {DG_PORT}</td>
</tr>
</tbody>
</table>

#### Script Run Method and Variable Entering Method

FILE_PATH: {Maxgauge Home Directory}/{ORACLE_SID}/install

```
# START ALERT LOG PATH
SQL> @get_alert_name.sql
/appp/oracle/diag/rdbms/orcl/ORCL/trace/alert_ORCL.log < "Oracle Alert Log Path & Name"

#START ALERT LOG FILE CREATE
$ . makealertconf ORACLE_SID {Oracle Alert Log Path & Name}
ex)$ . makealertconf ORCL /app/oracle/diag/rdbms/orcl/ORCL/trace/alert_ORCL.log

#START COMMON FILE CREATE
$ . makecommonconf ORACLE_SID {IPC_KEY} {PMON_NAME}
ex)$ . makecommonconf ORCL 0x992513cc ora_pmon_ORCL

#START RTS FILE CREATE
$ . makertsconf ORACLE_SID {RTS_PORT} {DG_IP_ADDRESS} {DG_PORT}
ex)$ . makertsconf ORCL 5080 192.168.0.10 7000

#START SNDF FILE CREATE
$ . makesndfconf ORACLE_SID {DG_IP_ADDRESS} {DG_PORT}
```
Password File Error

When executing Install.sh, if it doesn't create the password file, reference the items below.

FILE_PATH: {Maxgauge Home Directory}/maxgauge/conf/passwd/{OS TYPE}/
$ cp passwd {Maxgauge Home Directory}/(ORACLE_SID)/conf/(ORACLE_SID)

ex)$ cp passwd /home/maxgauge/ORCL/conf/ORCL/

Run by sys.sql Error

When executing Install.sh, if it fails in MaxGauge user create and grant privileges, reference the items below.

$ sqlplus DBA or SYS User Login

# Maxgauge user Password, Default Tablespace, Temporary Tablespace
SQL>
CREATE USER maxgauge IDENTIFIED BY &password
DEFAULT TABLESPACE &default_ts
TEMPORARY TABLESPACE &temp_ts;

GRANT RESOURCE TO maxgauge;
GRANT CREATE SESSION TO maxgauge;
GRANT CREATE DATABASE LINK TO maxgauge;
GRANT SELECT_CATALOG_ROLE maxgauge;
GRANT SELECT ANY TABLE TO maxgauge
GRANT CREATE ANY PROCEDURE TO maxgauge
GRANT EXECUTE ON SYS.DBMS_SESSION TO maxgauge
GRANT EXECUTE ON SYS.DBMS_SYSTEM TO maxgauge
GRANT ALTER SESSION TO maxgauge
GRANT ALTER SYSTEM TO maxgauge
GRANT SELECT ANY DICTIONARY TO maxgauge

Expkg.plb Error

When executing Install.sh, if it fails in package create, reference the items below.

FILE_PATH : {Maxgauge Home Directory}/(ORACLE_SID)/util/db_setup

$ sqlplus maxgauge/*****
SQL> expkg.plb

Package created.
No errors.
Package body created.
No errors.

**Env & List.conf Error**

When executing Install.sh, if it fails in Env and List.conf file create, reference the items below.

```java
FILE_PATH: {Maxgauge Home Directory}/(ORACLE_SID)/util/db_setup

# Env Create
$ . mke.sh

# List.conf Create
$ sqlplus DBA or SYS User Login
SQL> listconf.sql
```
This chapter contains the following sections:

3. Data Storage Server Configuration .............................................................. 32

  PostgreSQL Repository (Windows based) ......................................................... 32

  Oracle Repository (Windows based) ................................................................. 50

  Oracle Repository (Unix/Linux based) .............................................................. 62
3. Data Storage Server Configuration

The **Data Storage Server** is composed of **Platform.JS**, **Data Gatherer**, and the **Repository Database**. The OS type supported by each item is as follows.

<table>
<thead>
<tr>
<th>Installation Item</th>
<th>Supported OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform.JS</td>
<td>Windows</td>
</tr>
<tr>
<td>Data Gatherer</td>
<td>Windows, Unix/Linux</td>
</tr>
<tr>
<td>Repository Database</td>
<td>PostgreSQL (Windows, Linux))</td>
</tr>
<tr>
<td></td>
<td>Oracle (Windows, Unix/Linux)</td>
</tr>
</tbody>
</table>

### PostgreSQL Repository (Windows based)

**Advance Preparation**

**Java (JDK 1.6 or higher)**

Java is installed in the same server as the **Data Gatherer**. The installation method is as follows.

