



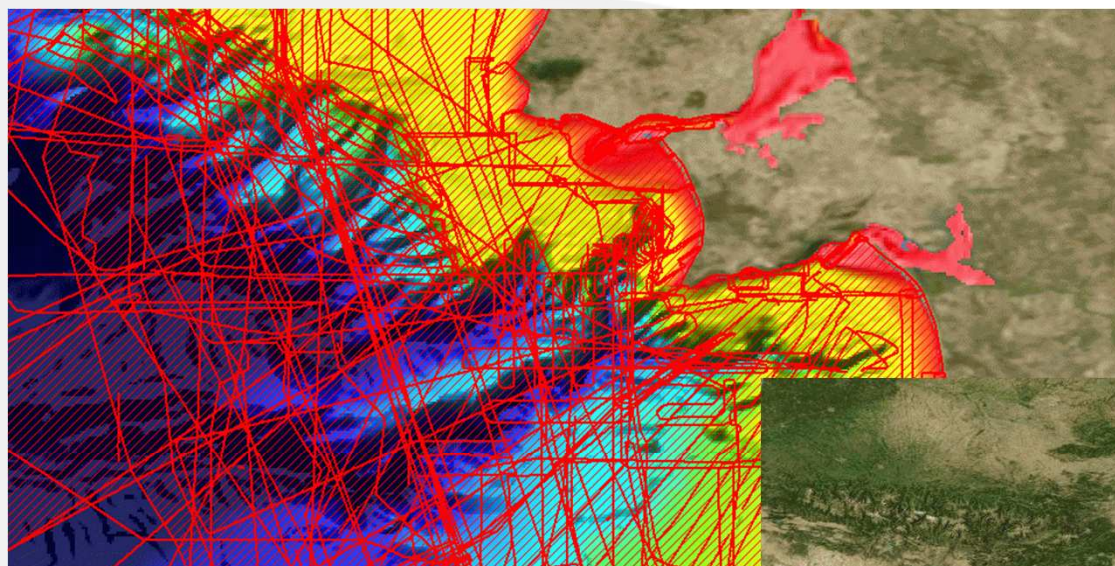
PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT



