

MANAGING ARCGIS SERVER IN AN ENTERPRISE ENVIRONMENT

Sébastien Petit



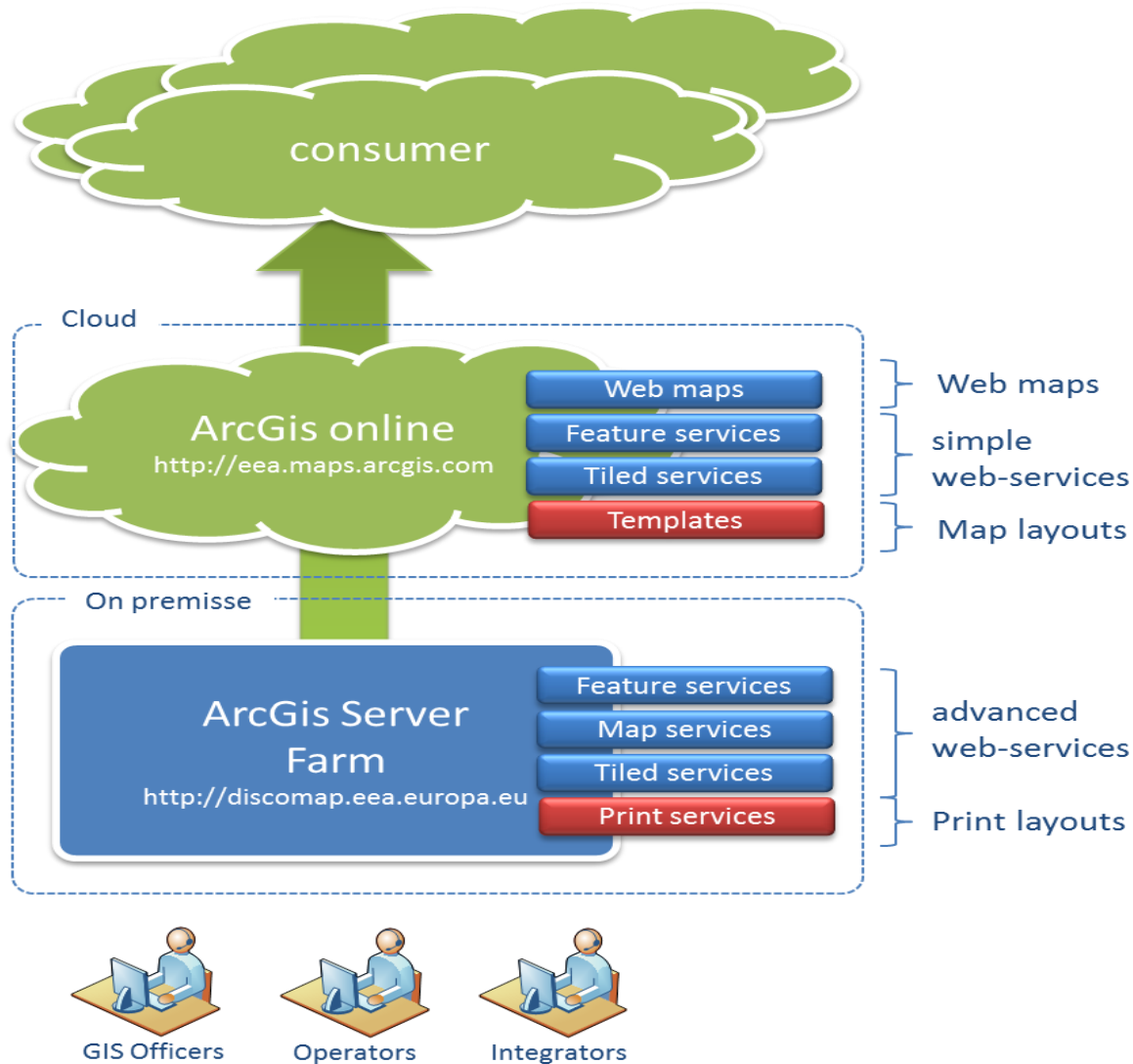
European Environment Agency



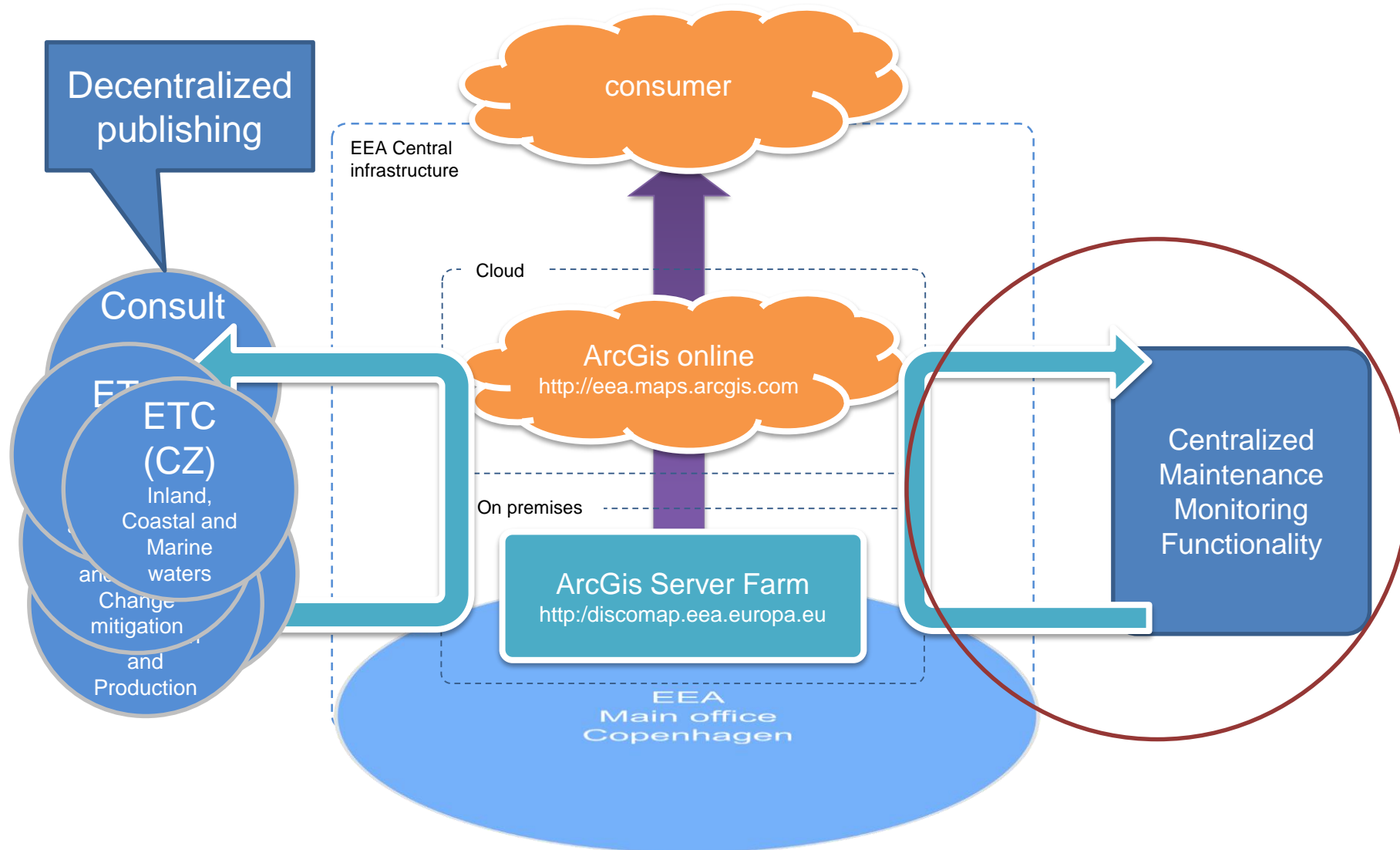
What is DISCOMAP?

- DISCOMAP is EEA's webservices platform
