Software Provisioning Infrastructure (UMD/CMD)

Mario David (LIP), João Pina (LIP), Carlos Manuel (LIP), Jorge Gomes (LIP), Pablo Orviz (IFCA)
Repositories

EGI Repositories

The EGI Software Repository provides access for the middleware distributions together with some Community Repositories.

Three main categories:

- The Unified Middleware Distribution (UMD): redistribution of traditional middleware

OS Support
- Centos 7: UMD-4

Provider:
- IBERGRID since 2021

Cloud Middleware Distribution (CMD): specific middleware for OpenStack and OpenNebula integration components

IGTF Distribution of Authority Trust Anchors: packages with the trust anchor information
EGI Repositories

- Since 2021 new service provider IBERGRID
- Complete redesign of the service:
  - New infrastructure based on Nexus Repository OSS
  - Release workflow implemented in GitHub and Jenkins pipelines.
- New public webpages
- Quality assurance - Full-automated approach
  - Faster release cycle with higher automation and less manual intervention
10 months of access data
10 months of access data

14/08/2022 to 11/06/2023
New architecture

New setup:

- Complete redesign of the service
- Allow full automatization of the process
- Easier to add new functionalities like new OS, containers support
- Better integration with Jenkins
- New Frontend layout based on software products rather than releases.
- Planned in production:
  - 3 quarter of 2023 UMD-5 ONLY
  - UMD-4 will use old infrastructure
  - CA’s will be moved after UMD-5:
    - no changes in path’s
New architecture (next)

Future:
- Integration with SQaaS service from EOSC-Synergy
- Allow it to be used by external users:
  - EGI / EOSC marketplace
UMD/CMD new Workflow

https://github.com/egi-qc/software-releases

Approved the Release (Testing/Production repository)
Tracking of the workflow all based on git

Frontend: [https://egirepo.a.incd.pt/](https://egirepo.a.incd.pt/)
Backend: [https://egirepo.a.incd.pt/software/umd/](https://egirepo.a.incd.pt/software/umd/)

New Functionalities:
- IPV6 compliant
- Backend behind a proxy
  - [https://repository.egi.eu/sw/production/](https://repository.egi.eu/sw/production/) (prod old)
  - [https://egirepo.a.incd.pt/software/umd/5/](https://egirepo.a.incd.pt/software/umd/5/) (beta new)
- High Availability
- Full automatic process until testing
- Testing -> production (manual git commit)

[https://github.com/egi-qc/software-releases](https://github.com/egi-qc/software-releases)
Yum repositories (new structure)

UMD-5 only

1. **release**: Main repository with all the packages (= to production).
2. **testing**: testing repository with rpm not fully validated in production environment. RPM belonging to release declared as production ready will be moved from testing to release.
3. **contrib**: repository for specific communities or special services. (NEW)

Dropped repositories: Staged Rollout and Release Candidate
Yum repositories (new structure)

[UMD-5]
name=UMD 5 (Alma Linux 9)
protect=1
enabled=1
# To use priorities you must have yum-priorities installed
priority=1
gpgcheck=1
gpgkey=https://egirepo.a.incd.pt/repository/umd/UMD-5-RPM-PGP-KEY

EPEL 9 required
UMD higher priority than EPEL
Priorities already part of DNF

Non official link

egirepo.a.incd.pt [will become] repository.egi.eu

Production
Nexus

Yum repositories (new structure)

[UMD-5-testing]
name=UMD 5 (Alma Linux 9)
baseurl=https://egirepo.a.incd.pt/repository/umd/5/al9/testing/$basearch
protect=1
enabled=0
# To use priorities you must have yum-priorities installed
priority=1
gpgcheck=1
gpgkey=http://egirepo.a.incd.pt/umd/5/UMD-RPM-PGP-KEY

Non official link
egirepo.a.incd.pt [will become] repository.egi.eu
Yum repositories (new structure)

[UMD-5-contrib]
name=UMD 5 (Alma Linux 9)
baseurl=https://egirepo.a.incd.pt/software/umd/5/contrib/$basearch
protect=1
enabled=0
# To use priorities you must have yum-priorities installed
priority=2
gpgcheck=1
gpgkey=http://egirepo.a.incd.pt/umd/5/UMD-RPM-PGP-KEY

Non official link
egirepo.a.incd.pt [will become] repository.egi.eu
Based on Html / Javascript / Json making it easy to maintain.

Testbed: https://egirepo.a.incd.pt/
Software Distributions

The EGI Software Repository Portal provides a unified point of access for the Middleware Distributions, the Community Repositories and the operational tools.

The Middleware Distributions are divided in Unified Middleware Distribution (UMD) and Cloud Middleware Distribution (CMD).

**UMD – Unified Middleware Distribution**

is the integrated set of software components contributed by Technology Providers and packaged for deployment as production quality services in EGI. UMD release schedule is available here.

Current UMD-4  Future UMD-5  Past UMD-2, UMD-3

**CMD – Cloud Middleware Distribution**

distributes OpenStack and OpenNebula integration components developed by Cloud Technology Providers. Two different distribution are technically available, CMD-OS for OpenStack and CMD-ONE for OpenNebula. For further details, please have a look at the Cloud Middleware Distribution wiki.

