

EMI

Release Notes

ARC CE

Document identifier:	EMI-.....
Document version:	1.1.0
Date:	April 3, 2011
Document status:	DRAFT
Document link:	http://www.nordugrid.org/documents/emi/arc-ce-rn-1.1.0.pdf

Abstract: ARC CE EMI component refers to ARC Compute Element and necessary auxilliary services, such as Janitor as ARIS

CONTENTS

1	RELEASE NOTES	3
1.1	WHAT'S NEW:	3
1.2	DEPLOYMENT NOTES:	3
1.3	KNOWN ISSUES	4

1 RELEASE NOTES

1.1 WHAT'S NEW:

- ARC Compute Element (ARC CE) in EMI-1 "Kebnekaise" release is a major step forward with respect to previous releases, as it completes migration to the new code base.
- Grid Manager service, which was at the heart of ARC CE for a decade, is completely refactored and re-engineered, while keeping all of its key features that made it so reliable and attractive, including automatic data caching and staging. The "replacement" is called A-REX (for ARC Resource-coupled EXecution service), which is a more sustainable, scalable and extendible (e.g. via plugins) solution.
- A-REX provides a new WS-based interface in addition to the gridftp-based pre-ws interface, thus preserving backwards interface compatibility
- A-REX can publish, through the LIDI WS interface, GLUE2 XML information
- A-REX comes with set of information providers that can feed GLUE2 LDAP information into the ARIS service
- A-REX comes with support for new back-end for the EDGI 3GBridged.
- As experimental feature A-REX offers improved input/output data handling framework
- As an experimental feature A-REX comes with and ARGUS authorisation plugin.
- The dynamic runtime environment module, the Janitor is another experimental new feature
- None of the experimental features are turned on by default, they offer preview of technologies to come in next releases.

There were no major changes in the norduridmap utility.

- In total, 48 bugs in A-REX and associated components were fixed since the previous ARC CE release in October 2010. These included fixing configuration issues, problems with handling of some job description attributes (both JSDL and xRSL), glitches in some internal job states, and improving performance and functionality of batch system interfaces. Complete list of fixes is available in the extended ARC Release Notes.

1.2 DEPLOYMENT NOTES:

- For sites deploying ARC 0.8.3 or ARC 0.8.3.1 releases, a smooth upgrade path via Yum is provided. Since this will imply switch from Grid Manager to A-REX, careful check is advised. Please refer to Grid Manager EOL notes (<http://www.nordugrid.org/arc/gm-eol.html>) for details.
- To deploy a functional computing element with the current production interfaces one needs to install the new "nordugrid-arc-arex" package together with ARIS and gridftp server packages. The later two are necessary to provide interface backward compatibility. It is also recommended to deploy the gridmap-utils package. A metapackage will be provided to enable easy installation of an ARC CE.
- To start the A-REX service use "/etc/init.d/a-rex start" (there is a compatibility grid-manager sym-link provided too).

- By default, A-REX uses configuration file from the old Grid Manager. Configurations taken from previous ARC CE deployments should work out of the box.

There were numerous changes to the configuration parameters and options. None of the changes are backward incompatible. The comprehensive list can be found in the A-REX documentation.

1.3 KNOWN ISSUES

- GLUE2 XML document published by A-REX is incomplete due to the absence of official XML rendering