

Commodity DataServer Installation Guide



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Install

Prerequisites:

Commodity DataServers must meet the following minimum requirements:

- Multi Core x86 64bit CPUs 2.6Ghz or greater Intel/AMD running on SUN/HP/DELL/IBM hardware
- Swap is 2 x RAM
- Internet connection initiated by the Commodity DataServer for data update delivery using https (tcp443) to ftp.lim.com
- SMTP mail relay available to send email to limupdates@lim.com for Commodity DataServer monitoring
- A dedicated Commodity DataServer Disk partition sized per minimum requirements noted below - cannot be NFS
- Two Local Morningstar Commodity User accounts set up:
 1. Reader /Custom Data
 2. Writer
- System Backup Procedures in place
- Commodity DataServer should run on dedicated systems
- Commodity DataServer Minimum Operating System Requirements - 64bit
- Solaris 10 update 8 x86 64bit and above
- Redhat Enterprise Linux 5.2 64bit and above
- Ubuntu 10.04 LTS 64bit

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- Oracle 10g or 11g database
 - MySQL 5.1.41 - 5.5.8
 - OS Installed Software: wget, sharutils (uuencode/uudecode), mail (sendmail/postfix), ksh, portmap
 - Any other OS voids Commodity DataServer Support

Virtual servers, Solaris Zones, etc – Morningstar Commodity provides support for the Commodity DataServer in these environments provided the minimum requirements above are met and the virtualization software is transparent

- Standard Performance Commodity DataServer - 8 cores 2.6Ghz - 16GB - 800GB MIM Storage
- High Performance Commodity DataServer - 8 cores 2.8Ghz - 24GB - 2.7TB MIM Storage
- Ultra Performance Commodity DataServer - 8 cores 3.0Ghz - 64GB - 5.4TB MIM Storage

Install Commodity DataServer

On Unix Server

Setup the users on the UNIX system.

Run bash first as root (typically on /usr/bin/bash for Solaris, /bin/bash for Linux)

```
groupadd lim
```

```
useradd -s `which bash` -g lim -m lim -p '-lim-'  
useradd -s `which bash` -g limih -m lim -p '-lim-'
```

So the following files should have something like this in them, for example:

```
/etc/passwd  
lim:x:510:501:limrel:/home/lim:/bin/bash  
limih:x:512:501:limrelih:/home/limih:/bin/bash
```

```
/etc/shadow  
lim:$1$yy6rJgZW$XdQUB8EW40kysL0MOPpBq0:14743:0:99999:7:::  
limih:$1$yy6rJgZW$XdQUB8EW40kysL0MOPpBq0:14743:0:99999:7:::
```

Installation:

Standard Commodity DataServer ports:

User	Port
------	------

lim	6464
-----	------

limih	6400
-------	------

Databases and Commodity DataServer binaries, etc:

Become the lim user (or the administrative user for the writing of Morningstar Commodity provided data):

Login as 'lim'

```
su - lim
```

Get dbs from <ftp.lim.com>

```
ftp -n ftp.lim.com <<EOM
user cust ftp4cust
cd <CUSTOMER NAME/DropOff Folder>
bin
prompt
passive
mget *
EOM
```

Uncompress and move into the appropriate directories

Download Golden Image.

Base Package

Solaris: `lim_sx64_ws.tar.gz` & `limih_sx64_ws.tar.gz`

Linux: `lim_lx64_ws.tar.gz` & `limih_lx64_ws.tar.gz`

Update Commodity DataServer Binary

Download from <http://customers.lim.com/download/mimserver>

Solaris: `latest_stable_mim_server_binaries_64_sx86.tgz`

Linux: `latest_stable_mim_server_binaries_64_lx86.tgz`

Extract archive directly into each users respective home directory

```
# Modify .limrc to reflect CUSTNAME and environment
# Modify .xmimrc with the to reflect the available databases
(Below command will automate this process)
perl -pi'.sav' -e 'if(/database:){ s/.*\n//; if(! $dbsDone){
$dbsDone=1; foreach my $db ( split(/\s+/, $ENV{"limUserDbs"} ) ){print
"echo \"database:          \\\$LIMHOME/$db/xmim.mim\\\"\\n"; }} }' .xmimrc;
diff mimTools/templates/.xmimrc .xmimrc
```

- For instructions on how to verify the status or troubleshooting suggestions, refer to the Troubleshooting section in the Appendix.

