

Tycoon Integration

Quarterly Technical Review
31st January 2007

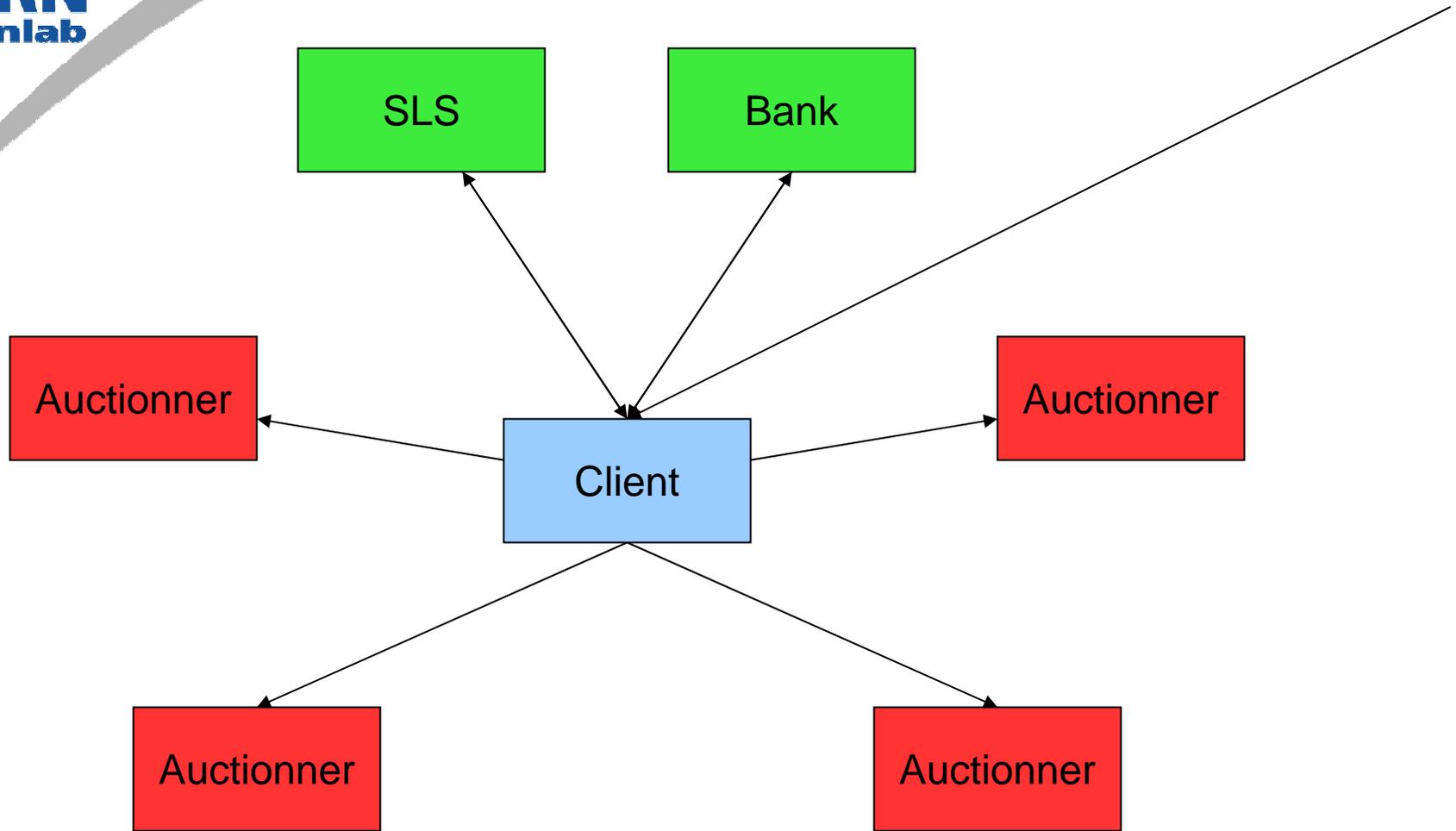
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- A distributed market-based resource allocation system