1. Download JDK and install.

   [Link](http://www.oracle.com/technetwork/java/javase/downloads/index.html)

2. Create JAVA_HOME environment variable.
Note. In general, Java is installed the same as the Bit Level of the installed OS.

Installation Process (Automatic)

Integrated Installer Execution

Installation method through the integrated installer is as follows.

1. Click the Next button.

2. Click the License Agree button.

4. Select the Windows Start Menu Folder name.
5. Choose whether to create a shortcut icon.

6. Click on the **Install** button to run the installation.

7. Execute Platform.JS which is the same as the bit of the installed Oracle Client.

---

**Note.** Once the installation is complete, Platform.JS, Data Gatherer, and PostgreSQL are automatically registered as local services.
Installation Process (Individual Installation)

PostgreSQL Individual Installation

In this Install Guide, we will not discuss the details regarding PostgreSQL Database installation. For information regarding the corresponding database installation, please see the PostgreSQL’s official Install Guide.

Repository Maxgauge User Configuration

For Repository DB’s Maxgauge User, use the super user (postgres).

**Note.** When you need to create a separate user, grant super user’s privileges.

Repository Parameter Configuration

The PostgreSQL Database Parameter

<table>
<thead>
<tr>
<th>Parameter name</th>
<th>Recommended settings (Memory 16GB standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>max_connections</td>
<td>300</td>
</tr>
<tr>
<td>shared_buffers</td>
<td>4GB</td>
</tr>
<tr>
<td>temp_buffers</td>
<td>64MB</td>
</tr>
<tr>
<td>work_mem</td>
<td>64MB</td>
</tr>
<tr>
<td>effective_cache_size</td>
<td>1GB</td>
</tr>
<tr>
<td>enable_seqscan</td>
<td>off</td>
</tr>
<tr>
<td>logging_collector</td>
<td>off</td>
</tr>
<tr>
<td>default_transaction_isolation</td>
<td>read uncommitted</td>
</tr>
<tr>
<td>log_truncate_on_rotation</td>
<td>on</td>
</tr>
<tr>
<td>log_rotation_size</td>
<td>0</td>
</tr>
<tr>
<td>wal_sync_method</td>
<td>fsync_writethrough (Windows) / fdatasync (Linux)</td>
</tr>
<tr>
<td>fsync</td>
<td>off</td>
</tr>
<tr>
<td>constraint_exclusion</td>
<td>partition</td>
</tr>
<tr>
<td>checkpoint_segments</td>
<td>32</td>
</tr>
<tr>
<td>track_counts</td>
<td>off</td>
</tr>
</tbody>
</table>
Data Gatherer Individual Installation

1. Unzip the MaxGauge5.2_DG.tar in the MaxGauge installation path.

2. Edit the Data Gather_S1/conf/DGServer.xml file's configuration.

```xml
<xml version="1.0" encoding="US-ASCII"/>
<DefaultOptions>
<master>false</master>
<gather_port>7801</gather_port>
<ClientPool>
<client_pool_init_size>10</client_pool_init_size>
<client_pool_max_size>30</client_pool_max_size>
</ClientPool>
<DBPool>
<database_type>postgresql</database_type>
<database_ip>172.0.0.1</database_ip>
<database_port>5432</database_port>
<database_size>maxgauge_pop</database_size>
<database_password>
<connection_pool_init_size>5</connection_pool_init_size>
<connection_pool_max_size>12</connection_pool_max_size>
<syst_conn_max>2</syst_conn_max>
<sea_conn_max>2</sea_conn_max>
<th_conn_max>2</th_conn_max>
<syst1min_conn_max>1</syst1min_conn_max>
<syst1max_conn_max>1</syst1max_conn_max>
<sql_conn_max>1</sql_conn_max>
<sqlDaily_conn_max>1</sqlDaily_conn_max>
</DBPool>
<DatabaseType_oracle>
<commit_write></commit_write>
```
<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gather_port</td>
<td>Port to communicate with MaxGauge Agent Set (7001 Recommended)</td>
</tr>
<tr>
<td>database_type</td>
<td>Set the Repository’s Database Type.</td>
</tr>
<tr>
<td></td>
<td>• PostgreSQL Database: postgres</td>
</tr>
<tr>
<td>database_ip</td>
<td>Set the IP of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Default Value: 127.0.0.1</td>
</tr>
<tr>
<td>database_port</td>
<td>Set the Listener Port of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Default Value: 5432</td>
</tr>
<tr>
<td>database_sid</td>
<td>Set the name of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• PostgreSQL Database: Database Name</td>
</tr>
<tr>
<td>database_user</td>
<td>Set the User Name of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• PostgreSQL Database: postgres</td>
</tr>
<tr>
<td>database_password</td>
<td>Set the User Password of the Repository Database to be connected to JDBC.</td>
</tr>
</tbody>
</table>

