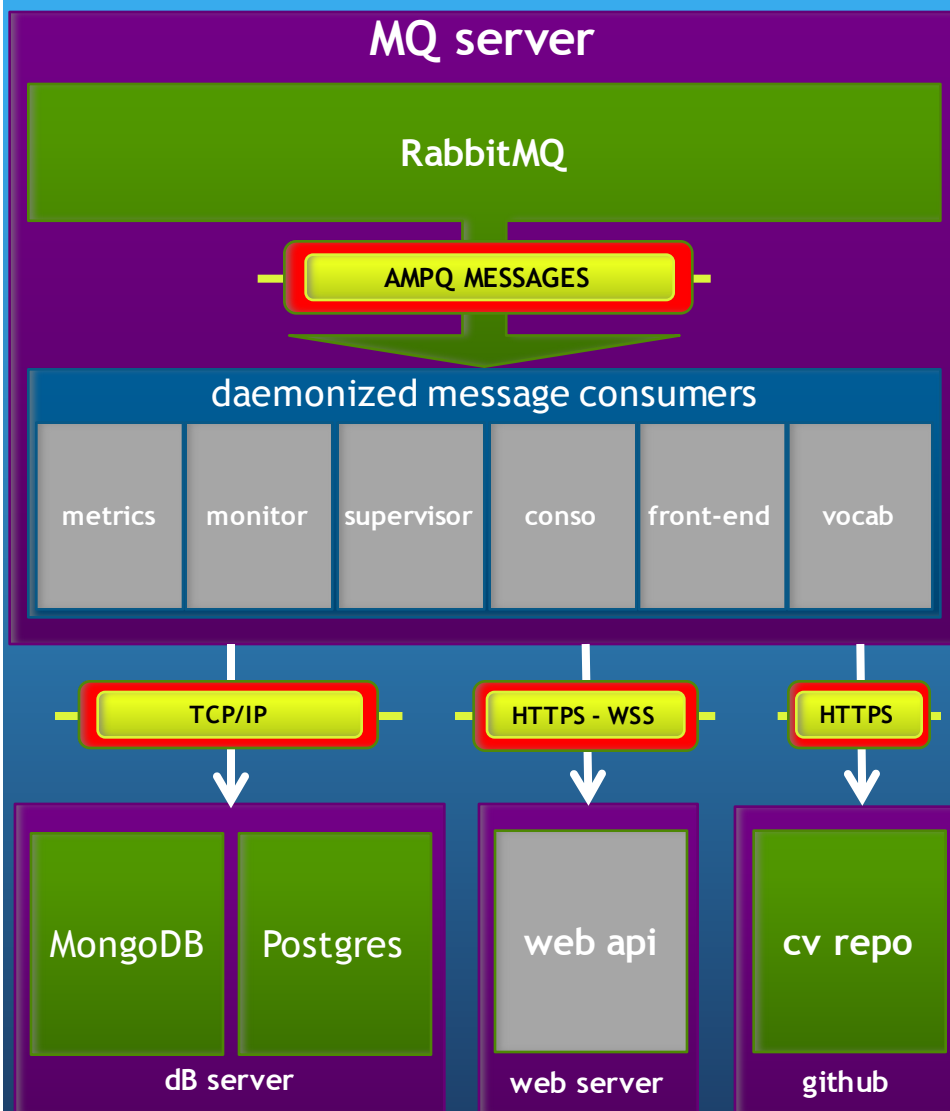
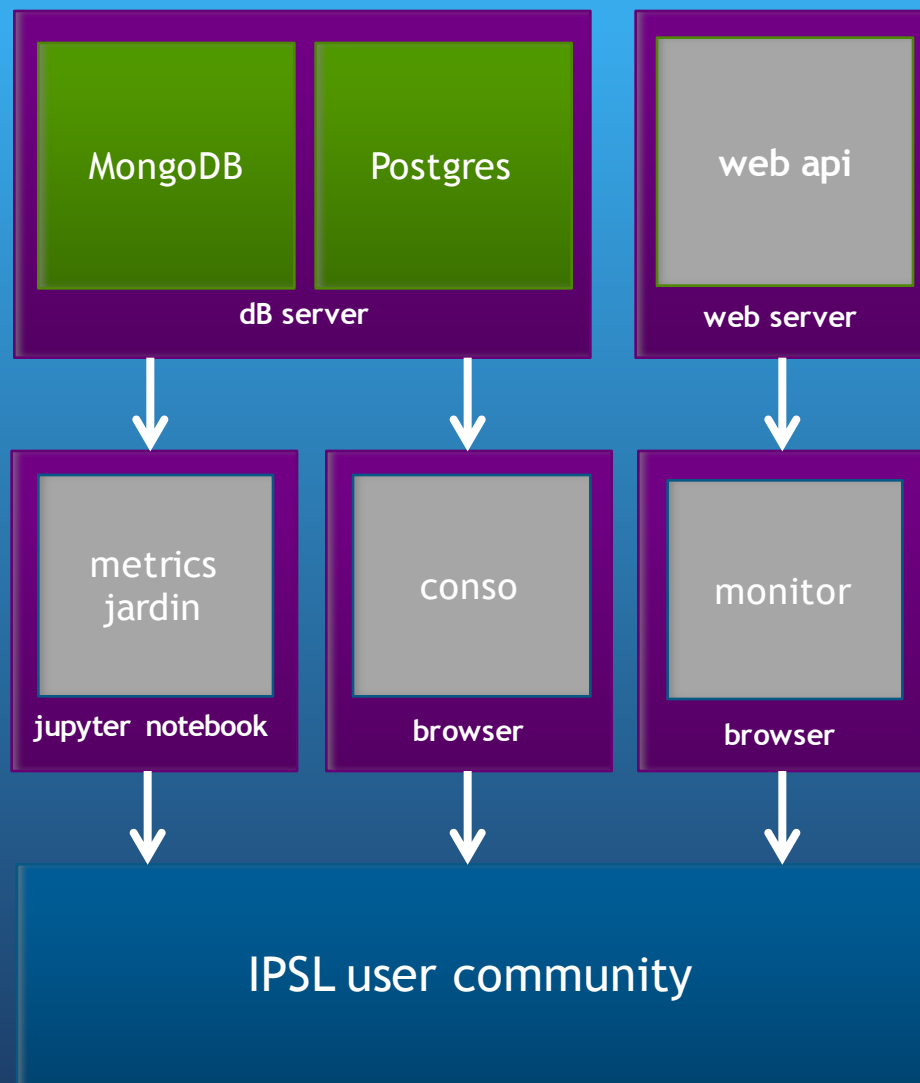


