



Enabling Grids for E-scienceE

NPM Mediator

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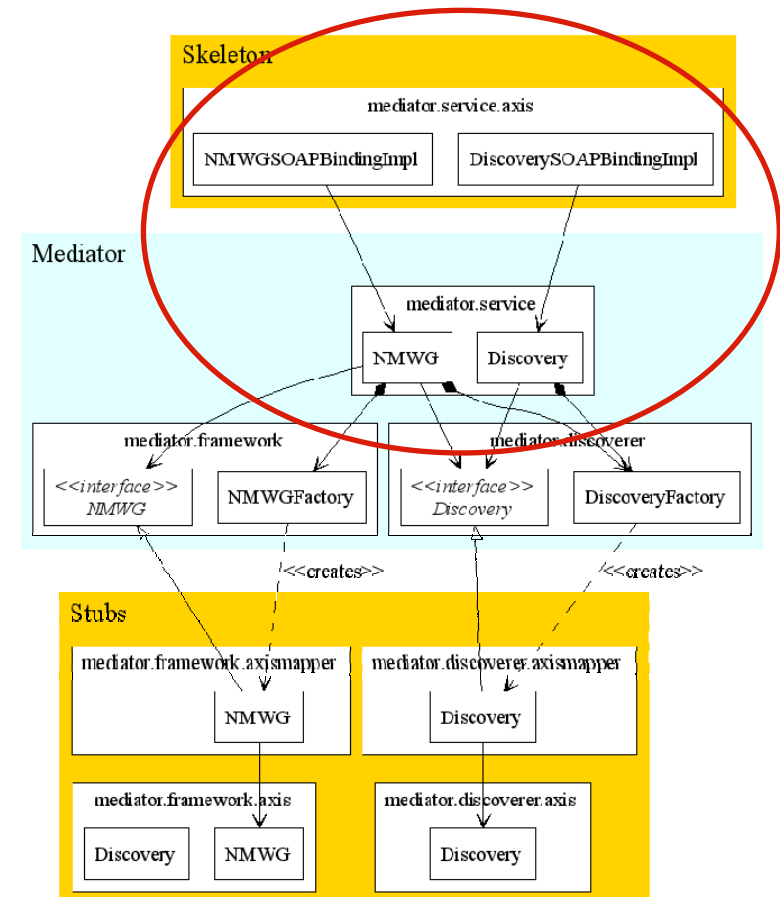


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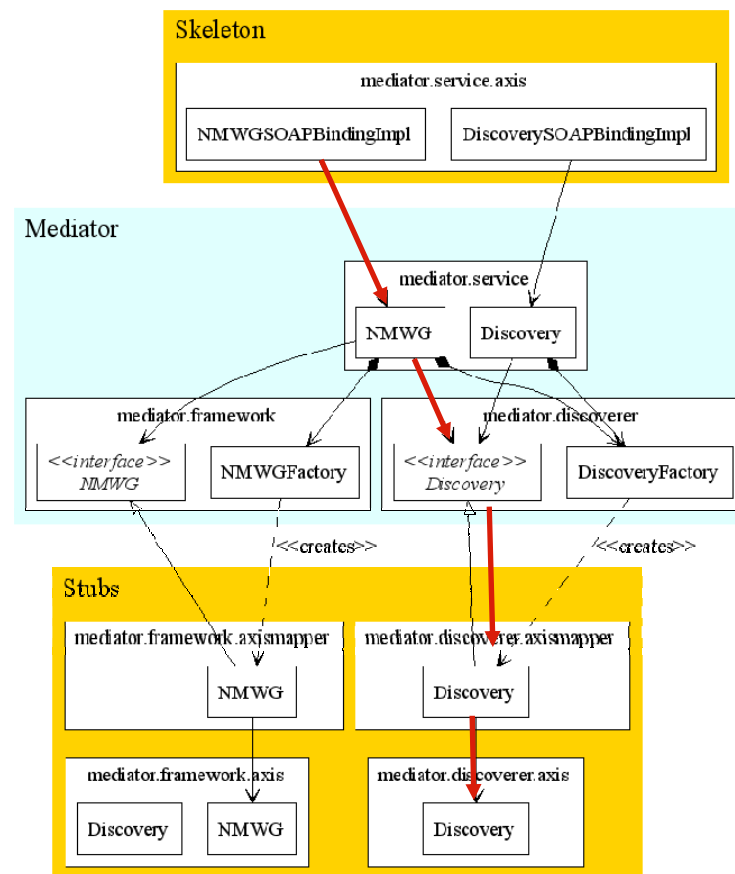


- **Architecture and interface discussed previously, so focus on design**
- **Objectives:**
 - Agree on mediator design
 - Decide if we're going to do aggregation or caching (data or discovery) - if so, when and how
- **Reference:**
 - Detailed design: <http://edms.cern.ch/document/606708>