- Many (many!!!) webservices on different themes (land, biology, climate, water, ...)
- Lot of access
 - May 2015: > 138.000 Unique vistor's
 - ~ 8.800.000 page views
 - ~ 11.000.000 hits

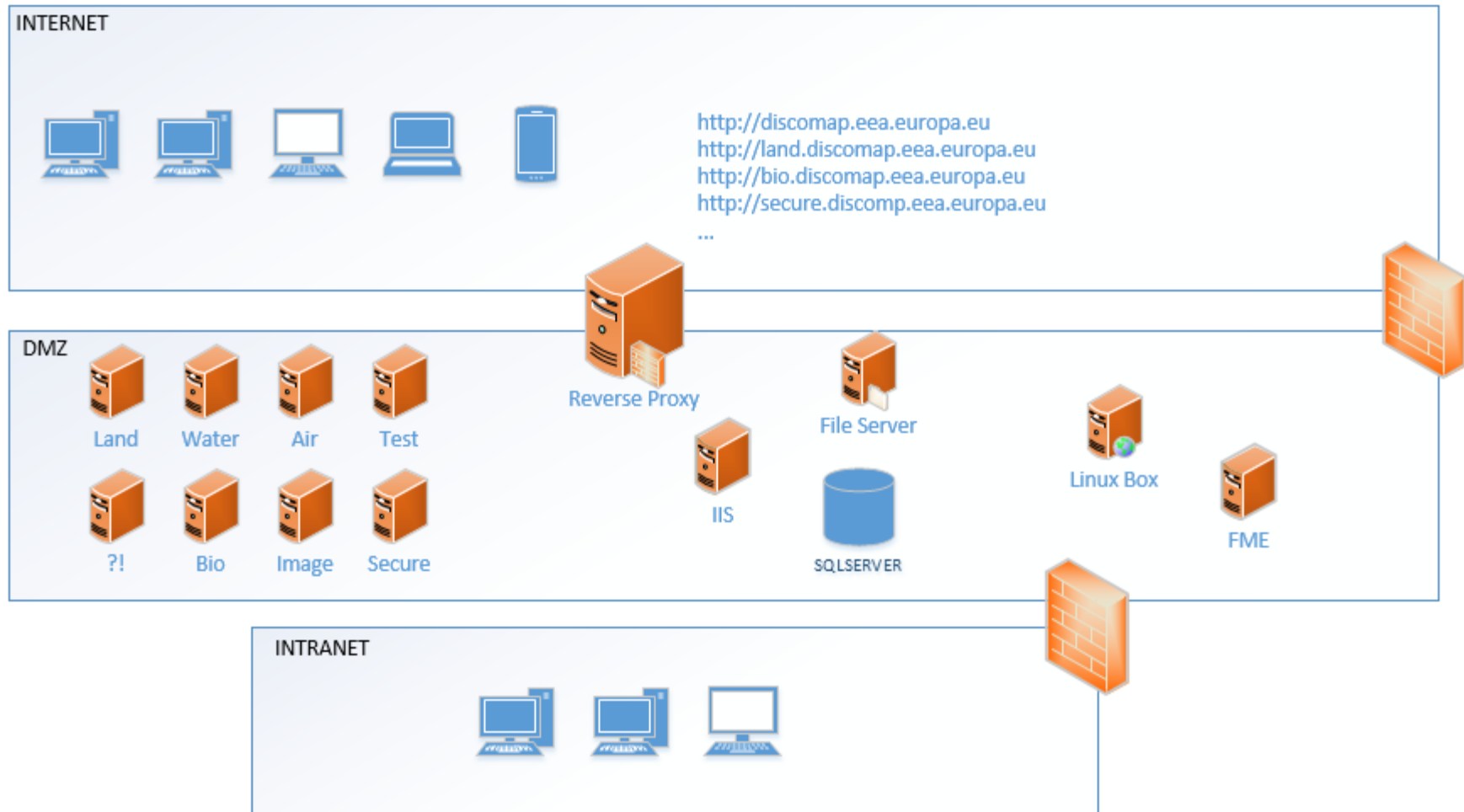
SDI for Web Dissemination



EEA Web GIS Architecture (2)



