

## Trip Report

# A “Fabric of Clouds” Built on Virtualization: Prepare Now For Your Future Data Center

The annual **Gartner Data Center & IT Operations Summit** was held on 28 – 29 November 2011, at the Park Plaza Westminster Bridge. Now in its 7th year, the Summit drew more than 500 attendees from nearly 40 countries, bringing together business and IT professionals from a cross-section of organizations and industries.

Led by conference chairs, Andrew Butler and Milind Govekar, the Summit featured over 50 presentations including keynotes, Gartner track sessions, workshops, end-user case studies, and solution provider sessions to provide delegates with both actionable advice and strategic insight to optimize their sourcing and IT services strategies.

## Chair’s Summary

The 2011 EMEA Data Center conference was one of the most successful summits of the year, and focused on the vortex of the storm caused by disruptive technologies such as fabric computing, virtualization and cloud computing. The objective of this year’s event was to enable Data Center professionals to understand, harness and manage change – both business as well as technology related change. The theme “Fabric of Clouds built on Abstraction: Welcome to your future Data Center” encapsulated how to deal with this change with tangible actions. For the first time this year we added a fifth track named “Preparing for the Cloud” that provided actionable advice from analysts that deliver “Gartner for Technical Professional” service on practical steps towards implementing cloud solutions. In addition the four additional tracks had presentations that addressed technology innovation, operational perfection, making virtualisation viral and the data center eco-system.

Overall the theme of the conference tied all track content that dealt with innovation

– such as fabric computing and storage evolution in the technology infrastructure area; how processes such as ITIL and DevOps are increasingly necessary to deliver operational excellence in a frequently changing environment; how virtualisation can be extended systematically across all areas of the infrastructure by balancing of workloads; how organisations need to define and implement their DR capabilities; managing data center facilities & energy and practical advice on building and managing cloud environments. The closing keynote left the audience with a compendium of actionable steps using highlights from of the five areas and advice on how data centers should be “built for change” as opposed to “built to last”.



## The Audience

The Summit attracted over 500 attendees, from 38 countries including 24 European nations represented. The core of the audience was naturally from the UK, with the next highest groupings coming from The Netherlands, Germany and Norway followed by Belgium, Finland and France. In terms of industries represented the key sectors were financial services, government and public sector followed by manufacturing with a range of other sectors then present.



## Summit Highlights

### GARTNER KEYNOTES



**David Cappuccio**  
Research VP,  
Gartner

#### Gartner Opening Strategy Keynote for 2011: Top 10 Trends and How They Will Impact Data Centers and IT

In the opening keynote Mr. Cappuccio outlined 10 trends that will impact I&O organizations in the next 5 years. These included increased focus on virtualization beyond the server (e.g. Storage, networks, I/O and desktops) and the impact of highly virtualized environments on organizational structures. Remaining vertically focused in the organization makes it very difficult to solve broad reaching problems across highly virtualized environments. There will also be a renewed focus on analytics and extracting business relevant trends from big data and a move towards highly consolidated, energy efficient data centers that focus on vertical density (compute per square meter) as a primary metric. The trend towards greater reliance on handheld devices and smartphones was discussed and their use in the emerging world of context aware computing (a melding on content, context and location). Additionally the impact of text messaging on IT organizations was discussed, with text becoming the primary communications medium for the next generation workforce. As organizations focus on converging networks and unified communications, they also need to take into account the text medium, as well as

all the social networks that are becoming mainstream for their customers and employees. The impact of cloud computing was also discussed, where external cloud services would be used initially for non-critical services, but as service providers prove themselves, and offerings become more robust, the idea of a hybrid cloud (part private, part public) will evolve.



**Magnus Lindkvist**  
Trend Spotter  
Extraordinaire

#### Guest Keynote: Security Strategy Development: How to Increase Security Capability and Functional Maturity

Five Future Skill sets to navigate the exponential future:

1. **Long-Viewing:** Using the cone of possibility to explore "what if's"
2. **Idea-blending:** Make it a point to expose yourself to new and different environments and perspectives to spawn inventive thinking
3. **Experimentation:** Many good ideas come from not having a plan and just tinkering your way to success
4. **Failure-recycling:** If you want to understand the future, study recent failures – and not just study them, recycle them with better results
5. **Patience:** Look to the horizon to avoid getting seasick in turbulent times



## Twitter

The topics raised at this year's Summit generated a lot of commentary on Twitter.

To continue the conversation with your peers and Gartner analysts, please use **#GartnerDC** tag.



