

Grid Computing
Now!

Knowledge Transfer Network



Knowledge Transfer Networks

A DTI business support solution

Delivered through the Technology Programme

Virtualisation and Grid: a fundamental challenge to the software licensing model?

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Grid Computing Now!



©Jeff Crosby, NY Times 2004

- **Grid Computing Now! Knowledge Transfer Network project: Government funded aimed at championing grid computing to UK plc.**
- **Project launched February 2005 and runs for 3 years in collaboration with the National eScience Centre, Edinburgh and leading suppliers.**
- **Web platform www.gridcomputingnow.org; industry news; events; webinars; user case studies; newsletters.**
- **Loose definition of Grid Computing Technologies mainly focused on Virtualisation, Grid Middleware and Service Orientation.**
- **Interest currently focused on grid computing contributions to:-**
 - Transport Modelling and Simulation
 - Data Centre Efficiency
 - Software Licensing

Introductions

–David Wallom, OERC

Setting the scene, *Ian*

OGF BoF – Software Licensing
for Grids, *David*

Discussion

Closing Comments



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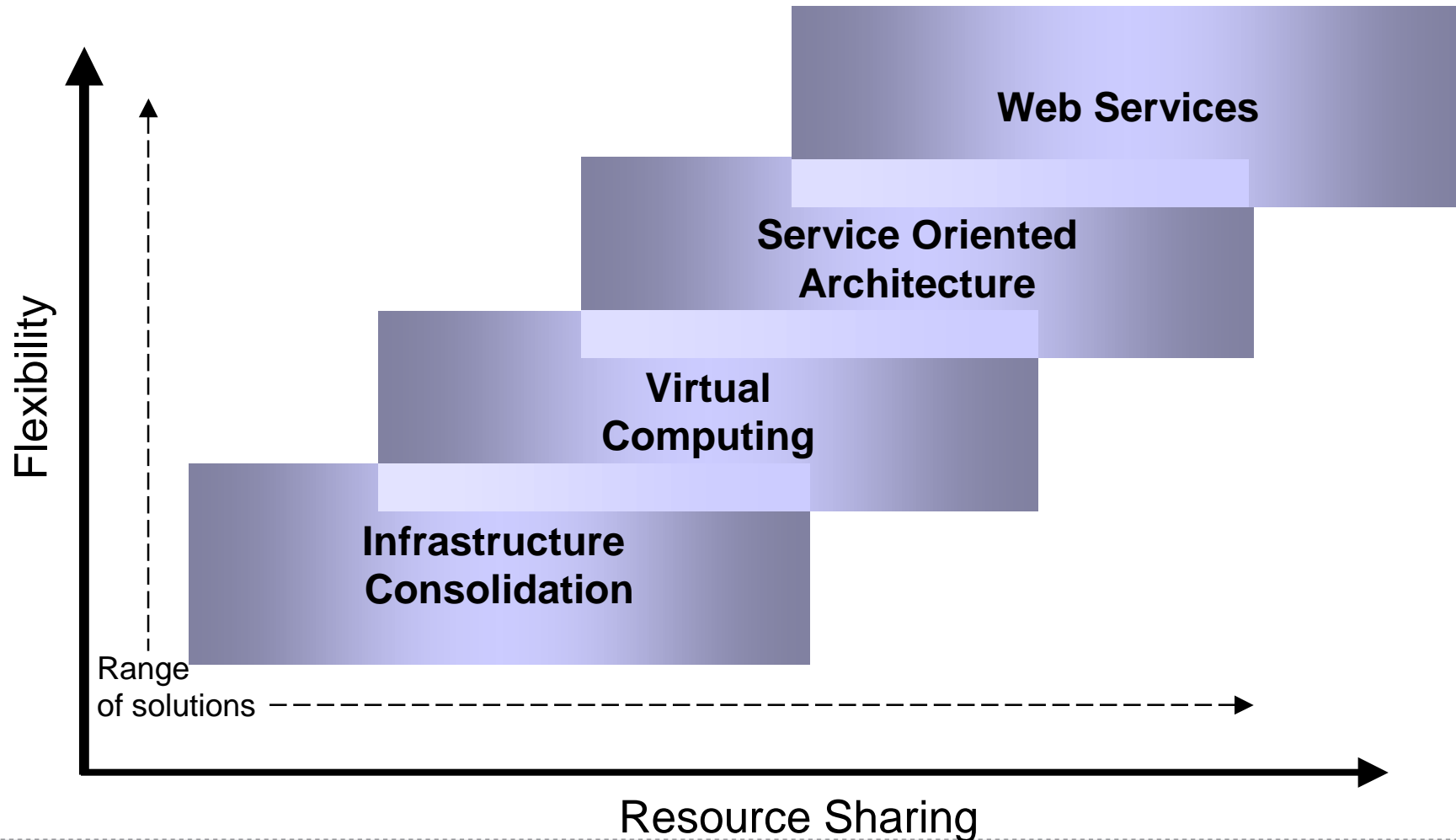


IT Architecture Trends

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Virtualisation and Software Licensing

