



Cardium Solutions
IT CONSULTANCY & SOLUTION PROVIDERS

**CASE
STUDY**

H J Heinz Ltd

Windows 2000 and SQL 2000 Cluster



Executive Summary

This is a brief overview of the approach taken by Cardium Solutions to install a Windows 2000 Cluster, SQL 2000 Cluster running clustered IIS/FTP for H J Heinz Ltd.

Client Profile

H J Heinz provides food for companies' world wide. As part of a development project being run in house Heinz required an installation and configuration of a Windows 2000 cluster, SQL 2000 cluster and IIS Cluster that would be access via HTML pages potentially worldwide.

Project Objectives

Cardium were asked to provide consultancy services to manage the implementation of the Windows 2000 cluster, SQL 2000 cluster, and IIS cluster on a HP SAN.

Project Approach

The following documents the approach that Cardium took to implement this project.

Cardium performed a survey of the hardware and SAN at the Heinz location and identified issues with the microcode and bios revision levels required by the HP SAN to support the Windows 2000 Cluster. The revision levels were communicated to Heinz who arranged for an update of various code levels by HP to the SAN.

Once the SAN was configured and the various disk configurations required to implement the solution were presented to the Windows 2000 clusters, Cardium performed the following steps:

- Confirmed hardware revision levels for the SAN;
- Identified Domain Accounts with Local Admin privileges for the various service accounts required for the installation;
- Identified and configured two Windows 2000 Enterprise servers to be implemented as a Windows 2000 Cluster running as an Active-Passive solution;
- Identified 5 disk partitions on the SAN:
 - one for each virtual SQL server;
 - one for the IIS/FTP Virtual Server;
 - one quorum disk;
- Identified all Virtual Names and IP Addresses required for the solution;
- Identified and Configured PUBLIC LAN and HEARTBEAT LAN interfaces for the cluster;

- Installed and configured the Windows 2000 Virtual Cluster name for the Active-Passive solution and the IP address for the virtual server;
- Installed and Configured MSDTC
- Installed SQL 2000 for each SQL Virtual server identified (3);
 - After each of the SQL installs Service Pack 2 was re-applied.
 - Configured the three SQL 2000 instance names;
- Installed and Configured a new WEB Site (IIS) on the Virtual Server;
- Installed and Configured a new FTP Site on the Virtual Server;
- Moved the MSDTC resource into the same failover group as the clustered IIS Server.
- Performed Various test procedures for Heinz staff:
 - Moving cluster groups to the alternate node;
 - Initiate Failure of each resource;
 - Turn off each node;
 - Break Network Connectivity;
 - Break Shared Array Connectivity to the SAN;
- Cardium provided various mentoring activities to Heinz staff during the deployment, the final step being to kill all SQL Server instances on one of the nodes, remove the SQL software and re-install from scratch using the Cardium Server Build details before the system was signed off.

Conclusion

Cardium provided this consultancy over a three month period, this was protracted due to the issues that Cardium discovered with the SAN and various Microcode/Bios code revisions. Once the SAN was configured correctly Cardium implemented the solution over a 3 day period, returning to provide disaster recovery testing and mentoring for the Heinz support staff.

Client Feedback

Post completion Cardium always undergo a project closedown meeting to obtain feedback from the client, shown below are the client's comments;

Awaiting Feedback

Contacting Cardium

- **Telephone** 01282 425111
- **Fax** 01282 425444
- **E-mail** info@cardium.co.uk
sales@cardium.co.uk
- **Address** **Cardium Solutions Ltd**
4 Dominion Court
Billington Road
Burnley
Lancashire
BB11 5UB
- **Internet** www.cardium.co.uk