ArcGIS Server Farm Details



Administrator tasks

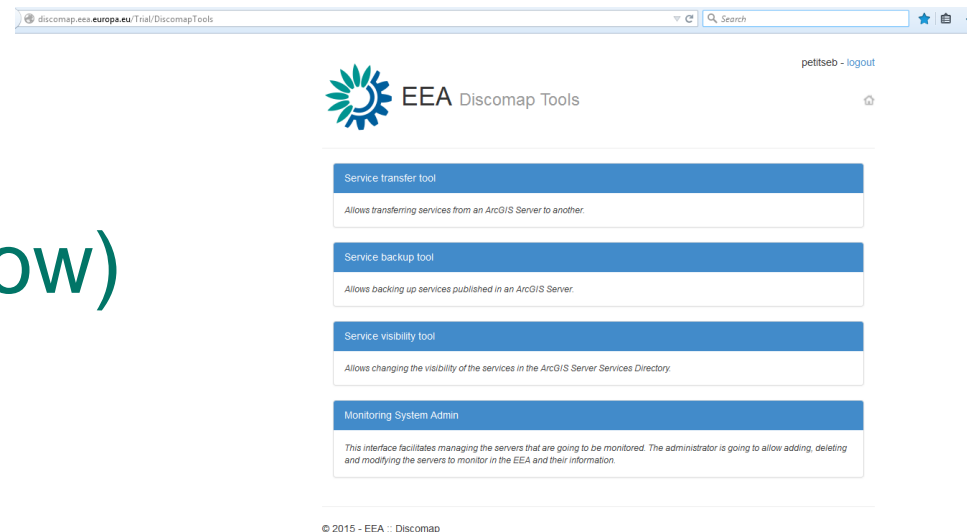
- Uptime
- Monitoring
- Backup
- Transfer
- Maintenance / fixing
- Publication / verification
- Stats

Some classic issues

- Who is doing WHAT – WHEN – WHY?
- Is it good?
- Where is it happening in the infrastructure?
- What are existing solutions? From ESRI?

What we need?

- Monitoring tool (up/down, new, delete)
- Outside monitoring (alerts)
- Daily monitoring
- Backup tool
- Transfer – Move
- Main page (hide or show)
- Visibility in server list
- Stats
- Metadata- Info update - Rename



Tools (1) - Monitoring

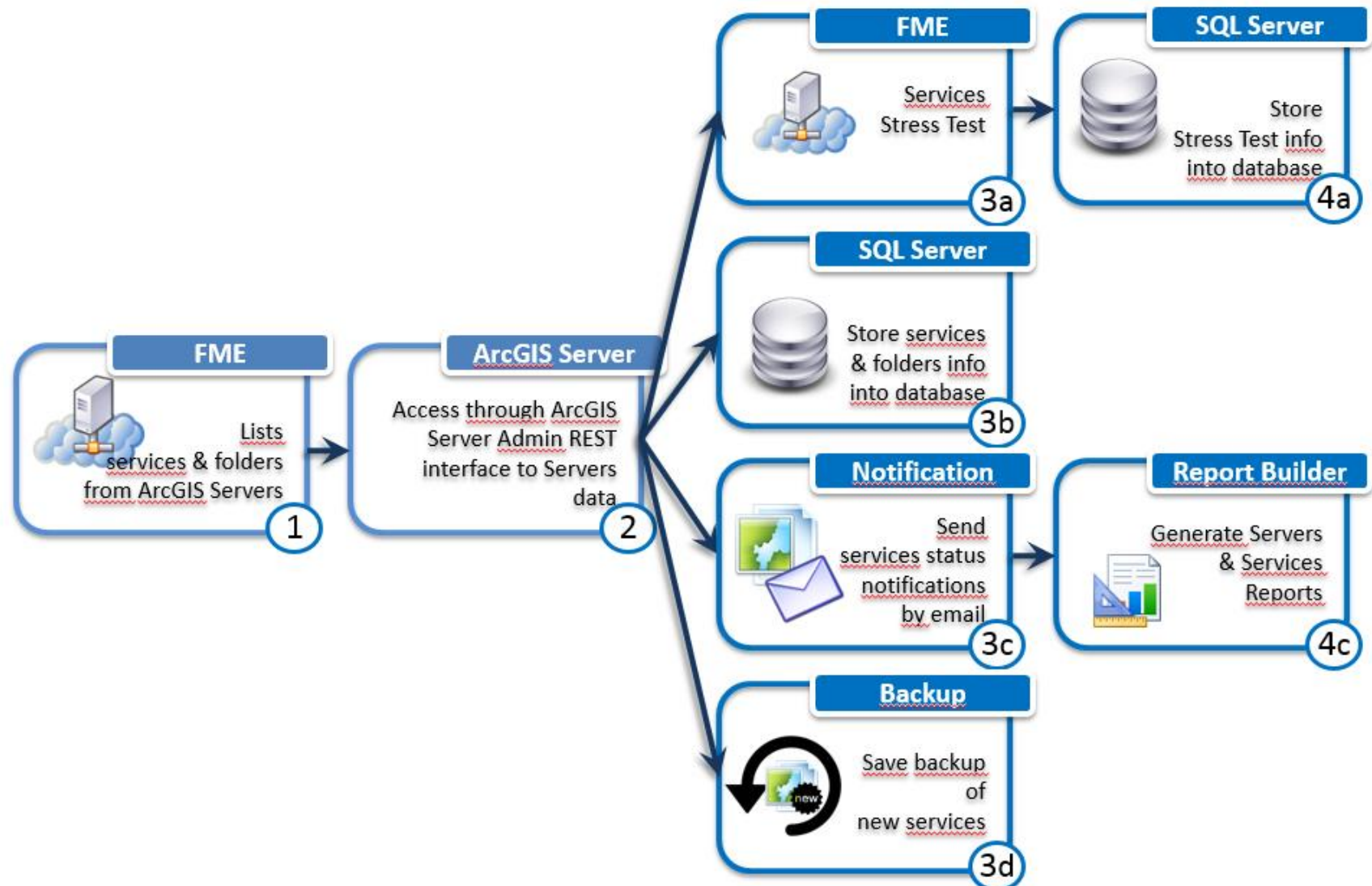
- What should we monitor and why?
 - Availability from outside
 - New stuffs
 - Removed
 - Report
- How?
 - Dotcom Monitor alert
 - FME