## Recommendations Summary

For a full list of recommendations and related Gartner Research, please visit: **ab.gartner.com/lsc7** and download the presentation entitled "Recommendations Summary"



**KEY TAKEAWAYS**



**Stewart Buchanan**  
Research VP,  
Gartner

**Getting the Deal You Want: The Art of Obtaining and Maintaining Buyer Control**

- The lowest prices are often negotiated under the weakest contracts, which typically deliver poor value in return for higher cost and risk.
- Many organizations underutilize their negotiating leverage, giving away valuable market information and more valuable opportunities to gain and maintain control.
- Gartner shared market research into what clients really want and can negotiate – effective controls, better communication and better relationships with IT suppliers.



**Ian Head**  
Research Director,  
Gartner

**Data Center Capacity Planning and Management: Integrating Demand Management**

- Use ITScore for I&O to identify dimensions in need of improvement
- Use the Service Portfolio to manage Demand
- Is a market oriented or business value oriented service portfolio right for you?
- Service Owners and Service Managers in place
- Demand enables Capacity Management
- Get ahead – Create a Social Media Strategy
- Stay ahead of the business on cloud computing

- I&O must manage all SaaS suppliers
- Use existing and additional tools to provide APM for current and hybrid cloud models.
- Be ready to monitor rogue cloud application projects
- Drive Complexity Down and Agility Up
- Identify candidate processes that a DevOps approach could benefit.
- Empower a group of individuals to lead your DevOps initiative.
- Use good project hygiene
- including for culture change in streamlining projects
- Embrace the combination of frameworks which matches your operations needs initiatives
- Reduce I&O costs by 33% in 3 years:
- Re-examine networking costs
- Consolidate I&O
- Virtualize I&O
- Streamline IT Operations
- Embrace data reduction technologies
- Before considering HVD

- Stay ahead of business demands for cloud-based IT service monitoring.
- Rogue IT projects will be created and managed in public clouds; you will have to monitor them.



**Cameron Haight**  
Research VP,  
Gartner

**DevOps and the Cloud Operating Model**

**Next 90 days**

- Review Gartner's DevOps research.
- Perform a high-level review of the potential of DevOps and the cloud operating model within your environment.
- Identify candidate processes that a DevOps approach could benefit.
- Empower a group of individuals to lead your DevOps initiative.

**Next 12 months**

- Move to develop a DevOps culture across your IT organization.
- Implement, where feasible, a cloud operating model approach.



**Will Cappelli**  
Research VP,  
Gartner

**Application Performance Monitoring: The Road Ahead**

- Investigate current capabilities of APM tools in use with respect to EUM, browser-based EUM and synthetic monitoring.
- Augment existing tools based on business demand for hybrid cloud models.





**Ian Head**  
Research Director,  
Gartner

**How to get Value from ITIL, COBIT and other frameworks**

- Use ITScore to check your current status on the key dimensions
- Embrace the combination of frameworks which matches your operations needs
- Match your framework adoption to your customer demands
- State SMART, step-wise goals for the adoption.
- Use good project hygiene including for culture change
- Ensure you have trained individuals
- Continually Improve – Plan, Do, Check, Act
- Read Gartner Research on using the frameworks to improve service operations



**Jay Pultz**  
VP, Distinguished  
Analyst, Gartner

**How to Significantly Reduce IT Infrastructure and Operations Costs**

**Key Issue: What are the data center dependencies for HVD deployments?**

Key to HVD implementations are storage requirements. These requirements institute a major change in how IT administrators look at storage, acting as a catalyst for change that will be forthcoming with storage management and their associated tools.

HVDs are typically configured in one of two ways: as a pooled image or as a dedicated image. A pooled-image configuration means that every user will use the same image for his or her desktop, which greatly simplifies the configuration and management of the environment. A pooled-image configuration also means fewer storage requirements because of the need for far fewer images. The standard storage approach for both pooled and dedicated images has been to store all images individually — in other words, both drive huge storage requirements. Key developments are allowing deduplication of the OS for pooled images, yielding significant reductions in storage needs. From a storage perspective, this means the amount of storage is significantly greater for dedicated images than that of pooled images, as well as being a far more complex environment to manage.



**Will Cappelli**  
Research VP,  
Gartner

**IT Operations Management: Critical Factors in Your Future Success**

**Key Issue: What ITOM trends should organizations monitor through 2016?**

Social networks exist in several forms. Each has slightly different purposes, spans of control and analysis tasks that come with them. The first realm is internal networks. These social networks are operated by an enterprise for internal use. Access and content can be controlled. Analysis can lead to understanding who is working together and on what topics, which drives workforce optimization. The second realm is externally facing social software, where people outside the company are invited to use company-operated social applications. Access and control still remain, although a strict approach may not be appropriate with customers and the public. Analysis helps determine the level of engagement and how well the goals of the social applications are being met, such as support, selling or training. The last realm is Internet-based social applications, where the enterprise has little control. These may support a Facebook page, a Twitter name, and so forth, but they can't edit people's remarks. Sites such as YouTube, external blogs and rating services also fall into the public arena.

