### History

<table>
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<th>Authors</th>
<th>Date</th>
<th>Comments</th>
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<td>1.2.0</td>
<td>S. Guyomarch, A. Briand</td>
<td>22/03/2012</td>
<td>PostgreSQL database, RESTful web service for modus 1, ZIP files and <code>dynamicConfig.xml</code>, SEGY format, Nagios monitoring <code>tnsnames</code></td>
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<td>1.2.0.a</td>
<td>S. Guyomarch</td>
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<td>Add Seismic data visualization for GeoSeas project</td>
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<td>14/11/2012</td>
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<td>1.4.1</td>
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<td>A. Briand</td>
<td>18/10/2013</td>
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### The current document can be found at:

http://www.seadatanet.org/Standards-Software/Software/Download-Manager

### References documents

1. [SeaDataNet Datafile Formats, version 1.13](http://www.seadatanet.org/Standards-Software/Data-Transport-Formats)
2. Download Manager User Manual

http://www.seadatanet.org/Standards-Software/Software/Download-Manager

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<td>S. Brégent</td>
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<td>Evolutions on checker results: multiple results files can be stored. URL has been updated: 4.3</td>
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References documents

1. [SeaDataNet Datafile Formats, version 1.13](http://www.seadatanet.org/Standards-Software/Data-Transport-Formats)
2. Download Manager User Manual

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1. Introduction

News on 1.4.7

Configuration steps are simplified:
- DM Batches: Only config.properties. No more log4j_www.properties
- DM Servlet: Only web.xml. No more log4j.properties. No more config.properties

This document describes the installation and configuration of the Download Manager software, part of the CDI/RSM ordering system of SeaDataNet. It also describes the preparation of data that must be done before the start of software installation.

SeaDataNet Software Architecture

DownloadManager (in cyan blue in the picture) is divided into 2 components:
- A Servlet (a web application running under Tomcat) that manages the connection between the Download Manager and the “outside world”: it is called by the RSM when client requests are waiting to be processed, and it handles downloading of data by the user
- 3 Java Batches program:
  - DM_Batch that processes users’ requests,
  - DM_ToolsBatch that removes users’ files older than a month and update BODC vocabulary files if needed
  - DM_Checker that can be run manually to perform several checks on coupling table and XML mapping files,

The 2 components can also be installed on the same server. If not, be careful that the access to the download_path is the same on the two servers.

The installation and configuration steps for each component of the Download Manager are described in the following paragraphs. As the installation can be customize by the data centre, two installation ways are detailed: Basic and Custom.

sdn-userdesk@seadatanet.org -- www.seadatanet.org

SeaDataCloud: Further developing the pan-European infrastructure for marine and ocean data management

Grant Agreement Number: 730960
2. Requirements

2.1. Documents

Use InstallSheet (§3.1). You will have to fill it during the next steps.
This InstallSheet will greatly help you during DM installation.
This InstallSheet is mandatory if you need help from MARIS (cdi-support@maris.nl) or IFREMER (sdn-userdesk@seadatanet.org).

Fill the InstallSheet fields from A1 to A4.

2.2. Operating system

The Download Manager can be installed on both the Windows and Linux platform.

Fill the S1 InstallSheet field with your operating system.

The following software/components are required before installing the Download Manager:

2.3. Java

The Download Manager requires at least Java SE JRE version 1.7, but JRE v1.8 is recommended.
One of the recommended Java SE JRE can be downloaded from http://www.oracle.com/technetwork/java/javase/downloads/index.html.
Check if Java is available by executing command ‘java –version’ in the command line of windows or terminal of *nix distribution.

Fill the S2 InstallSheet field with your java version.

2.4. Tomcat

The supported versions of Tomcat webserver are version 8 and version 7.
Download the Tomcat web server at http://tomcat.apache.org/.
Basic installation: use the port 80.
Custom installation: choose your tomcat port

Fill the S3 InstallSheet field with your tomcat version.
Fill the S4 InstallSheet field with your tomcat appbase directory (“webapps” directory where tomcat applications are deployed)

If you want to run Tomcat on another port, see §6.1.

Custom only: Fill the S5 InstallSheet field with your tomcat port

2.5. Network, firewall and proxy

IP address
Fill the A5 InstallSheet field with your public IP address.

