1. Start global clock server: `rg corba` or `rg jini`

Start Security Server: `rs corba` or `rs jini`
3. start Policy Client rp

Authorization Window

Resource Registration Window (User gets authorization, try to register resource. Registration fails because resource has already been registered)
Service registration window. Service will only show up after the resource after its registered.

Method registration window. Methods will only show up in available method list after the resource is registered.
Method registration succeeds
Build the (resource, Service, Method) Tuple. Only the registered resource, services and methods will show up in the window. A method must get registered before it is under a service.

A user can query a resource, a service in a resource, or methods in a service. Only the registered resource, services and methods in a service will be available for query.
Create roles for resources. Security administrator creates administrator roles for general resources.

Grant resource to one role or multiple roles. Security system resource is granted to pdb admin and udb admin. Users with these two roles will be the system administrators for patient DB and course DB respectively.
Grant services to roles.
Grant a method that has no signature constraint.

Grant a method that has signature constraint.
Signature Constraints

Query Role

Tracking

Resource: patient db

Start: Month 9, Date 20, Year 2001

Time: Hour 10, Min 0, Sec 0, PM

End: Month 10, Date 20, Year 2001

Time: Hour 10, Min 0, Sec 0, PM

Log File: D:\uwang\Hesse367\Hdeslog.dat

Track
Tracking tool, User can specify where to put the log file.

4 Start Authorization Client. ra

Security_admin logs in

Security_admin creates user chip, chip will be the administrator for both pdb and udb.
Grant pdb admin and udb adim roles to Chip

Query user
5. Start Policy Client
    Chip logs in as pdb admin

Chip create roles for PDB
Chip grants PDB resource to doctor, nurse, accountants.
Chip grants services to roles
Grant Method and add method signature constraints
Chip grants IP to the roles

Chip has no right to do anything on resource register
Chip changes his role to udb admin

Create dept head, faculty, grad and under roles and grant resources, services, and methods
(university db, Update Service, updateCourseCapacity) signature constraints granted to 'dept head'.

OK
Chip starts Authorization Client

Chi creates user “fei” and grants role to “fei”
Chip changes his role to udb admin and creates user “dana”, grant role to dana
Start pdb server

Fei logs in to pdb client
Fei adds patient Dana

Fei changes role from accountant to doctor
Fei writes diagnosis for patient dana
Start udb server

Dana logs into udb client
University Database Client

Query Database  Update Course  Register Courses

<table>
<thead>
<tr>
<th>NUM</th>
<th>TITLE</th>
<th>INSTRUCTOR</th>
<th>PREREQ</th>
<th>PREREQ2</th>
<th>SEMESTER</th>
<th>LOCATION</th>
<th>TIME</th>
<th>CAPACITY</th>
<th>ENROLLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>cse124</td>
<td>data structure</td>
<td>cse123</td>
<td>math101</td>
<td>fall</td>
<td>uce175</td>
<td>wed</td>
<td>100</td>
<td>40</td>
<td>48</td>
</tr>
<tr>
<td>cse372</td>
<td>image proc.</td>
<td>math300</td>
<td>cse124</td>
<td>fall</td>
<td>loren</td>
<td>thurs</td>
<td>40</td>
<td>20</td>
<td>28</td>
</tr>
</tbody>
</table>

Update Course

Course Number: cse372
Select Field: Capacity
Now Value: 11

Update  Cancel  Clear

Success

Successfully Updated!

OK
Dept. head does not have the right to register or drop a course.
Chip uses tracking tool to check the resource usage