3. Edit the Data Gather_M/conf/DGServer.xml file configuration.

```xml
<xml version="1.0" encoding="EUC-KR">
  <Variables>
    <name>view_path</name>
    <value>./views/</value>
  </Variables>
  <Properties>
    <property name="view_path">./views/</property>
  </Properties>
  <MaxGauge>
    <gather_port>7000</gather_port>
    <slave_gather_list>127.0.0.1:7001,127.0.0.1:7002</slave_gather_list>
    <database_type>postgresql</database_type>
    <database_ip>127.0.0.1</database_ip>
    <database_port>5432</database_port>
    <database_sid>managed_app</database_sid>
    <database_user>postgres</database_user>
    <database_password>postgres</database_password>
  </MaxGauge>
</xml>
```

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gather_port</td>
<td>Port to communicate with Platform.JS (7000 Recommended)</td>
</tr>
<tr>
<td>slave_gather_list</td>
<td>Set the Slave DG List</td>
</tr>
<tr>
<td></td>
<td>• IP: Configured in a port format. Use a comma ‘,’ to add a slave. ex) 127.0.0.1:7001,127.0.0.1:7002</td>
</tr>
<tr>
<td>database_type</td>
<td>Set the repository database type.</td>
</tr>
<tr>
<td></td>
<td>• PostgreSQL Database: postgres</td>
</tr>
<tr>
<td>database_ip</td>
<td>Set the IP of the repository database to be connected to JDBC.</td>
</tr>
<tr>
<td>database_port</td>
<td>Set the repository database port to be connected to JDBC.</td>
</tr>
<tr>
<td>database_sid</td>
<td>Set the repository database name to be connected to JDBC.</td>
</tr>
</tbody>
</table>
4. Execute the `Data_Gather_M\bin\dginstall.bat` file in the Command Prompt (Administrator).

5. Create table in the Repository Database by selecting the **Install Repository** option.

6. Register the **Data Gather** Processes as services in the Command Prompt (Administrator).

   **DG Master Process:**
   ```
   sc create DGServer_M binPath= "\{MaxGauge Home Directory\}\Data_Gather_M\bin\DGService_{bit}.exe"
   ```

   **DG Slave Process:**
   ```
   sc create DGServer_S1 binPath= "\{MaxGauge Home Directory\}\Data_Gather_S1\bin\DGService_{bit}.exe"
   ```
Note. Select the Bit Level file which is the same as Java (JDK).

7. When registered incorrectly, delete the registered service.

```bash
sc delete (Service Name)
```
Platform.JS Individual Installation

The Platform.JS installation method on Windows is as follows.

1. Click the **Next** button.

![Next button](image1)

2. Click the **License Agree** button.

![License Agreement](image2)


![Destination Location](image3)
4. Select Windows Start Menu Folder name.

5. Choose whether to create a shortcut icon.

6. Click on the Install button to run the installation.
7. Enter **Data Gatherer** and Repository Database information.

<table>
<thead>
<tr>
<th><strong>Item</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>Alias used internally in MaxGauge.</td>
</tr>
<tr>
<td>Type</td>
<td>• PostgreSQL Database: postgresql</td>
</tr>
<tr>
<td>Server(IP)</td>
<td>• PostgreSQL Database: Enter the IP Address of the Repository DB.</td>
</tr>
<tr>
<td>Database</td>
<td>Set the Repository Database Name</td>
</tr>
<tr>
<td>User</td>
<td>• PostgreSQL Database: Database Name</td>
</tr>
<tr>
<td>Password</td>
<td>Set the user password of the Repository Database</td>
</tr>
<tr>
<td>Port</td>
<td>• PostgreSQL Database: postgres</td>
</tr>
<tr>
<td>Gather IP</td>
<td>Set Master DG’s IP Address</td>
</tr>
<tr>
<td>Gather Port</td>
<td>Set Master DG’s Listener Port 설정</td>
</tr>
</tbody>
</table>

8. Execute **Platform.JS** which is the same as the Bit of the installed Oracle Client.
Note. Once installation is complete, the Platform.JS is automatically registered as a local service.

Run Method

MaxGauge Local Services

The Platform.JS, Data Gatherer, and Postgresql Database are automatically registered as Local Services in the installation step, and start running by executing each service in Services (Local).

MaxGauge Configuration

To start MaxGauge, you need to configure the required information through the MaxGauge Configuration. The configuration method is as follows.

