

Digital Research Environment

Digital Research Environment



DRE context

Rule of thumb: 1 workspace per research project

Workspaces

Data Requests

Information

- Wiki / Help
- Contact

Data sources

- CliniQuest
- PIMS
- Castor EDC

Your workspaces

Search ...

Name	Cost Center	Security Level	Status
pom-ecg	dws-1-POMECC	026600	Active
Sam210501	dws-1-Sam210501	High	Active
path	dws-10-PATH	009485	Active
Test Windows Workspace 3	dws-10-WINTHREE	1234	Active
pbv	dws-100-PBV	003550	Active
parkinsonathomestudy	dws-101-PARKATST	026507	Active
Training Koen	dws-101-TRAINING	test	Active
paramedischoofdhal	dws-102-PARAOHOA	025240	Active
orl-dennis	dws-103-ORLDENN	016350	Active
nva-proms-pijn	dws-104-NVAPROPN	003100	Active
nrz-onderzoek	dws-105-NRZONDZK	006150	Active
nrz-ieb	dws-106-NRZIEB	001650	Active
nrz-gemritux	dws-107-NRZGEMRX	006150	Active
nrz-cureihus	dws-108-NRZCURHS	006150	Active
clickd	dws-11-CLICKD	001650	Active
SAMPLEWORKSPACE2	dws-11-Simplicity	16	Active
neurodbs	dws-110-NEUDBS		
neuro-elg	dws-111-NEUELG		
neuroctomie	dws-112-NEURECTO		
LinuxDanteAccTest	dws-112233-acctest		

326 Workspaces



Workspaces

Data Requests

Files Members Virtual Machines

dws-9997-TRAINING Data

Request Files

Home

- new_test
- testfolder
- .Rhistory
- Demo_Forbes_2017.csv
- pooh.csv
- pooh_spss.sav
- SPEED TEST VM.docx
- Stata.ps1
- STATS_R33_CONFIGURATION.spe
- temp.txt
- testfile.xlsx
- testscript.R
- testset.csv
- testset_spss.sps
- Thumbs.db



Workspaces

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PIMS

Castor EDC

Files

Members

Virtual Machines

Budget

Virtual Machines in dws-9998-RTCDEMOW



Search ...

Resize machine



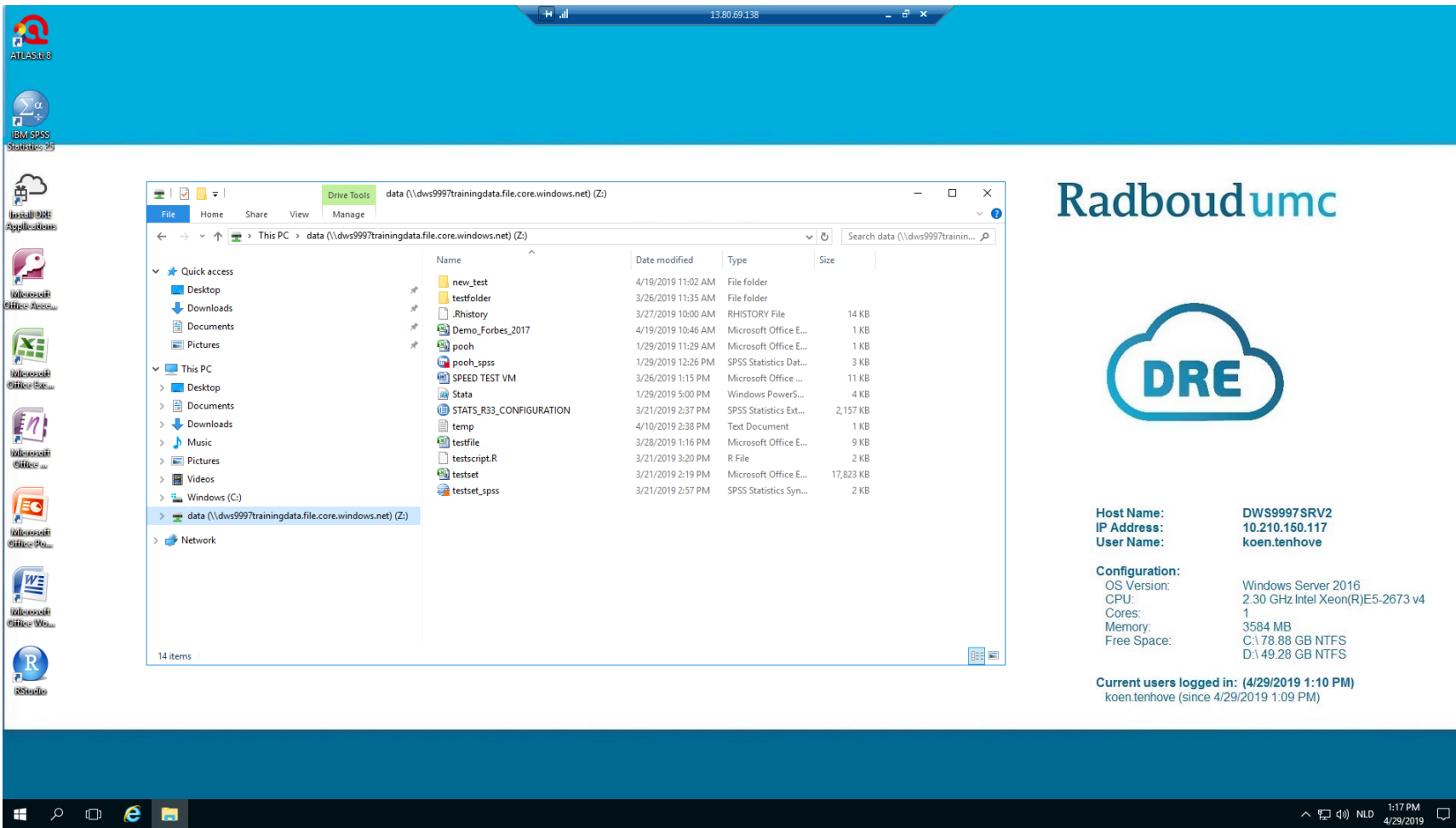
Name: dws9998RTCDEMOWserver1
(publisher: version:)
Status: deallocated
2 cores, 4 Gb RAM (Standard_B2s)
Private IP: 10.210.132.244