Tools (1) - Monitoring

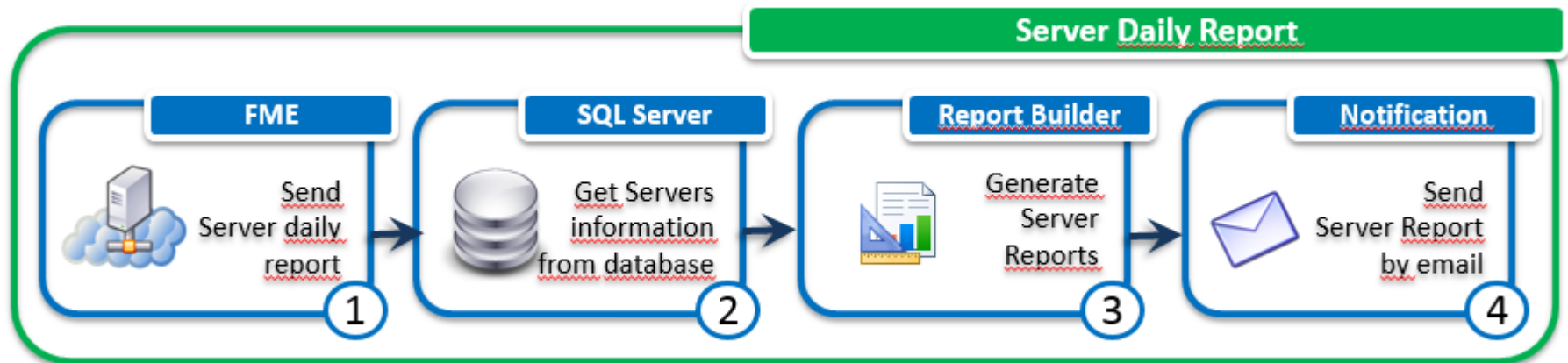
- Published in FME Server
- Scheduled every 40 minutes
- Includes
 - Stress test
 - Service events notification + attached report
 - Backup of new services

Tools (1) - Monitoring

How is the system is designed?



Tools (1) - Monitoring



- Published in FME Server
- Scheduled every day at 7:00 am
 - Server reports
 - Services reports

Tools (2) - Backup

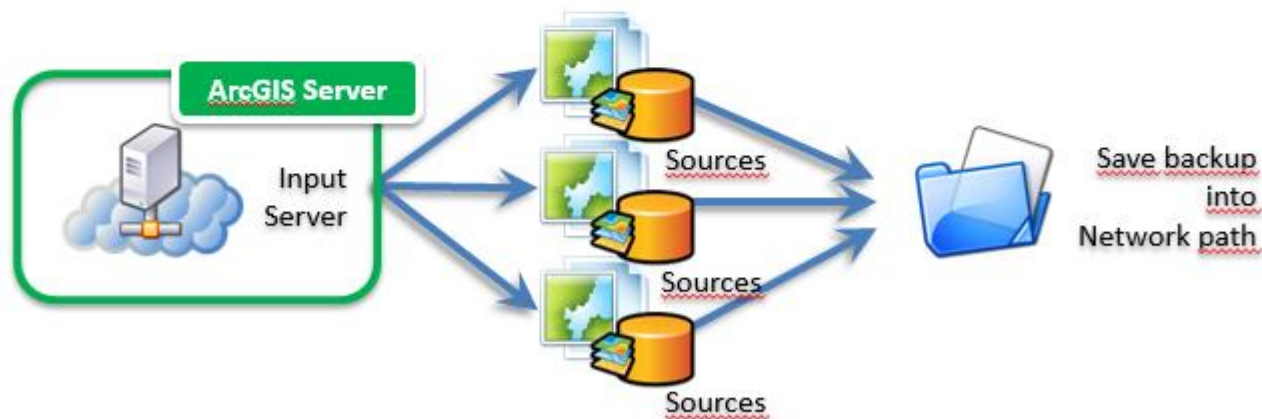
- Classic backup but not enough
- We need to get ressources from one single service
- Tool

Tools (2) - Backup

How is the tool designed?



What does the tool do?



