

The Building Blocks of the Cloud

Chris Smith

Principal Product Architect, Platform
Computing

& VP of Standards, Open Grid Forum



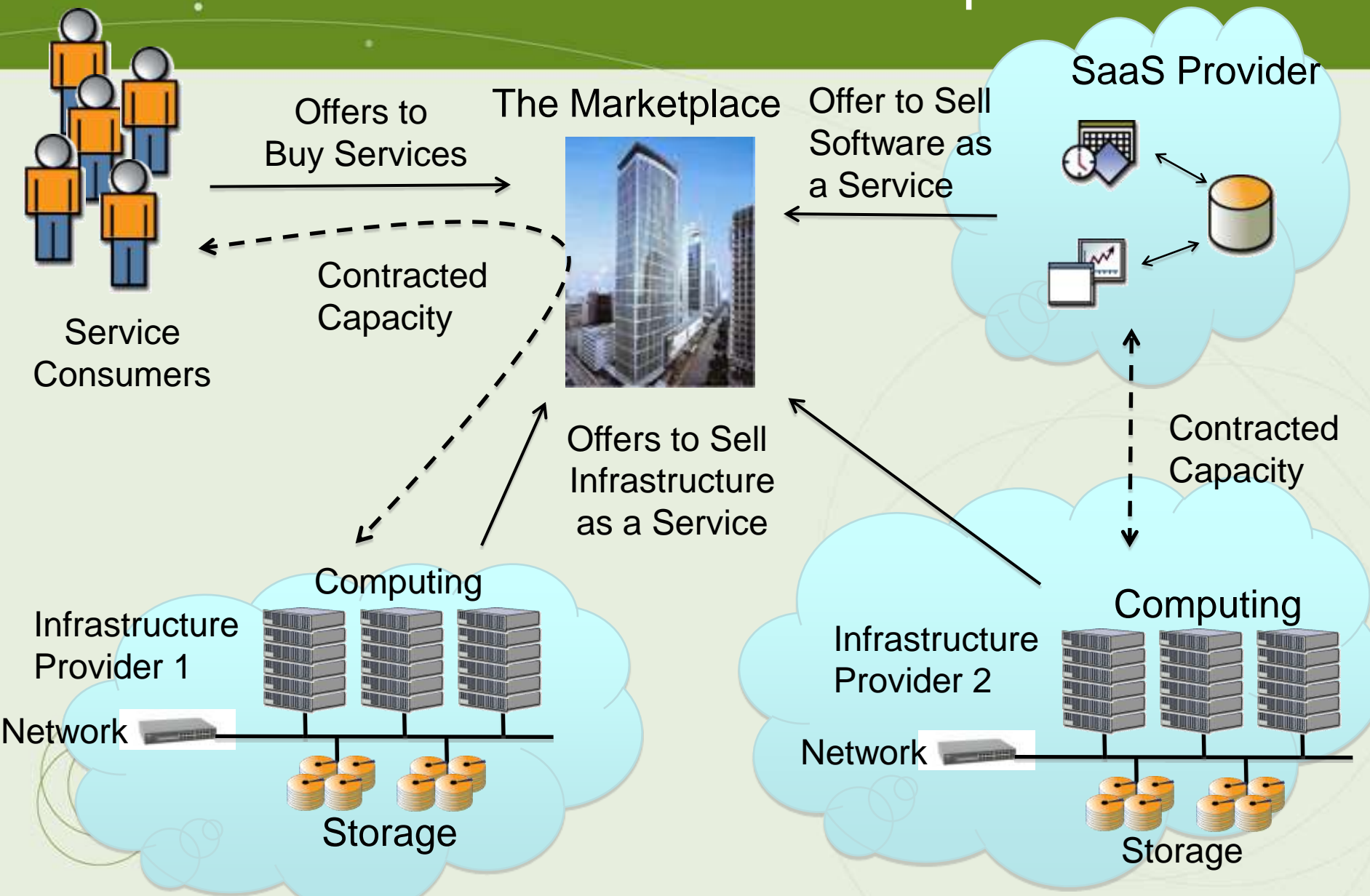
Is Cloud Disruptive?

