Grids get down to business

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(PhysOrg.com) -- New technology developed by European researchers allows companies to deploy their business processes using grid computing and, even better, it validates a platform that gives easy access to grid resources. It is a big deal.

Grid computing, desktop networks that share computer resources, were a big deal in the 1990s when they first started to appear. They allowed the Search for Extraterrestrial Intelligence (SETI) to borrow from volunteer computers the enormous computing resources required to analyse the background hum of the Universe. So far the enthusiasts have had no luck finding proof that ET phoned home, so the world lost interest in grids.

But serious science has taken to the power of supercomputing for solving grand challenges like protein-folding analysis, climate modelling and earthquake simulation, with European projects spearheading the way.

Quietly and discreetly, European researchers have created a system that allows managers to design and deploy business processes across a grid. They have thus validated a platform that delivers on the promise of easily accessed grid resources. People are listening again.

Difficult and time-consuming

Rightly so, as this is a big deal. Grids have, for the most part, remained the preserve of large, scientific institutions and companies. They are difficult to set up, even more difficult to manage on a day-to-day basis, and developing a new task or workflow can take many months.

No longer. The EU-funded A-WARE project has developed a platform that allows easy access to grid resources and has validated its approach by enabling grid deployment across large enterprises.

The work is barely finished and already the project partners have potential customers keen to get their hands on their work. Airbus actually joined the project to get access to just this kind of grid functionality. A major European petroleum company is in the final stages of becoming customer number two. Many big businesses are clamouring for the software.

Understandable enthusiasm

It is an understandable enthusiasm. Grids allow different computing platforms, like Windows PCs, Mac OS X laptops and Linux servers to share resources.

"It is very important for companies like Airbus, because they have so many different types of computer for each department. Maybe PCs for inventory and Solaris desktops for design, for example. Grids can link those together," explains Claudio Cacciari, a researcher with the project. "This helps to correct the legacy issues that computer networks develop over time."

"But we also designed the system so that it could understand business processes rendered in languages like Business Process Modeling Notation (BPMN). The A-WARE platform works with existing enterprise application standards."

This means that business experts do not need to be grid experts to develop new processes on the system. It will have an enormously positive impact on companies by both extending the functionality and flexibility of their enterprise systems, and by enabling powerful, but easy to use,

grid applications.

Many complex problems

Airbus tested this system out, too. The company's engineers wanted to model the acoustic impact of the engine, placed in slightly different places, on the pilot. This is a complex problem, involving large calculations of fluid dynamics.

But that is the beauty of the A-WARE system. It offers the simplicity of a network with the high-octane horsepower of a grid, and the process-development software of an industrial-strength enterprise application.

The A-WARE system works on three layers: the grid-layer, a web-based portal layer that gives easy access to grid functionality and resources, and middleware to link the two.

It applied the platform to business processes because it is a compelling test case – a complex environment where easy-to-use systems are essential. It has also proved to be a canny commercial choice, too.

But A-WARE's work will have a greater impact by setting the standard for easy-to-access grid computing. It opens the way for the regular use of grids in a many other sectors. It is grid computing for the rest of us.

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