**Firewall**

**Basic installation:**

Your firewall must have **port 80 open** in order to allow incoming and outgoing requests:
- **from** to the Maris CDI/RSM ordering system (from 77.87.163.227 and to 77.87.163.211 (seadatanet.maris2.nl))
- **from** the two NAGIOS monitoring systems:
  - at HCMR (netmon4.ath.hcmr.gr or 195.251.37.48)
  - at OGC (trilone.ogs.trieste.it or 140.105.70.47)
- **to** the BODC vocab web services (vocab.nerc.ac.uk or 192.171.196.70)

Your firewall must have **port 443 open** to allow outgoing requests to **the IFREMER authentication web services** the CAS marine-id and central AAA service (134.246.142.39 or vpublicnew.ifremer.fr).

**Custom installation:**

If your Download Manager uses 2 IP addresses (one for receiving requests and one for sending requests) to communicate with the outside, send MARIS these 2 address using the DM InstallSheet.

**Custom only:** Add your second IP address in the A5 InstallSheet field.

**Proxy**

Fill the N1 InstallSheet field: set YES if your network is behind a proxy, NO if not.

If your network is behind a proxy:

Fill the N21, N22 and N23 InstallSheet fields with proxy connection information.

---

### 2.6. **Supported databases**

The Download Manager can handle data and/or coupling table from a database, see [2].

Download Manager supports 5 types of databases: Oracle, MySQL, Microsoft SQL Server, Sybase and PostgreSQL.

The drivers loaded by the DM Batch are displayed on the DM Batch log file at each start.

Available drivers are:

- **Oracle:** ojdbc14 v12.2.0.3.0
- **MySQL:** mysql-connector-java v5.1.26
- **PostgreSQL:** jdbc3 v9.1-901
- **MS SQLServer:** sqljdbc4 v4.0
- **Jtds:** jtds v1.2.6

### 3. Installation

This section describes how to install the Download Manager.

**If data preparation not already done, follow the Download Manager User Manual [2] before perform installation.**
### 3.1. **InstallSheet**

<p>| | | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td><strong>Partner name</strong>&lt;br&gt;<strong>Name of the Data Centre</strong></td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td><strong>EDMO Code</strong>&lt;br&gt;<strong>EDMO code of the Data Centre</strong></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td><strong>Technical contact (for Nagios)</strong>&lt;br&gt;The person who will be notified by the NAGIOS monitoring system that the Download Manager is no longer replying to the monitoring requests thus it is considered offline</td>
<td>Name: &lt;br&gt;Email:</td>
</tr>
<tr>
<td>A4</td>
<td><strong>Partner contact (for data requests approbation)</strong>&lt;br&gt;E-mail address of the contact at the Data Centre that will deal with data requests&lt;br&gt;Login is the SeaDataNet ID obtained from the AAA authority server</td>
<td>Name: &lt;br&gt;Login: &lt;br&gt;Email:</td>
</tr>
<tr>
<td>A5</td>
<td><strong>Partner IP address</strong>&lt;br&gt;The IP address of the server at the Data Centre that is going to communicate with the RSM service at the portal. The CAS server requires the IP address of the DM server. Therefore please communicate the server’s IP address to MARIS beforehand because your IP address also has to be registered at the CAS server (operated by IFREMER).&lt;br&gt;&lt;br&gt;<strong>Basic:</strong> give your public IP address&lt;br&gt;<strong>Custom:</strong> give the 2 IP addresses and port</td>
<td></td>
</tr>
<tr>
<td>AT6</td>
<td><strong>Partner notify URL test</strong>&lt;br&gt;**URL of the local Download Manager to notify the DM that there are data requests awaiting at the RSM Webservice. When this URL is called, a file DM_Batch.start is created in the directory &lt;download_path&gt;/tmp/where&lt;download_path&gt; is the path to the directory defined in config.properties files.&lt;br&gt;Eg. &lt;br&gt;http://server_IP_address:80/dm/controller&lt;br&gt;&lt;br&gt;<strong>Custom:</strong> replace “dm” with the DM test Servlet directory</td>
<td>XXX/dm-test/controller&lt;br&gt;Where XXX is A5 InstallSheet field</td>
</tr>
<tr>
<td>AP6</td>
<td><strong>Partner notify URL production</strong>&lt;br&gt;Same as AT6, for production mode&lt;br&gt;&lt;br&gt;<strong>Custom:</strong> replace “dm” with the DM production Servlet directory</td>
<td>XXX/dm/controller&lt;br&gt;Where XXX is A5 InstallSheet field</td>
</tr>
</tbody>
</table>