1. Connect to http://127.0.0.1:8080/Maxgauge/ on Google Chrome.
2. Log in to the default account. (ID: admin / PW: manager)

3. Configure the Instance, Account, Alert, and SMS.

Note. For more information regarding MaxGauge Configuration, please reference "MaxGauge Configuration Manual".
User Defined Option

Add Slave Gather Process

If you communicate with a MaxGauge Agent Set which has too many single Slave DGs, it could generate an overload. In such a case, it is necessary to add Slave DGs. The Slave DG adding method is as follows.

1. Copy the DataGather_S1 folder and create DataGather_S# folder in the Path where MaxGauge is installed.

2. Edit the DataGather_S#/conf/WDGServer.xml file and change the Gather_Port.
3. Edit the DataGather_MWconfWDGServer.xml file and add the IP address and Port number in the Slave_Gather_List.

```xml
<SlaveGatherList>
  <SlaveGatherList>127.0.0.1:7001, 127.0.0.1:7002</SlaveGatherList>
</SlaveGatherList>
```

4. Register Slave DG # as a service in the Command Prompt (Administrator).

```
sc create {Service Name} binPath= "{MaxGauge Home Directory}\(Data Gather_S#)\bin\DGService_{bit}.exe"
```

5. When registered incorrectly, delete the registered service.

```
sc delete {Service Name}
```
**Note.** Recommended number of Slave Process is (Slave 1): (MaxGauge Agent Set 10~20). However, because each Slave Process is allotted 2G memory, you must first thoroughly check the Free memory before adding it. The DG's allotted memory can be changed by editing the DGServicex_x(bit).config file in each bin folder.

**PostgreSQL Tablespace Configuration**

When the data amount storing in the PostgreSQL Repository increases, the disk may run out of space. This type of problem can be resolved by creating a separate tablespace in each table and storing in partitions.

1. Execute pgAdmin3. ((MaxGauge Home Directory)/Database/bin/pgAdmin3)

2. Create new tablespace, and enter Name/ Owner/ Path.
3. Check for tables with high volume.

4. Assign the tablespace created in the table individually.

**Note.** The data save cycle can be changed in MaxGauge Configuration. For more information, please reference "MaxGauge Configuration Manual".
Oracle Repository (Windows based)

Advance Preparation

Java (JDK 1.8 or higher)

Install Java in the same server as the Data Gatherer. The installation method is as follows.

1. Download and install JDK.
2. Create JAVA_HOME environment variable.

Note. In general, Java is installed the same as the Bit Level of the installed OS.

Installation Process (Manual)

Oracle Individual Installation

In this Install Guide, we will not discuss the details regarding the Oracle Database installation. For more information about the corresponding DB installation, please reference the Oracle's official Install Guide.

Repository Maxgauge User Configuration

The Repository DB’s Maxgauge User’s privileges are as follows.

```sql
# sys or dba User
SQL> GRANT RESOURCE TO maxgauge;
SQL> GRANT CONNECT TO maxgauge;
SQL> GRANT CREATE SESSION TO maxgauge;
SQL> GRANT CREATE DATABASE LINK TO maxgauge;
SQL> GRANT SELECT_CATALOG_ROLE TO maxgauge;
```
SQL> GRANT SELECT ANY TABLE TO maxgauge;
SQL> GRANT CREATE ANY PROCEDURE TO maxgauge;
SQL> GRANT EXECUTE ON SYS.DBMS_SESSION TO maxgauge;
SQL> GRANT EXECUTE ON SYS.DBMS_SYSTEM TO maxgauge;
SQL> GRANT EXECUTE ON DBMS_LOCK TO maxgauge;
SQL> GRANT ALTER SESSION TO maxgauge;
SQL> GRANT ALTER SYSTEM TO maxgauge;
SQL> GRANT SELECT ANY DICTIONARY TO maxgauge;
Data Gatherer Individual Installation (Windows based)

1. Unzip the MaxGauge5.2_DG.tar file in MaxGauge installation path.

2. Edit the Data Gather_S1/conf/DGServer.xml file’s parameter configuration.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>database_type</td>
<td>Set the Repository’s database type.</td>
</tr>
<tr>
<td></td>
<td>• Oracle Database: oracle</td>
</tr>
<tr>
<td>database_ip</td>
<td>Set the IP of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Default Value: 127.0.0.1</td>
</tr>
<tr>
<td>database_port</td>
<td>Set the Repository Database port to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Default Value: 1521</td>
</tr>
<tr>
<td>database_sid</td>
<td>Set the Repository Database name to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Oracle Database: SID Name</td>
</tr>
<tr>
<td>database_user</td>
<td>Set the user name of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>• Oracle Database: maxgauge</td>
</tr>
<tr>
<td>database_password</td>
<td>Set the user password of the Repository Database to be connected to JDBC.</td>
</tr>
</tbody>
</table>
DATA STORAGE SERVER CONFIGURATION