Tools (3) - Transfer

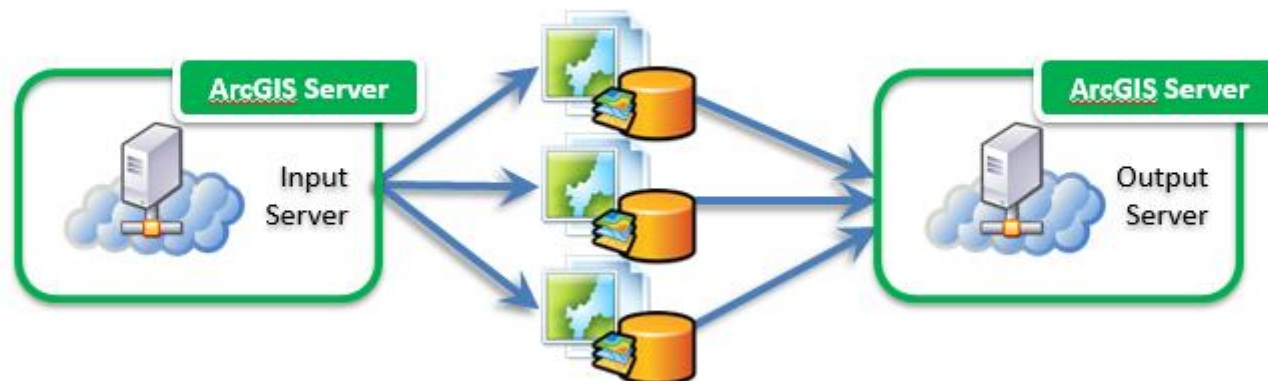
- Need to move from test to production
- Need to move from A to B
- Not manual
- Keep track

Tools (3) - Transfer

How is the tool designed?



What does the tool do?



Tools (4) – Main page for Standard user

The screenshot shows the DISCOMAP website interface. At the top, the URL is discomap.eea.europa.eu/home.html. The header features the DISCOMAP logo and a navigation bar with the text "Discover the map services of the European Environment Agency". Below the navigation bar, there is a list of map services categorized into two columns. A blue button at the bottom left encourages users to explore and work with web maps on ArcGIS online.

DISCOMAP
Discomap is a website for developers and GIS experts to allow re-use of our map-services. Any map service is exposed for public use and can be re-used freely.

Discover the map services of the European Environment Agency

- Air
- Airbase (air)
- Airbase (image)
- AirWatch
- Article_12
- Article17
- Assessments
- Background
- BathingWater
- Bio
- BioRegions
- ClimateAdapt
- CoralReefWatch
- DGREGIO
- Drought
- Elevation
- eReporting
- Floods
- GioLandPublic
- GroundwaterSoE
- Heatstress
- Heatwave

Explore and work with our web maps on ArcGis online: eea.maps.arcgis.com

This screenshot shows the detailed page for the "BiogeographicalRegions_Dyna_LAEA" map service. It includes a breadcrumb trail "You are here: Home / Bio", a small map thumbnail, and a metadata table. The metadata table provides information such as Title, Author, Subject, Keywords, Copyright Text, Registered first time, and Service Description. A "More info" link is also present.

Discover the map services of the European Environment Agency

You are here: Home / Bio

Bio

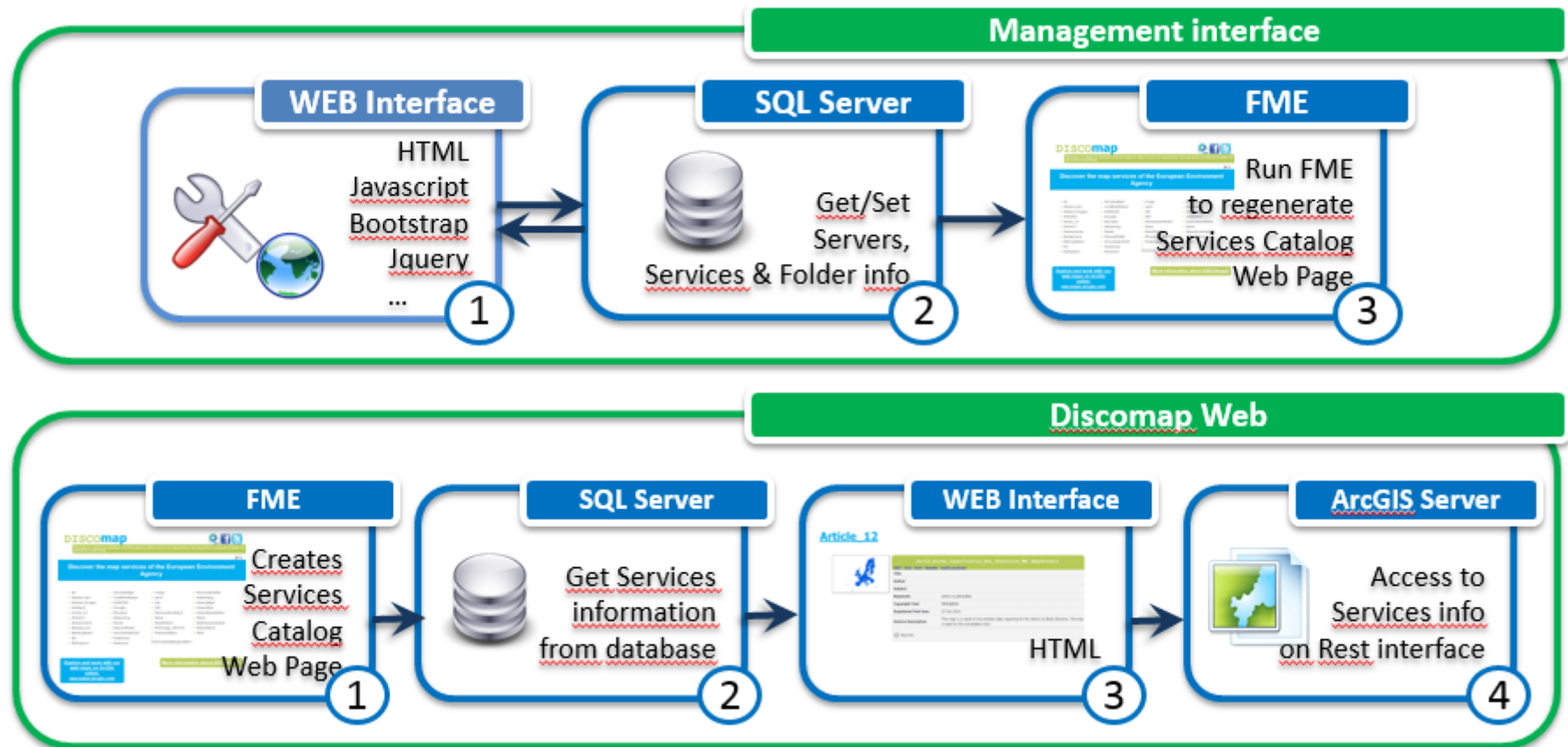
BiogeographicalRegions_Dyna_LAEA (MapServer)