Download Manager software Training Workshop Ostend, Belgium, 20th May 2014

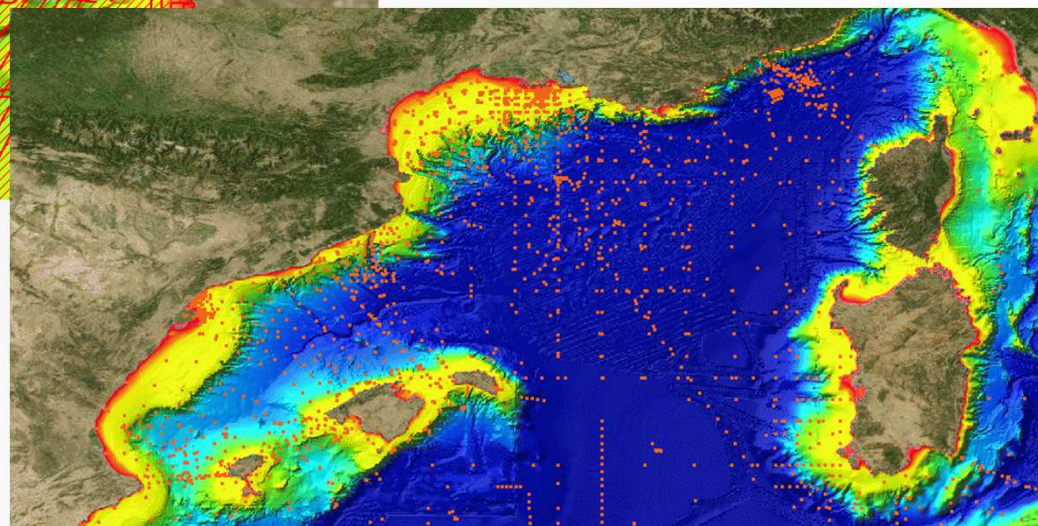
D.M.A. Schaap - Technical Coordinator

Examples of CDI search dialogue



Bathymetric surveys near Lisbon
Portugal

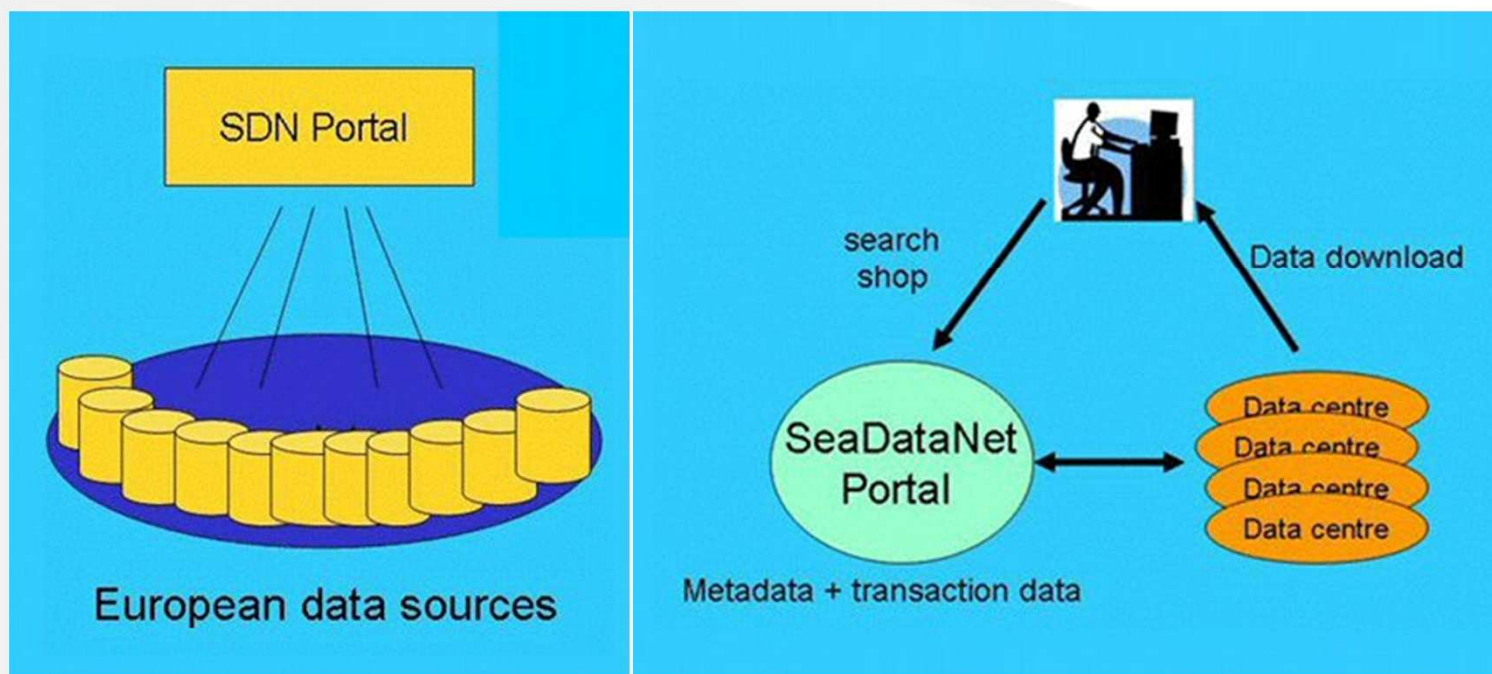
Nutrients data
sets
in West Med



CDI Result Maps

Result maps with EMODNet Bathymetry WMS in background

CDI service for discovery and unified access of data



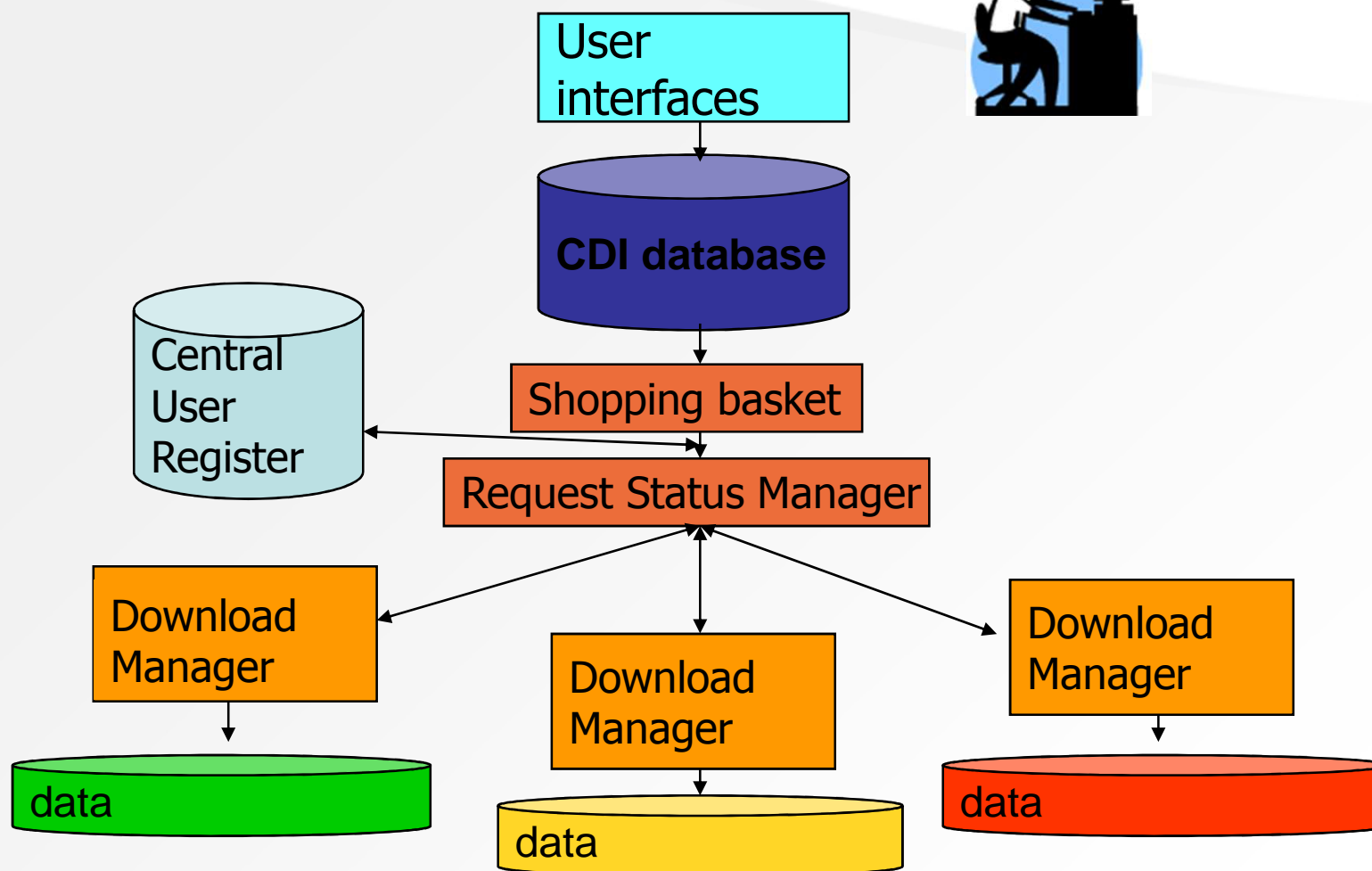
Already more than 90 data centres connected and more underway



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Components of the CDI service



Components of the CDI service

- **SeaDataNet CDI User Interfaces:**
 - For users to discover relevant data sets by combinations of search criteria or by a faceted search
- **SeaDataNet Central User Register with User Roles db + web service :**
 - Details of users, their organizations and addresses, Id-Passwords, Roles
- **SeaDataNet Shopping Basket:**
 - Preparing a user request of multiple data sets, max 10.000 records per transaction, and routing requests to the Request Status Manager

Components of the CDI service

- **SeaDataNet Request Status Manager:**
 - Processing and administration of all requests and data deliveries (downloads), for users in communication with data centres. For data centres to oversee all transactions.
- **Download Manager:**
 - Handles communication with Request Status Manager and takes care that requested files are made ready for downloading by User (if cleared!) in the agreed formats via a local website address.