- With Pay-per-use

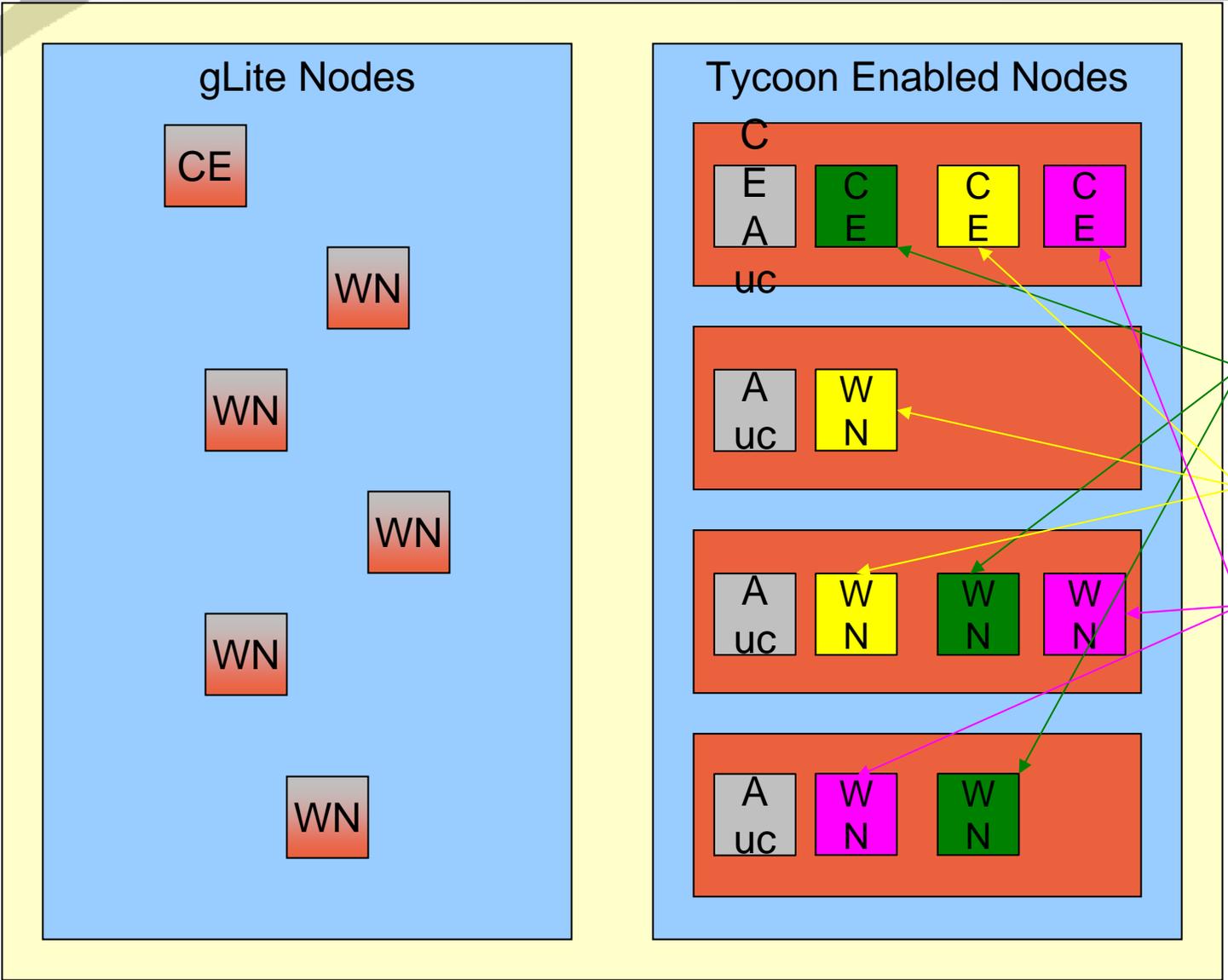
- Based on Virtualization (Xen)
 - Flexibility
 - Security



Why is integration with EGEE so important?

- Tycoon proposes a new way to understand and organize the trade of resources
- EGEE II has more than 160 sites (the largest Grid)
- Small and medium VOs could be attracted by EGEE providing Tycoon based services
- Large non-partners could trade resources
- We could have a controlled market-based system inside our Grid, helping us to share resources more efficiently

- NorduGrid (ARC) and BalticGrid (gLite) are using Tycoon in their Grids
- We're studying the proposal of BalticGrid for Tycoon integration
- Very special thanks to Lars Rasmusson (SICS) and Niklas Wirstrom (SICS) for their support



- Easy to implement
- Unmodified gLite
- Dynamic and secure system useful to trade resources
- Fully transparent for Grid users

- Virtual clusters are created on VO level
- VO agent has no information on the priority of individual jobs
- All the nodes of a virtual cluster have to be in the same LAN (for easier communication between CE and WNs and between different WNs)
- CEs must have public IP addresses

- Tycoon must allow ordinary gLite clusters to coexist on the same site
- Only users belonging to the VO to which the CE belongs, are allowed to submit jobs to that CE
- The system must be implemented using existing components from both Tycoon and gLite software
- The security of the overall system must not be weakened

- Scalability tests (inside and outside the Grid)
 - With the collaboration of EGEE partners especially the BalticGrid sites

- Our enhancements
 - Bid system, reservation, etc.
 - We are discussing with Tycoon implementers

- Tycoon integration with EGEE could improve both platforms
- The proposed architecture is easy to implement
- It's fully-transparent for normal users
- It could help us to share and trade resources more efficiently

Just in case you need more...

- <http://tycoon.hpl.hp.com>
- <http://groups.google.com/group/Tycoon-Users/>
- <http://groups.google.com/group/Tycoon-Developers/>

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