Name: dws9998RTCDEMOWserver2
cloudera-centos-os 7_5 (publisher: c...
Status: deallocated
2 cores, 4 Gb RAM (Standard_B2s)
Private IP: 10.210.132.245

1 items selected

2 Virtual machines



Radboudumc



Host Name: DWS9997SRV2
IP Address: 10.210.150.117
User Name: koen.tenhove

Configuration:
OS Version: Windows Server 2016
CPU: 2.30 GHz Intel Xeon(R)E5-2673 v4
Cores: 1
Memory: 3584 MB
Free Space: C:\ 78.88 GB NTFS
D:\ 49.28 GB NTFS

Current users logged in: (4/29/2019 1:10 PM)
koen.tenhove (since 4/29/2019 1:09 PM)

Radboudumc

In depth

- DRE Wiki
 - Logging in to the DRE
 - Data upload
 - Collaboration
 - Virtual machine
 - Big data (ML and Batch)
 - Data download
 - Archiving
 - Catalog
 - Budget
 - Billing
 - Management reports
-



Navigation

[DRE portal](#)
[Main page](#)
[Recent changes](#)
[All pages](#)
[Help](#)

Wiki tools

[Special pages](#)

Main Page

[Main page](#) [Discussion](#)

[View](#) [View source](#) [History](#)

Consult the [User's Guide](#) for information on using the wiki software.

There are multiple sections about parts of the DRE. View the link for the section about the topic mentioned:

- [Creating your account or setting up 2Factor Authentication \(2FA\)](#)
- [Accessing the DRE portal](#)
- [Accessing workspaces](#)
- [Accessing virtual machine](#)
- [Adding members to a workspace \(owner only\)](#)
- [Upload files/folders](#)
- [Download file\(s\)](#)
- [Data transfer requests](#)



The DRE is a newly build platform, where some issues/bugs are being encountered. For the issue(s)/bug(s) listed below, we are working on a permanent fix. In the meanwhile there are temporarily workaround(s):

- [Black screen virtual machine](#)
- [Data file share not loaded in virtual machine](#)

More

[What links here](#)
[Related changes](#)
[Printable version](#)
[Permanent link](#)
[Page information](#)
[Page logs](#)

https://wiki.researchenvironment.org/index.php/Main_Page

Logging in to the DRE

Features:

- Security.
- Access DRE Active Directory.
- Logging security via Azure Monitor.
- Logging for reports (e.g. active users).

Clip: DRE 1 – inloggen.mov

Data upload

Features

- Logging for security via Azure Monitor.
- Logging for reports (e.g. amount of upload data).

Clip: DRE 3 – uploaden.mp4

Collaboration

Features:

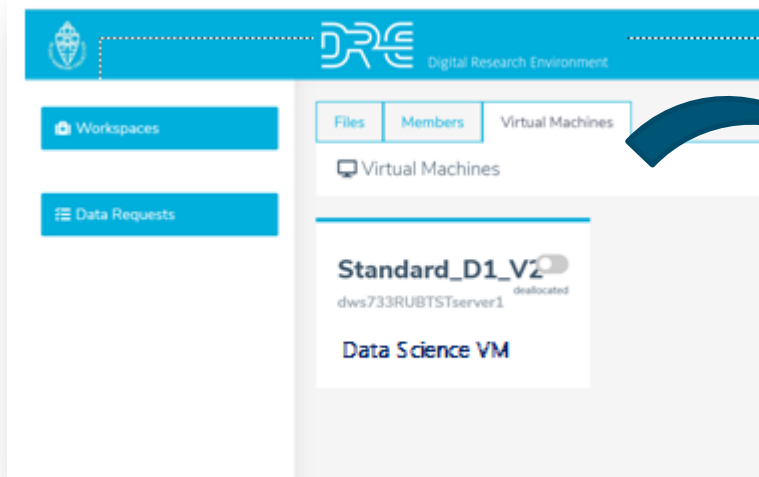
- Security (AD level).
- Adding members to security context.
- Controlled access instead of 'giving away' data.
- Expertise (e.g. statistician) to the data, instead of the other way around.
- Logging voor security via Azure Monitor.
- Logging for reports (e.g. active users).