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RSM and Download Manager

- RSM keeps IP-addresses, EDMO codes, data manager e-mail, trigger addresses etc of all connected Data Centres in config file
- Download Manager is Java programme, that must be locally installed
- Functions DM:
 - Communication with RSM Web service
 - Retrieving and processing order lists after being triggered
 - Double checking user via AAA Web service
 - Retrieving data files, related to requested CDI's, via local_CDI_ID
 - Preparing data files in agreed and requested formats (ODV, MedATLAS, NetCDF)
 - Placing data files in zip format for downloading
 - Informing RSM Web service of order processing status and url's
 - Keeping a local log
- DM support for file management and database storage

Download Manager releases

- 24 January 2013 - Version **1.4.0**
- 13 May 2013 – Version **1.4.1**
- 23 September 2013 – Version **1.4.2**
- 25 October 2013 – Version **1.4.3** (Current release)
- 26 May 2014 – Version **1.4.4** – planned release

Requirement that data centres regularly upgrade to adopt new functionalities

DM V1.4.3 extra features compared to V1.1f

- Allows NAGIOS monitoring
- PostgreSQL support added
- RESTful support for coupling table modus 1
- Improved DM_Checker – compares the entries in the CDI metadata catalogue with the entries in the coupling table
- Improved security model
- Improved client order processing – no check of client access roles
- Improved splitter module
- Simplified upgrade procedure



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DM V1.4.4 extra features compared to V1.4.3

- NetCDF format is supported
- DM_Checker improved for checking consistency at data centre and checking coherence between local data centre and CDI central
- compatible with tomcat7/java7
- DM and its documentation are simpler
- Maris and Ifremer can access more logs files for a better helpdesk service
- bug corrections : database drivers are upgraded + a Splitter bug is corrected + a little update on servlet log display + last corrections on the bug "duplicates entry" + correction on header of ODV files + etc...



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DM – Data Conversion

7.1.1. Data conversion

The tables below summarize the type of possible conversions:

mono means that the file contains only one LOCAL_CDI_ID,

multi is for files with 1 to n LOCAL_CDI_ID(s).

input format corresponds to the format of the files as they are stored at the data centre.

output format is the format of the files that the download manager will deliver to the user.

modus is the type of file described in the coupling table.

Input Format		modus	Output format (mono)
name	type		name
ODV	mono	1	ODV
	multi	3	ODV
	mono	1	CFPOINT
	multi	3	CFPOINT
Medatlas	mono	1	Medatlas
	multi	3	Medatlas
	mono	3	ODV
	multi	3	ODV
	mono	1	NetCDF
	multi	3	NetCDF
NetCDF	mono	1	NetCDF
	multi	3	NetCDF
Database	-	2	ODV
	-	2	NetCDF

Situation with DM installations

- 103 Data Centres engaged with CDI infrastructure
- => 8 getting connected / in test mode
- => 6 in interim mode (without DM) and operational
- => 89 DMs installed and operational

