APEL Accounting:
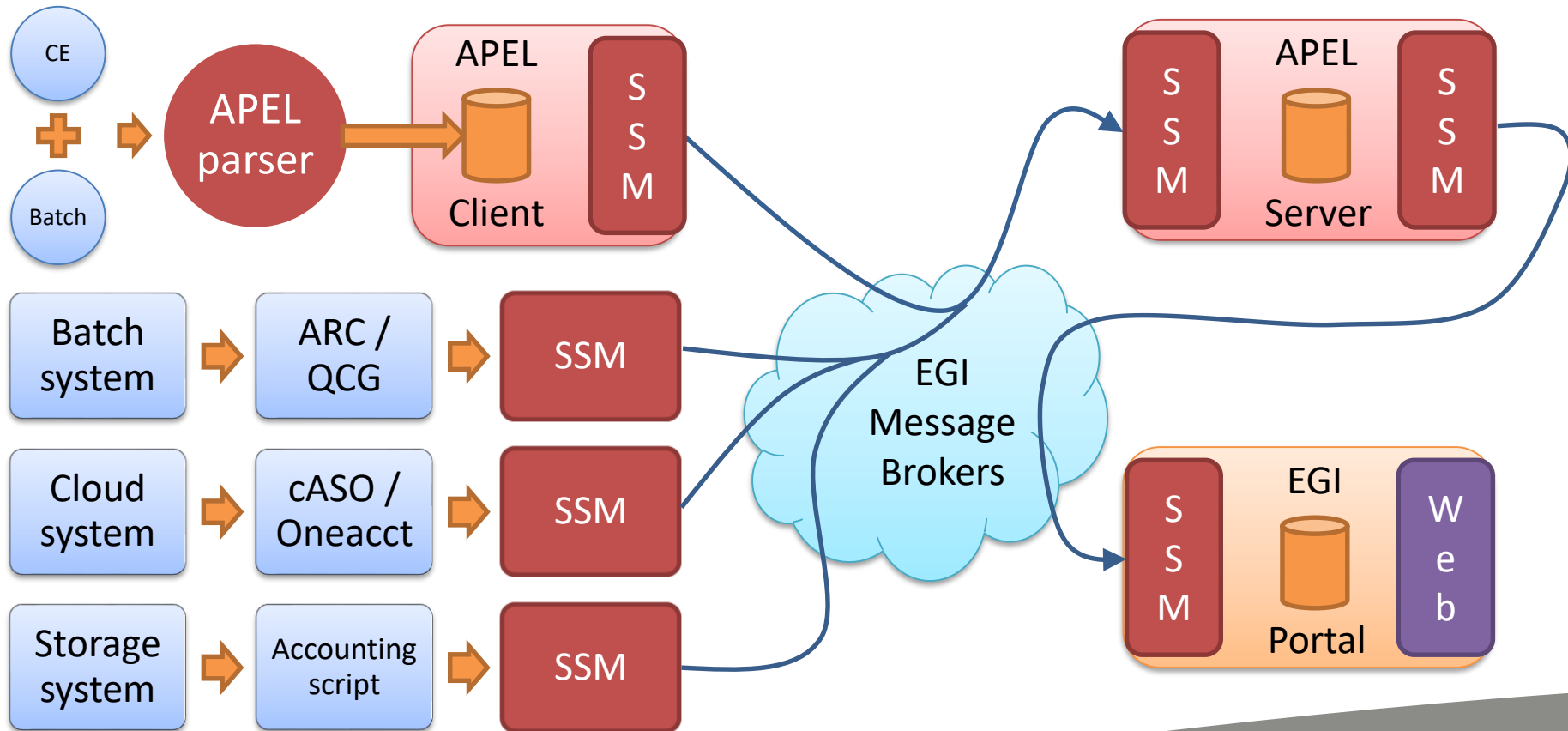# Data Flow and Work Plan