Virtual machine

Features:

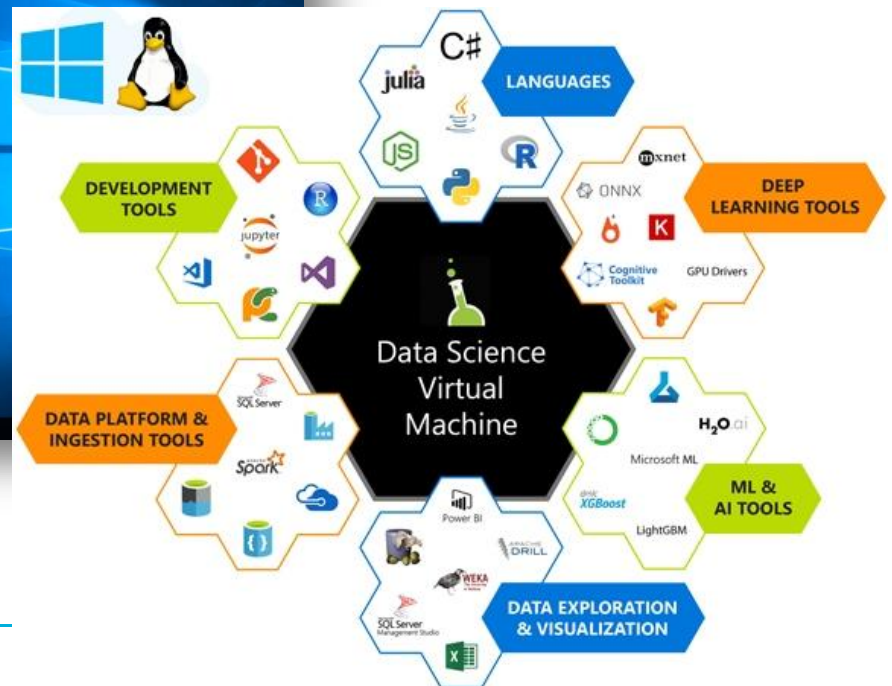
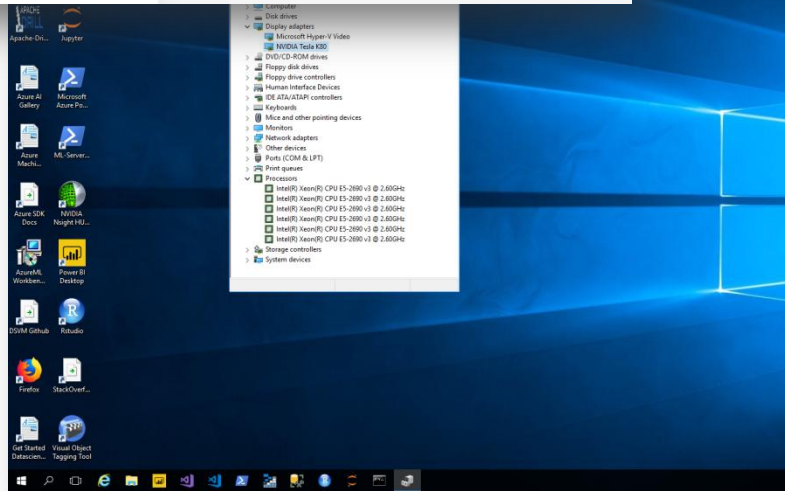
- Security > VM in workspace.
- Admin rights and different kind of users > self service.
- With two active users in the same VM
- Multiple VM's per workspace possible, working on the same data.
- Templated VM.
- Automatic stopping VM in the evening, unless overruled.

