

Contain IT sprawl by simplifying,  
consolidating and  
automating IT

# SHIFT

millions in IT sprawl to innovation.



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For years organisations have been buying technologies to support their growing businesses. But now many of these businesses are suffering from IT sprawl — an explosion of data and technologies. IT must deal with rigid, expensive and complex infrastructures.

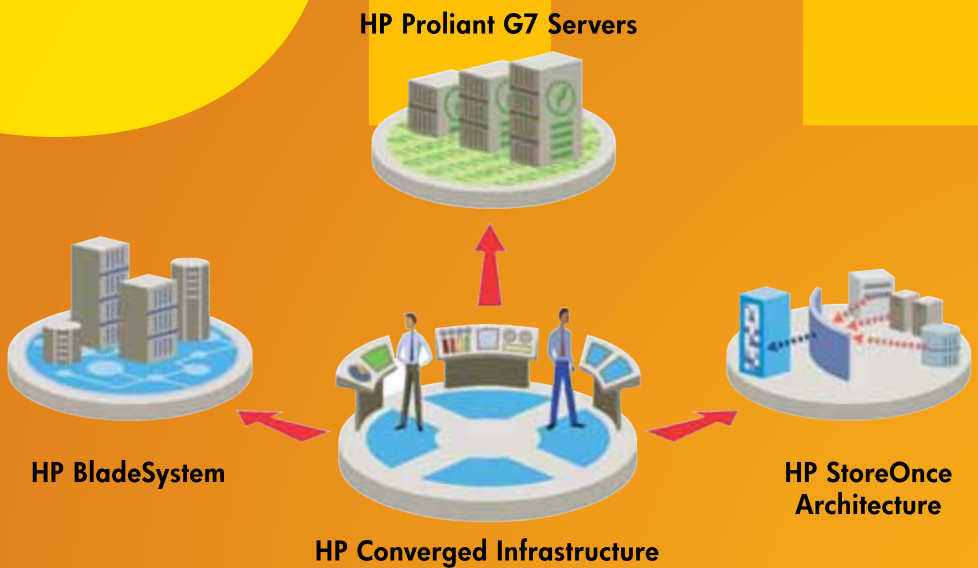
Instead of putting shillings toward innovation, organisations are spending the bulk of their budgets — 70% — managing IT sprawl. Only 30% goes toward helping the business create and deliver innovative products and services.

Data explosion is a major contributor to IT sprawl. Storage is fragmented with rigid and disparate hardware, protocol stacks, and data service architectures. This has contributed to rising costs, application complexity, and scalability limitations that plague data centers worldwide.

# THE SOLUTION



# to innovation.



## HP Converged Infrastructure → the solution to sprawl.

The era of point products has driven interoperability issues, increased complexities and rising resource requirements across the data center. Technologies are not optimized to work together, there are too many vendors to manage and too many help desks to call. These issues have driven significant costs to users while also creating uncertainty around building an IT infrastructure that is responsive to future technology and business change.

The solution to sprawl is to break down the technology silos and bring all IT resources together into adaptive pools of assets that can be shared by many applications and managed as a service. This solution brings together management tools, policies, and processes so resources can be managed in a holistic, integrated manner. It also brings together power and cooling practices so systems and facilities work synergistically to extend the life of the data center.

**A Converged Infrastructure has five overarching requirements. It is virtualized, resilient, open, orchestrated, and modular.**

# HP Converged Infrastructure Architecture

The HP approach to Converged Infrastructure encompasses four key areas: HP Matrix Operating Environment, FlexFabric, Virtual Resource Pools, and HP Data Center Smart Grid.

## HP Matrix Operating Environment

A common management platform to manage technologies from infrastructure-to-application

## HP FlexFabric

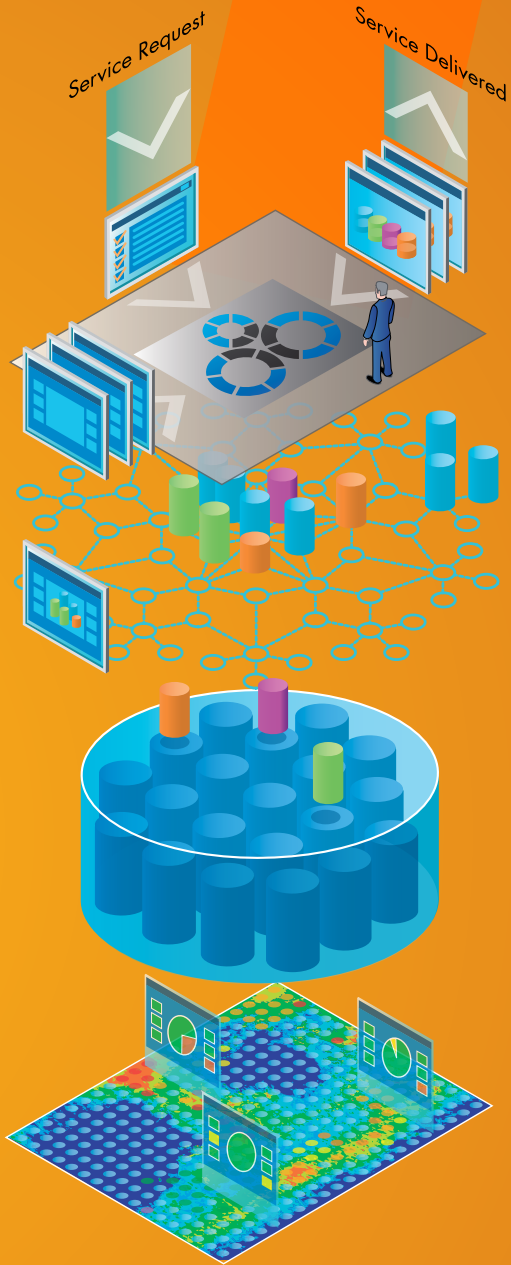
A common, wired-once, virtual I/O network