Adrian Coveney, Greg Corbett
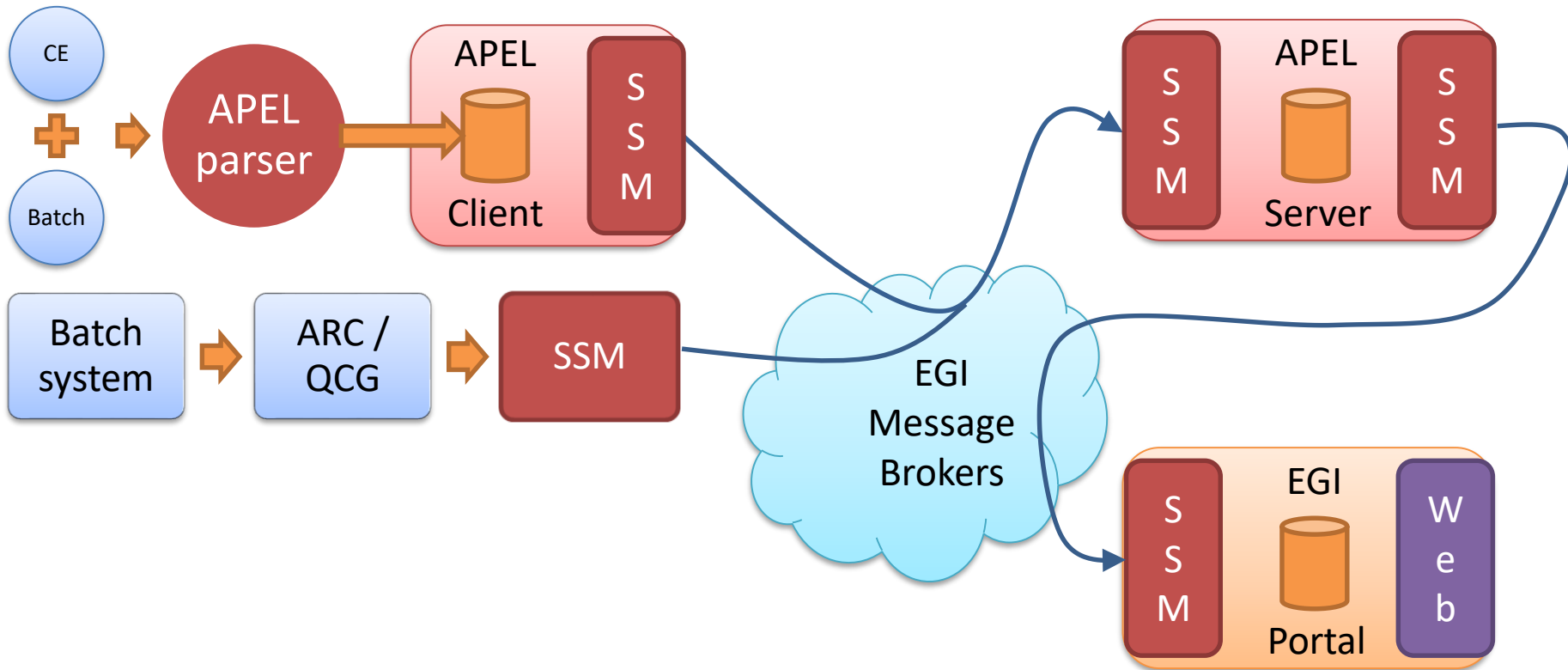
apel-admins@stfc.ac.uk

Data Flow

Data Flow

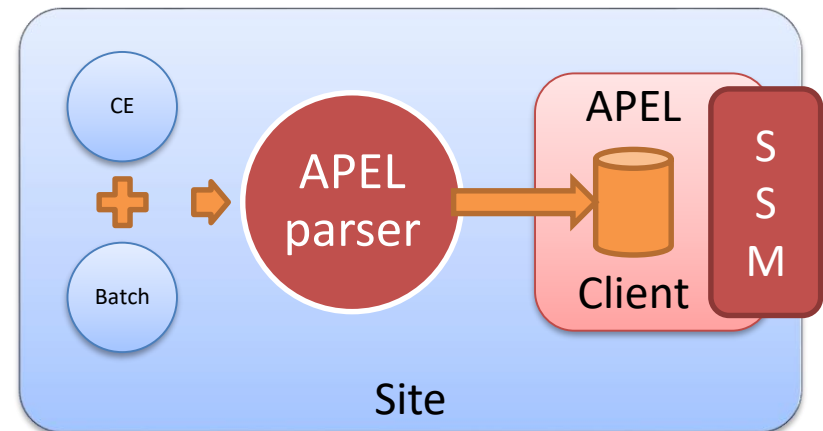# Data Flow - Grid

CE

Batch

APEL parser

APEL
Client
SSM

Batch system

ARC / QCG

SSM

EGI Message Brokers

SSM
APEL
Server
SSM

SSM
EGI
Portal
Web

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Data Flow - Site

- APEL Client Supported CEs
  - Cream CE
  - HTCondorCE (see work by Stephen Jones: https://twiki.cern.ch/twiki/bin/viewauth/LCG/HtCondorCeAccounting)

- APEL Client Supported Batch Systems
  - LSF
  - PBS
  - SGE/OGE
  - SLURM
  - HTCondor

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Data Flow - Site

- Sites install the APEL software

- Client parses the submit host (CE) logs and the worker node logs to create JobRecords