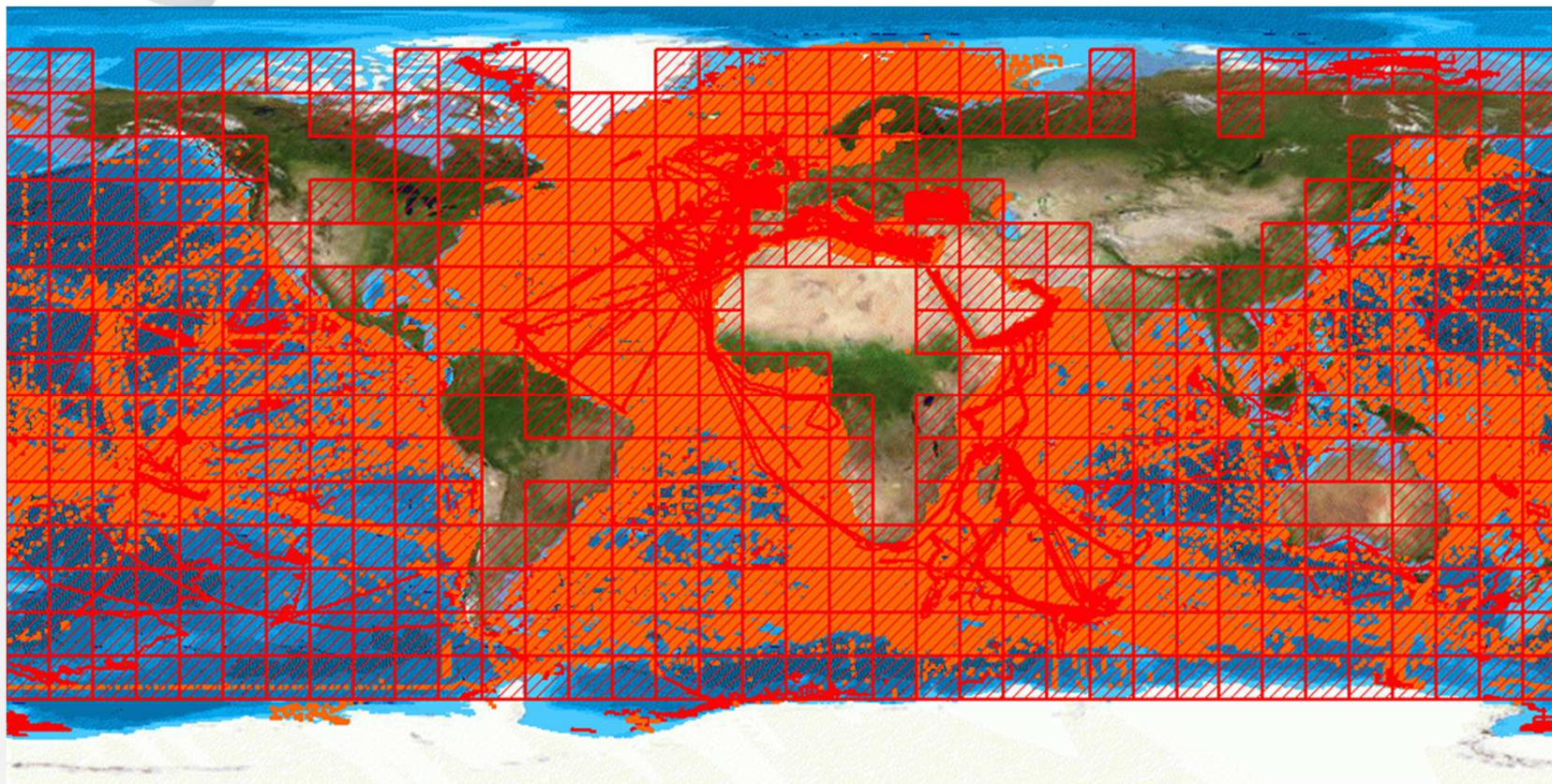
- 55 Data Centres up-to-date with DM Version 1.4.3
- 30 Data Centres still at DM Version 1.2.0
- 4 Data Centres even at older version of DM!

Data centres should upgrade to adopt new functionalities and to make the SeaDataNet CDI service more robust and homogeneous



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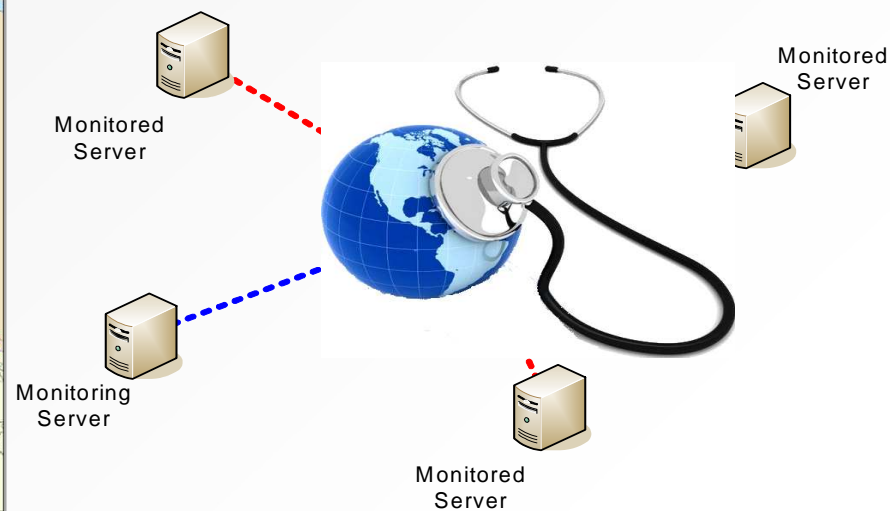
> 1,55 million CDI entries from **34** countries and **95** data centres and **487** originators for physics, chemistry, geology, geophysics, bathymetry and biology; years **1800 – 2014**; **85%** unrestricted or under SeaDataNet licence

