Objectivity Case History

Customer Information

Customer:	UNISYS, Corp., System Operations & Management
Industry:	Computer hardware and Software Manufacturer
Application Domain:	Network Management Application Platform
Status:	Finishing Development Phase – 7 months from Deployment target
Platform:	Intel architecture – Enterprise Windows NT Server Products
Compiler:	C++
Other Tools:	FTO & DRO – Critical for deployment

Where Objectivity/DB is at in Unisys:

We are a burned-in subcomponent of their new Mainframe Class Server products. Objectivity products are embedded into the management application platform (MAP) software. This software is burned into two PC's, that make part of the Mainframe Server offering. Objectivity's OODBMS helps track all the inventory and definitions of components, statistics, parts, intelligence, slot locations, and relationships within the MF server architecture. This Unisys Mainframe server manages and interfaces with operating systems in an Enterprise-Intel environment. The benefit of this new MF architecture is that it can manage a lot of NT nodes as well as different operating systems from this 1 MF server manager (For Example: 8 different NT nodes running NetWare, Unix, NT, Unisys' 2200 OS, and their A series of OS. Currently, this cannot be accomplished in the enterprise-wide NT market. The NT server market doesn't scale well. Hence, corporations cannot really take advantage of the cost-effectiveness of the NT environment. Unisys believes this highly scalable, and highly available (HA) architecture shall help address these limitations.

Background

Unisys chose Objectivity because it will give Unisys a significant competitive advantage against Microsoft's Wolfpack's Server products. Specifically, in the Enterprise Intel Server market, Unisys is looking for a competitive advantage against Wolfpack. The key benefits in this competitive vertical are 1. DOWN TIME (Bullet proof 24X7) 2. Scaling with Windows NT nodes. Today, unlike Wolfpack's initial limitations, Unisys' ServerPlus HA supports scalability to as many as 16 Windows NT nodes. This virtually eliminates downtime. In addition, the use of industry-standard APIs serve to "future-proof" corporate Windows NT nodes. Investment in business-critical cluster technology.

Unisys' ServerPlus High Availability Capabilities:ServerPlus HA products include database and transaction processing software that make it possible to deploy highly available, truly scalable, and manageable business-critical applications in the Windows NT server clustered environment. This clustering software sits on the Windows NT server system which may use Objectivity/DB as the embedded object engine. Hence, having our DRO and FTO options fully functional is not only critical but at the core of their entire competitive advantage.

Objectivity's Opportunity Within Unisys

Unisys Pioneers the Future of High Availability Windows NT Systems

In addition to providing the resources to implement today's most advanced high availability Windows NT solutions, Unisys is pioneering the next steps beyond clustering for increasing the

scalability and availability of Windows NT systems**: ServerPlus High Availability Objects** and ServerPlus Cellular Multiprocessing (CMP).

In 1998, Unisys Cellular Multi-Processing (CMP) will deliver a quantum leap in Intel-based server performance. A new Unisys Intel platform, based on CMP, will push Windows NT server performance far beyond the limits of today's symmetric multiprocessing architectures. The new platform will continue to provide the high availability benefits of clustering and retain full compatibility with Wolfpack-compliant applications, **while supporting up to 32 processors in a shared memory configuration.**

The Windows NT operating system has internal constraints that, once a given point is reached, serve to limit a system's capacity regardless of how many processors are added. To achieve higher performance, multiple NT servers are clustered together, typically using high-speed clustering connections such as Dual-ported SCSI or ServerNet. In spite of the speed of these connections, there is still a significant degree of latency in these configurations. In contrast, ServerPlus CMP integrates all "NT Clusters" under one high-performance memory system. This makes it possible for cluster processes to communicate at memory speeds, without the latency of other forms of cluster connections. For high availability, the various cluster nodes are still independent of each other in case of failure.

Unisys - ServerPlus High Availability (HA) Objects

As distributed network-based applications such as e-commerce proliferate, Unisys is improving the resiliency of geographically distributed services and their networks with the concept of Dynamic Distributed Object Management (DDOM). ServerPlus High Availability (HA) Objects is a distributed computing framework for deploying high availability distributed applications that can span tens of thousands of nodes.

Unlike traditional distributed models like client/server, a dynamic distributed object system does not establish fixed relationships between clients and servers. Therefore, network conditions -- such as traffic volume, processing loads, and subsystem failures -- can be constantly monitored and automatically responded to in real time. This includes changing network paths and reproducing and rearranging "objects" that are becoming bottlenecks. A dramatic increase in the efficiency of large-scale network applications is the result.

Distributed applications in industries with many remote locations, such as banking, airlines, telecommunications, and manufacturing, are prime candidates for the new dynamic distributed object technology, especially when these applications drive the business and extend to customers and suppliers.

Buying Criteria

These Products must have built-in redundancy and high availability features to reduce hardware-related problems. This strategic suite of products with Objy/DB inside must allow a flexible choice of clustering solutions that meet varying scalability and availability requirements. The next level of high availability and scalability based on the total network environment and its needs for growth, resiliency, and interoperability. The major win for Unisys will be the ability for them to tell their customers that placing business-critical applications on powerful, economical Windows NT systems will increase their profitability. Increasingly, they are coming to Unisys for the experience and the resources needed to deliver world-class high availability solutions.

Objectivity's Win

If we implement DRO and FTO in the fashion in which Unisys needs it (2-processor hot fail-over approach versus our Quorum approach), we shall see between [redacted] in run-time in calendar year 1999.

Contact Information

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