

『ExpressCluster X 2.1』 Update Information

16 June 2009

NEC Corporation

Release Outline

◆ Release Date

16 June, 2009

◆ Product Name

ExpressCluster X 2.1

- ※ 2.1 is a minor version up for 2.0.
- ※ ExpressCluster X 2.0 license can be continuously used for 2.1
(Except for the additional lineup “AntiVirus Agent”)
- ※ 2.1 includes all the functions of 2.0.

Enhancements

Differences between X2.0 and X 2.1

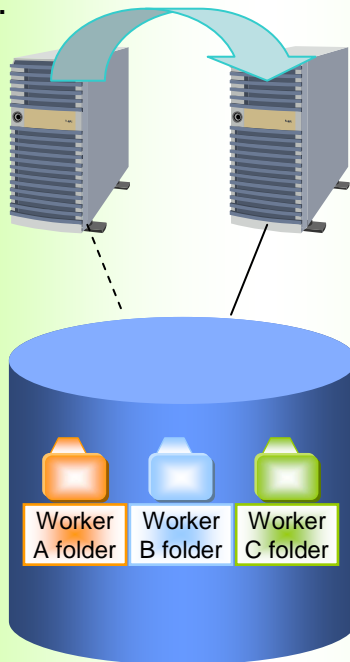
1. Windows shared folder settings simplified
2. Complete support for VSS failover
3. Regular monitoring of responses from antivirus software
4. Monitoring options added to ExpressCluster for Solaris x86
5. Displaying clusters using filtering or grouping of Integrated Manager
6. Snapshot – backup assistance feature for mirroring configuration added

Windows Shared Folder Settings Simplified

ExpressCluster X 2.1 automatically updates the cluster settings when accounts and shared folders are created and deleted. The user no longer has to update cluster settings at the above times.

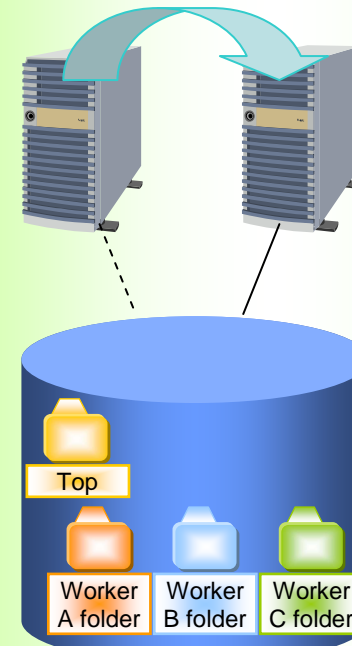
By customer request

■ When shared folders are added, the cluster settings must be changed so the folders can failover.



Cluster settings must be updated individually.

■ When shared folders are added or deleted, their settings are automatically added to or deleted from the cluster settings.



Cluster settings only need to be updated once at the top of the tree.

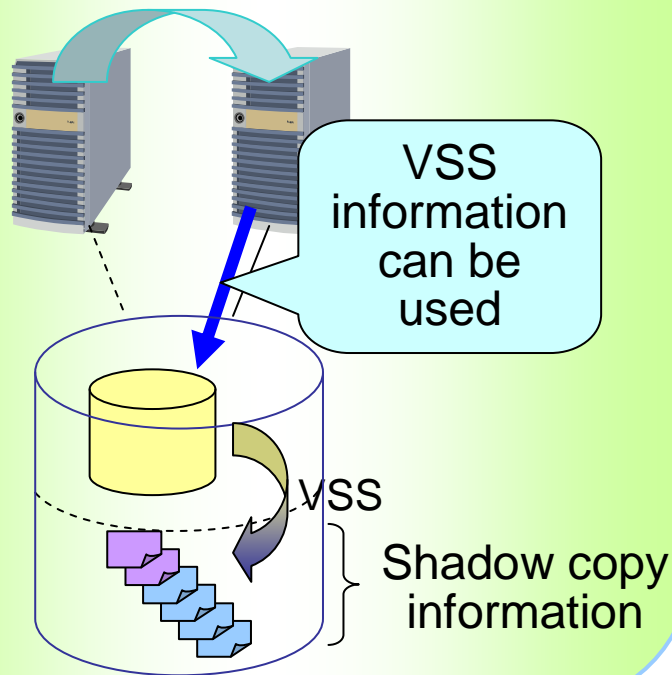
Complete Support for VSS Follower

VSS can now be used for data mirroring clusters.