Machine learning phase 1

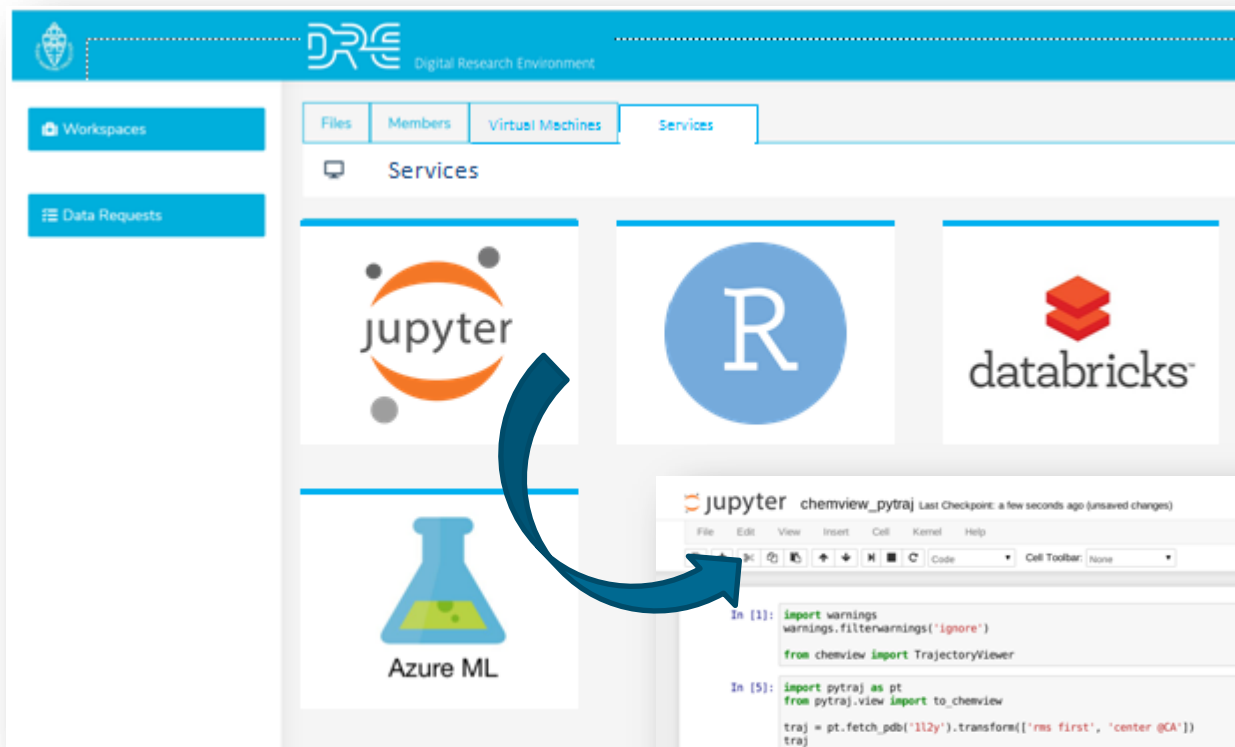


In version 1.5
Data Science workspace

Data Science Virtual Machine
Discuss: <http://aka.ms/dsvm/forum>

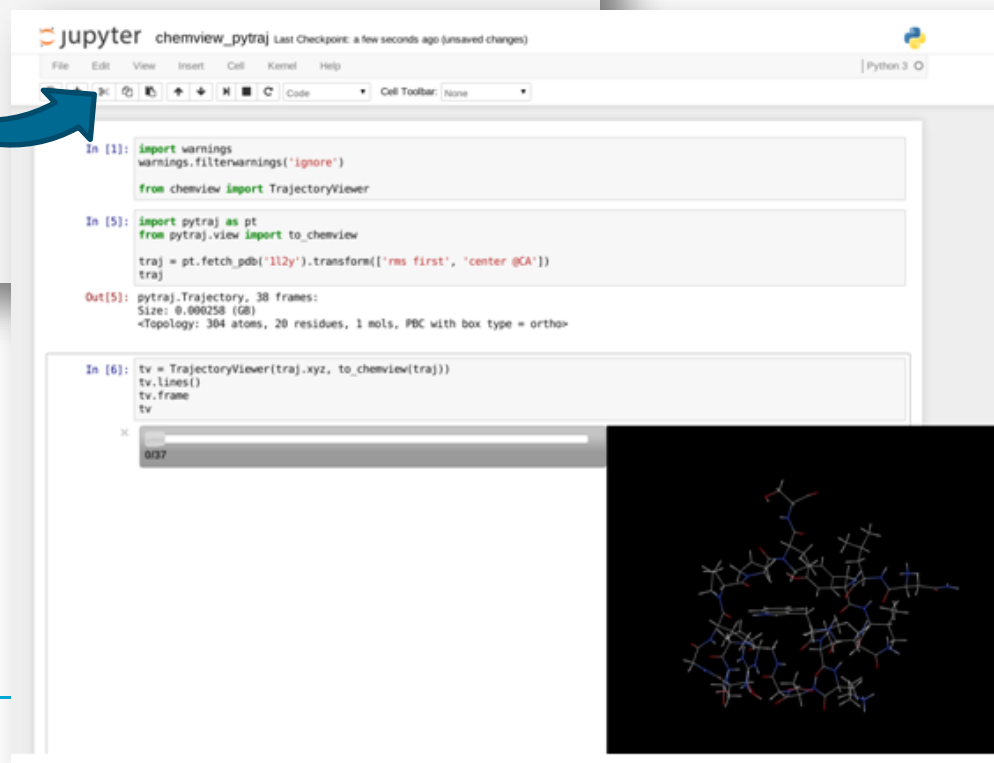


Machine learning phase 2



The screenshot shows the Digital Research Environment (DRE) interface. At the top, there is a blue header with the DRE logo and the text "Digital Research Environment". Below the header, there are navigation tabs for "Files", "Members", "Virtual Machines", and "Services". The "Services" tab is selected, and it displays a grid of service icons: Jupyter, R, Databricks, and Azure ML. A blue arrow points from the Jupyter icon to a larger, detailed screenshot of the Jupyter interface.