● Oracle Database: maxgauge

commit_write
Set DG Slave Process’ Commit Method (10gR2 or higher)

● Default Setting Value: Follow the Oracle Default Setting Value (IMMEDIATE, WAIT)
For information on parameters, reference the Oracle document.
http://docs.oracle.com/cd/B19306_01/server.102b14237/initparams027.htm#REFRN10260

3. Edit the Data Gather_M/conf/DGServer.xml file’s parameter configuration.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>slave_gather_list</td>
<td>Set the Slave DG List.</td>
</tr>
<tr>
<td></td>
<td>● IP: Configured in a port format. Use a comma ‘,’ to add a slave.</td>
</tr>
<tr>
<td></td>
<td>ex) 127.0.0.1:7001,127.0.0.1:7002</td>
</tr>
<tr>
<td>database_type</td>
<td>Set the Repository’s Database type.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: oracle</td>
</tr>
<tr>
<td>database_ip</td>
<td>Set the IP of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td>database_port</td>
<td>Set the Repository Database Port to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>● Default Value: 1521</td>
</tr>
<tr>
<td>database_sid</td>
<td>Set the Repository Database name to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: SID Name</td>
</tr>
<tr>
<td>database_user</td>
<td>Set the user name of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: maxgauge</td>
</tr>
<tr>
<td>database_password</td>
<td>Set the user password of the Repository Database to be connected to JDBC.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: maxgauge</td>
</tr>
<tr>
<td>tablespace</td>
<td>Tablespace Name which will create a Repository Table.</td>
</tr>
<tr>
<td>index_tablespace</td>
<td>Tablespace Name which will create an index in the Repository Table.</td>
</tr>
</tbody>
</table>

4. Execute the Data Gather_M/bin/dginstall.bat file in the Command Prompt (Administrator).
5. Select the Install Repository option to create a table in the Repository Database.

6. Register the Data Gather Processes as services in the Command Prompt (Administrator).

**DG Master Process:**
```
sc create DGServer_M binPath= "\{MaxGauge Home Directory\}\Data Gather_M\bin\DGService_{bit}.exe"
```

**DG Slave Process:**
```
sc create DGServer_S1 binPath= "\{MaxGauge Home Directory\}\Data Gather_S1\bin\DGService_{bit}.exe"
```

**Note.** Select the Bit Level file which is the same as Java(JDK).
7. When registered incorrectly, delete the registered service.

`sc delete (Service Name)`
Platform.JS Individual Installation (Windows based)

The Platform.JS installation method on Windows is as follows.

1. Click the **Next** button.

![Next button image](image1)

2. Click the **License Agree** button.

![License Agree image](image2)


![MaxGauge Home Directory image](image3)
4. Select the Windows Start Menu Folder Name.

5. Choose whether to create a shortcut icon.

6. Click on the Install button to run the installation.
7. Enter the **Data Gatherer** and Repository Database information.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Alias</td>
<td>Set the Repository Database Name.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: SID Name</td>
</tr>
<tr>
<td>TNS Name</td>
<td>Oracle Database: Enter the Repository DB's TNS Alias.</td>
</tr>
<tr>
<td>User</td>
<td>Set the user name of the Repository Database.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: maxgauge</td>
</tr>
<tr>
<td>Password</td>
<td>Set the password of the Repository Database.</td>
</tr>
<tr>
<td></td>
<td>● Oracle Database: maxgauge</td>
</tr>
<tr>
<td>Gather IP</td>
<td>Set the Master DG's IP Address.</td>
</tr>
<tr>
<td>Gather Port</td>
<td>Set the Master DG's Listener Port.</td>
</tr>
</tbody>
</table>

8. Select the **Platform.JS** which is the same as the Bit Level of the installed Oracle Client, and execute **MaxGauge Configuration**.

**Note.** Once installation is complete, the Platform.JS is automatically registered as a local service.

**Run Method**

**MaxGauge Local Services**

The **Platform.JS** and **Data Gatherer** are automatically registered as Local Services in the installation step, and and start running by executing each service in Services (Local).
MaxGauge Configuration

To start MaxGauge, configure the required information through MaxGauge Configuration. The configuration method is as follows.

1. Connect to http://127.0.0.1:8080/Maxgauge/Config on Google Chrome.

2. Log in to the default account. (ID: admin / PW: manager)

3. Configure the Instance, Account, Alert, and SMS.
Note. For more information regarding MaxGauge Configuration, please reference "MaxGauge Configuration Manual".