By customer request

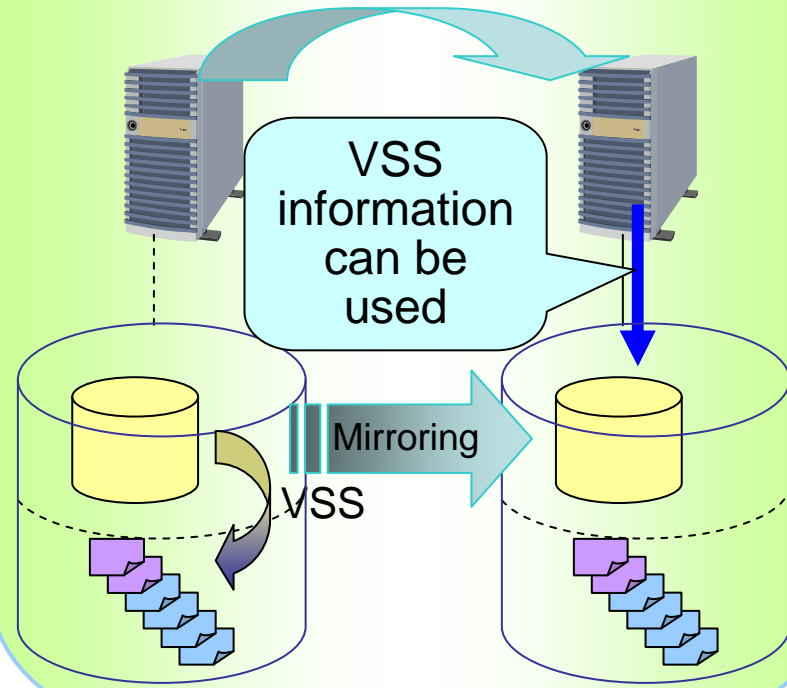
Shared disk cluster

■ VSS usable from X2.0



Data mirroring cluster NEW

■ VSS usable from X2.1



Regular Monitoring of Responses from Antivirus Software

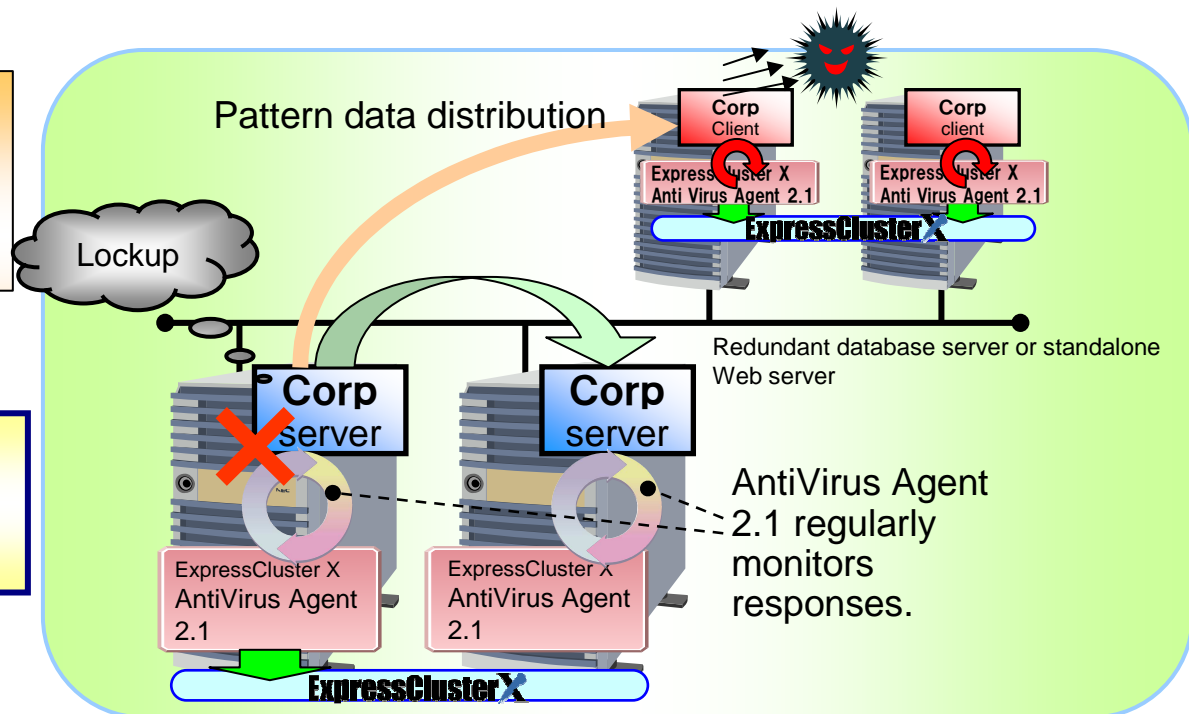
◆ ExpressCluster X AntiVirus Agent 2.1 added

Applicable products (as of release date): **Virus Buster Corp 8.0 SP1 patch 1** from Trend Micro

- **AntiVirus Agent 2.1** monitors Corp servers and executes failover if an abnormality is detected, so the server can continue functioning.
- **AntiVirus Agent 2.1** monitors Corp clients and executes auto-recovery if a failure occurs, improving availability.

If antivirus software causes a failure, pattern files may not be loaded, raising the chances of viral infection.

Systems can operate while running more robust antivirus software.



