APEL Client Functional Description

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European Middleware Initiative

APEL Client Functional Description

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<td>2.1</td>
<td>25/04/2013</td>
<td>Add SLURM parser.</td>
<td>Will Rogers</td>
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<td>Rewritten for new APEL implementation in EMI3.</td>
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1. INTRODUCTION

1.1. PURPOSE
APEL (Accounting Processor for Event Logs) is a tool that gathers CPU accounting information by parsing batch system and blah accounting log files and inserting the data into a local MySQL database. APEL then publishes the data into a centralised repository.

1.2. DEFINITIONS AND ACRONYMS
APEL: Accounting Processor for Event Logs
CE: Computing Element – the APEL log parser is installed as part of this service.
LRMS: Local Resource Management System – batch system used to manage computing jobs.
STOMP [1]: Text-based messaging protocol supported by various message brokers.
SSM: Secure STOMP Messenger – a simple program used to send files using STOMP.

2. OVERALL DESCRIPTION
The APEL client has two components: the APEL parsers and APEL publisher.

The APEL parsers interpret log files to extract job information. Specifically, processing the log files produced by a batch system (PBS, LSF, SGE or SLURM) and the blahd/grid-jobmap accounting log files, which are produced by a CE. Extracted data is stored within a local MySQL database on the APEL publisher machine.

‘APEL Publisher’ is used to describe both the APEL client and APEL SSM.

The client makes LDAP queries of the BDII or CE to obtain the CPU performance figures for the worker node clusters. It then generates accounting records derived from the parsed logging data and stores the records in the local database. It writes the accounting data to the local filesystem so that it can be sent to the central server by SSM.

SSM reads files containing accounting data from the filesystem, and then sends it, using the configured message brokers, to the central APEL repository, where the information is aggregated.

3. ARCHITECTURE
4. REFERENCES