

# Waltham Forest Turns to the Superior Novell Cluster Support of Syncsort Backup Express

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## Background

Waltham Forest is a pleasant residential and recreational borough inside the borders of Greater London. Though most of its 220,000 residents and numerous visitors are aware of its sprawling parklands and open space, few are aware of the sprawling, complex computer network needed to conduct the borough's business.

Of utmost importance to Waltham Forest Council is its use of e-mail and document management. The council's e-mail is served from Novell GroupWise 7 servers on a sophisticated 10-node NetWare failover cluster with two shared volumes and nearly 4 TB of data. In addition to this cluster, there are more than 150 live file servers in the network, and over 3000 desktop users. The computers are spread over many locations in Waltham Forest, connected by a wide area network.

As data volumes grow and new technologies are implemented, Waltham Forest Council data centre manager Steve King is confronted by many complex issues. One of his top priorities is assuring that all information and applications – now and in the future – are routinely backed up and easily recoverable.

## The Challenge

Steve King and his team of six technicians directly confronted this challenge in the summer of 2007. They identified three particular areas of concern:

- Protecting the Novell cluster
- Protecting GroupWise resources
- Data protection centralization across the network.

The team quickly surmised that finding a robust, reliable data protection solution that supports backup and restore of GroupWise on a large Novell cluster would be a formidable task.

Several solutions were recommended, and most were riddled with glitches or did not function at all. Finally, in September 2007, the Data Centre team tested Backup Express, Syncsort's enterprise data protection software for heterogeneous networks. They were very satisfied. "We purchased Backup Express because nothing else worked for our NetWare cluster," states Steve. "It was a no-brainer. The alternative was to ditch our entire cluster."

## The Solution

By leveraging the unique Syncsort/Novell strategic partnership, Waltham Forest Council chose to exploit some of the most advanced data protection capabilities available for Novell environments.

### Protecting a Novell Cluster

Steve notes that data protection for Novell clustering gives rise to a number of difficulties. Among them are assuring that data and files on shared cluster nodes are backed up only once, recognition of the active physical node by the backup software, and assuring no data is skipped if a physical node fails over during backup. Syncsort Backup Express, which is cluster-aware for all current Novell operating systems, handles all these challenges.

First, to assure information on the shared cluster nodes is backed up only once, Backup Express logically views shared cluster nodes as a single virtual

node. All shared resources are viewed by Backup Express as local resources of the virtual node. With this structure, Backup Express ensures that backups of the shared resources are performed through the virtual node and backups of local resources are performed through the physical nodes.

Second, that same logical structure removes the need for Backup Express to know which physical node is active. Shared data resources that are included in the backup job definition are backed up regardless of the active physical node. The same holds true for recoveries.

Finally, if the physical node that hosts the resource being backed up goes down, either gracefully or abruptly, Backup Express supports automatic file-level retry (task-level retry if the failed node contains the Master IP resource). File-level retry means that the backup will continue from the point of error and only those files that have not been completely backed up before the failover are retried.

### Protecting GroupWise Resources

In addition to Novell cluster support, the Council needed reliable GroupWise protection on their clusters.

Backup Express, they learned, supports GroupWise through the Target Service Agents (TSAs) recommended by Novell for each Novell and GroupWise platform. This enables the following data protection capabilities for GroupWise:

- **Domain (DOM)** – the entire GroupWise domain structure can be backed up; entire domains or individual files can be restored.

- **Post Offices (PO)** – entire post offices or individual files within a post office can be backed up or recovered.
- **Documentation Management Services (DMS)** – backups at the library level or at the file level can be performed and entire libraries or individual files can be restored.
- **Binary Large Object (BLB)** – binary large objects are the database structures for storing message attachments and DMS documents; backups and restores of binary large objects, which may be stored separately from the post office, can be performed.

### Looking Ahead

Data Centre Manager Steve King feels that their choice of data protection software offers great potential for the Council. “The fact that Backup Express supports so many platforms with a single interface and catalog is like a bonus, really,” Steve stressed.

#### Data Protection Centralization Across the Network at Waltham Forest

Once NetWare protection is fully integrated, Steve would like to extend the use of Backup Express to other platforms he already uses. “At this moment about two to three hours a day are spent changing tapes and checking

backups at a number of sites. With Backup Express, it would require a fraction of the time to monitor all the jobs that run.” Steve has already ordered Backup Express licenses for a large Oracle database (on Red Hat Linux) and a Lotus Notes database (on Microsoft Windows).