| N1 | Is your network behind a proxy? |   |
| N21 | Proxy URL |   |
| N22 | Proxy user |   |
| N23 | Proxy password |   |

| S1 | Operating system |   |
| S2 | Java JRE version |   |
| S3 | Tomcat version |   |
| S4 | Tomcat appbase directory |   |
| S5 | Tomcat port (**Custom only**) 80 |   |
3.2. Preparation


Put and unzip the DownloadManager-x.y.z.zip file in a temporary directory <tmpDir>.

Choose the directory where you want to install the DM Batches. This directory will be named <dm_datacentre_dir> in the next steps of this document.

| DT1 | DM batches test install directory |
| DT2 | DM batches test download directory |
| DT3 | DM batches test data directory |
| DT4 | DM mapping files directory path |
| DT5 | DM logs test directory |

| DP1 | DM batches production install directory |
| DP2 | DM batches production download directory |
| DP3 | DM batches production data directory |
| DP4 | DM mapping files directory path |
| DP5 | DM logs production directory |

Fill the DT1 InstallSheet field with your DM Batch test install directory path.

Choose a directory on your server where you want to store daily result data ZIP files generated by the DM_Batch. The directory should not be accessible through the internet.

Fill the DT2 InstallSheet field with your DM Batch download directory path.

You must have stored your pre-processed data files (SeaDataNet ODV, MedAtlas, NetCDF CFPOINT formats) in a directory (see [2]).

Fill the DT3 InstallSheet field with your DM Batch data directory path.

Choose a directory on your server where you want to store mapping files (only if modus 2 is used).

Fill the DT4 InstallSheet field with your mapping files directory path.

3.3. Installation summary

To be ready to move backwards if needed, be sure that you save (by renaming) the current directories DM_batches and dm-test (or dm in production).

As briefly detailed in sections 3.4 and 3.5, start from scratch by copy the directory of the delivery and update the configuration files with the configuration of your data centre:

Batches configuration files (3 steps briefly detailed below):
- config/config.properties (see §3.4.1)
- config/coupling.txt (only if coupling is in file) (see §3.4.2)
- config/dynamicConfig.xml (see §3.4.4)

Servlets configuration files (1 step briefly detailed below):
- WEB-INF/web.xml (see §3.5.1.2)
Warning: Do not copy old configuration files over the new, since some new settings could have been added (or removed) in new release. It is recommended to manually compare the old and new configuration files and manually copy the relevant lines from one to the other.

You will contact the MARIS team using cdi-support@maris.nl about the new installation in order to be added in their Request Status Manager (RSM) service and for the testing of the new installation.

3.4. DM batches installation

Copy the current DM batch directory to a directory that will serve as back-up (mv dir_yyyymmdd).

Copy the directory of the delivery<tmpDir>/DownloadManager_vX.Y.Z/DownloadManager_installPackage/batch_install_dir/DM_batches to the DM directory of your data centre<dm_datacentre_dir>.

