
Experiment Control Tools for ORCA Control Framework

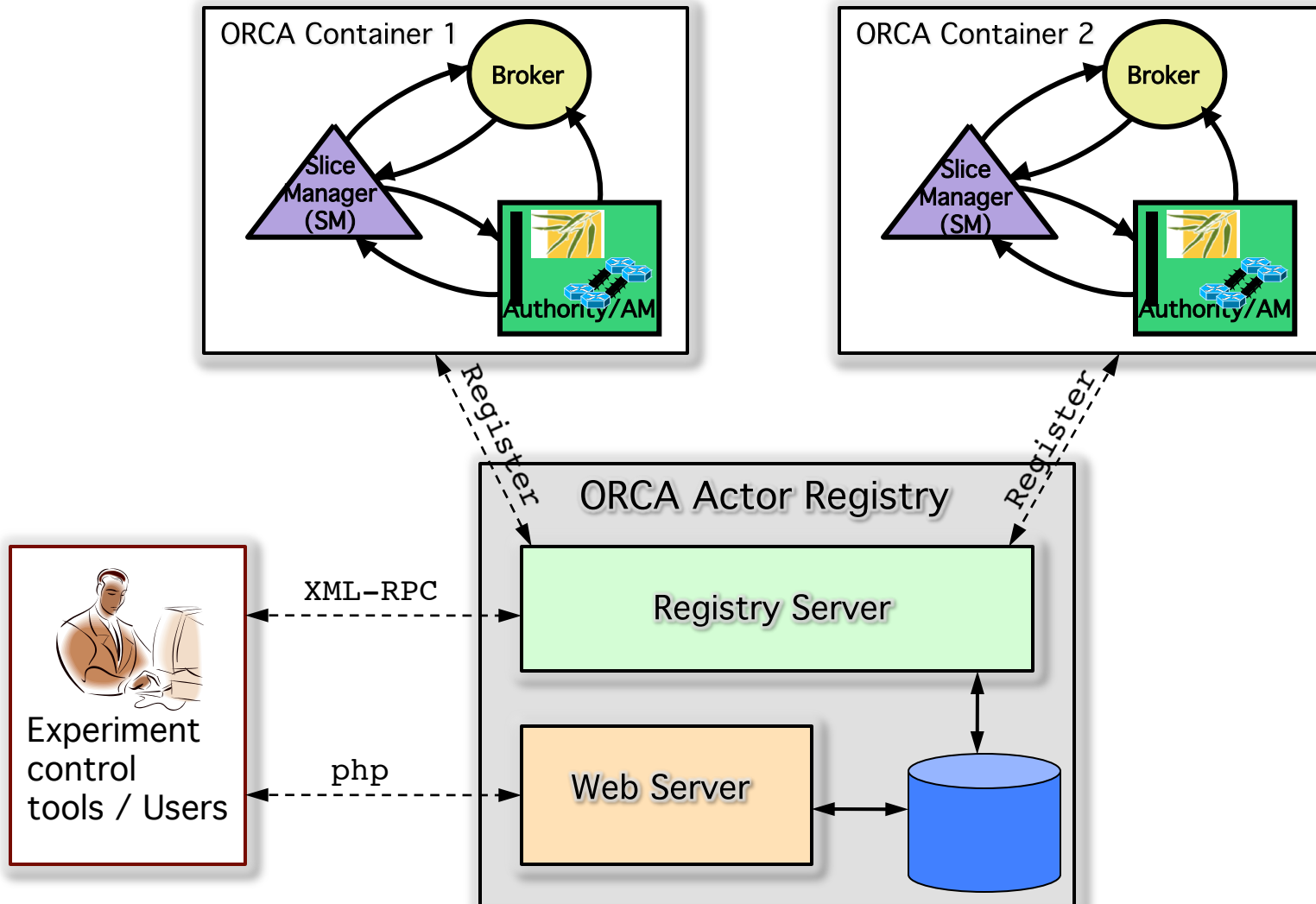
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ORCA Actor Registry