User Defined Option

Add Slave Gather Process

If you communicate with a MaxGauge Agent Set which has too many single Slave DGs, it could generate an overload. In such a case, it is necessary to add Slave DGs. The Slave DG adding method is as follows.

1. Copy the DataGather_S1 folder and create DataGather_S# folder in the Path where MaxGauge is installed.

2. Edit the DataGather_S##conf DGServer.xml file and change the Gather_Port.
3. Edit the `DataGather_M.conf\DGServer.xml` file and add the IP address and Port number in the `Slave_Gather_List`.

```
<slave_gather_list>127.0.0.1:7001, 127.0.0.1:7002</slave_gather_list>
```

4. Register Slave DG # as a service in the Command Prompt (Administrator).

```
sc create {Service Name} binPath="{MaxGauge Home Directory}\{Data Gather_{S#}\}bin\DGService_{bit}.exe"
```

5. When registered incorrectly, delete the registered service.

```
sc delete {Service Name}
```
Note. Recommended number of Slave Process is (Slave 1): (MaxGauge Agent Set 10~20). However, because each Slave Process is allotted **3GB memory**, you must first thoroughly check the Free memory before adding it. The DG's allotted memory can be changed by editing the DGService_{(bit)}.config file in each bin folder.

---

**Oracle Repository (Unix/Linux based)**

**Advance Preparation**

**Java (JDK 1.8 or higher)**

Install Java in the same server as the Data Gatherer. The installation method is as follows.

1. Download JDK and unzip the file.


   **Note.** For Unix/Linux, consult with an OS engineer before running the job.

2. Designate JAVA_HOME and the Path to maxgauge user’s .profile.

   ```
   export JAVA_HOME= {Java Home Directory}
   export Path= $JAVA_HOME/bin
   ```

3. Apply the .profile.

   ```
   $ source $HOME/.profile
   ```

**Installation Process (Manual)**

**Oracle Individual Installation**

In this Install Guide, we will not discuss the details regarding the Oracle Database installation. For more information about the corresponding DB installation, please reference the Oracle’s official Install Guide.

**Repository maxgauge user Configuration**

The Repository DB’s Maxgauge User’s required privileges are as follows.

```sql
# sys or dba User
SQL> GRANT RESOURCE TO maxgauge;
SQL> GRANT CONNECT TO maxgauge;
SQL> GRANT CREATE SESSION TO maxgauge;
SQL> GRANT CREATE DATABASE LINK TO maxgauge;
SQL> GRANT SELECT_CATALOG_ROLE TO maxgauge;
```
SQL> GRANT SELECT ANY TABLE TO maxgauge;
SQL> GRANT CREATE ANY PROCEDURE TO maxgauge;
SQL> GRANT EXECUTE ON SYS.DBMS_SESSION TO maxgauge;
SQL> GRANT EXECUTE ON SYS.DBMS_SYSTEM TO maxgauge;
SQL> GRANT EXECUTE ON DBMS_LOCK TO maxgauge;
SQL> GRANT ALTER SESSION TO maxgauge;
SQL> GRANT ALTER SYSTEM TO maxgauge;
SQL> GRANT SELECT ANY DICTIONARY TO maxgauge;

Data Gatherer Individual Installation

1. Unzip the [MFO5.3]_[DataGather]_[Build date].tar file in the MaxGauge installation path.

```bash
$ tar -xvf [MFO5.3]_[DataGather]_[Build date].tar
```

2. Edit the Data Gather_S1/conf/ DGServer.xml file’s parameter configuration.

```bash
$ vi Data Gather_S1/conf/ DGServer.xml
```

### Parameter Name | Description
--- | ---
**database_type** | Set the Repository’s Database type.  
- Oracle Database: oracle  
**database_ip** | Set the IP of the Repository Database to be connected to JDBC.  
- Default Value: 127.0.0.1  
**database_port** | Set the Repository Database Port to be connected to JDBC.  
- Default Value: 1521  
**database_sid** | Set the name of the Repository Database to be connected to JDBC.  
- Oracle Database: SID Name  
**database_user** | Set the user name of the Repository Database to be connected to JDBC.  
- Oracle Database: maxgauge  
**database_password** | Set the user password of the Repository Database to be connected to JDBC.  
- Oracle Database: maxgauge
3. Set the DG Slave Process’ Commit Method (10gR2 or higher)

- **Default Setting Value:** Follow the Oracle Default Setting Value (IMMEDIATE, WAIT)

For information about parameters, please reference the Oracle document. 
http://docs.oracle.com/cd/B19306_01/server.102/b14237/initparams027.htm#REFRN10260

