Introducing Manjrasoft Pty Ltd

Manjrasoft Pty Ltd is a start-up business focused on developing Next Generation .NET-based Cloud Computing technologies that ultimately save you time and money.

What else do we do?

- Develop flexible and scalable Building Blocks that are central to Cloud Computing platforms.
- Develop software optimised for networked Multi-core computers to accelerate applications.
- Provide Quality of Service (QoS) and Service Level Agreement (SLA)-based management solutions enabling application scheduling, dispatching, pricing, accounting for enterprise and/or public network computing environments.

Introducing Aneka

The first of Cloud and Grid Computing technologies being commercialised is “ANEKA”, which is a proven platform for .NET-based enterprise Cloud Computing.

ANEKA is a patented (PCT pending) Cloud computing technology building block that enhances:

- **Applications development** through a support for rapid creation of legacy and new applications using innovative parallel and distributed programming models.
- **Ability of organisations to harness** computing resources within an enterprise for accelerating execution of “compute” or “data” - intensive applications.
Introducing the **ANEKA PLATFORM**

**ANEKA** provides a set of services that make enterprise cloud construction and development of applications as easy as possible without sacrificing flexibility, scalability, reliability and extensibility.

The key features supported by **ANEKA** are:

- A configurable and flexible execution platform (container) enabling -
  - pluggable services;
  - security implementations - multiple authentication / authorisation mechanisms such as role-based security and Windows domain-based authentication;
  - multiple persistence options including RDBMS, SQL Express, MySQL and flat files;

- SDK (Software Development Kit) supporting multiple programming models including –
  - Object oriented thread model,
  - Task model for legacy applications
  - Map Reduce model for data-intensive applications
  - Custom tools such as Design Explorer for parameter sweep studies

- Easy to use management tool for SLA and QoS negotiation and resource allocation

**ANEKA** – the first choice for flexible, extensible .NET enterprise Cloud application development and deployment.

ANEKA allows servers and desktop PCs to be linked together to form a very powerful computing infrastructure.

This allows companies to become energy efficient and save money without investing in greater numbers of computers to run their complex applications.

Typical customer environments include:

- CAD, 3D Rendering, Drug Discovery, Life Sciences, Data Mining & Investment Risk Analysis.

**Specifications**

<table>
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<tr>
<th>Application Specifications</th>
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<tbody>
<tr>
<td>Microsoft Windows / Vista (XP Pro SP3, Business)</td>
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<tr>
<td>Microsoft Windows Server 2003 / 2008</td>
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<tr>
<td>Microsoft .NET Framework (&gt;2.0)</td>
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Dr. Rajkumar Buyya  
CEO – Manjrasoft Pty Ltd  
Director, GRIDS Laboratory, University of Melbourne, Australia

**Meet the CEO**

Dr. Rajkumar Buyya  
CEO – Manjrasoft Pty Ltd  
Director, GRIDS Laboratory, University of Melbourne, Australia

Dr Buyya is:

- **Globally recognised** as a thought leader in Utility and Distributed Computing.
- **Over 15 years experience** in research, design and development of high-performance distributed computing systems.
- **Received the 2009 IEEE Medal for Excellence in Scalable Computing, IEEE Computer Society TCSC, USA.**
- **For Engineering or other Opportunities, contact Raj at:** raj@manjrasoft.com

**ANEKA**  
Your choice for Enterprise .NET Cloud Solutions
ANEKA TECHNICAL OVERVIEW

Model choice

ANEKA offers four programming models which are closely aligned to many business and scientific applications, and also offers the unique ability to add more models as required.

Chose from:
- Aneka task
- Aneka thread
- Map Reduce
- Custom Models

ANEKA is built on a decentralised architecture. Each ANEKA node consists of a configurable container which includes information & indexing, scheduling, execution and storage services. ANEKA supports multiple programming models, security, persistence and communications protocols.

ANEKA provides a flexible and extensible environment which runs multiple applications simultaneously and supports complex models and dependencies within those applications.

Enterprise Cloud Technology Tips

Q: Many of the grid & cloud products only support Linux – what can I use on my Microsoft based systems?

A: ANEKA is the first .NET-based enterprise cloud computing platform that supports multiple programming models. With most corporates using Windows-based PCs as desktops, a .NET-based solution enables you to seamlessly integrate your desktops with enterprise grid/cloud systems.

If you are looking to develop new .NET distributed computing applications or cloud/grid enable your legacy .NET applications, ANEKA is the product for you. Using ANEKA’s DesignExplorer, a corporate developer, a software vendor or a services provider can quickly turn legacy applications into cloud/grid applications. This build and deploy model allows the user to take advantage of the scalable and reliable grid / cloud computing environment provided by ANEKA.

EYE ON IT

Current Industry Trends

“The clouds are gathering”

Nearly every major technology vendor, industry player and academic institutions have signalled or released a cloud computing offering. At Manjrasoft we believe that most large corporate, ISVs and Services providers require both reliable and scalable technologies in a cloud environment.

ANEKA is a product that meets this need – Try it and See!

“Everyone is talking Clouds”

Who isn’t talking clouds? The hype around cloud computing is growing. At Manjrasoft, we believe that cloud computing is here to stay and many will first build internal or enterprise clouds.
Engineering Applications for ANEKA include:
Electronics Design, Automotive/Aerospace Design, CAD & 3D Rendering.

Benefits

Maximise ROI on underused assets
- Leverage idle hardware you already own

Higher Productivity
- Engineering simulations take hours instead of days to complete
- Speed time to market by doing parallel and multiple simulations

Improve Quality and Precision
- Extra time to repeat simulations with different data points

Customer example: Maya Rendering

GoFront Group is China’s premier and largest nationwide research and manufacturer of rail electric traction equipment. The GoFront group is responsible for designing the high speed electric locomotive, metro car, urban transportation vehicle and the motor train. The raw design of the prototypes require high quality 3D images using Autodesk’s rendering software called Maya. By examining the 3D images, engineers identify problems in the original design and make the appropriate design improvements.

The Maya GUI is used to implement Maya rendering (batch mode parameters, generate ANEKA tasks, monitor submitted ANEKA tasks and collect completed rendered images). The design image used to take three days to render (2000+ frames, each frame with more than five different camera angles). Using only 20, mostly idle legacy PCs, ANEKA software reduces the above Rendering scenario **from 3 days to 3 hours**!

Jixiong Sun, Vice Director of IT, GoFront Group said “ANEKA technology not only improves the overall productivity of our product design, but also it gives us a fantastic opportunity to utilise our existing desktop resources which achieves the maximum utilisation of our existing investment.”