EASA: A White Rose Grid Service Enabling Application Sharing and Hosting via the Web

"EASA is an excellent tool for publishing and sharing applications via the web."

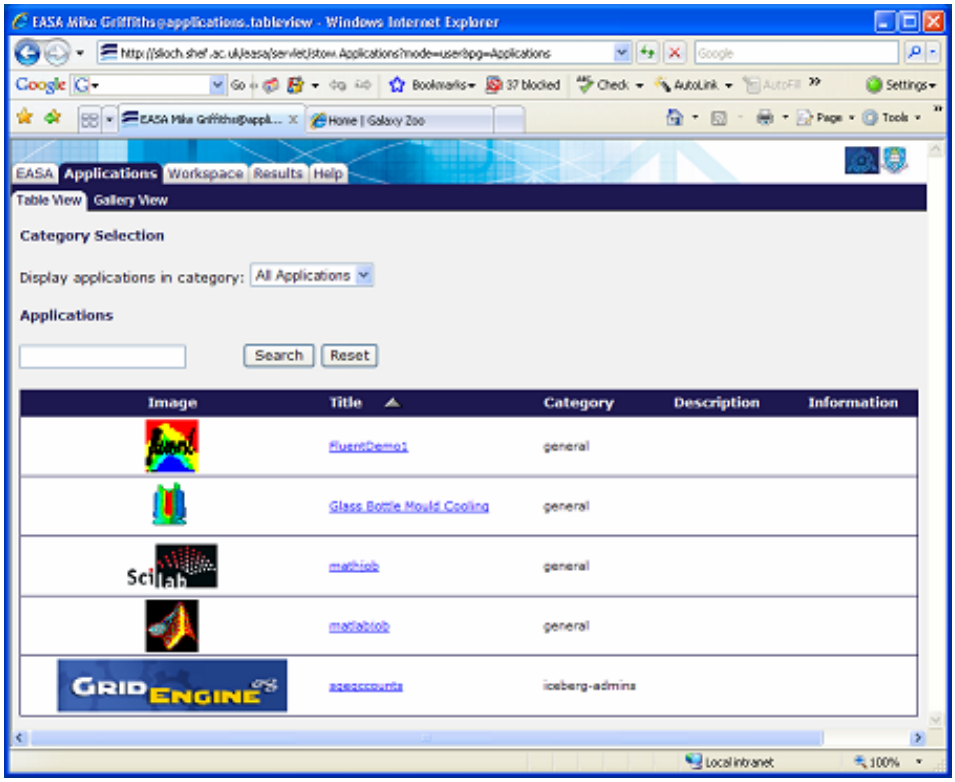
Introduction

The White Rose Grid e-Science Centre and Corporate Information and Computing Services at The University of Sheffield have initiated a new service called EASA. This service provides its users:

- A library of applications hosted by the High Performance and Grid Computing services of the White Rose Grid
- Authoring tools enabling publication of their applications on the web through the EASA service.

EASA is an excellent tool for sharing applications, for providing demonstrations and for the development of applications by multidisciplinary cross institutional collaborations.

This EASA service has been successfully customised to enable metascheduling across the White Rose Grid. The method used can be adapted to other applications publicised by EASA application authors.



The EASA Portal, illustrating the Applications Gallery.

Background

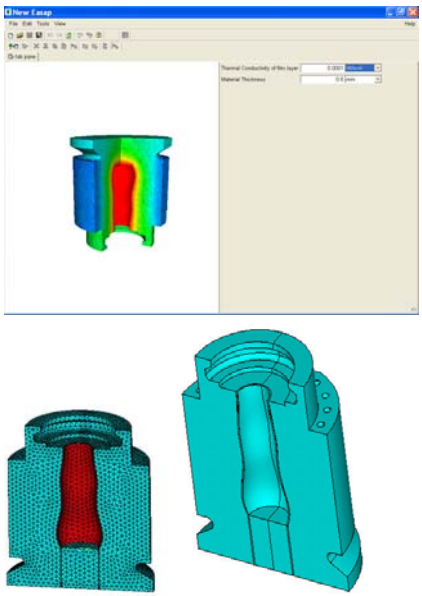
EASA is a service developed using proprietary software developed by EASA Ltd. The current WR service was developed from two projects:

- Glass technology project using finite element modelling to design a mould coating used in glass container manufacture
- Collaborative analysis of offenders, Personal and area based Social exclusion.

The initial project prototyped the EASA service and in a second phase funded by the White Rose Grid e-Science Centre a service has been established that can be used by all White Rose Grid users.

Registration and Access

Access to the EASA portal is simple; users require a web browser to open the White Rose Grid EASA portal login page. Users simply enter their White Rose Grid username and password.



EASA application for finite element modelling of moulds used for glass container manufacturing.

To register to use EASA users apply for a White Rose Grid account. Users with an account on the Sheffield node of the White Rose Grid may use the credentials they use for that node.

Running EASA Applications

Access to the EASA service is through a login page accessed through the University of Sheffield White Rose Grid web pages. When a user has logged in to EASA they are presented with a tabbed web page.
Under the applications tab, the user is presented with a gallery of the available applications.

Clicking on an application image or title opens the corresponding application. The application opens in another web page or for more complex applications requiring a lot of user interaction, the application can be opened with the EASA client. Users who need to run such applications can install the EASA client on their local machine by selecting install client under the EASA tab.

The results tab presents users with a list of the jobs that have been run and including those that are currently in progress. Particular jobs can be stopped, deleted or restarted. The user can review the results for a job by clicking the results item for a particular job.

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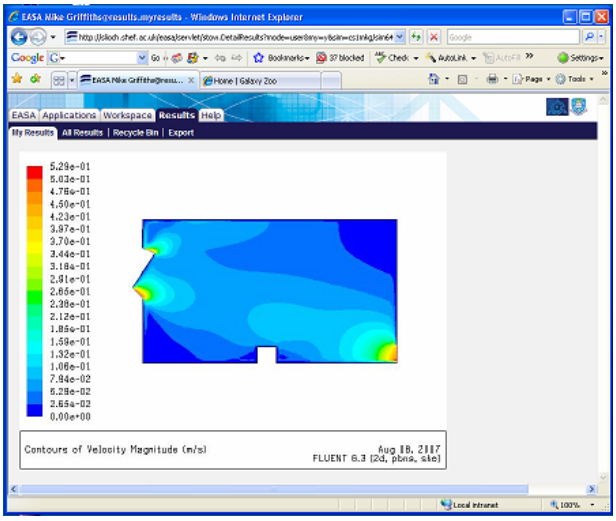

Above: Example output from a Fluent application presented by EASA.

Authoring Applications

A key feature of EASA is the capability for authoring and publishing applications. The applications are publicised by authors who are specialists in particular disciplines. Any user can be given permission to author an application. EASA provides an application builder tool enabling development of the EASA application. This tool enables the development of rich user interface applications without the need for the author to be experienced in graphical user interface development using java, C++, X, or tcl/tk.

Summary

A number of applications have been publicised on the application portal enabling them to be accessed through a web browser. The application portal has been used to manage job submission on individual White Rose Grid nodes. Additionally, a metascheduler configuration enabling job submission across all of the White Rose Grid nodes has been successful.

Further Information

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