- Definitely! But not a technology disruption. It's a disruptive business model.
- Cloud is characterized by services made available on-demand, and payment for these services based on actual usage.
- Some say Grids evolve to Clouds, others say Clouds are completely different from Grids
 - I'm staying out of that argument

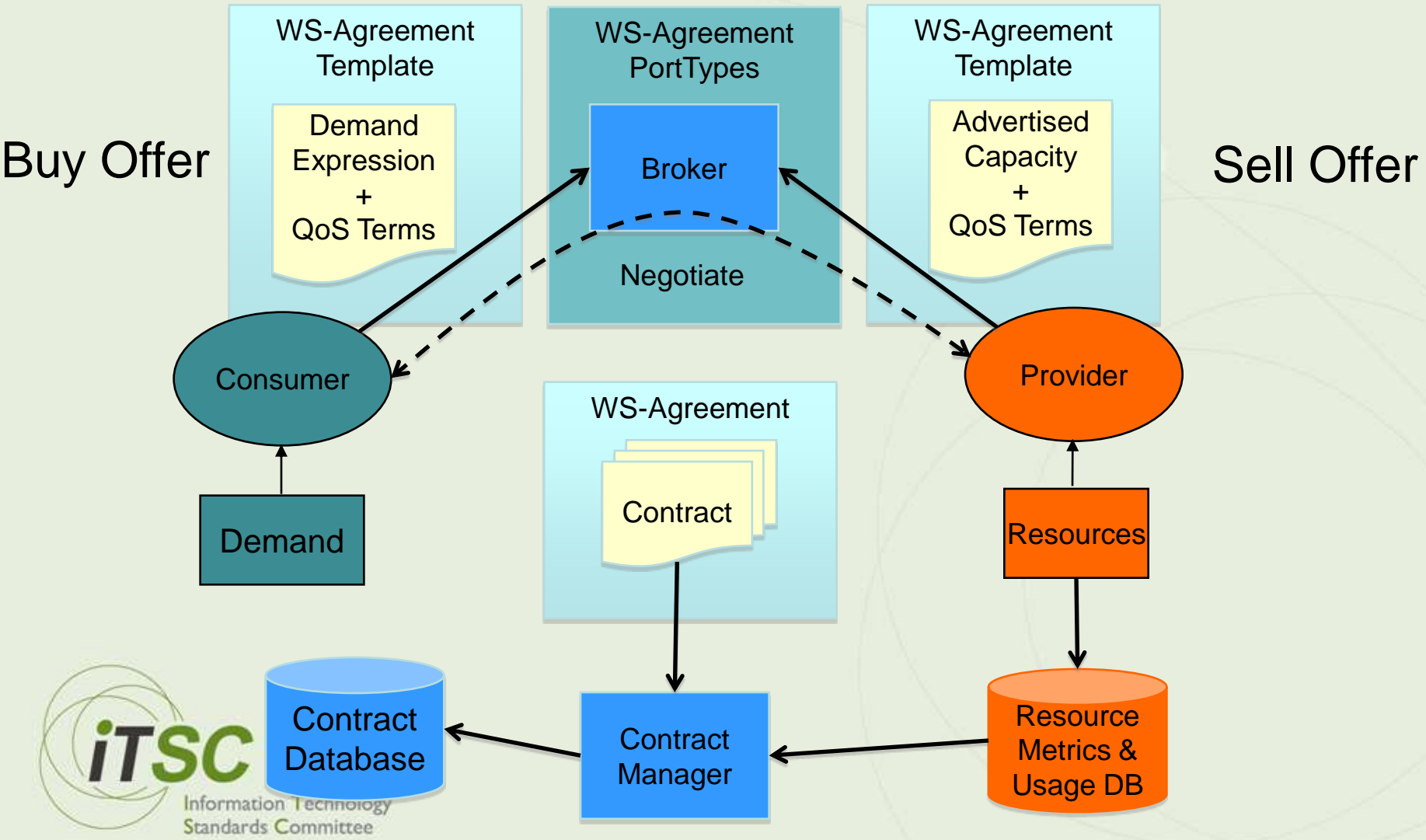
Standard Building Blocks

- Cloud is a business model; Grid is an access model
 - Both are implemented using similar (or even the same) technology components, which can be thought of as building blocks
 - These building blocks are used to build Clouds or Grids – depends on what you need
- So if a standard exists for a particular Grid building block, it might be applicable to building Clouds