- Snapshot of available actors from various ORCA containers
 - Users can use this for resource discovery and other queries
 - Two new properties need to be set during container startup to register new actors
 - `registry.url=http://geni.renci.org:19999`
 - `registry.method=registryService.insert`
 - Registry contains information about actors - brokers, authorities (AM) and slice managers (SM)
 - actor name, guid, type, description, public keys and certificates
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ORCA Actor Registry



Actor Registry

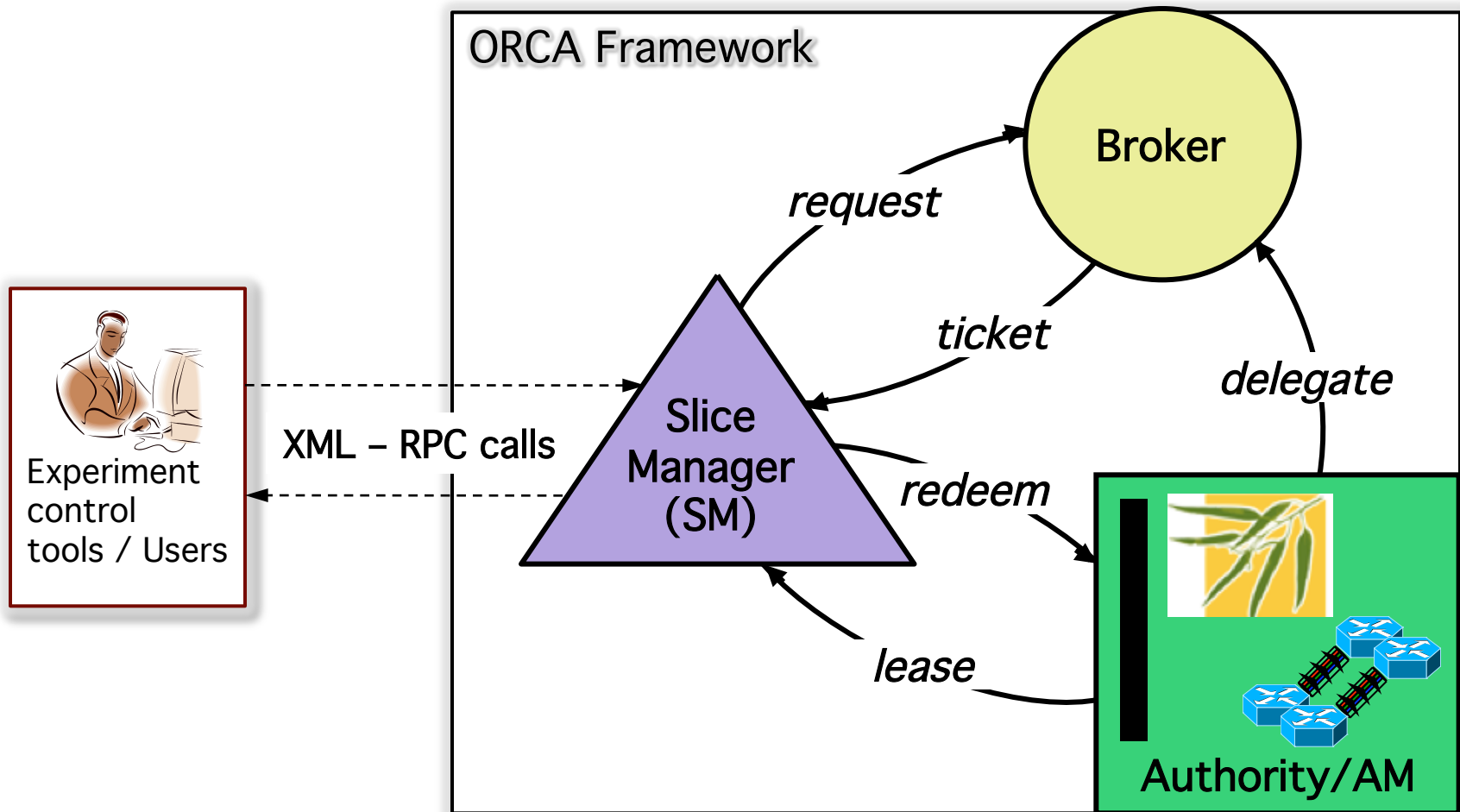
- Users can visit <http://geni.renci.org/actors.php> to view current set of actors registered with the registry
- Users can also programmatically query the registry using an XML-RPC interface

```
String url = "http://geni.renci.org:19999/";  
XmlRpcClient client = new XmlRpcClient(url);  
Vector params = new Vector(); params.clear();  
String result = (String) client.execute("registryService.getActors",  
params);
```