## HP Virtual Resource Pools

Virtualized compute, memory, storage and network resources

## HP Data Center Smart Grid

Intelligent energy management across systems and facilities



## HP Innovation & Leadership

To build a Converged Infrastructure with the attributes described, you need a partner with vast expertise that is guided by the ability to align business applications with IT resources, and the global reach to deliver the full vision of a Converged Infrastructure.

**That describes HP**, delivering technology with better business outcomes with our GOLD Computing Systems Specialist, **Computech**.

HP has now expanded the capabilities of its converged infrastructure portfolio, **setting the stage to help customers shift millions from IT sprawl to innovation.**

- **The data center of the future.** HP BladeSystem is a foundation for building a converged infrastructure. New BladeSystem innovations eliminate 95 percent<sup>1</sup> of network sprawl, deliver up to four times more virtual machines than any other blade<sup>2</sup> and let customers provision infrastructure and applications in minutes. Learn more about the HP BladeSystem.
- **Tame the data beast.** StoreOnce is HP's next-generation data deduplication technology, built into HP StorageWorks D2D4312. StoreOnce helps companies control data growth, comply with industry regulations, and keep data available to the business on demand. Learn more about HP StoreOnce.
- **Step up to scalability and resilience.** A new class of scale-up ProLiant servers from HP offers scalable performance and automated power management with payback on the cost of the iron in 30 days.<sup>3</sup> When companies combine HP Intelligent Power Discovery with the new ProLiant G7 servers in their data centers, they blaze a short path to creating a fully automated, energy-aware network between servers and third-party facility management. Learn more about HP's new ProLiant G7 rack mount servers and HP Intelligent Power Discovery.

A converged infrastructure means less complexity and more efficiency in IT operations and across the entire network.

For additional information, refer to the resources listed below.

<b>HP Converged Infrastructure</b>	<a href="http://www.hp.com/go/ConvergedInfrastructure">www.hp.com/go/ConvergedInfrastructure</a>
<b>HP Solution Demo Portal</b>	<a href="http://www.hp.com/go/SolutionDemoPortal">www.hp.com/go/SolutionDemoPortal</a>
<b>Virtual Resource Pools</b>	<a href="http://www.hp.com/go/VirtualResourcePools">www.hp.com/go/VirtualResourcePools</a>
<b>Data Center Smart Grid</b>	<a href="http://www.hp.com/go/DataCenterSmartGrid">www.hp.com/go/DataCenterSmartGrid</a>
<b>FlexFabric</b>	<a href="http://www.hp.com/go/FlexFabric">www.hp.com/go/FlexFabric</a>
<b>Matrix Operating Environment</b>	<a href="http://www.hp.com/go/MatrixOperatingEnvironment">www.hp.com/go/MatrixOperatingEnvironment</a>

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1 Based on HP analysis of networking equipment (adapters and enclosure interconnects) required to connect 16 server blades with six Ethernet NIC and two Fiber Channel HBA connections to data center LANs and SANs. A traditional server blade configuration would require a dual port LOM, an extra quad port NIC mezzanine and dual port HBA with accompanying switch modules (six Ethernet and two Fibre Channel). The total traditional configuration components is 40 versus the HP VC FlexFabric solution, which requires only embedded dual port FlexFabric CNAs on servers (no mezzanine cards) and two VC FlexFabric modules.  $(40-2)/40=95\%$

2 Calculations based on "Total VMs/rack = max VMs/blade server x blades per rack." Assumptions:

- HP best practices of 3GB of RAM per VM
- Gartner recommendations of 100Mb of Ethernet and 200Mb of Fibre Channel bandwidth per VM (or double for redundancy) and blade specification
- Intel performance estimates
- All competitive data sources were vendor websites as of April 2 -April 26, 2010

3 Based on HP internal testing comparing hardware on DL360 G4 to DL585 G7.

For more information on containing IT sprawl in your organisation contact any of our regional offices:



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