IT infrastructure and operations (I&O) can utilize these different realms of social network analysis to create a strategy for social media within their organization. A social media strategy for IT I&O should include technology, processes, and people alignment for:

- Capturing and facilitating collaboration with IT
- Promoting crowdsourcing among employees
- Promoting the value of IT services to the business



**Mark Margevicius**  
Research VP,  
Gartner

**Hosted Virtual Desktops – The Required Data Center and Infrastructure Investment**

**Key Finding:**

Deploying Hosted Virtual Desktops (HVD, also known as VDI) requires above all else an infrastructure buildout involving servers,



storage, network, and data center facilities. Because of this infrastructure, clients will likely encounter higher capex investments for HVD as compared to PCs.

**Recommendation:**

Organizations contemplating HVD deployments need to establish justifications that do not include capex costs. Rather, clients need to focus on areas of security, compliance, manageability, remote access, business continuity, and agnostic devices as the primary reasons to deploy HVDs.



**Andy Butler**  
VP Distinguished  
Analyst, Gartner

**Fabric-Based Infrastructure: Transforming the Way Data Center Technology Is Bought, Managed and Evolved**

- Decide on use cases where an integrated system or appliance approach would be suitable, and begin an evaluation matrix of potential vendor partnerships.
- Use the new Gartner IT Market Clock methodology to evaluate the current technologies employed in the data center to assess investment continuity, degree of commoditization, obsolescence and functional upgrade.
- When planning an integrated systems strategy, select a team of best talent — architects, administrators from all technology disciplines, application developers — and create a reporting structure responsible to the CIO. And get buy-in from key external stakeholders like procurement and the appropriate line of business.



**Neil Rickard**  
Research VP,  
Gartner

**Data Centre Networking: Preparing for a virtual world**

**Key Finding:**

Virtualization is forcing a complete redesign of the data centre network, eliminating layer three switching, reducing the number of tiers of LAN switches and virtualizing network functions. Failure to address these changes will leave the network as a roadblock to the virtualization agenda.

**Recommendations:**

- Address LAN interface sprawl and begin the consolidation of LAN and SAN, by using converged adaptors to consolidate interfaces and cables in the rack, while retaining separate LAN and SAN backbones.
- Be ready to support cloud based application delivery, by preparing a suite of virtualized network products, such as router, ACD, WOC and firewall that can be loaded wherever your applications are hosted.



**Tom Scholtz**  
VP Distinguished  
Analyst, Gartner

**Data Centre Networking: Preparing for a virtual world**

**Key Finding:**

Risk management is more art than science.

An individual's experiences, values and goals have a significant impact on the way he or she interprets and accepts different risks. Risk appetite is a personality trait that differs widely between people. Hence not everyone in the organization shares the same enthusiasm about a risk-based approach. The term risk manager is a misnomer – risk managers usually fulfil more of an advisory function.

**Recommendation:**

Focus on continuous improvement in risk management practice gained through experience. Do not attempt to use one assessment method or tool for all assessment scenarios. Develop competencies in a number of assessment methods, and learn how to apply methods appropriate to given scenarios and contexts. Do not attempt to roll up multiple independent risks into one overall risk indicator. Remember that the risk affinity of organizations and individuals changes over time.



**Trent Henry**  
Research VP,  
Gartner

**Zoning and Securing the Internal Cloud**

Concerns about virtualization security remain, but they are waning. Hypervisor platform vendors have improved their security capabilities, and a healthy ecosystem of third-party vendors is filling gaps. As organizations move from simple data center virtualization to internal, private clouds, they will need to consider new issues: workload behavior monitoring, increased sprawl and attack surface

brought by self-service, and protection requirements for increasingly mobile VMs.



**Alessandro Perilli**  
Research Director,  
Gartner

**Technical Insights: The Internal Cloud  
Key Building Blocks: Self – Service  
Provisioning, Capacity Management**

- Self-service provisioning, capacity management and orchestration are key capabilities to build internal clouds. Organizations must put significant effort in designing how these components work with each other, and implement them as early as possible in their cloud projects.
- Self-service provisioning goes beyond deploying a virtual machine. While the early stages of a cloud infrastructure focus on infrastructure delivery, organizations must look forward, selecting the right tools and designing the cloud architecture wisely. For service delivery, the self-service portal requires a mature orchestration engine and broad integration between multiple management layers.
- Managing capacity in cloud infrastructures requires a strategy overhaul. Blindly maximizing infrastructure utilization no longer works. Capacity modeling must consider workload constraints, application performance, consumption trends and system events. To avoid underestimating complexity, organizations must invest in personnel training and a new class of capacity management tools.



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The Gartner Data Center Summit 2012 will be held in London on 27 – 28 November 2012.

We hope to see you again!

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