3.4.1. Configuration of the config.properties file

Edit the file <dm_datacentre_dir>/DM_batches/config/config.properties, and modify the properties below.

```properties
# test_mode=x (where x=1 in test mode or x=0 in production mode)
test_mode=x

centre_id=xxx (where xxx=edmo_code, A2 InstallSheetfield)
centre_id=xxx

rsm_server_name=77.87.163.227;195.251.37.48
IP addresses of RSM and Nagios. Do not change!

logs:
DM_Batch_log_path=(DT2 or DP2 InstallSheetfield)
DM_Checker_log_path=(DT2 or DP2 InstallSheetfield)
DM_Tools_log_path=(DT2 or DP2 InstallSheetfield)
DM_Servlet_log_path=(DT2 or DP2 InstallSheetfield)

Custom installation only:
The logs can be written in separated directories. The constraint is that the files must be readable from the Tomcat server on which the DM Servlet in installed.
The log level can be defined manually with DM_xxx_log_level properties. Use “ERROR”, “INFO” (default), or “DEBUG”.
The log can be displayed in the console manually with DM_xxx_log_console properties. Set property to “ON” or “OFF” (default is OFF)
download_path=(DT2 or DP2 InstallSheetfield)
download_path=(DT2 or DP2 InstallSheetfield)
data_path=(DT3 or DP3 InstallSheetfield)
data_path=(DT3 or DP3 InstallSheetfield)
mapping_files_path=(DT4 or DP4 InstallSheetfield)
mapping_files_path=(DT4 or DP4 InstallSheetfield)

See section 3.4.3
coupling_table_dbms=x (where x=0 if coupling table is in file or x=1 if coupling table is in database)
coupling_table_dbms=x

If your coupling table is in a file, it must be in <dm_datacentre_dir>/DM_batches/config directory
If your coupling table is in a database, you must fill the properties: coupling_table_connection,
coupling_table_user, coupling_table_password and coupling_table_tablename.
```

```properties
# custom installation only:
coupling_table_dbms=x (where x=0 if coupling table is in file or x=1 if coupling table is in database)
coupling_table_dbms=x

coupling_table_connection=your_connection_string

coupling_table_user=your_username

coupling_table_password=your_password

coupling_table_tablename=your_table_name
```
Note for MS SQL Servers:
If you want to use Microsoft Windows authentication instead of set the login/password in the config file, you can use the jtds driver:

coupling_table_connection=jdbc:jtds:sqlserver://<server>:<port>/<database_name>

In this case, coupling_table_user and coupling_table_password will be ignored and can be empty

rsm_cdi_format_map_url_prefix=http://seadatanet.maris2.nl/dm_checker/get_page.asp?v1=

Do not change!

Only if your network is behind a proxy:
proxy(N21 InstallSheet field)
proxy_user(N22 InstallSheet field)
proxy_password(N23 InstallSheet field)

Only if you use a visualisation service:
service.<serviceName>.baseURL=www.example.com
Example of URL for Geoseas project: xxx.xxx.xxx.xxx/Geo-Seas/zoom.php
service.<serviceName>.title=title example
service.<serviceName>.accessButtonLabel=labelAccessExample
service.<serviceName>.removeButtonLabel=labelRemoveExample

### 3.4.2. Coupling table File

If your coupling table is stored in configuration file (not in database), copy the coupling.txt file of your data centre into the `<dm_datacentre_dir>/DM_batches/config` directory.


### 3.4.3. ODV mapping files

If you have some data stored in database (Modus 2), put the ODV mapping files into the mapping files directory that you have chosen in InstallSheet field DT4/DP4


### 3.4.4. Configuration of dynamicConfig.xml

When pre-processed files are retrieved from the shelf (ie modus 1 or 5), the extension of these files are automatically calculated by the DM Batch (.odv, .txt for SDN ODV, .med for Medatlas, and .nc for NetCDF CFPOINT files).

However, you may want to keep some extensions, like “.zip” or “tar.gz”. These extensions must be specified in the dynamicConfig.xml file.

Edit the file `<dm_datacentre_dir>/DM_batches/config/dynamicConfig.xml`.

**Root node <dynamicConfig>** (mandatory)

This is the root node of the XML document.

```xml
<dynamicConfig>
  ...
</dynamicConfig>
```

**Node <extensionsListExceptions>** is mandatory.
Each file extension that you want to keep should be specified by a `<extension>` child node.

```xml
<extensionsListExceptions>
  <extension>zip</extension>
  <extension>tar.gz</extension>
  <extension>rar</extension>
  ...
</extensionsListExceptions>
```

Note: The extensions zip, tar.gz and rar are already in the default dynamic configuration file.

### 3.5. **DM Servlet Installation**

At the beginning of the §3.2, you unzipped the DownloadManager-x.y.z.zip file in a temporary directory `<tmpDir>`.

You noted your tomcat appbase directory in the InstallSheetS4 field. This directory will be named here `<S4appbase>`.