CMD-OS (OpenStack)  CMD-OS-1  CMD-ONE (OpenNebula)  CMD-ONE-1

**Community Repositories – Community Software**

is the integrated set of software components contributed by Technology Providers and packaged for deployment as production quality services in EGI. UMD release schedule is available here.
SOFTWARE-DISTRIBUTIONS

Here you can find all the SOFTWARE-DISTRIBUTIONS distribution releases.

Filter by distribution:
UMD, CMD-OS, CMD-ONE, All

UMD-4.15.0 • published
UMD 4.15.0 is an update release of UMD 4. It includes StoRM 1.11.21, lcms-plugins 1.8.1, CERN Frontier 4.15.2, dmitie 115.0, APEL SSM 3.2.1, DDNS Nagios probe 1.0.1, dCache 6.2.24, Infrastructure Manager Nagios probe 1.0.1

UMD-4.14.0 • published
UMD 4.14.10 is an update release of UMD 4. It includes ARC 6.12.0, xrootd 5.2.0, xrootd 5.2.0, davix 0.7.5, gridftp 13.24.1, gftp2 2.18.2

UMD-4.13.1 • published
UMD 4.13.1 is a fix release of UMD 4. It includes a new releases for CERN Frontier.

UMD-4.13.0 • published
UMD 4.13.0 is an update release of UMD 4. It includes new releases for ARC, APEL, StoRM, VOMS admin server, VOMS client, CVMFS

UMD-4.12.6 • published
UMD 4.12.6 is an update release of UMD 4. It includes new packages for ARGO AMS library and APEL SSM
Software Catalog

Filter by distribution:
UMD, CMD-OS, CMD-ONE, All

apel.apel-ssm-2.3.0  CMD-OS-1.3.0 • published 2020-02-18 11:34:44
Secure Stomp Messenger (SSM) is designed to simply send messages using the STOMP protocol. Messages are signed and may be encrypted during transit. Persistent queues should be used to guarantee delivery.

capabilities  File Management  Resource Manager

apel.apel-1.8.1  CMD-OS-1.3.0 • published 2020-02-18 11:34:44
The APEL project provides grid accounting for EGI. It is written in Python and uses MySQL.

undefined capabilities  File Management  Resource Manager

ifca.caso-1.4.0  CMD-OS-1.3.0 • published 2020-02-18 11:34:44
cASO is a pluggable extractor of Cloud Accounting Usage Records from an OpenStack installation. cASO gets usage information from nova or ceilometer APIs and can generate valid output for Apel SSM or logstash.

undefined capabilities  File Management  Resource Manager

infoprovider.cloud-info-provider-0.12.0  CMD-OS-1.3.0 • published 2020-02-18 11:34:44
Frontend

Testbed:
https://egirepo.a.incd.pt/

dcache.dcache 6.2.24

deployed • UMD 4.15.0 • published 2021-07-23 13:39:45

dCache provides system for storing and retrieving huge amounts of data, distributed among a large number of heterogenous server nodes, under a single virtual filesystem tree with a variety of standard access methods.

Notes: https://www.dcache.org/old/downloads/1.9/release-notes-6.2.shtml

Installation --
Additional Details --

Documentation Links

• https://www.dcache.org/manuals/index.shtml

Target platforms (0)  Issues (0)  Change log

<table>
<thead>
<tr>
<th>Platform</th>
<th>Architecture</th>
<th>repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>centos7</td>
<td>x86_64</td>
<td>/sw/production/umd/4/centos7/x86_64/updates</td>
</tr>
</tbody>
</table>

Repository Url
/sw/production/umd/4

Contacts
juergen.starek@desy.de
UMD-5 (first release plan)

- List of products for al9 (provisory):
  - BDII and site-bdii
  - Gfal2
  - Dcache
  - Globus (evaluation)
  - HTCondor-CE
- First release planned over July/August (new date)
- Creation of a non-supported Rocky8 repository containing all relevant middleware packages (request from WLCG)
Questions?
Old setup:

- No new functionalities for many years, since it’s hard to implement them.
- Backend based on perl scripts with tight relation with RT.
- To many manual steps (RT fully manual) leading to a large delay in the releases of packages.
- Frontend outdated which could lead to security issues (already replaced by a simplified version).
The pipeline is as follows:

1. **json_parser.py**: parse json, get the list of files to download and produce list of filenames (packages).
2. **download_pkgs.py** (option 0): download the packages to a temporary directory.
3. **rpm_sign.sh** (option 0): rpm sign each package.
4. **rpm_sign.sh** (option 0): verify signature of each package.
   a. a. verification of the packages
5. **upload_pkgs.py**: upload each package to nexusrepo.
6. **Package-install**: Validate package installations from testing repository and perform functional tests.
7. **release-candidate**: Install all packages in release repo together with the new packages from testing
8. **json_parser.sh**: Produce new json file as asset of the new release
9. **clean.sh**: clean temporary directories.