DM installation / upgrading in test mode

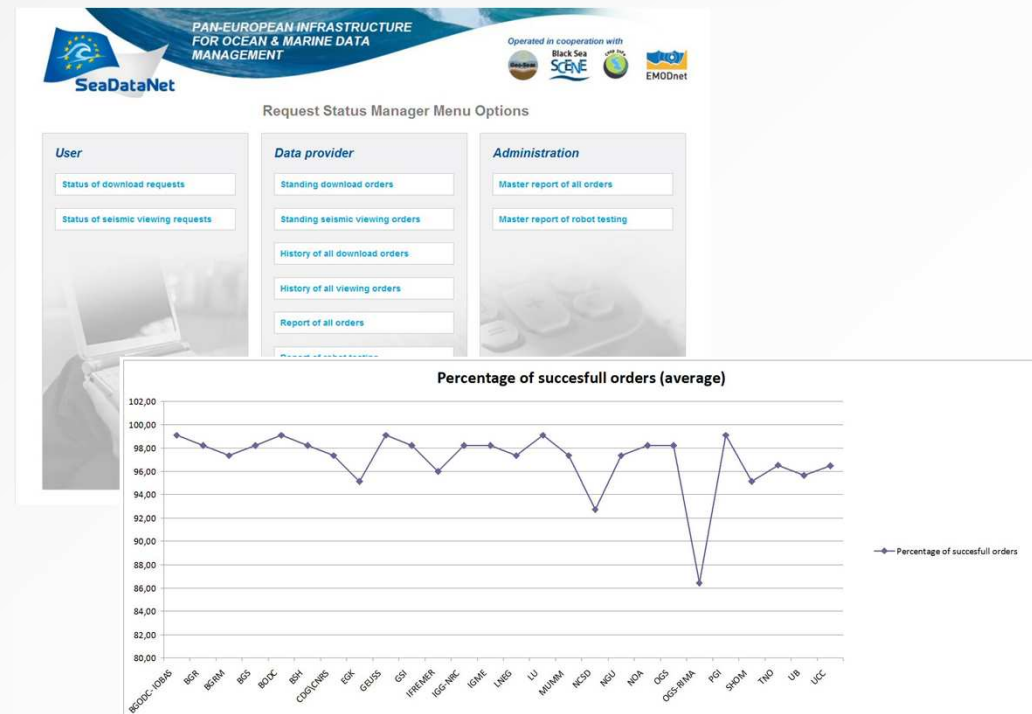
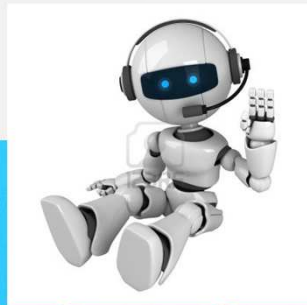
- Preparing test CDI XML records using latest MIKADO software
- Inclusion in CDI test service by MARIS
- Installing and configuring the Download Manager software in test mode in dialogue with MARIS
- Choosing between pre-processed data files OR conversion via the Download Manager
- Completing the coupling table between the LOCAL_CDI_ID (in the CDI XML records) and the local data sets / database queries
- Testing the well functioning of the shopping process together with MARIS
- If ok, migration to production mode

Nagios monitoring

Monitoring of the infrastructure by NAGIOS software for core services centrally based (website, catalogues querying) and for local services (downloading)