To be ready to move backwards, rename `<S4appbase>/dm-test` directory into `<S4appbase>/dm-test-
<v.vv>` where v.vv is the version of the DM previously installed.

**Copy the file below into the `<S4appbase>` directory:**

```bash
<tmpDir>/DownloadManager_vX.Y.Z/DownloadManager_installPackage/servlets_install_dir/dm-test.war
```

**Restart tomcat.**

**Custom installation only:** you can rename the DM Servlet directory “dm-test” with the name of your choice.

**Custom:** modify the AT6 and AT7 InstallSheet fields

### 3.5.1. **Configuration web.xml file**

#### 3.5.1.1. **CAS configuration**

To protect the user personal download page by CAS authentication it is required to edit the web server configuration file at path file `<S4appbase>/dm-test/WEB-INF/web.xml`.

**Custom:** replace “dm-test” with the name of you DM Servlet directory in the above path

Find the section:

```xml
<init-param>
  <param-name>edu.yale.its.tp.cas.client.filter.serverName</param-name>
  <param-value>localhost:80</param-value>
</init-param>
```

Edit the parameter value with the correct server IP address and port number for the Data Centre:

**Replace “localhost” by the A5 InstallSheet field**

The CAS window with login and password will be shown if someone will try to get access to this page directly. If the user comes to this download page from the portal Request Status Manager (RSM) service, then the CAS certificate is passed on and the user does not have to log in a second time.
Warning: You have to provide the server’s IP address (or hostname) in this file and also communicate both of them to MARIS to be registered at the CAS server (operated by IFREMER).

3.5.1.2. DM configuration

At the end of web.xml file, fill the dm_configuration_dir property with your DM Batches configuration directory path.

```xml
<!-- Download Manager configuration directory path -->
<env-entry>
    <env-entry-name>dm.configuration.dir</env-entry-name>
    <env-entry-type>java.lang.String</env-entry-type>
    <env-entry-value>/dm_datacentre_dir/DM_batches/config</env-entry-value>
</env-entry>
```

Replace `/dm_datacentre_dir/DM_batches/config` by `<InstallSheet field DT1/DP1>/DM_batches/config`

4. Run the DM

4.1. DM batches Scheduling

The batch programs DM_Batch and DM_Tools must be launched every 5 minutes and every day, respectively. The batch program DM_Checker can be run manually when needed.

**Note:** If your network is behind a proxy, you need to add the options `-DproxyHost=xxx.xxx.xxx.xxx -DproxyPort=xxxx` to the batches command lines, to connect the BODC server and get BODC vocabularies.

4.1.1. Add batches in crontab (Unix/Linux)

DM_Batch should be scheduled to run every 5 minutes and DM_ToolsBatch every day.

**Unix – Crontab**

For DM_Batch, add the following line in crontab:

```bash
0,5,10,15,20,25,30,35,40,45,50,55 * * * * java -Xmx512m -jar <dm_datacentre_dir>/DM_batches/DM_Batch.jar -config <dm_datacentre_dir>/DM_batches/config/config.properties
```

Where `<dm_datacentre_dir>` is DT1 InstallSheet field

For DM_ToolsBatch (cleaner + BODC vocabulary update), add the following line in crontab:

```bash
0 0 * * * java -Xmx512m -jar <dm_datacentre_dir>/DM_batches/DM_ToolsBatch.jar -all -config <dm_datacentre_dir>/DM_batches/config/config.properties
```

Where `<dm_datacentre_dir>` is DT1 InstallSheet field

**NOTE [only if data or coupling table are stored in a database]:** if a tnsnames file is used for database connections, the command option "--Doracle.net.tns_admin=/home/tnsnames" is mandatory.

Example: java -Xmx512m -Doracle.net.tns_admin=/home/tnsnames -jar <dm_datacentre_dir>/DM_batches/DM_Batch.jar -config-dm_datacentre_dir>/DM_batches/config/config.properties.