REST	JSON	SOAP	WMS	Metadata	ArcGIS JavaScript
Title	Biogeographical Regions				
Author	Alex Oulton SESS @ EEA				
Subject	Biodiversity - Biogeographical Regions, Europe 2008				
Keywords	Alpine, Anatolian, Arctic, Atlantic, biogeographic, Black Sea, Boreal, Continental, DISMED, geospatial data, Macaronesia, Mediterranean, Niatan, Natura 2000, Pannonian, Steppe, vector data				
Copyright Text	© EEA, Copenhagen, 2012				
Registered first time	06 Oct 2014				
Service Description	Modifications adopted by the Bern Convention Standing Committee and approved by habitats Committee in 05-04/03. Opposed to former versions this layer has an improved geographical scale of 1:1000000. This means that it can also be used to analysis purposes. Note, however, that this version has a poorer geographical coverage than the former versions.				
More info					

BiogeographicalRegions_Dyna_WM (MapServer)

REST	JSON	SOAP	WMS	Metadata	ArcGIS JavaScript
Title	Biogeographical Regions				
Author	Alex Oulton SESS @ EEA				
Subject	Biodiversity - Biogeographical Regions, Europe 2008				

Tools (4) – Management interface for Standard user



Tools (5) – Visibility (Show and hide Services)

water.discomap.eea.europa.eu/arcgis/rest/services/Water

ArcGIS REST Services Directory

[Home](#) > [services](#) > [Water](#)

[JSON](#) | [SOAP](#)

Folder: Water

Current Version: 10.3

View Footprints In: [ArcGIS.com Map](#)

Services:

- [Water/EPRTDiffuseWater_Dyna_WGS84](#) (MapServer)
- [Water/Flooded_cities_Dyna_LAEA](#) (MapServer)
- [Water/NitratesVulnerableZones_Dyna_WGS84](#) (MapServer)
- [Water/RiverBasinDistrict_Dyna_WGS84](#) (MapServer)
- [Water/WaterGlobal_Dyna_LAEA](#) (MapServer)
- [Water/WaterGlobal_Dyna_WGS84](#) (MapServer)
- [Water/WaterGlobal_Dyna_WM](#) (MapServer)
- [Water/WFDGroundwater_Dyna_LAEA](#) (MapServer)
- [Water/WFDGroundwater_Dyna_WGS84](#) (MapServer)
- [Water/WFDGroundwater_Dyna_WM](#) (MapServer)
- [Water/WFDRiverBasinDistrictInfo_Dyna_LAEA](#) (MapServer)
- [Water/WFDRiverBasinDistrictInfo_Dyna_WGS84](#) (MapServer)
- [Water/WFDRiverBasinDistrictInfo_Dyna_WM](#) (MapServer)
- [Water/WFDSurfacewater_Dyna_LAEA](#) (MapServer)
- [Water/WFDSurfacewater_Dyna_WGS84](#) (MapServer)
- [Water/WFDSurfacewater_Dyna_WM](#) (MapServer)
- [Water/WISoE_TCM_Dyna_LAEA](#) (MapServer)
- [Water/WISoE_TCM_Dyna_WGS84](#) (MapServer)
- [Water/WISoE_TCM_Dyna_WM](#) (MapServer)

Supported Interfaces: [REST](#) [SOAP](#) [Sitemap](#) [Geo Sitemap](#)



EEA Service visibility tool

[Server](#) [Select services](#) [Summary](#) [Process](#)