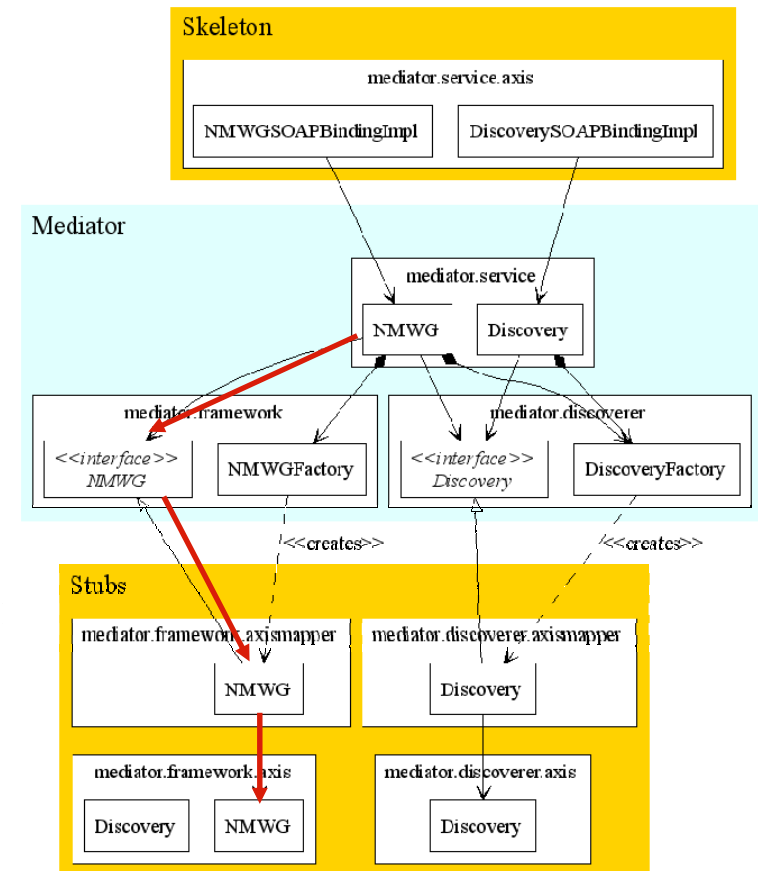
- Skeleton service auto-generated by Axis
- mediator.service.NMWG has same operations as mediator.service.axis.NMWGSOAPBindingImpl (Skeleton), but using NM-WG object model types; same for Discovery
- Service implementation uses Mapper to convert from Axis stubs into NM-WG object model, then calls into corresponding mediator.service.NMWG and mediator.service.Discovery operation



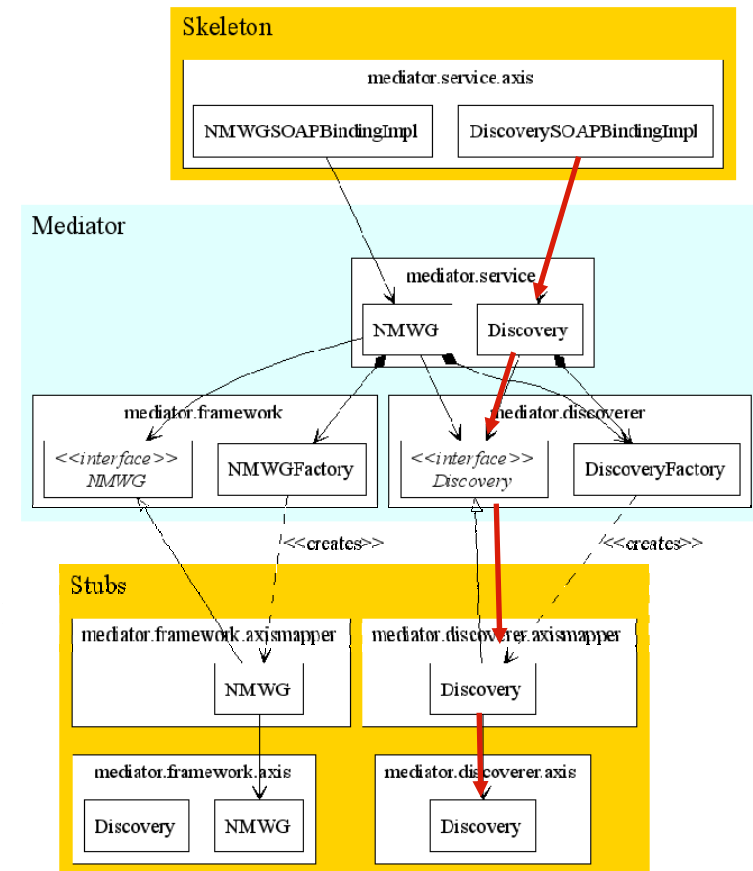
- If a NM-WG request is received, the URI of the corresponding framework service must first be determined (by the mediator.service.NM-WG implementation)
- The DiscoveryFactory is used to create an instance of a class that implements the mediator.discoverer.Discovery interface
- This interface is used to send the framework URI query to mediator.discoverer.axismapper.Discovery
- This class then converts this request into one using the Axis stubs, and calls the corresponding method in mediator.discoverer.axis.Discovery
- The query is then sent to the Discoverer and the URI received is returned back to mediator.service.NM-WG



- Mediator.service.NM-WG then uses the NM-WGFactory to create an instance of a class that implements the mediator.framework.NM-WG interface, with the specified end-point URI
- This interface is used to send the NM-WG query to mediator.framework.axis.mapper.NM-WG
- This class then converts the request into one using the Axis stubs, and calls the corresponding method in mediator.framework.axis.NM-WG
- The return value, in Axis stub form, is converted into the NM-WG object model by mediator.framework.axis.mapper.NM-WG and returned to mediator.service.NM-WG



- If a Discovery request is received, the DiscoveryFactory is used by mediator.service.Discovery to create an instance of a class that implements the mediator.discoverer.Discovery interface
- This interface is used to send the query to mediator.discoverer.axismapper.Discovery
- This class then converts this request into one using the Axis stubs, and calls the corresponding method in mediator.discoverer.axis.Discovery
- The query is then sent to the Discoverer and the return value, in Axis stub form, is converted into the NM-WG object model by mediator.discoverer.axismapper.NMVG and returned to mediator.service.Discovery



- **Should we do aggregation?**
- **Should we do caching of discovery information?**
 - How long is it valid for?
- **Should we do caching of NM-WG report data?**
 - Likely only makes sense for raw data, and if we have aggregation
 - Consider validity, quantity to cache, replacement algorithm

- **Any other Mediator issues, questions, comments?**