End 2019
Working with
big data technology



The detailed screenshot shows the Jupyter interface for a notebook named "chemview_pytraj". The code in the notebook is as follows:

```
In [1]: import warnings
warnings.filterwarnings('ignore')
from chemview import TrajectoryViewer

In [5]: import pytraj as pt
from pytraj.view import to_chemview
traj = pt.fetch_pdb('1l2y').transform(['rms first', 'center @CA'])
traj

Out[5]: pytraj.Trajectory, 38 frames:
Size: 0.000258 (GB)
<Topology: 304 atoms, 20 residues, 1 mols, PBC with box type = ortho>

In [6]: tv = TrajectoryViewer(traj.xyz, to_chemview(traj))
tv.lines()
tv.frame
tv
```

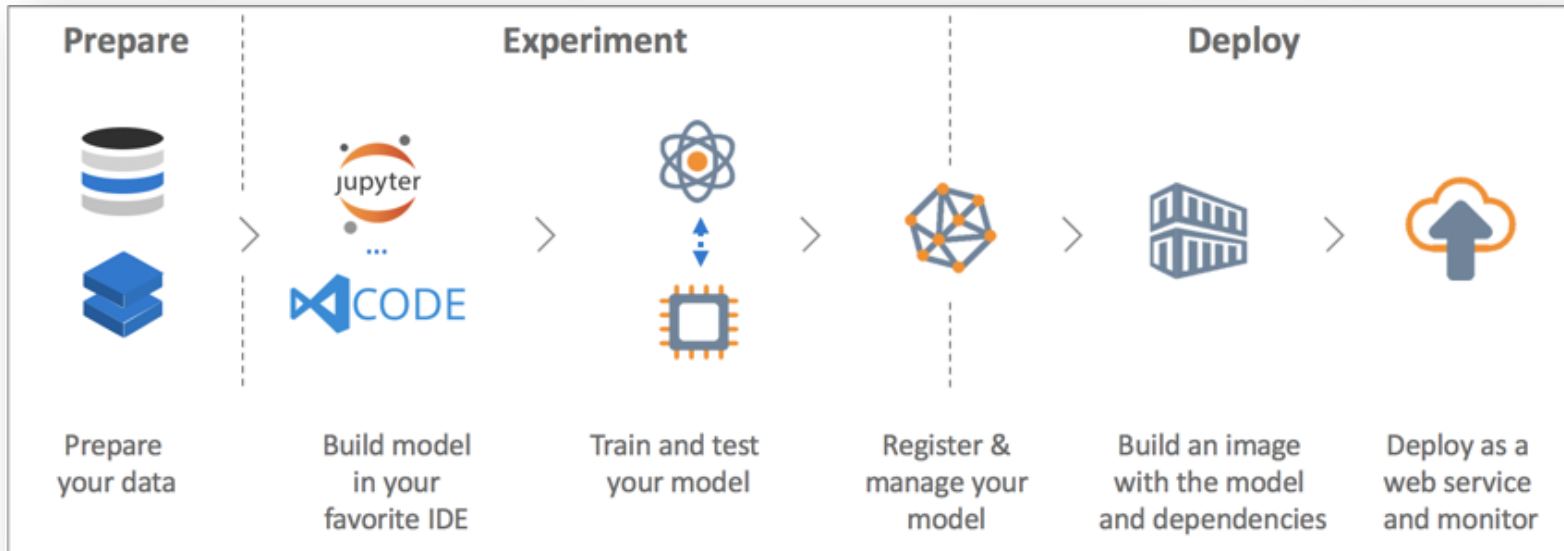
Below the code, there is a small window showing a molecular structure visualization. The structure is a complex, multi-colored molecule with a central core and several branches, rendered in a 3D perspective view.

Machine learning phase 3

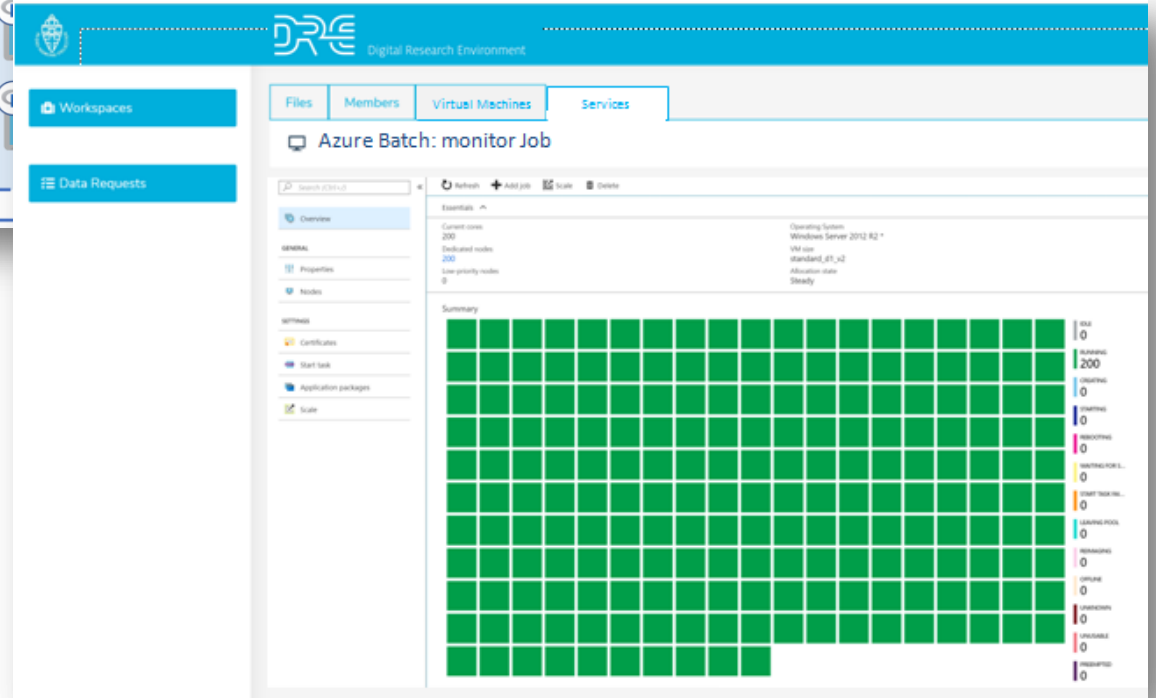
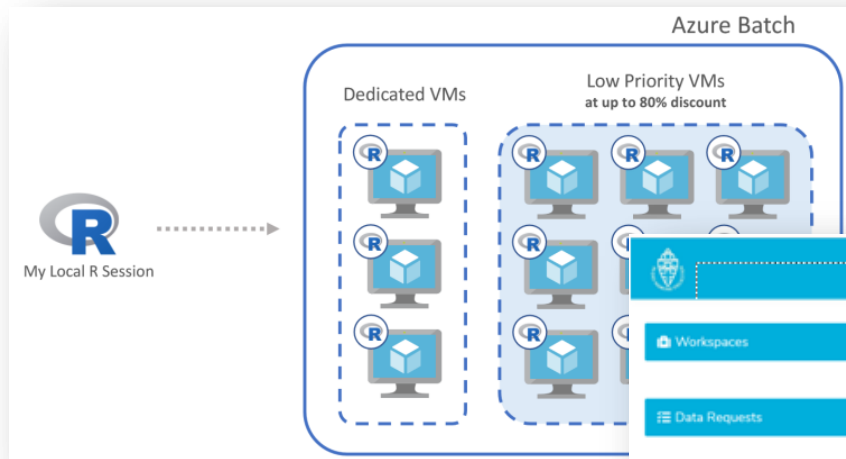
Mid 2020