### Edit the Data Gather_M/conf/DGServer.xml file’s parameter configuration.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<DataGather>
  <DefaultOptions>
    <client_timeout></client_timeout>
   <client_port>2000</client_port>
   <slave_gather_list>127.0.0.1:7001,127.0.0.1:7002</slave_gather_list>
   <client_pool>
     <client_pool_init_size>10</client_pool_init_size>
     <client_pool_max_size>50</client_pool_max_size>
   </client_pool>
   <DBPool>
     <database_type>oracle</database_type>
     <database_ip>127.0.0.1</database_ip>
     <database_port>1521</database_port>
     <database_sid>ORC</database_sid>
     <database_user>maxgauge</database_user>
     <database_password>maxgauge</database_password>
     <query_timeout>10</query_timeout>
   </DBPool>
  </DefaultOptions>
</DataGather>
```

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| slave_gather_list | Set the Slave DG List.  
     - IP: Configured in a port format. Use a comma ‘,’ to add a slave.  
       ex) 127.0.0.1:7001,127.0.0.1:7002 |
| database_type    | Set the Repository’s Database type.  
     - Oracle Database: oracle |
| database_ip      | Set the IP of the Repository Database to be connected to JDBC. |
| database_port    | Set the Repository Database Port to be connected to JDBC. |
| database_sid     | Set the name of the Repository Database to be connected to JDBC.  
     - Oracle Database: SID Name |
| database_user    | Set the user name of the Repository Database to be connected to JDBC.  
     - Oracle Database: maxgauge |
| database_password| Set the user password of the Repository Database to be connected to JDBC.  
     - Oracle Database: maxgauge |
| tablespace       | Tablespace Name which will create the Repository Table. |
| index_tablespace | Tablespace Name which will create an index in the Repository Table. |
4. Execute `Data Gather_M/bin/dginstall.sh` file.

   `$ /dginstall.sh`

5. Select the **Install Repository** option and create a table in the Repository Database.

6. Start the **Data Gather** Process by using the `dgboot` command in the `Data Gather_M/bin` and `Data Gather_S1/bin`.

   `$ .dgboot`

7. Check to confirm that **Data Gather** Processes are running properly.

   `$ ps –ef | grep DG`

---

**Note.** If you find the DG Process is malfunctioning, stop the DG Process by using the `dgdown` command.
PlatformJS Individual Installation (Unix/Linux based)

Be released after August 2016/08 New Java PlatformJS supports the Oracle / PostgreSQL Repository, and you can select repository and change settings through install.sh.

From version 5.3.2 and requires Java 1.8 or later.

1. Installation File Upload

To install PlatformJS in a Linux environment, the following installation files are required and you need to upload these files in a binary format.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[MFO5.3]<em>[PlatformJS]</em>[File Ver].tar</td>
<td>PlatformJS installation file.</td>
</tr>
</tbody>
</table>

Example

Ex) OS : Linux

FTP> put MFO5.3_PlatformJS_Linux_160221.tar

2. Installation File Unzip

Unzip the the uploaded files in the maxgauge user home directory. The unzip method is as follows.

```
$ unzip [MFO5.3]_[PlatformJS]_[File Ver].zip
```

Example

```
$ unzip [MFO5.3]_[PlatformJS]_[160810].zip
```

3. Run Install Script

Uncompress and use the configuration.bat inside to enter the information for the Repository DB to perform the silent installation. Depending on the type of Repository DB, there are some differences in the input items. Input values are as follows.

the first Menu is the description of each option

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Configurations .</td>
<td>Set the value in the config.json file for PlatformJS startup.</td>
</tr>
<tr>
<td>2. SSL Settings</td>
<td>Set the setting value when using SSL</td>
</tr>
<tr>
<td>( Current state : Disabled )</td>
<td></td>
</tr>
<tr>
<td>3. Port Settings</td>
<td>Used to change the PlatformJS Http Service port.</td>
</tr>
<tr>
<td>( Current port: 8080 )</td>
<td></td>
</tr>
<tr>
<td>4. Log Settings</td>
<td>Used to change the PlatformJS Log option</td>
</tr>
<tr>
<td>5. Exit</td>
<td>Exit the Install Helper</td>
</tr>
</tbody>
</table>
## Configurations option

<table>
<thead>
<tr>
<th>항목</th>
<th>설명</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataGather IP</td>
<td>Master DataGather installer environment IP</td>
</tr>
<tr>
<td>DataGather Port</td>
<td>Master DataGather Port</td>
</tr>
<tr>
<td>Repository DB Type</td>
<td>Repository DB type(1 : PostgreSQL / 2 : Oracle)</td>
</tr>
<tr>
<td>Database Server</td>
<td>Repository DB IP</td>
</tr>
<tr>
<td>Database Port</td>
<td>Repository DB Port</td>
</tr>
<tr>
<td>Database Name</td>
<td>Port information assigned to the DataGather</td>
</tr>
<tr>
<td>Database User</td>
<td>Repository DB user name</td>
</tr>
<tr>
<td>Database Password</td>
<td>Repository DB user password</td>
</tr>
<tr>
<td>Service Port</td>
<td>Port to be used by PlatformJS</td>
</tr>
</tbody>
</table>

### Example