Publisher Installation ****If Licensed**

Publisher Instructions

http://www.lim.com/sites/default/files/mim_publisher.pdf

Install Tomcat Services

Prerequisites

- **Commodity DataServer**
A standard Commodity DataServer. Minimum version 4.7.1.37 and above. See previous section on how to install the Commodity DataServer.
- Oracle 10g or 11g
- MySQL 5.1.41 -- 5.5.8

Overview

At the time of writing here:

- **API:** API services root indicating the overall status of API/* services. When this shows an error, API/* are not accessible.
Note: All API/* services require user authentication (log-in.)
- **API Schema:** Meta-data service under API.
- **API Search:** Search service under API/.

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- **API Shortcuts:** Shortcut service under API/.
 - **Entitlements:** Entitlement service to support dashboard
 - **Jobs:** Jobs service
 - **QA:** LIM QA service
 - **Uploader:** Data-Upload service

The standard for which account runs the following:

User	Function
Lim	Writing of LIM provided data
limih	Writing of non-lim provided data & Reader User

Setup

Verify appserver ports; change ports if needed.

Standard ports:

User	Port	Function
limih	9090	WebServices
limih	8443	SSL Connector port
limih	9092	AJP port

Install **shortcuts**, search, and jobs

Many of the web services (ex. shortcuts, search, jobs) run under the Commodity DataServer reader account (limrdr).

- Start the services


```
start.server
$LIMHOME/appserver/bin/startup.sh
```

-
- Build the index.

```
$LIMHOME/mimTools/cronjobs/idxBuild-2.0.sh &  
tail -f $LIMHOME/mimTools/logs/index-build_*
```

 - Setup a cronjob to run it nightly.

```
crontab -e
```

 - Build Search Index 3:10 am

```
10 3 * * * /home/lim/mimTools/cronjobs/idxBuild.sh >  
/dev/null 2>&1
```

 - Recommended crontab scheduling is nightly.**

- Verify context.xml is correctly configured
Example jobs.mail.host = localhost (or appropriate mail relay)

Web Services Data Loader Installation

The Web Services Data Loader is installed under the limih user account, since it writes custom data.

WS Data Loader Instructions

- See - [LIMWebServiceDataLoader.pdf](#)

WS API Instructions

- See [Web Service User Guide](#)

Testing the Web Services

URL to test if the Web Services are successfully installed

`http://server_url:port/status/`

Should look something like:

LIM Web Services

Service (Version 2.0.1-b000) Statuses

Inspector: lim

Time: Wed Jul 21 12:02:53 CDT 2010

Service	Status Code	URI	Message
API Entitlements	200	http://aussm40-z47.lim.com:9660/rs/api/entitlements	OK
API Schema	200	http://aussm40-z47.lim.com:9660/rs/api/schema/relation/TopRelation	OK
API Search	200	http://aussm40-z47.lim.com:9660/rs/api/search?search=ng&max_results=1	OK
API Shortcuts	200	http://aussm40-z47.lim.com:9660/rs/api/shortcuts/users	OK
API Uploader	200	http://aussm40-z47.lim.com:9660/rs/api/upload/jobreport/0	OK
Entitlements	200	http://aussm40-z47.lim.com:9660/rs/entitlements	OK
Jobs	200	http://aussm40-z47.lim.com:9660/rs/jobs	OK
QA	200	http://aussm40-z47.lim.com:9660/rs/qaservices	OK
Search	200	http://aussm40-z47.lim.com:9660/rs/search?search=ng&max_results=1	OK
Shortcuts	200	http://aussm40-z47.lim.com:9660/rs/shortcuts/users	OK
Uploader	200	http://aussm40-z47.lim.com:9660/rs/upload/jobreport/0	OK

Database Creation

Oracle

Morningstar Commodity support does not perform or maintain Oracle installation, configuration, or database engine management.