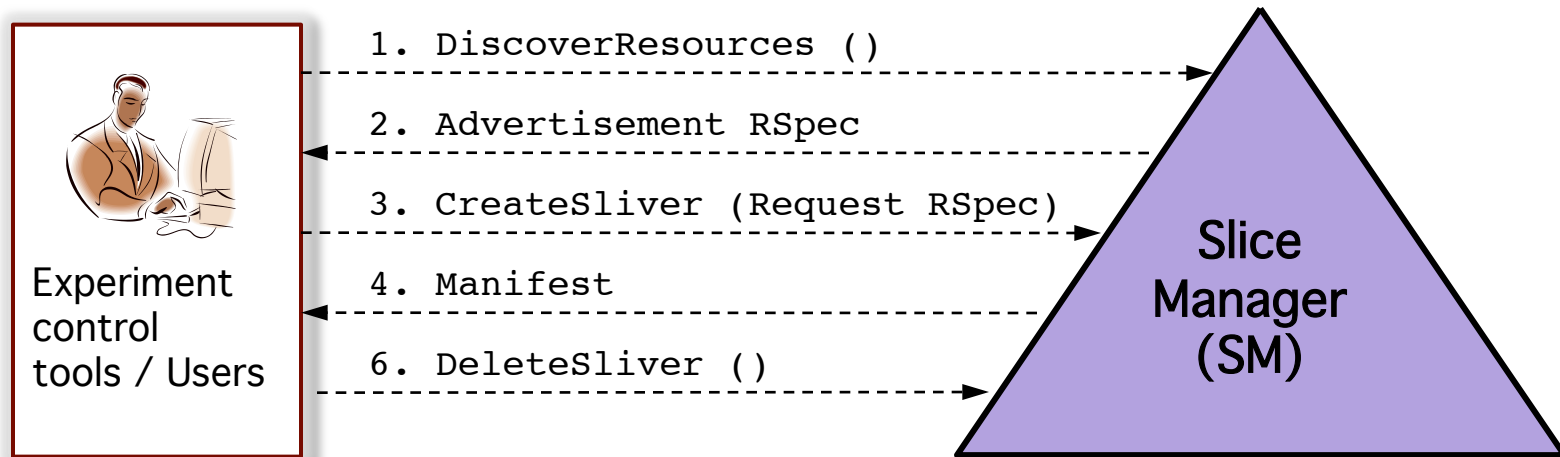
XML-RPC Controller

- **Goal: Provide an XML-RPC interface to ORCA for experiment control tools and external users**
 - **Tools/users would use this interface to**
 - **discover available resources**
 - **instantiate and destroy experiment slivers**
 - **Initial version of ProtoGENI-like XML-RPC interface available on an ORCA SM**
 - **Generic slice manager acts on behalf of experiment control tools/user**
 - **Details of control framework hidden from user**
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Overview



Interface Details



- These interfaces provide a minimal set of features
 - DiscoverResources(), CreateSliver(), DeleteSliver()
 - Extended set of features (available later) would include
 - GetTicket(), RedeemTicket(), UpdateTicket(), UpdateSliver()
 - Add support for resource representation using NDL
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