Where `<dm_datacentre_dir>` is DT1 InstallSheet field
4.1.2. **Add batches in scheduler (Windows)**

**Windows – Scheduler**

For **DM_Batch**, launch a command prompt and execute the following command:

```
  schtasks /create /tn "DM_Batch_periodic_task" /tr "java -Xmx512m -jar \
  "<dm_datacentre_dir>/DM_batches/DM_Batch.jar" \
  "<dm_datacentre_dir>/DM_batches/config/config.properties" /sc MINUTE /mo 5 /RU \
  "<domain>\<user>" /RP <password>
```

*Where* `<dm_datacentre_dir>` is DT1 InstallSheet field

For **DM_ToolsBatch** (cleaner + BODC vocabulary check), launch a console and execute the following command:

```
  schtasks /create /tn "DM_ToolsBatch_periodic_task" /tr "java -Xmx512m -jar \
  "<dm_datacentre_dir>/DM_batches/DM_ToolsBatch.jar" \
  "<dm_datacentre_dir>/DM_batches/config/config.properties" /sc DAILY /st 00:00:00 /RU \
  "<domain>\<user>" /RP <password>
```

*Where:*
- `<dm_datacentre_dir>` is DT1 InstallSheet field
- `<domain>\<user>`: the name under which the job is run
- `<password>`: the password associated with the `<domain>\<user>`

**NOTE:** In Windows, when a task does not seem to run and no DM log file is created, go to Control Panel > Scheduled Tasks, then menu Advanced > View log. This will show any errors that occurred while trying to run the scheduled jobs.

4.1.3. **DM_ToolsBatch**

**DM_ToolsBatch** replace the **DM_CleanerBatch** which was available in the Download manager until the version 1.4.3. This utility cleans user files (as **DM_Cleaner** did) and updates the BODC vocabulary files if needed.

The command is:

```
  java -Xmx512m -jar <dm_datacentre_dir>/DM_batches/DM_ToolsBatch.jar -XXX - \
  config<dm_datacentre_dir>/DM_batches/config/config.properties
```

where XXX = “cleaner” to clean user files or “update” to update BODC vocabulary files or “all” to execute both cleaner and updater actions.

4.2. **Reload DM Servlet in tomcat Application manager**

Open the tomcat Application Manager page on a browser: [http://localhost:80](http://localhost:80)

**Custom:** use the appropriate port instead of 80

Click on “Reload” on the “commands” column, in the dm-test line.
4.3. **Status / log file monitor**

Logs for Batches and servlet configuration is set in config.properties file.

If config.properties file path given as argument to the batch is incorrect, batch process is aborted, and a default log is written in the DM_Batches directory.

If the configuration directory path is not properly set in the Servlet web.xml file and/or the log configuration is incorrect, the servlet log is written in the tomcat catalina.out default log file.

The Download Manager provides a function that allows RSM portal server at MARIS to retrieve log file and configuration information below:

- `dm_batch.log` and all files `dm_batch.log.*` (DM_Batch log files)
- `dm_tools.log` and all files `dm_tools.log.*` (DM_ToolsBatch log files)
- `dm_servlet.log` and all files `dm_servlet.log.*` (DownloadManagerservlet log files)
- `<dm_datacentre_dir>/DM_batches/config/config.properties` (Batches configuration file)
- `<Servlets_install_dir>/WEB-INF/config.properties` (DownloadManagerservlet configuration file)
- `<Servlets_install_dir>/WEB-INF/web.xml`

The following functions can be called from localhost and from the RSM server:

Get DM version:
```
http://<DM_server_address>/dm-test/status?output=version
```

Get today DM_Batch log file:
```
http://<DM_server_address>/dm-test/status?output=logBatch
```

Get DM_Batch log file for the date YYYY-MM-DD if available:
```
http://<DM_server_address>/dm-test/status?output=logBatch&date=YYYY-MM-DD
```

Get today DM_ToolsBatch log file:
```
http://<DM_server_address>/dm-test/status?output=logTools
```

Get DM_ToolsBatchlog file for the date YYYY-MM-DD if available:
```
http://<DM_server_address>/dm-test/status?output=logTools&date=YYYY-MM-DD
```

Get today DownloadManagerservlet log file:
```
http://<DM_server_address>/dm-test/status?output=logServlet
```

Get DownloadManager servlet log file for the date YYYY-MM-DD if available:
http://<DM_server_address>/dm-test/status?output=logServlet&date=YYYY-MM-DD

Get batches configuration file (<dm_datacentre_dir>/DM_batches/config/config.properties):
http://<DM_server_address>/dm-test/status?output=configBatch