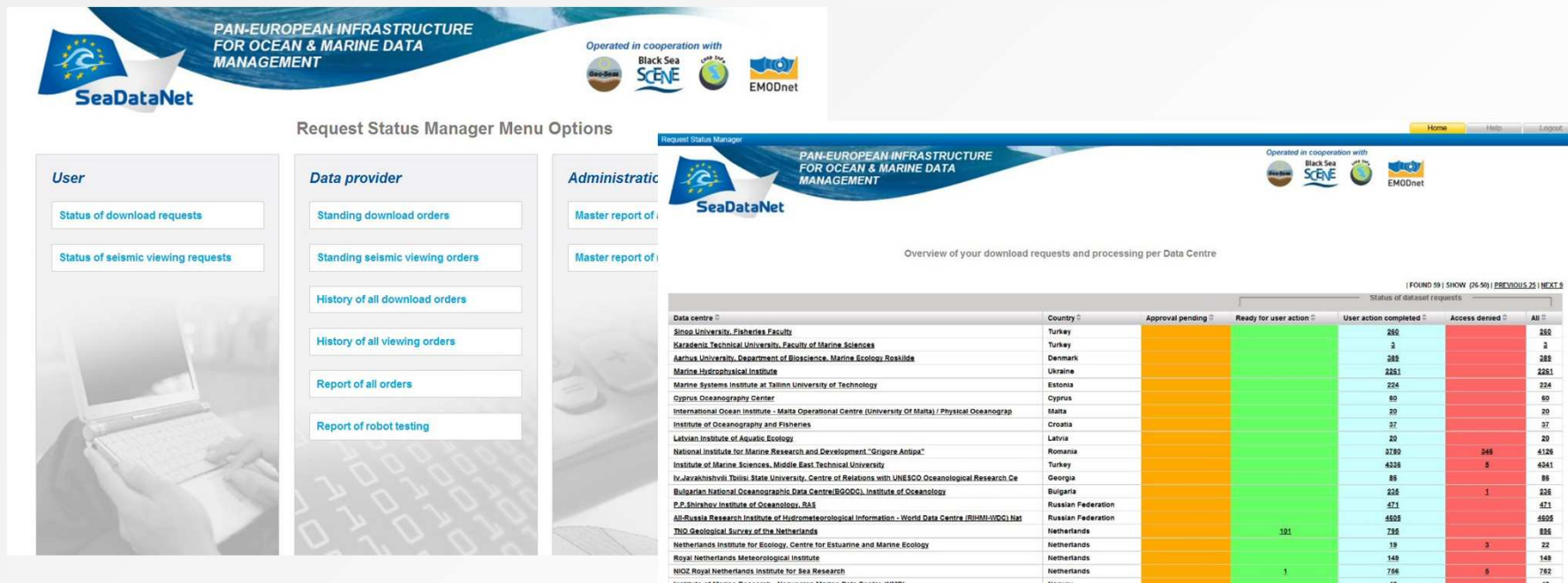


Monitoring of the well functioning of the CDI data requesting and downloading process between central portal and connected data centres by ROBOT user, alert mailings and RSM logging of all steps



Request Status Manager

- Tracking and tracing of all shopping requests
- By users
- By data providers
- Analysis of transactions
- Checking status of orders and downloading from data providers



The screenshot displays the Request Status Manager web application. The interface includes a top navigation bar with the SeaDataNet logo and the text "PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT". Below the navigation bar, there are three main menu sections: "User", "Data provider", and "Administrative". The "User" section contains links for "Status of download requests" and "Status of seismic viewing requests". The "Data provider" section contains links for "Standing download orders", "Standing seismic viewing orders", "History of all download orders", "History of all viewing orders", "Report of all orders", and "Report of robot testing". The "Administrative" section contains links for "Master report of" and "Master report of".

The main content area shows an "Overview of your download requests and processing per Data Centre". It includes a table with the following columns: Data centre, Country, Approval pending, Ready for user action, User action completed, Access denied, and All. The table lists various data centres and their corresponding request counts.

