IT Consolidation – Revenue Generating Infrastructure

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What is IT Consolidation? What is NOT IT Consolidation?

IT Consolidation is a practice that optimizes processes, services, people, skills, infrastructure, applications and management that supports a customer business while at the same time simplifying the operational environment, increases service levels to the business, and creates greater flexibility to encompass change in the future.

The practice involves understanding business objectives, alignment of IT to those objectives (another term for alignment is rightsizing), maximising the ROI of the IT investment, making IT – a profit generating infrastructure.

The typical IT Consolidation definitions found in the industry are in HP's opinion insufficient and sub-optimal. Here are some of them:

- The process of taking multiple applications running on several servers and loading them onto a larger server (Computerworld)
- The centralization of distributed systems in a single location or to centralize the management of distributed servers (InformationWeek)
- Reducing the number of servers in use within an organization by collocating many applications onto fewer servers (InfoWorld)

Consolidation is NOT centralizing. Consolidation is NOT shrinking, or down-sizing IT. If companies are growing, they can consolidate, right-size, optimize, and align their IT to meet demand. If companies are restructuring, remorphing, refocusing their businesses – consolidation, right-sizing, optimizing, aligning their IT will also make sense.

Consolidation is NOT simply reducing the total-cost-of-ownership (commonly referred to as TCO). A company can reduce TCO and it may still be a bad investment. The real question is what is the optimal level of IT investment that will bring strong ROI for business?

What are the typical drivers and symptoms that lead companies towards consolidation?

From a holistic and business perspective, IT Consolidation becomes a viable option for many companies when faced with:

- Business restructuring / refocusing – aligning resources to meet changing needs
- Business globalization – aligning resources to reflect global / regional needs
- Mergers and acquisitions
- Implementation of ERP, CRM and SCM solutions
- E-services, e-commerce, e-business
- The information utility and knowledge management and its effect on company competitiveness
- Focus on reduction in TCO and increase in Return on Investment (ROI) and on Assets (ROA)
- Improve IT efficiency and effectiveness
- Need to improve Time-To-Market, Quality-of-Service
- Cost cutting [notice this is mentioned last – not first]

From a technology, infrastructure perspective: The magazine InfoWorld identified ten reasons as to why clients should look at IT Consolidation:

- Losing track of servers / storage / other infrastructure assets
- Facing scalability restrictions
- High ratio of administrators to servers / storage / other infrastructure assets
- Running more than seven operating systems or versions thereof
- Difficulty controlling software licenses
- It is less expensive to buy new servers / storage than to do capacity planning
- Purchasing is decentralized, but management is centralized
- Utilization rates for more than half of the servers are in single digits
- Physical space for every servers / storage is becoming impossible
- Infrastructure maintenance costs are skyrocketing

Are the different types of consolidation?

Dimension #1: Holistic

- **People/Skills/Support Consolidation**: Significant quality of service improvements and cost reductions can be realized by refining and investigating the company's core competencies, culture, strategy and support contracts.
- **Process Consolidation**: Prerequisite is determining key performance indicators (KPI) and service management (ITIL) best practices. These can be effectively applied to enable consolidation of development, test, certification and management environments. Consolidation in this area will increase the measurable quality, as well as the end-user perceived quality of services.
- **Services**: Often overlooked are solutions that are available for secure transactions, transaction monitoring, financing, leasing, pay-per-use, license metering, and procurement. The use of financial services can dramatically improve ROI and optimize TCO further.
- **Technology Consolidation**: For many companies, this is the main focus area of consolidation. IT architecture review and redesign workshops help to define the technical alternative to achieve effective consolidation.

Dimension #2: Technology

- **Server consolidation**: the process of consolidating the workload of multiple servers onto fewer, larger, and more easily managed servers. This generally includes the migration of applications, operations procedures, utilities, and tools from multiple servers to one or more larger servers.
- **Platform consolidation**: those that involve the company's desire to reduce the number of vendor platforms in use within the infrastructure.
- **Storage consolidation**: redeployment of mass storage on an enterprise level. It focuses on separating storage management (including backup and disaster recovery) from compute management and acts to reduce the complexity of the storage infrastructure.
- **Backup consolidation**: is the systematic centralization and rehosting of data management applications (namely backup and recovery).
- **Management consolidation**: is the systematic centralization and consolidation of systems and network management applications, processes, and procedures.
- **Contract consolidation**: is the reduction and consolidation of support, maintenance, license, and other related contracts.

- **Floor space consolidation**: is the systematic decrease in the amount of floor space required to house systems, storage, and other IT infrastructure facilities. This can be achieved through a number of measures including re-racking of equipment, consolidating servers and storage, creating lights-out operating environments…
- **Network consolidation**: is the systematic consolidation of communications networks. This generally includes the merging of wide area networks including voice, data, video, fax, message, and other networks to a single unified networking strategy that can be centrally managed
- **Application consolidation**: is reducing the number of instances of the same application, and consolidating that application on a larger platform server.
- **Data centre consolidation**
- **Client desktop consolidation**
- **Printing solutions consolidation**

Dimension #3: Consolidation Styles

- **Logical consolidation**: there is no physical relocation of servers and the goal is to implement common processes and enable standard systems management procedures across the infrastructure
- **Physical consolidation** entails the collocation of multiple platforms at fewer locations.
- **Rationalisation** means implementing multiple applications on fewer platforms. The two major forms of implementing rationalization are through partitioning or workload management.

What are the benefits of consolidation?

- Translation to experience, revenue, profits – hence the emphasis on consolidation as a profit generating infrastructure
- Better quality-of-service – translating this to revenue, profits
- Better response for time-to-market – translating this to revenue, profits
- Streamlining people, skills, processes, operations
- Outsourcing
- Improved resource utilization e.g. servers / storage / infrastructure by combining applications onto underutilized servers / storage / application stacking
- Contract and service level agreement improvements
- Reclaimed storage from consolidating duplicate data sets
- Reduced number of peripherals needed for backup and data storage
- Decreased communication costs and increased network performance
- Reduced administrative headcount by using tools to increase the number of servers per administrator
- Lower support prices by moving to consolidated contracts
- Lower environment charges due to small footprints on the data centre floor
- Lower software license fees through either consolidated purchases or moving to usage-based license fees

About the Author

Greg Nunes has a well balanced range of experience and expertise. His key strengths are in Business Management, Business Development and Business Consulting. Greg's IT career started as a lecturer in Computer Science/Information Systems for undergraduate students which, while interesting, lacked the wider opportunity and excitement of the commercial world. Using a practice of searching out challenging opportunities to grow, innovate and improve, Greg was able to create a successful company specifically dealing with business consulting, application development and support of end-to-end business solutions.

On moving to New Zealand Greg took on the role of account manager with Computerland; moving on to become a member of the start-up team for Dell Computer New Zealand before joining HP he was with IBM Global Services. During his tenure at IBM, Greg was responsible for the development, design, launch and management of a number of packaged service offerings around Y2K, Facilities Management, e-Business Transformation Services and IT Alignment. As an ERP Engagement Consultant, his focus was on Application Package Enabled Business Transformation.

Greg's current role as Solution Development Manager at HP is focused on connecting HP's products and Services with those of our partners to create inspirational solutions. These are specifically around Enterprise Application Integration around J2EE and .NET and Infrastructure Solutions such IT Consolidation.