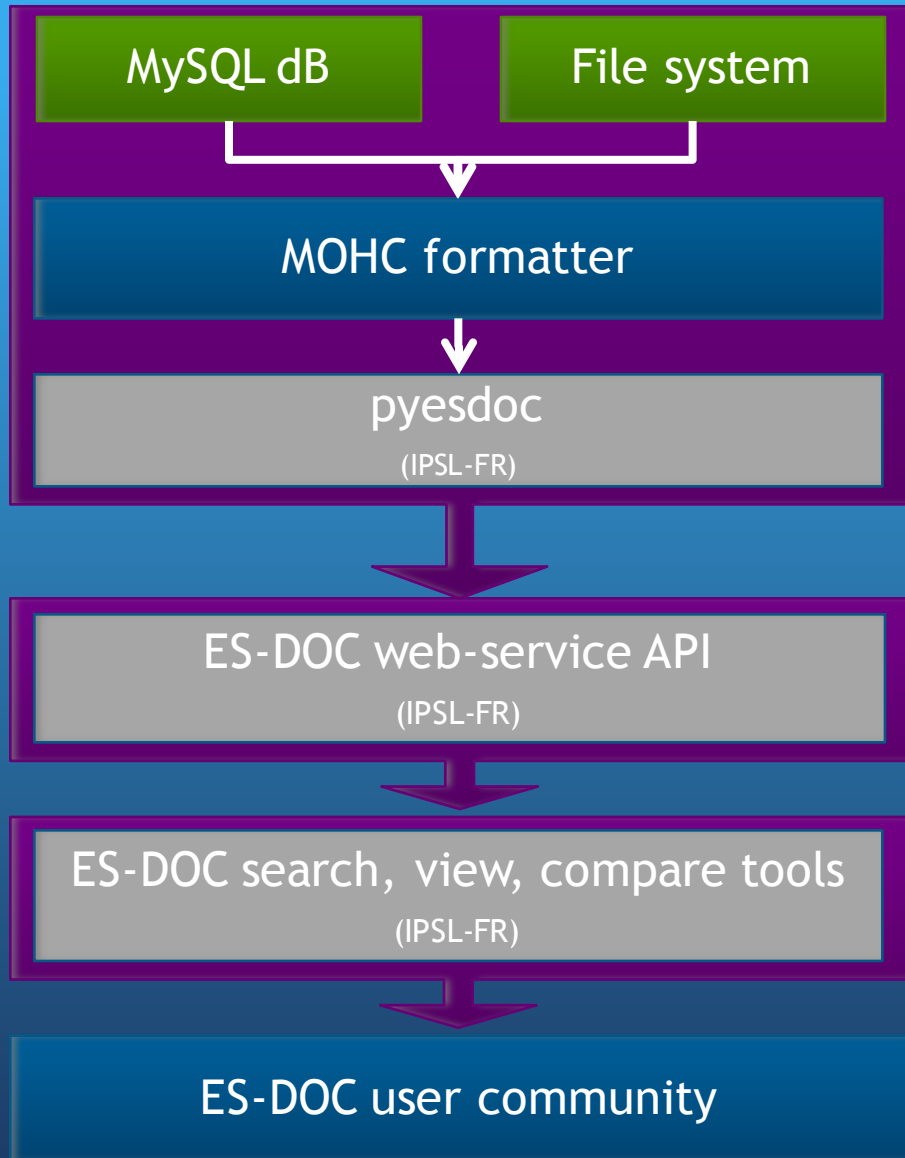
- The integration of IPSL's simulation runtime (libGCM) with a messaging platform supports a new set of use-cases
- HPC environment constraints mean that an SMTP messaging bridge is necessary
- libGCM now emits message batches which are sent via email to an IPSL SMTP server
- A daemon process on the Prodiguer message queue server receives email notifications
- Messages extracted from the emails are reformatted according to the AMPQ protocol
- Messages are subsequently dispatched to the AMPQ compliant RabbitMQ server