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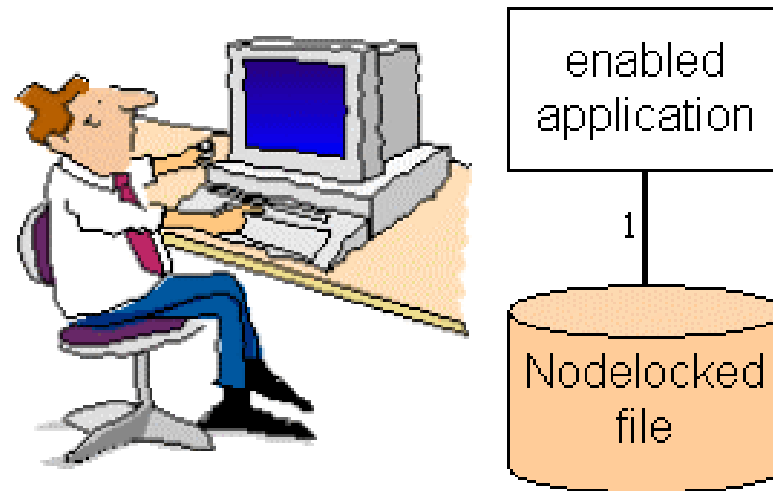
It used to be simple!

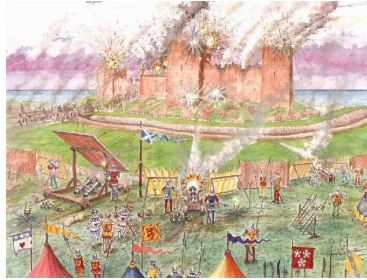
One license per computer

**-scaled by processor size or
number of users**

Not any longer ...

- Multi-core processors**
- Virtual software stacks**
- Replicating on servers**
- Moving around infrastructure**
- Across geographic boundaries**
- Towards on-demand, utility
style dynamic capacity**





Marketplace discontinuity

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“Byzantine” licensing models

Per processor/core multipliers

–Oracle (*2nd processor*.85*)

–IBM *Power Value Units, scaled by processor power*

Per “socket” used by others

–*Intel has 80 core processors in the Lab!*

Multiple concurrent software use per “system” agreed by MS (*4)

Metering/usage accounting

–*E.g. IBM purchase of CIMS*

User Perspectives*

Desire to pay a fair price for software

Business requirement for audit capability and controls

Not to get in the way of business needs

–*Use across the organisation*

–*Sharing valuable resources*

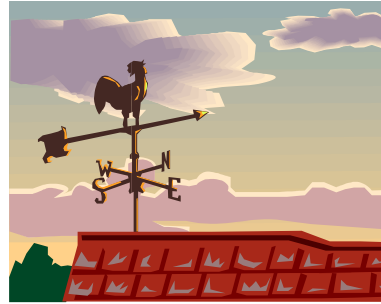
*GCN! User Survey 2007

Simple principles:

1. In ISV's interest to get software installed as widely as possible and to be paid fairly for its use
2. Classes of software:-
 - Used everywhere (Office)
 - Used selectively (EDA)
 - Value based on transactional volume (DB)
3. Straightforward management control/audit process to meet business needs
4. Consistent T's & C's across the industry.

Sample inputs from customers surveyed:-

- Used everywhere: Martini License (anytime, anywhere, any place – in the world!)
- Used Selectively: Concurrent Server License (e.g. Macrovision FlexLM)
- Transactional Volume: Metering on data flow or transactions. Open standard agreement.
- Regular discussion of audit data
- Ability to extend licensing dynamically



Alternatives

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Open Source:

- Community developed software tools/applications.
- Popular in the public sector, where service levels are perhaps not so critical
- Not free software, services are typically required for business
- Movement is growing and increasingly competitive
- Potential patent disputes ahead

Major support from leading industry players:-

- Google

Software as a Service:

- Per user license for using an application hosted remotely
 - E.g. Salesforce.com
- Increasingly viable for niche applications and small and medium size businesses
- Trend towards “hosted” IT services. E.g. Amazon e2c
- Model is operable within an organisation too!

Web Services – A Brand New Dawn?

Is there a problem with Software Licensing?

What are the problem(s)?

What steps need to be taken to address this?

What steps are being taken?

Where's the gap?

What can we do about the gap?

Who should be doing it?

How urgent is this?

Key Points

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OGF BoF: Create a short term working group to focus on understanding user requirements as a means of creating shared understanding of the challenges and gathering best practices towards more effective software licensing approaches.

- Volunteers encouraged to participate in the work
- Volunteers encouraged to submit examples of best practice
- Volunteers encouraged for review of the outputs
- 6-monthly time span for this activity

Be careful to develop clear understanding of user business requirements. Help vendor sales staff understand the requirements to be met.

- What is the user business application and intended usage?
- What boundary conditions? Usage within site; organisation; geography or beyond to utility vendors; out-source and multi-national?
- What is the envisaged compute infrastructure?
- How widely deployed will the software be?
- What options are sought for more flexible license usage?

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Thank you!

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