For Oracle, the DBA should refer to the document: [Web Services Administration Guide for RDBMS Oracle Version 1.2](#) for more information.

Usage Processes

Load

A single java process will parse the Commodity DataServer Log insert the user, timestamp, rel_id (symbol), and entitlement group granting/denying access into the MIM_ACCESS_LOG table.

Modify

\$LIMHOME/mimTools/mimEntitlementsSync/authority/accessLogging/Load_mim_server_logs.sh for the correct SQL server to load logs to.

- Oracle example

- \$JAVA_HOME/bin/java com.Lim.serverLog.MimLogProcessor

oracle.jdbc.OracleDriver 'jdbc:oracle:thin:

{DatabaseName}/{Username}@{ServerName}:1521:{SID}' {DatabaseName}.

mimlog

\$LIMHOME/mimTools/mimEntitlementsSync/authority/accessLogging/serverLogSpool

\$LIMHOME/mimTools/mimEntitlementsSync/authority/accessLogging/serverLogArchive

- The last arguments are the directory containing the log to load, and the directory to move them to once complete.

ausm50-i01:liment> crontab -l

*9 * * * **

/home/liment/mimTools/mimEntitlementsSync/authority/accessLogging/Load_mim_server_logs.sh >>

/home/liment/mimTools/mimEntitlementsSync/authority/accessLogging/Logs/load_mim_server_logs.log

Dirs to cleanup -

/home/liment/mimTools/mimEntitlementsSync/authority/accessLogging/serverLogArchive

Modify vi \$LIMHOME/appserver-data/mim_persistence.properties for the SQL table to read usage history from.

The log files contain a number of fields, including username, symbol name, client IP address, entitlements group name, and access timestamp. An example row in the data access log

(\$LIMHOME/tmp/.xmim_server_{port#}.log):

<!-- xmim_server (master) startup at Thu Nov 5 15:13:25 2009 -->

<!-- Slave server 1 started on host ausLd44, pid=27837, at Thu Nov 5 15:13:30 2009 -->

```
12.43.227.78 - craig [05/Nov/2009:15:13:47 -0600] "GET
/daily/NYMEXCL.EDF_BALMO/MarkVal/08-18-2009/10-15-2009" 200 0 "-"
"/xmim_get" "ausLd44.0000000001:27837" "plattsdispatch_AA"
10.2.1.84 - craig [05/Nov/2009:15:13:51 -0600] "GET
/daily/NYMEXCL.EDF_BALMO/MarkVal/08-13-2009/11-22-2009" 200 0 "-" "[java
com.Lim.mimapi] GetRecords" "ausLd44.0000000003:27837"
"plattsdispatch_AE"
<!-- xmim_server shutdown at Thu Nov 5 15:14:02 2009 -->
```

To view which users are accessing certain datasets over a given timeframe (1 month), query the MIMLOG table for the 'raw' data for the 1 month and allow the client to manipulate the data as is required.

Troubleshooting

Relates to Commodity DataServer Install section

All Commodity DataServer instances should be up and running.

Here is how to tell:

Verify the Commodity DataServer Instance is running

1. `ps -ef | grep xmim_server` (You should see 2 Total Responses running)
2. `server.info` (Verify Version in Output)

Verify Tomcat is Running

1. `ps -ef | grep java`
2. `telnet localhost (tomcat port)`
3. `tail -100 $LIMHOME/appserver/logs/catalina.out`
4. From Web Browser
`http(s)://{ServerURL}:{PORT}/rs/api/schema/relations/TopRelation`