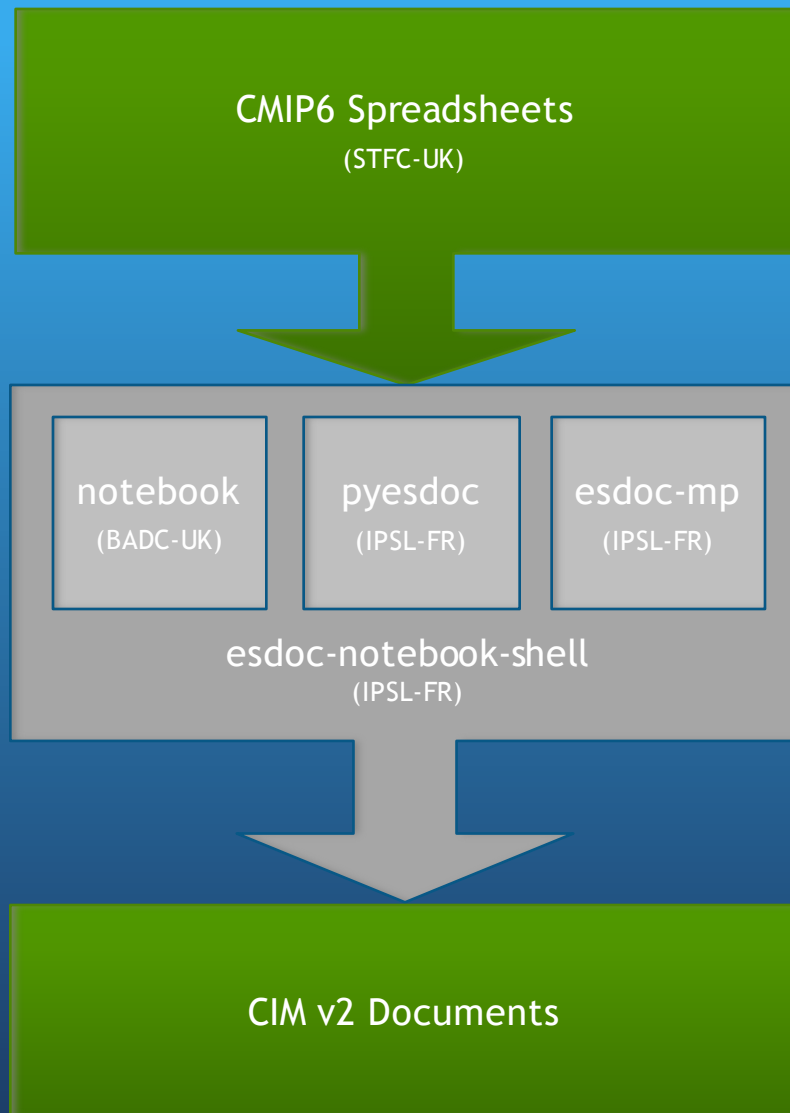
- Messages streaming from the HPC's are processed centrally at IPSL servers in Paris
- Messages are routed by RabbitMQ to daemonized message consumers
- Message consumers perform a diverse array of processing according to the use case that they are designed to support
- Most consumers interact with either one or more of the prodiguer databases
- Consumers can push Information downstream via a web service API
- Controlled vocabularies are dynamically updated and synched across servers



- Downstream applications benefit from the data extracted from message content
- Applications are built upon either data aggregation or time-slices
- Applications can also benefit from receiving real-time notifications
- Such downstream applications are at present either browser or notebook based



- MOHC stores simulation metadata in a MySQL database and/or the file system
- MOHC have built a documentation formatter to convert it's simulation metadata into CIM compliant documents
- The MOHC formatter uses the pyesdoc library to create, validate, encode & publish the CIM compliant documents
- All documents are to be published to the ES-DOC web-service API
- Published documents will appear in ES-DOC search, view & compare tools



- The first set of CMIP6 documents to be produced are related to experiment definitions
- The CIM ontology has been extended to support CMIP6 experimental definitions
- Initial spreadsheets are imported into a notebook for refinement
- The notebook allows the user to further define the experiments
- Completed experiments are published in a CIM v2 compliant format prior to publishing to the ES-DOC web-service API
- All CMIP6 experiment documents will subsequently appear in ES-DOC search & view tools