# Specification of a MyProxy Plugin for Mozilla

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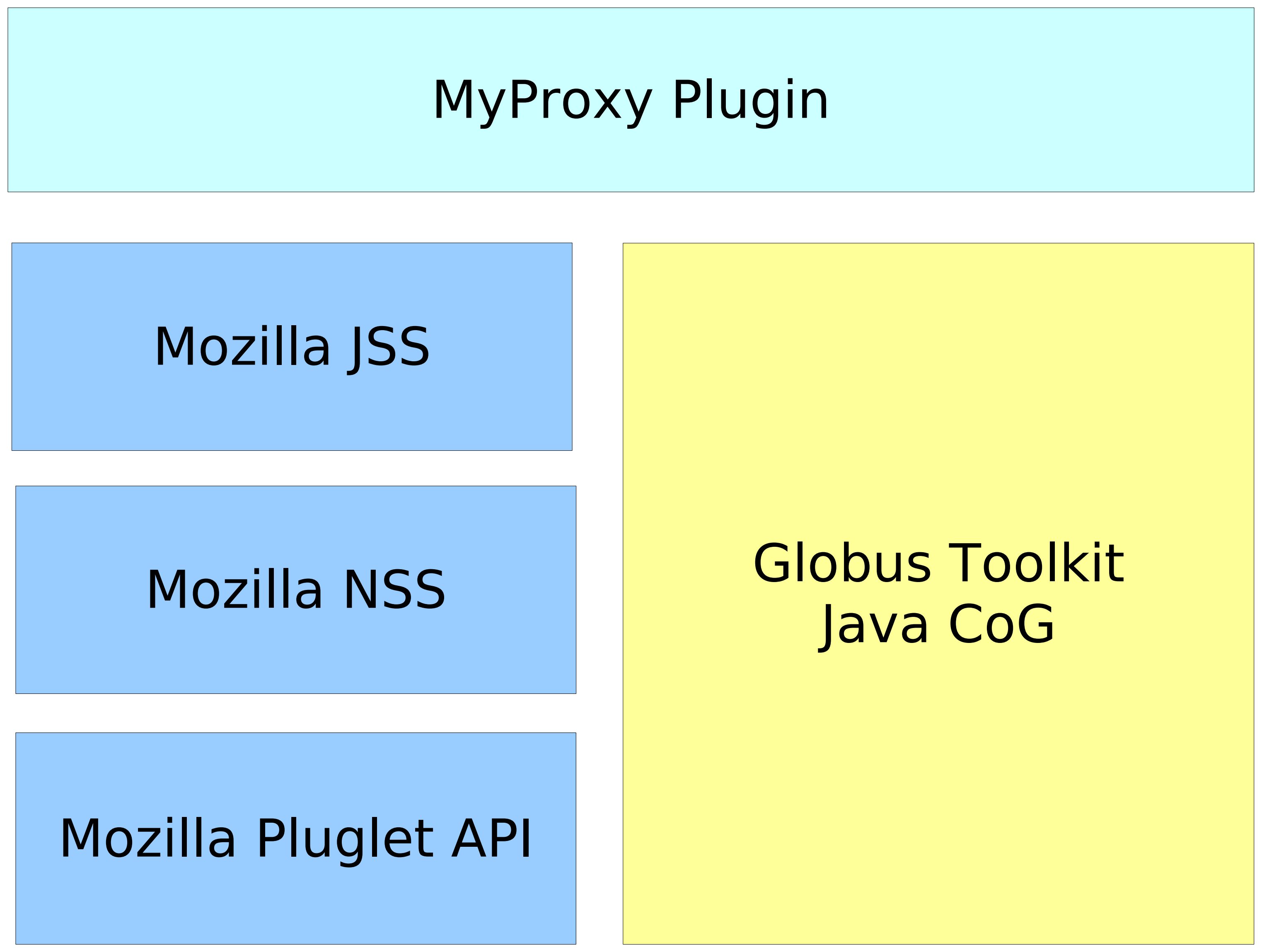
Currently a user is admitted to SINAPAD's computational grid after performing a number validation steps in the grid administrative system. After being validated the user must generate a certificate request using standard GSI tools such as grid-cert-request or a Java application developed by SINAPAD. The files generated in this process are stored in the local filesystem and are managed by the user. The request is sent to the grid CA where the certificate is issued and sent back to the user. To effectively use the grid the user must delegate a proxy certificate to the MyProxy repository using the myproxy-init tool or the Java CoG Kit. Users frequently find this procedure to be difficult since it involves managing files containing their credentials and running applications to upload their proxy certificates.

The majority of the browsers today are fully compliant with PKI technology. Usually they come with software-based cryptographic tokens that allow users to transparently generate certificate requests and store certificates issued by a CA. This makes the process of requesting certificates to a CA easier since the users would simply fill a form with their data. Upon submission of the form the browser's cryptographic token is automatically activated to generate a key pair and a certificate signing request (CSR). The CSR is sent together with the form to the CA. Installation of the certificate is also very simple since the CA usually sends an e-mail containing a link to the certificate repository. After accessing the link the certificate is automatically installed in the browser's cryptographic token. A functionality not available yet is the ability to generate and upload proxy certificates to a MyProxy repository.

A Java-based plugin for the Mozilla web browser is being developed within the context of SINAPAD which will be able to interact with MyProxy repositories. It makes use of the Java CoG Kit and Mozilla's Network Security Services (NSS), Java Security Services (JSS) and the Java Pluglet API. NSS and JSS enables one to write applications to access the browser's software-based cryptographic token.

It is expected that using native PKI tools of Mozilla will make the process of accessing the SINAPAD computational grid considerably simpler than it is now. The use of the software-based cryptographic tokens contained in browsers will also improve security since the user will no longer have to manage files containing their credentials. It will also be easier to use hardware-based cryptographic tokens since these are well supported by the current browsers.


MyProxy Plugin
Mozilla JSS
Mozilla NSS
Mozilla Pluglet API
Globus Toolkit
Java CoG