Services to change visibility

Service name	Show	Hide
SampleWorldCities.MapServer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Article17/Article17_Consultation_Habitats_Map_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article17/Article17_Consultation_Species_Map_Sensitive_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article17/Article17_Consultation_Species_Map_NonSensitive_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article17/Article17_Distribution_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Art12_Birds_Consultation_Non_Sensitive_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Article12_Birds_Trends_Breeding_LAEA.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Art12_Birds_Consultation_Sensitive_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Article12_Birds_Trends_Breeding_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Article12_Birds_Trends_Wintering_LAEA.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Article_12/Article12_Birds_Trends_Wintering_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bio/BiogeographicalRegions_Dyna_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bio/Biogeographicalregions_Dyna_LAEA.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bio/Article17_Dyna_WM.MapServer	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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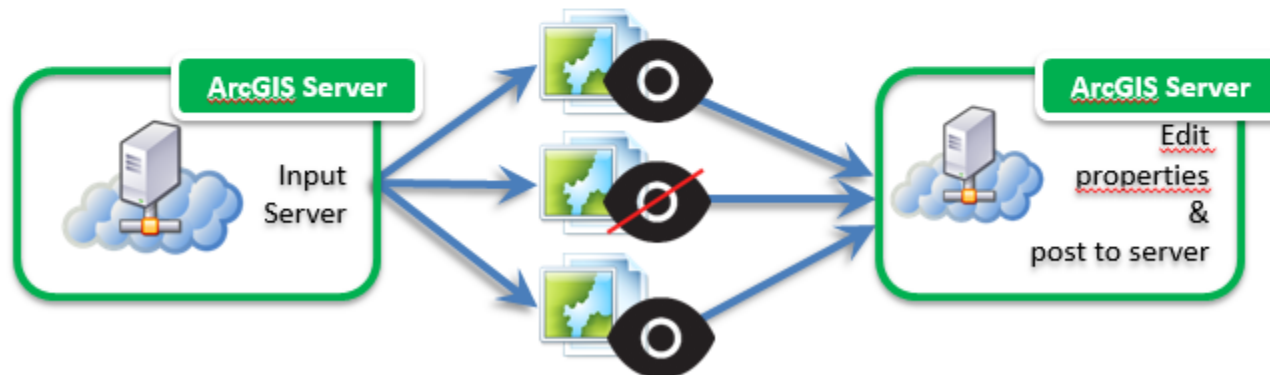
p track?

Tools (5) – Visibility (Show and hide Services)

How is the tool designed?



What does the tool do?



- Some tools from ESRI (ArcGIS Server and ArcGIS Online) but...
- We are using Google analytics for our templates
- Awstat to read stats from our Reverse Proxy

Other tools

- Restore backup
- Fill metadata
- Rename a service
- Update Metadata and infos (bulk or single)

Tools (6) Restore backup

Select services

Output server

Summary

Process

Services to publish

Backup	<input type="checkbox"/> Publish	Folder	Service Name
AirQualityTest.MapServer	<input type="checkbox"/>		AirQualityTest
AirQualityTest.MapServer	<input type="checkbox"/>		AirQualityTest
SOER/VulnerablePeople.MapServer	<input type="checkbox"/>	SOER	VulnerablePeople
MapServicesForMapViewers/WISoE_Gw_AmmoniumInGwByG...	<input type="checkbox"/>	MapService	WISoE_Gw_Amr
BathingWater/BathingWater_Dyna_WM.MapServer	<input type="checkbox"/>	BathingWat	BathingWater_Dyna
BathingWater/BathingWater_TimeSlider_Dyna_WM.MapServer	<input type="checkbox"/>	BathingWat	BathingWater_Time
MapServicesForMapViewers/WISoE_Gw_AmmoniumInGwByG...	<input type="checkbox"/>	MapService	WISoE_Gw_Amr
BathingWater/BathingWater_Dyna_WM.MapServer	<input type="checkbox"/>	BathingWat	BathingWater_Dyna
BathingWater/BathingWater_TimeSlider_Dyna_WM.MapServer	<input type="checkbox"/>	BathingWat	BathingWater_Time
MapServicesForMapViewers/WISoE_Gw_AmmoniumInGwByG...	<input type="checkbox"/>	MapService	WISoE_Gw_Amr



- For ArcGIS Online and ArcGIS Server

Description

App Registration

Register your app to generate an App ID. Use the App ID in your app to allow users to sign in to the platform (with OAuth 2.0), and to collect usage statistics.

[REGISTER](#)

Properties

URL	http://maps.eea.europa.eu/EEABasicviewer/v4/?appid=cdaf077d87f04809a20db0ab2055ae7a
Code Attachment	None
Purpose	Ready To Use
API	JavaScript
Shared with	Everyone (public)
Tags	Test , Nuts
Credits	
Size	1 KB
Delete Protection	Disabled
Extent	

ArcGIS Online fill metadata

Results		Messages					
		Owner	Description	Snippet	Access	SpatialReference	Pr
1	rice	fantamir_ETCICM	NULL	NULL	private	102100	NI
2		fantamir_ETCICM	NULL	NULL	private	NULL	NI
3	oping Application	fantamir_ETCICM	NULL	NULL	private	NULL	NI
4	service	fantamir_ETCICM	NULL	NULL	public	NULL	NI
5		fantamir_ETCICM	countriesasdfsdf	NULL	public	NULL	NI
6	rice	fantamir_ETCICM	<div style=	Bathing waters can be coastal or inland waters. T...	private	102100	NI
7		fantamir_ETCICM	NULL	NULL	private	NULL	NI
8	service	fantamir_ETCICM	NULL	NULL	private	NULL	NI
9		fantamir_ETCICM	NULL	NULL	private	NULL	NI
10		fantamir_ETCICM	NULL	NULL	private	NULL	NI
11		fantamir_ETCICM	NULL	NULL	private	NULL	NI
12		schuren	NULL	NULL	public	NULL	NI
13		schuren	NULL	NULL	public	NULL	NI
14		alinai	NULL	NULL	public	NULL	NI
15		alinai	NULL	NULL	private	NULL	NI
16		llonasc	NULL	NULL	private	NULL	NI
17		harkun_ess	<div><h>Definition and tamete</h></div><div>	The maps are derived from the measurement data	private	NULL	NI

ArcGIS Online – What where?

- Which app is embed, which webmap or webservices used?

