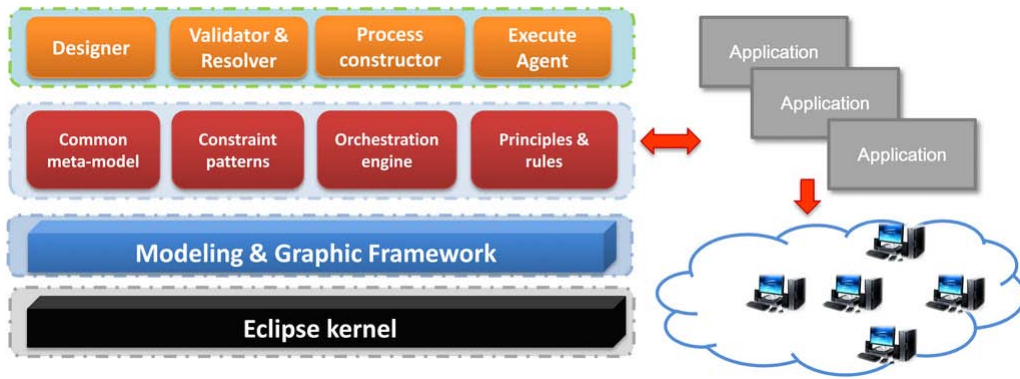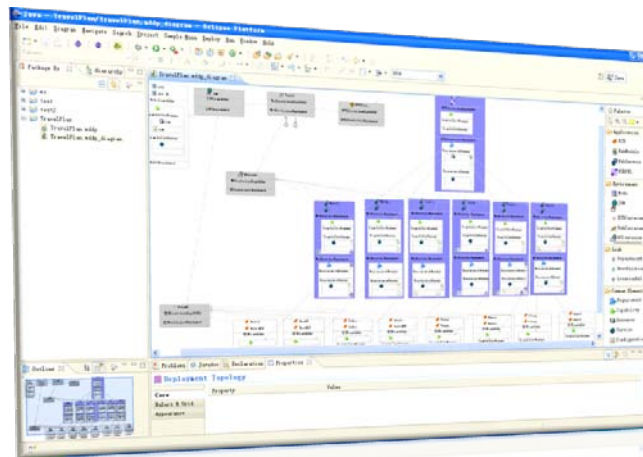Deployment is an important and complex phase in software lifecycle, especially for large-scaled and complicated distributed cloudware. Deployment challenges lie in: 1)how to improve the automation level and the efficiency during the deployment phase; 2)how to improve the reliability and correctness of the application configuration.

ONCE Deployer is a model-based deployment tool, and the objects of ONCE Deployer are 1) promoting the efficiency and reduce the cost during deployment, 2) and improving the reliability and correctness of the whole deployment process. Compared with JASMINe, the features of ONCE Deployer are as following

1) ONCE Deployer is focusing to solve the problems on application level, which include many kinds of components, while JASMINe Designer mainly on the design and configuration of platform, such as JOnAS and Tomcat. Thus JASMINe could become more powerful enhanced with ONCE Deployer

2) Model-based approach is adopted in ONCE Deployer, which can improve the automation level in deployment topology design and construction phase. A set of core meta-models are defined as the basic element to provide information abstraction for applications, environments, especially the applications meta-model, many features and properties are defined to support the configuration design and construction.

3) Deployment topologies validation is an important function in ONCE Deployer, which aims to enhance the reliability of the deployment plans. There are predefined constraints patterns constructed in ONCE Deployer to help application deployer define rules, requirements and assertions, such as unique constraint, dependency constraint, location constraint.

4) ONCE Deployer supports application migration among different application servers. It uses XSLT to help application deployer generate and edit vender specific deployment descriptors. This automates many of the standard migration tasks that formerly had to be done manually.

5) ONCE Deployer is developed on the kernel of Eclipse, and exists as a set of plug-ins, which makes it is easy to integrate with JASMINe Designer at the technology level.

Once Deployer Structure

A Screenshoot