- JobRecords stored in client database

- Client can then either send individual records or summaries

Data Flow - Site

- Configuration

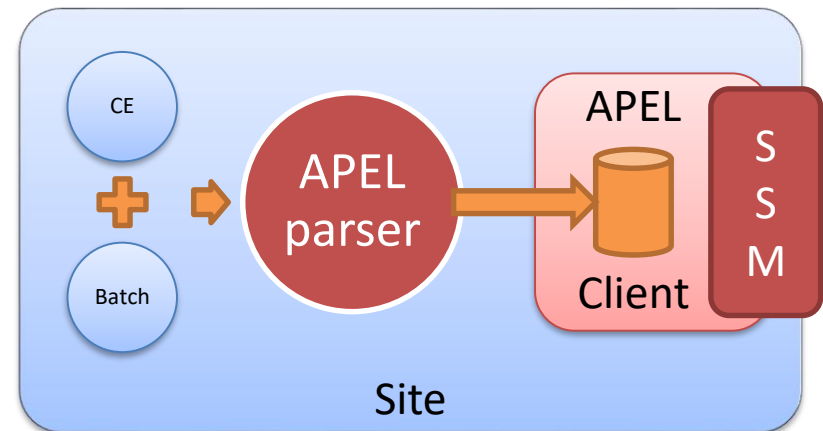 /etc/apel/parser.cfg

  /etc/apel/client.cfg

  /etc/apel/sender.cfg

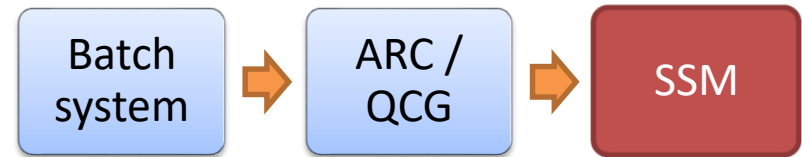- Logging

  /var/log/apelparser.log

  /var/log/apel/client.log
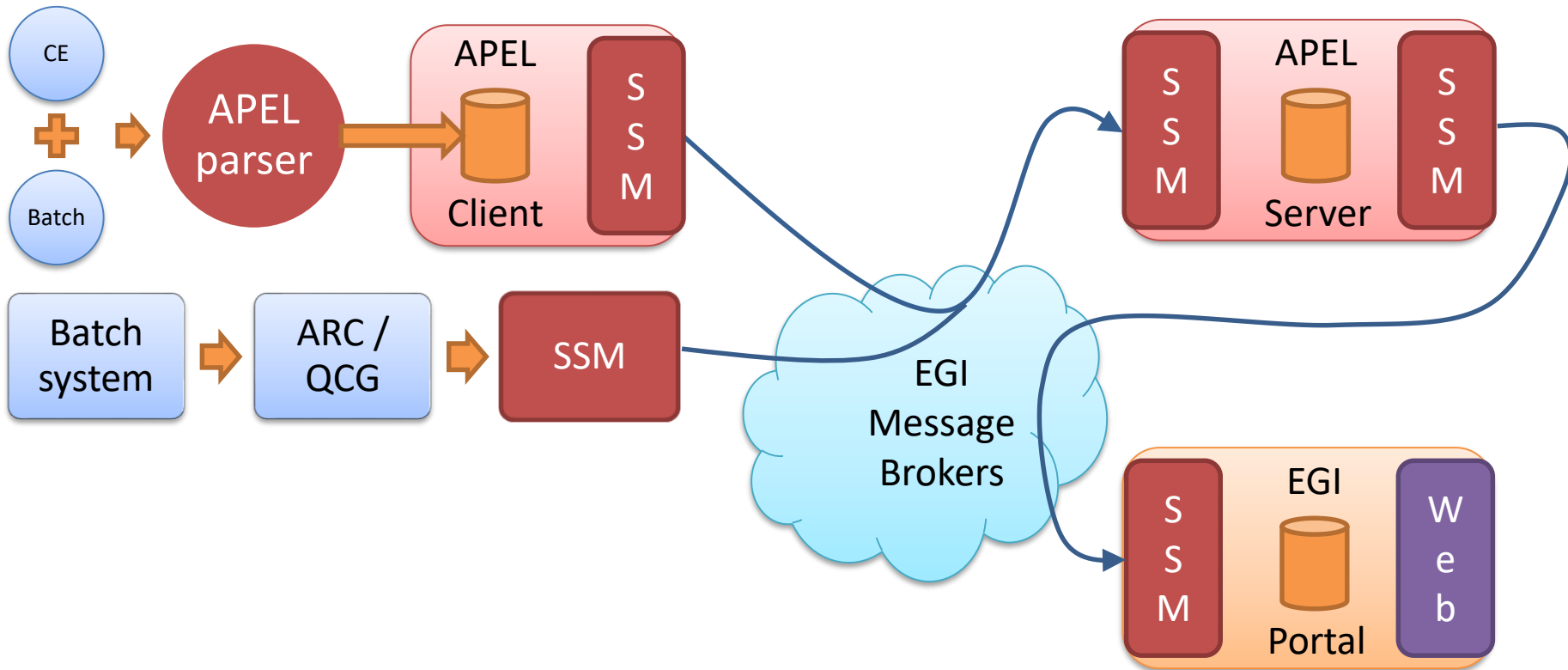
  /var/log/apel/ssmsend.log

