



Architecture Design

System Implementation

Specialised ICT Support

General IT Support

Technical Project Management



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SERVER CONSOLIDATION

The single biggest strength of a distributed computing model is also its biggest weakness: multiple distributed servers provide redundancy, but they also create islands of information and resources scattered across an organisation, in-country or even the world. Indeed, industry analysts have estimated that, on average, only 30% of the capacity of distributed servers is utilised and yet the same research found some servers to be constantly running near their limits. This can hardly be called efficient use of available resources.

However, because everything is so widely dispersed, it is impossible to manage effectively and equally impossible to know when a given server is about to fall over or has spare capacity. You generally only find out about the former when it's too late and you typically don't ever hear about the latter.

Problematic Issues

Issues frequently encountered in distributed server environments include:

- the under-utilisation of resources in some cases and overloading in others;
- it is almost impossible to share or shift resources between departments;
- servers are often located in uncontrolled and/or unsecure environments;
- greater exposure to viruses, malware and other digital threats;
- difficulties arise in ensuring adherence to backup policies and procedures;
- service disruption is inevitable when new servers or applications are deployed;
- meeting the challenge of offering support in multiple locations or, possibly, countries;
- file, print, and multiple database applications deployed on a single server with the result that identification of performance related issues is cumbersome;
- server failure affects multiple applications;
- little or no software version control or consistency across the organisation;
- data centre infrastructure limitations: power; floor space and air-conditioning;
- no deployment standards.



Ideal Solution

The ideal manner in which to address all the issues above is to design a server consolidation solution with the focus still to deliver business performance and reliability requirements. This allows an organisation to employ its resources - both in terms of systems and people - more effectively and efficiently. It also safeguards business continuity and offers significant advantages over a distributed approach.

Beneficial outcomes are:

- discipline and standardisation improving management of environment
- fewer large servers require less support and maintenance;
- the hassle associated with software version upgrades is greatly reduced;
- in the case of a virus or malware attack there are fewer attack vectors;
- centralised applications enable stronger disciplines and controls;
- new capacity and applications can be introduced quickly and without disruption;
- solid backup procedures and policies are easier to introduce and manage;
- less chaos and more control over valuable systems and data;
- ability to cater for enhanced fail-over solutions on more applications ensuring high availability and disaster recovery becomes more cost effective;
- substantial cost reduction due to effective application and database deployment; and
- ability to leverage the full benefits of virtualisation technology.

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