My url's

Enter a URL to analyze (http://):

<http://maps.eea.europa.eu/EEABasicviewer/v4/?appid=87c9a9da8d9e4ed39a3de3fdb071> **Analyze**

Results

- Web App
 - 1) <http://maps.eea.europa.eu/EEABasicviewer/v4/?appid=87c9a9da8d9e4ed39a3de3fdb071c75>
- Web Map
 - 1) <http://maps.eea.europa.eu/EEABasicviewer/v4/?webmap=0007ddfbf9724fd9809e628cc0114857>
- Map Services
 - UWWTD receiving areas, catchments -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - UWWTD plants assesment of perf. compliance, overall -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - UWWTDs - types of additional polishing treat.steps -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - UWWTD treatment plants -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - UWWTD Agglomerations - Big cities/dischargers -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - UWWTD agglomerations treatment pathways -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - Agglomerations - overall compliance -- http://test.discomap.eea.europa.eu/arcgis/rest/services/UWWTD/UWWTD_WM_20150225/MapServer
 - NatGeo_World_Map_2536 -- http://services.arcgisonline.com/ArcGIS/rest/services/NatGeo_World_Map/MapServer

ArcGIS Online – What where?

☐ Web Maps

- ☐ 1) Urban Waste Water Treatment maps -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=0007ddfb9724fd9809e628cc0114857>
 - ☐ Web Apps
 - 1) Urban Waste Water Treatment maps -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=87c9a9da8d9e4ed39a3de3fdb071c75>
- ☐ 2) Heat wave risk of European cities-Copy-Copy-Copy -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=0350749a890c453989b71cee262548d3>
 - ☐ Web Apps
- ☐ 3) Natura 2000 Zones -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=11f236206cea466b99c3abc43848d166>
 - ☐ Web Apps
 - 1) Natura 2000 en Belgique -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=3f27cfe381e94f4596911ebad79e1b7b>
- ☐ 4) UWWT maps - 20150220 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=2d6127a5458f4a75a86715a1646df30d>
 - ☐ Web Apps
 - 1) UWWT maps - 20150220 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=18d6b4ff49534467a90f305496a0d369>
- ☐ 5) Worldwide locations of nuclear facilities and population density - See that nuclear facilities are threatening many neighbouring areas and people -<http://discomap.eea.europa.eu/map/>
 - ☐ Web Apps
- ☐ 6) NO2 annual average 2009 - Interpolated air quality data -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=3c21e51fd60a44eea5d527008b12d9d6>
 - ☐ Web Apps
- ☐ 7) Nuclear test -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=3d268036ca824428b9203b195ca5d34e>
 - ☐ Web Apps
- ☐ 8) PM10 36th maximum daily average 2009 - Interpolated air quality data -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=5c8027d08b064b8bb37974a8528876e7>
 - ☐ Web Apps
- ☐ 9) Urban Waste Water Treatment maps - December 2014 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=6043a8d179404b77bdbcfb91f22813d>
 - ☐ Web Apps
 - 1) Urban Waste Water Treatment maps - December 2014 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=6133b960bf944baebadcb1866f20d3d>
- ☐ 10) Worldwide locations of nuclear facilities and Earthquake Locations -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=774cb05f57074f2eab8f9d95b4820a62>
 - ☐ Web Apps
- ☐ 11) PM10 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=9ee4b3f8efbd43db854b44a70ea02647>
 - ☐ Web Apps
- ☐ 12) PM10 annual average 2009 - Interpolated air quality data -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=a3ba1fd6ce8a4aefb2ba03f8ce5eda57>
 - ☐ Web Apps
- ☐ 13) SO2 annual average - Interpolated air quality data-Copy -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=badc29e8515a4e92b7c0f67fbc72a93>
 - ☐ Web Apps
- ☐ 14) Years of life lost -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=bbbd89be4ce1417a94aa589751bea179>
 - ☐ Web Apps
- ☐ 15) Interpolated air quality data-Copy -<http://discomap.eea.europa.eu/map/eeaswipviewer/?webmap=c2dcfc399ff54ce589cb0fa223cbc926>
 - ☐ Web Apps
 - 1) Vlanetin -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=1111075b5344449e90626350a6bc6aa1>
 - 2) PM10 2009 -<http://discomap.eea.europa.eu/map/eeaswipviewer/?appid=111c62716335d19798751a37f6d269a>

Report daily

http://discomap.eea.europa.eu/report/ArcGisStatistics_reports/ServersMonitoring_statistics

Servers Overview

Server	Number of services	Critical errors	Total requests	Timed-out	Failed	Average response time	Last checked
air (cow3)	159 (2/114)	False	29280	258	433	4.43	06/10/2015 03:43
bio (cow1)	83 (2/69)	False	39326	3	66	0.49	06/10/2015 07:03
climate (waxbill)	152 (10/130)	False	5958	0	184	0.47	06/10/2015 07:43
geotool (bontebok)	29 (2/20)	False	36	1	32	11.08	06/10/2015 05:43
land (cow3)	162 (2/114)	False	29227	258	431	4.42	06/10/2015 02:23
noise (cow5)	251 (52/171)	False	8425	0	816	3.14	06/10/2015 03:03
water (cow5)	251 (52/171)	False	8428	0	816	3.14	06/10/2015 03:03

Most requested services

Server	Service	Total requests	Last checked
bio (cow1)	ProtectedSites/Natura2000_Dyna_WM.MapServer	21738	06/10/2015 07:03
air (cow3)	Air/EprtrFacilities_Dyna_WGS84.MapServer	7646	06/10/2015 03:43
land (cow3)	Air/EprtrFacilities_Dyna_WGS84.MapServer	7645	06/10/2015 02:23



ArcGIS Server Status Report

<http://bio.discomap.eea.europa.eu>

Server: cow1 Current version: 10.3
Monitorization state: Monitorization ENABLED
Last tested date: Tuesday, October 06, 2015 7:03 AM



Article_12 0 / 6
Article17 0 / 4
Bio 0 / 16
BioRegions 0 / 3
Ecosystem 0 / 2
Internal 0 / 8
Life 0 / 2