Get servlet configuration file (<Servlets_install_dir>/WEB-INF/web.xml):
http://<DM_server_address>/dm-test/status?output=web.xml

Get today DM_Checker log file:
http://<DM_server_address>/dm-test/status?output=logChecker

Get today DM_Checker log file for the date YYYY-MM-DD if available:
http://<DM_server_address>/dm-test/status?output=logChecker&date=YYYY-MM-DD

Get the result list file(s) outputted by the DM_Checker (CAS authentication required):
http://<DM_server_address>/dm-test/catalogCheck

where xxxxxx is your SeaDataNet User Id.

Note that the status page also includes the version of the DM and the dates for which log files are available.

Note: since the log files and configuration files contain sensitive information, the status page can only be called from the DM server itself (localhost) and from the RSM portal server (rsm_server_name in config.properties).

Note: when calling the status servlet, a check is performed on the batches and servlet config.properties files.

If error 500 is returned with message “Servlet configuration file invalid”, check servlet logs to know what is wrong with config.properties files and solve this issue.

The log files and the configuration files are the best method to solve problems. If DM does not work correctly consult the logs before making another action. The messages are explicit and helpful. For common issues see the Troubleshooting section. Please, contact cdi-support@maris.nl if you have questions or consider the issue too cryptic.

4.4. Seadatanet URLs

For running DM in test mode, dedicated CDI and RSM websites are available (see the urls below). These websites operate independently from the production environment. A Download Manager in test mode (test_mode=1 in config.properties files) communicates with these websites.

The test environment is also recommended to be used for first time generation of CDI XML files or new types of measurement that were not done by you or your colleagues before.

The test environment URLs:
CDI: http://seadatanet.maris2.nl/v_cdi_v3_test/search.asp (Portal site for searching, browsing metadata and ordering data.)
RSM: http://seadatanet.maris2.nl/v_rsm_test/welcome.asp (Portal site for managing orders and checking their status.)

The production environment is meant to be used for “real” orders for data files distributed by your center. Download Manager is will be moved to production mode only if it works correctly and the data it serves and the accompanying metadata are complete and valid. A production Download Manager is expected to be running without interruptions on a stable server.

The production environment URLs:
CDI: http://seadatanet.maris2.nl/v_cdi_v3/search.asp
RSM: http://seadatanet.maris2.nl/request/welcome.html

There is also an “import” CDI portal site. This site is only used for checking the correctness and completeness of the metadata before moving it to the production portal.

This site DOESN’T allow for data ordering as the other two and it will only be used for testing the display and correctness of the information in the CDI metadata files.

The import CDI portal can be found at http://seadatanet.maris2.nl/v_cdi_v3_import/search.asp.

Please, note that the 3 URLs are for separate sites and for easy distinction, the test environment is coloured red, while the production environment is blue and the import site is green.

4.5. Run DM in standalone mode

For running DM in standalone mode,

1/ Create files that simulate RSM requests (modus, format, etc.) as below:

```
<xml version="1.0" encoding="utf-8">
<rsm_response local-datetime="2017-06-02 15:06:53">
<request_key>6503</request_key>
<request_id>21</request_id>
<request_date>2017-06-02</request_date>
<CDI_id>410052</CDI_id>
<Local_CDI_id>1001216_PCx_Surf</Local_CDI_id>
<Dataset_name>Q2</Dataset_name>
<formatName SDNIdent="CFPOINT">Climate and Forecast Point Data NetCDF</formatName>
<User_id>ab05xx5</User_id>
<User_role SDNIdent="SDNR03">Academic</User_role>
</datarequest>
</rsm_response>
```

2/ Run DM as described in section §4.1 adding option -t get_datarequests.xml for each file simulating an RSM request.

5. Move to production mode

This chapter explains how to create a copy of the DM test installation and deploy it in production environment.

If DM-RSM connection not already checked in “test mode”, please contact Maris team (cdi-support@maris.nl) before move to production mode.

5.1. Preparation

Choose a directory on your server where you want to store daily result data ZIP files generated by the DM_Batch. The directory should not be accessible through the internet.