Develop, run, and share

Model	Version	Owner	Request access	Description	User manual
Computer vision generic	1	researcher@radboudumc.nl	Request	A model ded	link
Text Analysis Dutch (medical)	1	researcher@radboudumc.nl	Request	Analyse Dut	link
Throat Cancer detection	1	researcher@radboudumc.nl	Request	Throat cance	link
Throat Cancer detection	2	researcher@radboudumc.nl	Request	Throat cance	link
Risk analysis	1	researcher@radboudumc.nl	Request	Risk predicti	link
Patient Length of Stay	2	researcher@radboudumc.nl	Request	Length of St	link
Patient Length of Stay	3	researcher@radboudumc.nl	Request	Length of St	link



Batch processing



Nu
Azure Batch for scaling
calculations

End 2019
Azure Batch in DRE
workspace

Batch processing test Een multifit analyses of high resolution image data:
>100000 images, ImageJ, now machine with 128GB/12CPU

Results

(Multi-Fit): 8 days → 5 hours 50 E16_v3 VMs (16 core, 128 gb). Costs: €270,-(Linux)

Data download

Features:

- Multiple files download.
- Workspace to workspace transfer.
- Logging for security via Azure Monitor.
- Logging for reports (e.g. how much data is downloaden).
- Organization in control.

Archiving








Workspaces

Data Requests

Archive Workspace: dws-7-TOH

Select Components to Archive

<input checked="" type="checkbox"/>	NAME ↑↓	TYPE ↑↓
<input checked="" type="checkbox"/>	 dws9999sampledata	Storage account
<input checked="" type="checkbox"/>	 dws9999SAMPLEserver1	Virtual machine
<input checked="" type="checkbox"/>	 dws9999SAMPLEserver1-nsg	Network security group
<input checked="" type="checkbox"/>	 dws9999SAMPLEserver1-OSDisk	Disk
<input checked="" type="checkbox"/>	 dws9999samplevault	Key vault

Archive

Catalog

Medicare

Search

Advanced Search

Browse

Search results for "Medicare"

CMS Program Statistics

Organization: Radboud | Publisher: Centers for Medicare & Medicaid Services
The CMS Office of Enterprise Data and Analytics has developed CMS Program Statistics, which includes detailed summary statistics on national health care, Medicare populations, utilization and expenditures, as well as counts for Medicare populations, utilization, and expenditures, as well as counts for Medicare populations, organized into sections which can be downloaded and viewed separately. This is replacing the Medicare and Medicaid Statistical Supplement, which was published annually from 2001-2013.



Geographic Variation in Medicare Spending

Organization: DRE | Publisher: Centers for Medicare & Medicaid Services
The Geographic Variation Dashboards present Medicare fee-for-service per beneficiary spending figures in these dashboards using standardized dollars that remove the effects of the geographic adjustments that Medicare makes for many of its payment rates.



Chronic Conditions Chartbook

Organization: DRE | Publisher: Centers for Medicare & Medicaid Services
Chronic Conditions among Medicare Beneficiaries is a chartbook prepared by the Centers for Medicare and Medicaid Services and created to provide an overview of chronic conditions among Medicare beneficiaries. The chartbook highlights the prevalence of chronic conditions among Medicare beneficiaries and the impact of chronic conditions on Medicare service utilization and spending. The Portable Document File format allows for online viewing and printing of the entire chartbook, and the data tables provide spreadsheets with the underlying data, and the presentation includes all the chartbook figures for print or download.



