

dCache Component Release Notes for EMI 1

Component release numbers

The dCache server release for EMI 1 is planned to be the next dCache Golden Release which is 1.9.12. The previous long term release (Golden Release) has been 1.9.5. The subsequent Component Release Notes refer to the upgrade from 1.9.5 to 1.9.12.

What's new

EMI imposed features and improvements

The following features and improvements are part of the DoW agreement.

Publishing of GLUE 2.0 compatible information

dCache 1.9.12 will publish GLUE 1.3 type of information using the GLUE 1.3 and the GLUE 2.0 schema in parallel.

Integration of the EMI ARGUS authoriation rendering system.

dCache 1.9.12 will provide an improved authentication/authorization system (gPlazma2). gPlazma2 allows to add arbitrary login and mapping pluggins. Initially dCache will provide

- login/mapping pluggin for backward compatibility to gPlazma-1 configuration files.
- Username/password login pluggin
- LDAP/mapping pluggin
- ARGUS pluggin for DN blacklisting.

dCache 1.9.12 will use gPlazma-1 as default. gPlazma-2 needs to be enabled.

Support for NFS4.1/pNFS

dCache 1.9.12 will provide full NFS4.1/pNFS server functionality including Kerberos Authentication. For details and testing results see the dCache.org presentations [on NFS4.1](#).

Support for WebDAV.

dCache 1.9.12 provides the WebDAV server protocols as well as raw http(s) access to data and directory structures. More information and documentation will become available after the dCache Goettingen workshop 16/17 of March.

SRM over SSL

dCache 1.9.12 offers SRM via GSI and SSL. Delegation is only provided via GSI. For SSL, only mechanisms are support which don't need a delegation service. A common agreement (between all EMI areas and external services), on a delegation service, is in preparation.

Features and improvements not being part of the EMI DoW.

Modern configuration system

With 1.9.12 dCache provides a unified configuration system. Other than in the past, configuration parameters can now be manipulated in a single directory/file.

New logging system.

The component logging system has been modified to incorporate user requirements collected from customers since 1.9.5 was deployed.

GSI X509 authentication for the xrootd protocol.

xrootd is a propriatery protocol mainly used by WLCG to access data. dCache 1.9.12 provides GSI authentication for this protocol.

Improved pools scalability

Triggered by the demanding requirements for local data access, the scalability of the dCache data pool system has been significantly improved.

Migration Module Improvement

The Migration Modules allows to schedule file transfers between pools in order to drain pools or to distribute data among pools to improve performance. The functionality of the Migration Module has been significantly improved.

Deployment Notes

- When upgrading from 1.9.5 to EMI-1 (dCache 1.9.12), configuration files need to be modified according to the new configuration system [?](#).
- The upgrade to 1.9.12 can be done gradually. All head nodes (including doors) need to be upgraded at the same time, the pools however can be upgraded step by step after the head nodes are processed.
- The complete compatibility matrix is provide with all dCache release notes. (e.g. 1.9.11 [?](#) notes)

Known issues

Up to know, there are no known issues with dCache 1.9.12.

Detailed component release notes

- [Details to 1.9.9](#) [?](#)
- [Details to 1.9.10](#) [?](#)
- [Details to 1.9.11](#) [?](#)

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