#### Moving Beyond NetWare

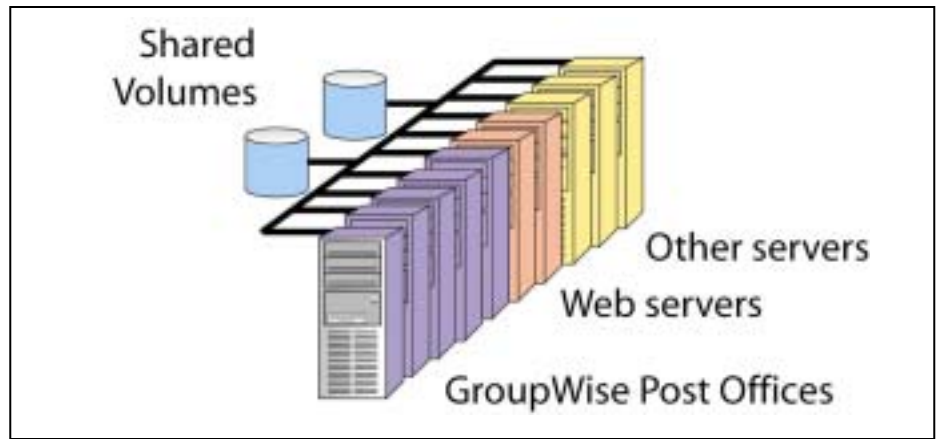
Steve also acknowledges the Borough can’t stay with NetWare 6.5 forever because of Novell’s push for SUSE Linux. “In the due course of time, NetWare users are going to fall out of support with suppliers.” Steve and his team are considering eventual migration to Linux on Novell Open Enterprise Server, as well as other options. Backup Express supports Novell Open Enterprise Server migration through

cross-platform restore, mixed (NetWare/Linux) cluster capabilities, and dynamic multi-platform SAN and NAS support. Partnering with Novell, Syncsort provided the first solution to offer robust data protection for clustered Open Enterprise Server environments.

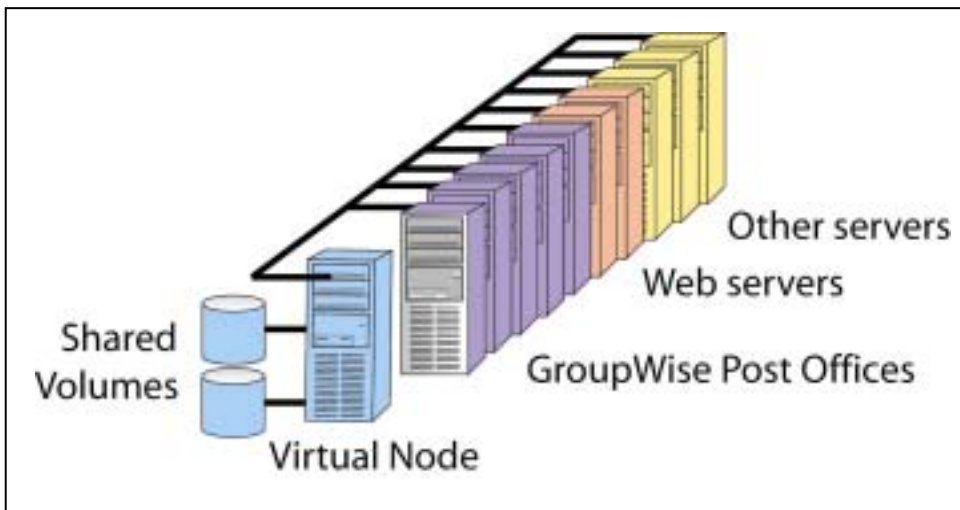
Whether the Council chooses to migrate to Linux, Windows, or UNIX, Backup Express will continue to serve its needs by protecting all its nodes – before, during, and after migration – with a common interface and single catalog.

### Conclusion

Waltham Forest is one of five London boroughs which have been designated host boroughs for the 2012 Olympic and Paralympic Games. With Syncsort Backup Express in house, the London Borough of Waltham Forest is well-positioned to expand and centralize its data protection needs to meet the Olympic challenge.



Physical Representation of Waltham Forest Council's NetWare Cluster



Logical Representation of Waltham Forest Council's NetWare Cluster in Backup Express – Shared Volumes are Viewed as Local Resources of a Virtual Node



Backup Express is enterprise data protection software that provides fast server backup, reliable disaster recovery, and robust cluster support.

For a free consultation or demo, visit [www.syncsort.com/coibex](http://www.syncsort.com/coibex).