CMS Program Statistics

Organization: Radboud

Publisher: Centers for Medicare & Medicaid Services

The CMS Office of Enterprise Data and Analytics has developed CMS Program Statistics, which includes detailed summary statistics on national health care, Medicare populations, utilization and expenditures, as well as counts for Medicare populations, organized into sections which can be downloaded and viewed separately. Tables and maps are included. CMS Program Statistics is replacing the Medicare and Medicaid Statistical Supplement, which was published annually in electronic form from 2001-2013.

Request Access

Budget



Workspaces

Data Requests

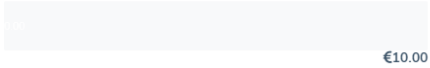
Files Members Virtual Machines Budget

€ dws-777-RVHTSTWK Budget

Current Spend

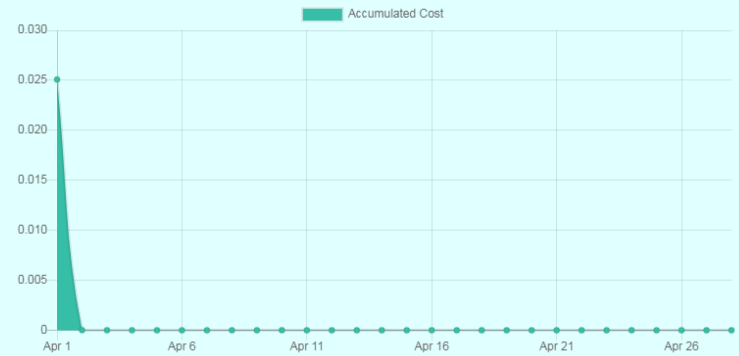
This indicates the amount spent from Apr 22, 2019 to Apr 22, 2020.