```bash
$ sh configuration.bat
```

```
PlatformJS Configuration

1 : Configurations
2 : SSL Settings ( Current state : Disabled )
3 : Port Settings ( Current port: 8080 )
4 : Log Settings
0 : Exit
Select Number :1

Configurations

Step 1. DataGather IP [ Default : 127.0.0.1 ] < BACK : 0 >
Input Text :
127.0.0.1

Step 2. DataGather Port [ Default : 7000 ] < BACK : 0 >
Input Text :
7000

Step 3. Repository DB Type [ Default (1)PostgreSQL ] < BACK : 0 >
1.PostgreSQL
2.Oracle

Select Number : 2
Oracle
```
Step 4. Database Server [ Default : 127.0.0.1 ] < BACK : 0 >
Input Text :
127.0.0.1

Step 5. Database Port [ Default : 1521 ] < BACK : 0 >
Input Text :
1521

Step 6. Database Name [ Default : MFO ] < BACK : 0 >
Input Text : DEVQA21

Step 7. Database User [ Default : maxgauge ] < BACK : 0 >
Input Text : c##maxgauge

Step 8. Database Password [ Default : maxgauge ] < BACK : 0 >
Input Text : maxgauge

Step 9. Service Port [ Default : 8080 ] < BACK : 0 >
Input Text :
8080

==========================================
Confirm
==========================================
Datagather IP     : 127.0.0.1
Datagather Port   : 7000
Database Type     : Oracle
Database Server   : 127.0.0.1
Database Port     : 1521
Database Name     : DEVQA21
Database User     : c##maxgauge
Database Password : maxgauge
Service Port      : 8080

Do you want to save? 1.Save  2.Cancel [ Default (1)Save ]

Select Number : 1

### Saved ###
press any key to continue.

PlatformJS Configuration

PlatformJS Configuration

1 : Configurations
2 : SSL Settings ( Current state : Disabled )
3 : Port Settings ( Current port: 8080 )
4 : Log Settings
Java PlatformJS run method

If you want run configuration.bat from the extracted folder

The platformjs.start.sh, platformjs.stop.sh shell files are created and you can control the behavior of PlatformJS using these files.

How to use is as follows

PlatformJS start

```
$ sh platformjs.start.sh
PlatformJS
Select the operation mode you wish to perform.

1. Release Mode (background execution)
2. Debug Mode (Console execution)

Choose Mode (Enter Key, Default '1'):
```

<table>
<thead>
<tr>
<th>Operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Release Mode (background execution)</td>
<td>Start PlatformJS as a background process</td>
</tr>
<tr>
<td>2. Debug Mode (Console execution)</td>
<td>Start PlatformJS by hanging into that session</td>
</tr>
<tr>
<td></td>
<td>(You can check the log.)</td>
</tr>
</tbody>
</table>

PlatformJS stop

```
$ sh platformjs.stop.sh
Waiting 10 seconds for jetty to stop
WARNING: Server reports itself as Stopped
```

MaxGauge Configuration

To start MaxGauge, set the required information in MaxGauge Configuration. For settings, follow the steps below.
1. On Google Chrome, go to http://LINUX_PLATFORMJS_Installation IP:PORT/MAXGAUGE/Config. (When executing PlatformJS in a Linux environment, to enter the address, you must type MAXGAUGE in all capital letters.)

2. Log onto the default account. (ID: admin / PW:manager)

3. Set the Instance, Account, Alert, SMS settings.

---

Note. For more detailed instructions on MaxGauge Configuration, please reference "MaxGauge Configuration Manual".
To find out more about MaxGauge or if you have interesting about this product, contact MaxGauge.

www.MaxGauge.com

TEL : 714-833-2055
E-MAIL : sales@maxgauge.com
ADDRESS : 20280 S Vermont Ave Suite200, Torrace, CA 90502, USA

ABOUT US
MaxGauge, INC is a solution based technology company that has been providing database optimization and tuning services since 2001 with our software solution. We have served 450 clients across a wide range of industries including finance, manufacturing, government, healthcare, telecommunication, etc.