Data Flow - Site

- For sites not using the APEL Client it's a black box as far as the APEL team is concerned.

- So long as the output is in our record format, we can ingest it regardless of the exact source.

- Sent to us via SSM and the EGI message brokers

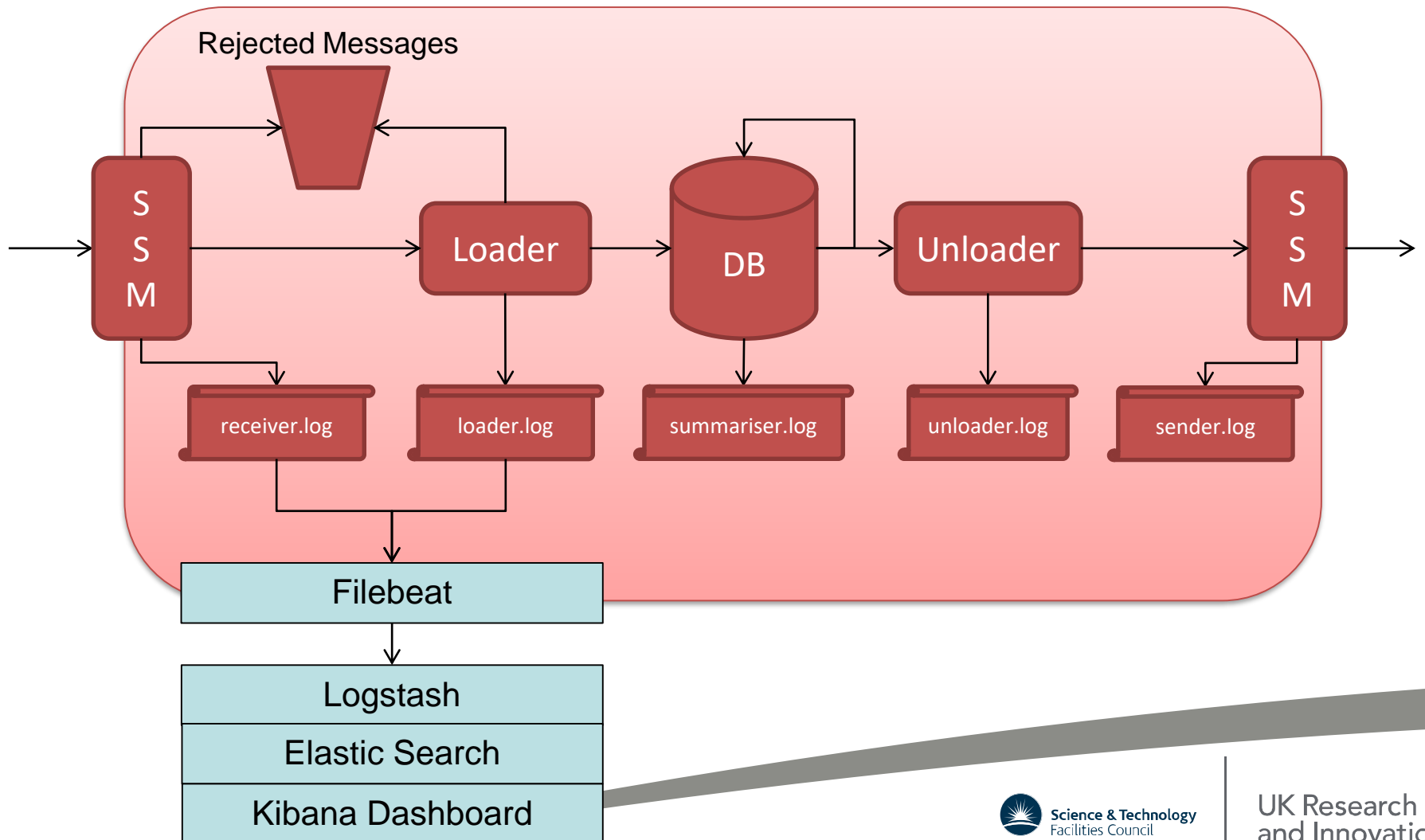Batch system → ARC / QCG → SSM
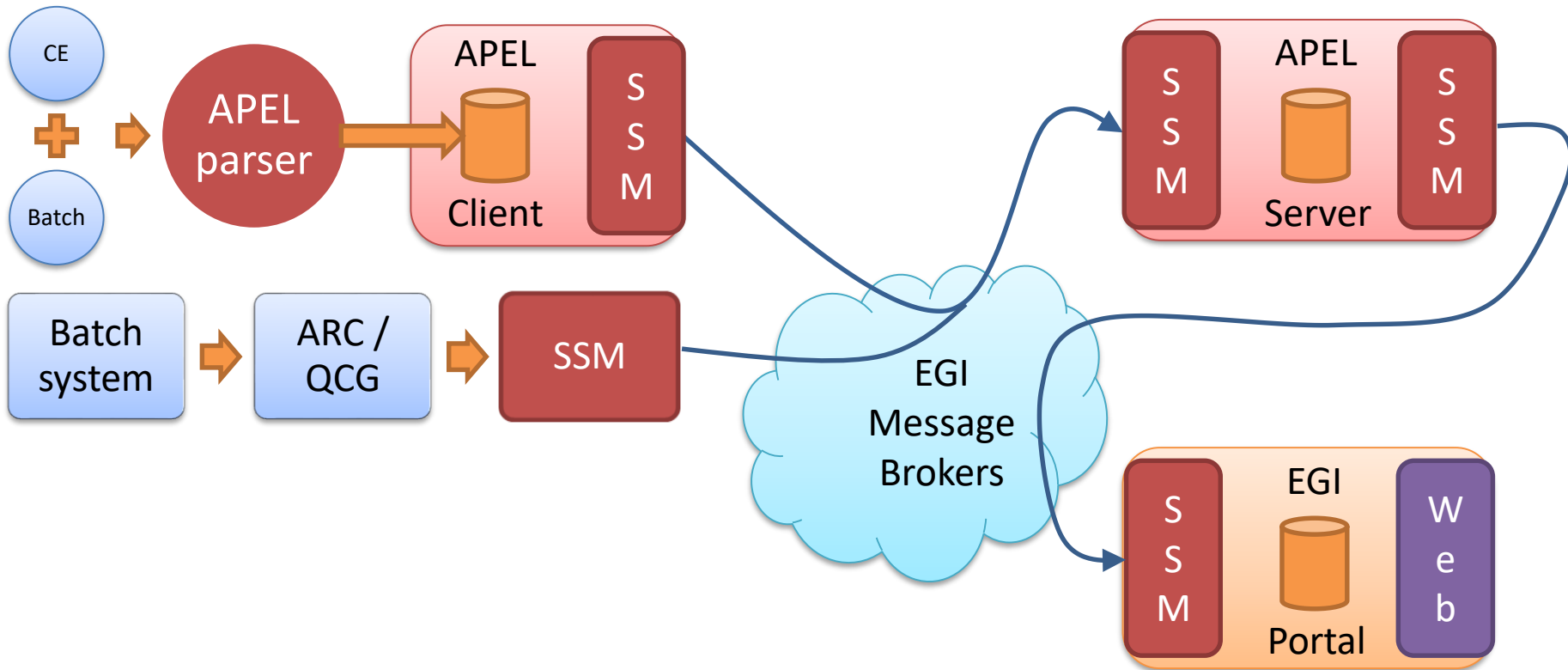
Data Flow

Data Flow - SSM

- Our messaging software uses the STOMP protocol and the EGI Message Brokers
  - Plan is to move away from the current STOMP message brokers towards HTTP based system, the ARGO Messaging Service.
  - https://argoeu.github.io/guides/messaging/

Data Flow - Central Server

Data Flow

Work Plan

Work Plan

- Raw unscaled wall clock planned to be tested as part of IRIS work for future use by WLCG.

- Currently working with Stephen Jones on including benchmarks in local APEL client config so that dependency on BDII can be removed. Future plan to enable fetching from CE JSON via GOCDB once that's more widely used and more stable.

Work Plan

- Having a different benchmarks ok so long as there's a conversion factor. Storing more than one benchmark is another matter. Latter would require schema change. More research required.

- Move to using ARGO Messaging Service – new version of SSM with minimal configuration changes.

- Defining a summary record for Storage Accounting to ease load on portal.

- IP Accounting record for Cloud Accounting.

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Questions?