Data centre	Country	Approval pending	Ready for user action	User action completed	Access denied	All
Sinop University, Fisheries Faculty	Turkey	286	0	286	0	286
Karadeniz Technical University, Faculty of Marine Sciences	Turkey	3	0	3	0	3
Aarhus University, Department of Bioscience, Marine Ecology Roskilde	Denmark	388	0	388	0	388
Marine Hydrophysical Institute	Ukraine	2261	0	2261	0	2261
Marine Systems Institute at Tallinn University of Technology	Estonia	224	0	224	0	224
Cyprus Oceanography Center	Cyprus	60	0	60	0	60
International Ocean Institute - Malta Operational Centre (University Of Malta) / Physical Oceanography	Malta	20	0	20	0	20
Institute of Oceanography and Fisheries	Croatia	37	0	37	0	37
Latvian Institute of Aquatic Ecology	Latvia	20	0	20	0	20
National Institute for Marine Research and Development "Grigore Antipa"	Romania	3780	0	3780	248	4028
Institute of Marine Sciences, Middle East Technical University	Turkey	4336	0	4336	8	4344
Iv.Javakishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Ce	Georgia	86	0	86	0	86
Bulgarian National Oceanographic Data Centre (BGODC), Institute of Oceanology	Bulgaria	235	0	235	1	236
P.P. Shirshov Institute of Oceanology, RAS	Russian Federation	471	0	471	0	471
All-Russian Research Institute of Hydrometeorological Information - World Data Centre (IHI-MHI-WDC) Nat	Russian Federation	4605	0	4605	0	4605
THIO Geological Survey of the Netherlands	Netherlands	191	0	191	0	191
Netherlands Institute for Ecology, Centre for Estuarine and Marine Ecology	Netherlands	19	0	19	3	22
Royal Netherlands Meteorological Institute	Netherlands	149	0	149	0	149
NIOD Royal Netherlands Institute for Sea Research	Netherlands	786	1	786	9	796

Request Status Manager - reporting

Overseeing all transactions and preparing reports

[Home](#)
[Help](#)
[Logout](#)

Request Status Manager

Search

CDI partner

All

User name

User organisation

-

Service type

All

Last update (yyyy-mm-dd) from

to

Request date (yyyy-mm-dd) from

to

Status

All

User country

Portal

All






Restriction

All

Search

Reset

Operated in cooperation

Master Analysing and reporting all requests by all users and for all Data Centres

25

50

100

1000 RECORDS

Go

Export

FOUND 1800364 | SHOW (1-25) | PREVIOUS | NEXT 25

Dataset CDI-ID	LOCAL_CDI_ID	Dataset name	CDI partner	User name	Portal	Status	Service type	Request-key	Request date	Last update
482974	19980098ST177278sed_MUDAB	19980098sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482922	19980073ST146837sed_MUDAB	19980073sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	To be discussed	Downloading service	6360	2013-03-08	2013-03-08
482907	19980071ST201035sed_MUDAB	19980071sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	To be discussed	Downloading service	6360	2013-03-08	2013-03-08
482870	19980070ST213323sed_MUDAB	19980070sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482829	19970114ST275636sed_MUDAB	19970114sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482823	19970114ST275630sed_MUDAB	19970114sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482770	19970114ST275577sed_MUDAB	19970114sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482743	19970114ST275550sed_MUDAB	19970114sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482738	19970114ST275545sed_MUDAB	19970114sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482702	19970069ST203304sed_MUDAB	19970069sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482672	19970068ST248249sed_MUDAB	19970068sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482661	19970003ST141491sed_MUDAB	19970003sed_MUDAB	German Oceanographic Datacentre (NODC)	Mr Hendrik Wolschke - hendrik.wolschke@hzg.de	seadatanet.maris2.nl	Ready for user action	Downloading service	6360	2013-03-08	2013-03-08
482659	19970003ST141488sed_MUDAB	19970003sed_MUDAB	German Oceanographic	Mr Hendrik Wolschke -	seadatanet.maris2.nl	Ready for user	Downloading service	6360	2013-03-08	2013-03-08

Upgrading DM

- Latest version of DM including documentation is always available in the SeaDataNet extranet
- Installation & configuration in communication with MARIS
- Read carefully the documentation with configuration instructions
- In case of issues, both MARIS and IFREMER provide support
- Need for local IT expert with good understanding of local computer & network configurations and security arrangements