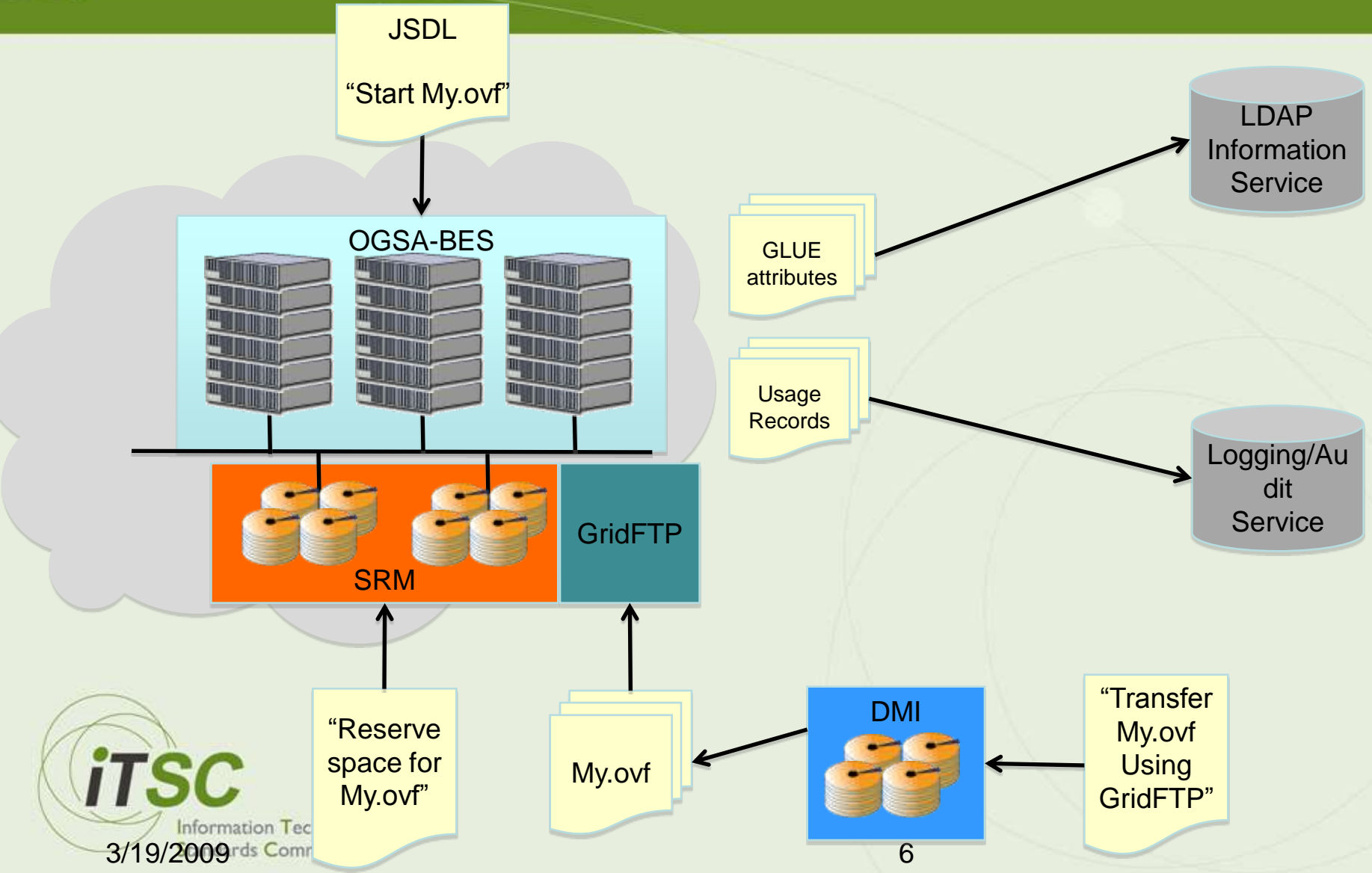
The Cloud Marketplace



Contracting Cloud Services



Accessing Cloud Services



Are We Done?

- While the referenced set of specifications provide some significant building blocks, others still need definition
 - Term languages for describing Cloud resources and QoS constraints
 - Extend BES state model to accurately describe VM instance lifecycle
 - New information attributes for describing Cloud services and applications
 - And the list goes on....

Referenced Standards

- Web Services Agreement Specification (WS-Agreement)
 - <http://www.ogf.org/documents/GFD.107.pdf>
- GLUE Schema
 - <http://www.ogf.org/documents/GFD.147.pdf>
- Lightweight Directory Access Protocol (LDAP)
 - <http://tools.ietf.org/html/rfc4510>
- Storage Resource Manager Interface (SRM)
 - <http://www.ogf.org/documents/GFD.129.pdf>
- Data Movement Interface (DMI)
 - <http://www.ogf.org/documents/GFD.134.pdf>
- GridFTP
 - <http://www.ogf.org/documents/GFD.20.pdf>
- Open Virtualization Format Specification (OVF)
 - http://www.dmtf.org/standards/published_documents/DSP0243_1.0.0.pdf
- Job Submission Description Language (JSDL)
 - <http://www.ogf.org/documents/GFD.136.pdf>
- Basic Execution Service (BES)
 - <http://www.ogf.org/documents/GFD.108.pdf>
- Usage Record (UR)
 - <http://www.ogf.org/documents/GFD.98.pdf>

Thank you

www.platform.com