€0.00



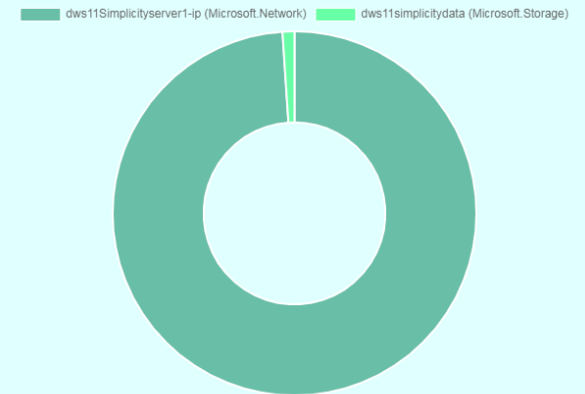
Daily Cost

Daily cumulative cost consumption for all resources in the workspace

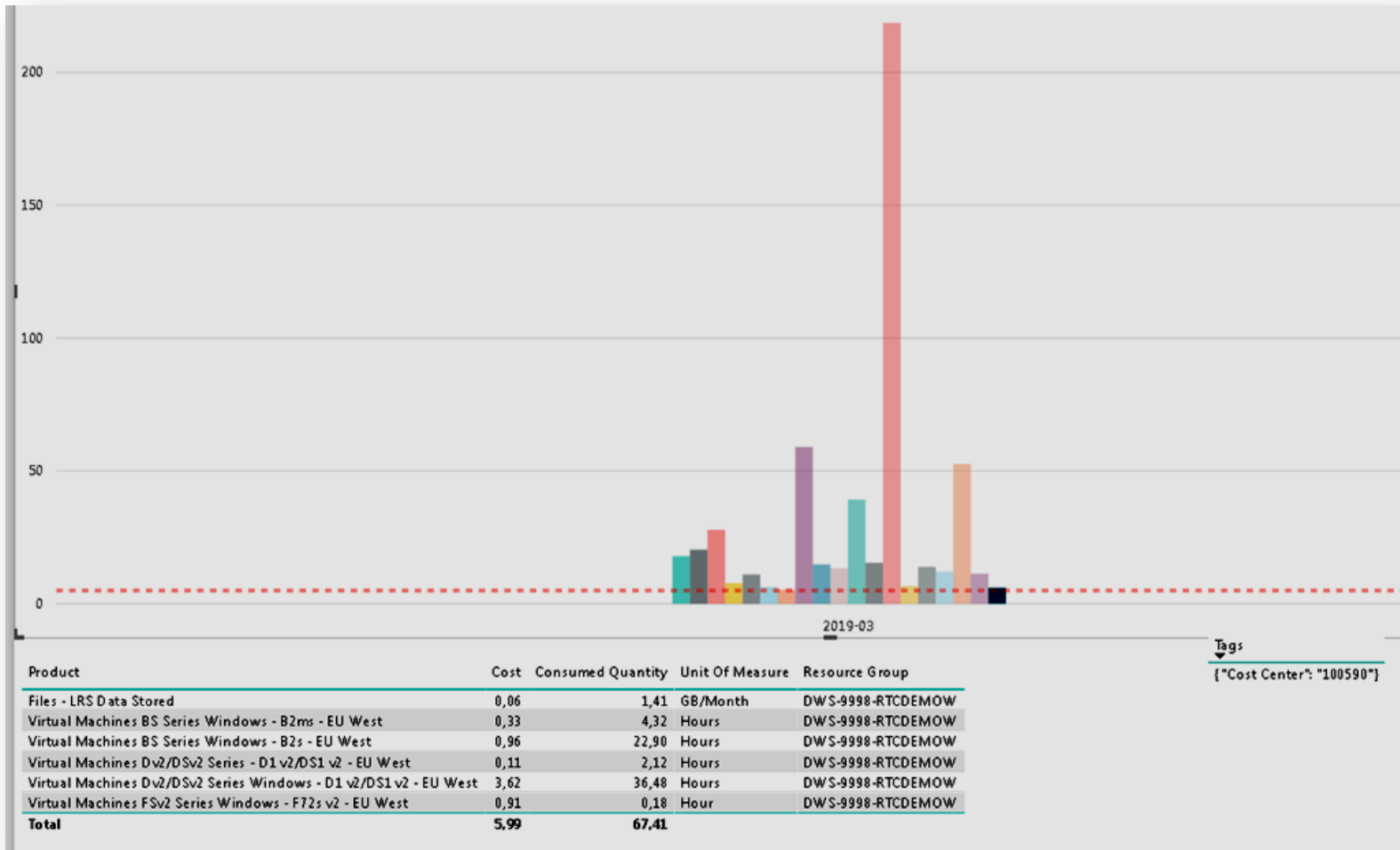


Cost per resource

Per resource cost consumption



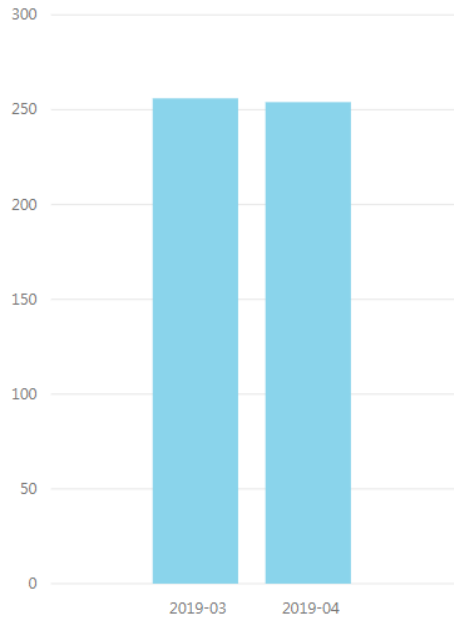
Billing



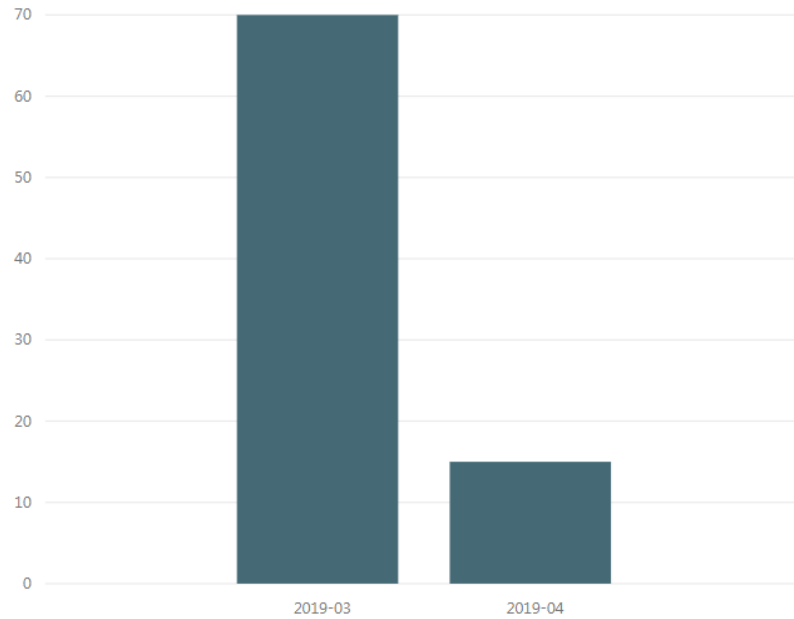
Management reports

Management Rapportage

Total workspace per month



Workspaces virtual machines used per month

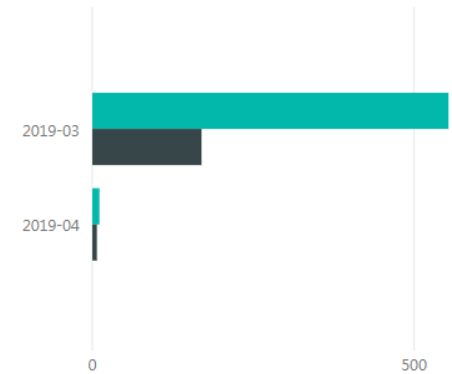


Amount of data in DRE platform:

3.961
Total Tb

Cost by month and service type

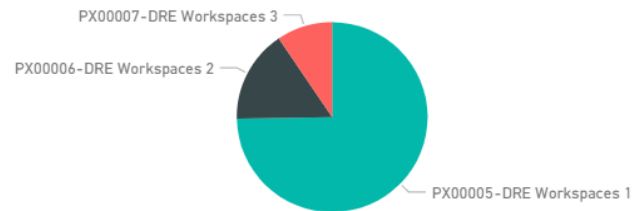
Type: ● Microsoft.Compute ● Microsoft.Storage



Location



Consumed quantity per subscription



Questions?

