D. IMPLEMENTED TOOLS

Section D.1 - XPolicySender

The XPolicySender is helping tool developed to easily introduce policies in the MANBoP infrastructure through the recvXPolicy method of the PE component.

The tool expects four arguments from the command line: the username of the user sending the policy, its password, the path where the file with the XML policy is located and finally, the MANBoP instance to which this XML policy should be forwarded to. The MANBoP instance is identified by means of the MANBoPInstanceId.

The logic implemented within the tool starts first the ORB and POA and then serialises the XML file into a string. Once this is achieved it retrieves the PE component interface from the Naming Service, using the MANBoPInstanceId, and finally it forwards the request to that interface. It also captures any possible exception sent and prints on the screen the error message that corresponds to that exception.

Section D.2 – UserCreator

The UserCreator helping tool has been developed to assist in the system testing by allowing a simple creation of a User object. In this way, the MANBoP system considers the User as a registered one and the registration step is avoided. In consequence, there is no need to create and interact with the GUI to register a new User or create and enforce a delegation policy for realising the same task.

The tool expects four arguments from the command line, which are the MANBoP instance to which this XML policy should be forwarded to; the username of the user sending the policy and its password; and finally, the file path where the es.upc.nmg.MANBoP package is located. The MANBoP instance is identified by means of the MANBoPInstanceId.

The logic implemented for this tool is very simple. It just retrieves the arguments introduced, checks that they are apparently correct, creates the User object and stores it at the appropriate DB location by serialising the object itself.

Section D.3 – SchemaCreator

The SchemaCreator tool has been created to ease the program testing process by skipping the need of enforcing a delegation policy to create and introduce an XML Schema file assigned to a policy functional domain and user. The tool not only stores the indicated XML Schema file in the appropriate directory, but also creates the Schema IMO that maps the policy functional domain and user with the XML Schema introduced.

The tool expects five arguments from the command line. These are, the user name linked with the XML Schema being created; the identifier of the policy functional domain covered by the XML Schema; name of the XML Schema file, or schema identifier; and the directory where the MANBoP system files are stored.

The logic implemented by this tool is quite simple and resembles a bit that already described from the UserCreator tool. That is, it retrieves the arguments introduced, checks that they are apparently correct, creates the Schema IMO and stores it at the appropriate DB location by serialising the object itself and finally, stores at the same location the XML Schema file.

Section D.4 – MultiPS

The Multiple Policies Sender (MultiPS) tool has been created to ease a bit more and fasten sensibly the time needed to introduce in the management system several policies. Very often, a user of the MANBoP management system will desire to introduce several policies. Using just the XPolicySender tool it would need to send one policy after the other introducing each time the full path of the policy as arguments. The MultiPS tool simplifies the process by sending to MANBoP all policies contained within a directory introduced as argument. Therefore, the user will just need to use the MultiPS tool to introduce as many policies as he desires. Furthermore, the tool allows specifying the periodicity between policies. That is, the interval of time the system must wait before forwarding the next policy.

The tool expects five arguments from the command line. The first four arguments are exactly the same as those expected at the XPolicySender tool. While the fifth argument is the periodicity for policy forwarding in seconds.

The logic implemented has a lot of common parts with that described for the XPolicySender tool. The differences reside in the fact that the MultiPS tool creates as many string with the XML policies as XML policies are contained within the directory and, afterwards, forwards them all to the Policy Editor component of the corresponding MANBoP instance with the periodicity specified.

Section D.5 – Manager

The Manager tool has been implemented for the administrator of the network. This tool allows him to easily introduce administrative commands, such as those needed for the addition or removal of a managed device, on a MANBoP instance.

The tool expects as arguments, at least, the name of the action to be done and the identifier of the MANBoP instance where it must be done. Additionally, zero or more extra arguments necessary for carrying out the corresponding action might be also introduced.

The logic implemented in this tool is quite simple. Basically, it simply obtains the reference of the Policy Consumer Manager component for the corresponding MANBoP instance from the Naming Service. Once, the reference is obtained, it just contacts the corresponding method depending on the action to be method introducing the appropriate arguments, built with those received by the tool.