Fill the DP2 InstallSheet field with your DM Batch production download directory path.
You must have stored your pre-processed data files (SeaDataNet ODV, MedAtlas, NetCDF CFPOINT formats) in a directory (see [2]). If the DM in production mode uses the same data as the DM in test mode, fill the DP3 InstallSheet with the value of the DT3 field.

**Fill the DP3 InstallSheet field with your DM Batch data production directory path.**

Choose a directory on your server where you want to store mapping files (only if modus 2 is used).

**Fill the DP4 InstallSheet field with your mapping files directory path.**

5.2. **Copy the DM Batches**

Make a copy of your DM batch installation directory (DT1 InstallSheet field).

**Fill the DP1 InstallSheet field with your DM Batch production install directory path.**

5.3. **Copy the DM Servlet**

In the `<S4appbase>` directory (S4 InstallSheet field), copy the “dm-test” directory and paste it with the new name “dm”.

**Custom installation only**: You maybe have renamed the “dm-test” directory with a name of your choice. You can rename the DM Servlet directory “dm” with the name of your choice.

**Custom**: modify the AP6 and AP7 InstallSheet fields

5.4. **Run the DM with production configuration**

Configuration of the batch config.properties file: see §3.4.1.

DM batches scheduling: see §4.1, replace DT1 InstallSheet field by DP1.

Configuration of the servlet web.xml file: see §3.5.1.

Run the DM in production mode: see §4.

6. **Annexes**

6.1. **Run tomcat on a non-standard port**

If you want to run Tomcat on another port than port 80 there are two options:

6.1.1. **Run tomcat “behind” a webserver**

If you are running a webserver such as Apache or IIS (on port 80) it is possible to install Tomcat on a different port, running “behind” the webserver.

This manual does not describe this process, but you can find information online. These are links to the official Tomcat documentation:

6.1.2. Use a proxy to run on a non-standard port

This section only applies if you do not want to run Tomcat on port 80.

In other words, if you use a proxy that listens on port 80 and communicates with Tomcat on another port.

The RSM portal website can only access the Download Manager notification URL on port 80 due to firewall restrictions. That means the data centres would have to install Tomcat on port 80. Some data centres may however want to run Tomcat on a non-standard port since this is often considered to be more secure.

As a solution, a simple proxy can be built. This proxy acts as a "middle-man" between the RSM website and the Download Manager. It should run on a server at the data centre that allows incoming requests on port 80 and outgoing requests on the port that Tomcat/DM is running on. The proxy can be a simple web page or script that checks if an incoming request comes from the right IP address (the RSM website) and then makes a web request to the Download Manager notification URL. (Note that this should be a server-side web request, NOT a client-side redirect.)

This way, the order notifications (the "trigger" that an order is waiting to be processed) will be routed through the proxy, while users that want to download files will still access the DM directly on the alternative port. It should be noted that as always the DM will communicate with the RSM webservice and the AAA webservice through port 80, but these are outgoing requests.

If this proxy solution is used, the setting rsm_server_name in the Download Manager configuration file config.properties should be changed to the IP address of the server on which the proxy is running. The URL of the proxy page should be known at MARIS so it can be called instead of the direct notification URL.

The above solution makes use of the fact that the rsm_server_name setting is ONLY used for checking the IP address of an incoming notification (http://.../dm/controller).

Using a proxy exposes several servlets to outside access and access to these must be stop using rules similar to the ones below:

```
<LocationMatch "/(controller)" >
  Order Deny,Allow
  Deny from all
  Allow from 77.87.163.227
</LocationMatch>
<LocationMatch "/(status)" >
  Order Deny,Allow
  Deny from all
  Allow from 77.87.163.227
  Allow from 195.251.37.48
</LocationMatch>
<LocationMatch "/(index.html)" >
  Order Deny,Allow
  Allow from all
</LocationMatch>
```

or

```
<LocationMatch "/(controller|status)" >
  Order Deny,Allow
</LocationMatch>
```
Deny from all
Allow from 77.87.163.227
</LocationMatch>
<LocationMatch "/dm/(status)" >
    Order Deny,Allow
    Deny from all
    Allow from 195.251.37.48
</LocationMatch>
<LocationMatch "/dm/(index.html)" >
    Order Deny,Allow
    Allow from all
</LocationMatch>