Monitoring Options Added to ExpressCluster for Solaris x86

◆ ExpressCluster X Database Agent 2.1 for Solaris released

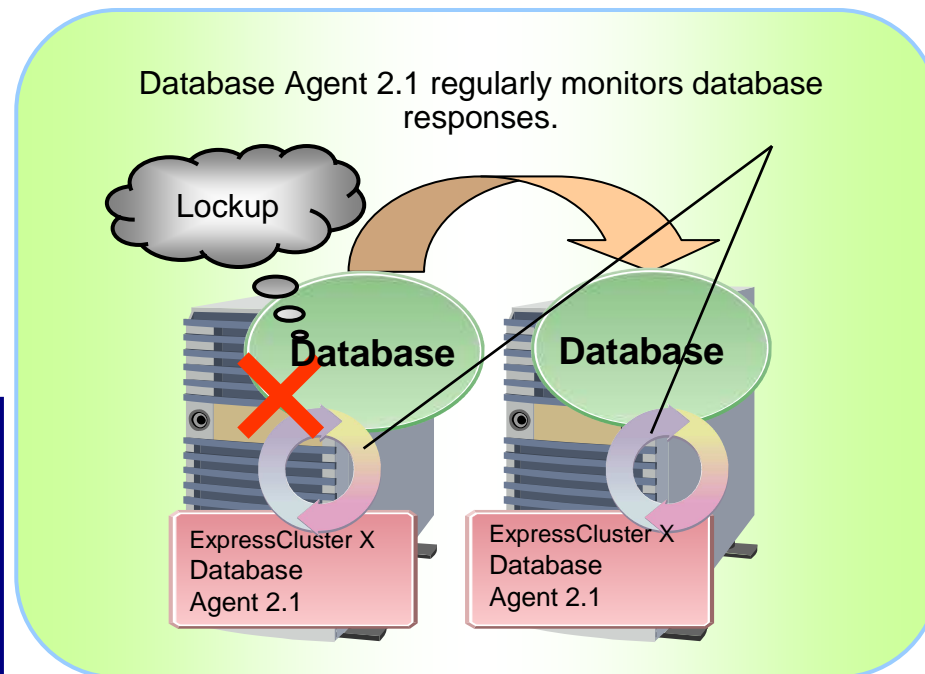
- **Database Agent 2.1 for Solaris** regularly monitors database responses and executes failover if an abnormality is detected, so the database can continue operating.

- Applicable databases:

- Oracle 10g R2
- MySQL 5.1
- PostgreSQL 8.x (8.1, 8.2, 8.3)

You don't want to spend time and money building monitoring processes, but dead-or-alive monitoring for process cannot determine whether a database can respond to client requests.

Database Agent 2.1 doesn't require programming and can be used with the Solaris x86 platform to improve the fault tolerance of your database servers.



Displaying Clusters Using Filtering or Grouping of Integrated Manager

Desired nodes can be found quickly by using search filters.

Clusters can be grouped and displayed on a workplace basis.

The image displays three screenshots of the Cluster List Manager interface, illustrating different ways to view and filter clusters:

- Top Left Screenshot:** Shows a list of clusters on the left pane, including 'ExpressCluster', 'clg1415', 'clg190', 'clg3940', 'clg566', 'cluster', 'cluster-1-14-ia64', and 'clusterpro-194-0it'. The main pane shows a grid of cluster icons labeled Cluster 1 through Cluster 6, each with a platform icon (Solaris or Linux).
- Top Right Screenshot:** Shows a 'Custom Folder' tree on the left pane, organized by department: '東京本社' (Tokyo Head Office) with Cluster 2, 6, 7; '人事部' (HR Dept) with Cluster 3; '業務部' (Business Dept) with Cluster 4; '四国支社' (Shikoku Branch) with Cluster 8, 9; and '品質部' (Quality Dept) with Cluster 4, 5, 1. The main pane shows Cluster 4, 5, and 1.
- Bottom Left Screenshot:** Shows a filter pane on the left with 'Windows', 'Linux', and 'Solaris' options. The main pane displays a list of clusters with their IP addresses and status: Cluster 1 (不明, 192.168.17.14), Cluster 2 (不明, 192.168.16.144), Cluster 4 (不明, 192.168.15.80), Cluster 5 (警告, 192.168.15.117), Cluster 7 (警告, 192.168.16.127), Cluster 8 (正常, 192.168.15.154), Cluster 10 (不明, 192.168.16.100), and Cluster 11 (警告, 192.168.16.217).
- Bottom Right Screenshot:** Shows a search results pane on the left with '全てのクラスター' (All Clusters) and '異常クラスター' (Abnormal Clusters) options. The main pane shows Cluster 10, 2, 5, and 1. A status bar at the bottom indicates '検索条件に一致するクラスターは4個見つかりました' (4 clusters found matching the search criteria).

In the background, a map of Japan is shown with two server racks labeled 'ExpressCluster X' overlaid on the country.

Snapshot – Backup Assistance Feature for Mirroring configuration

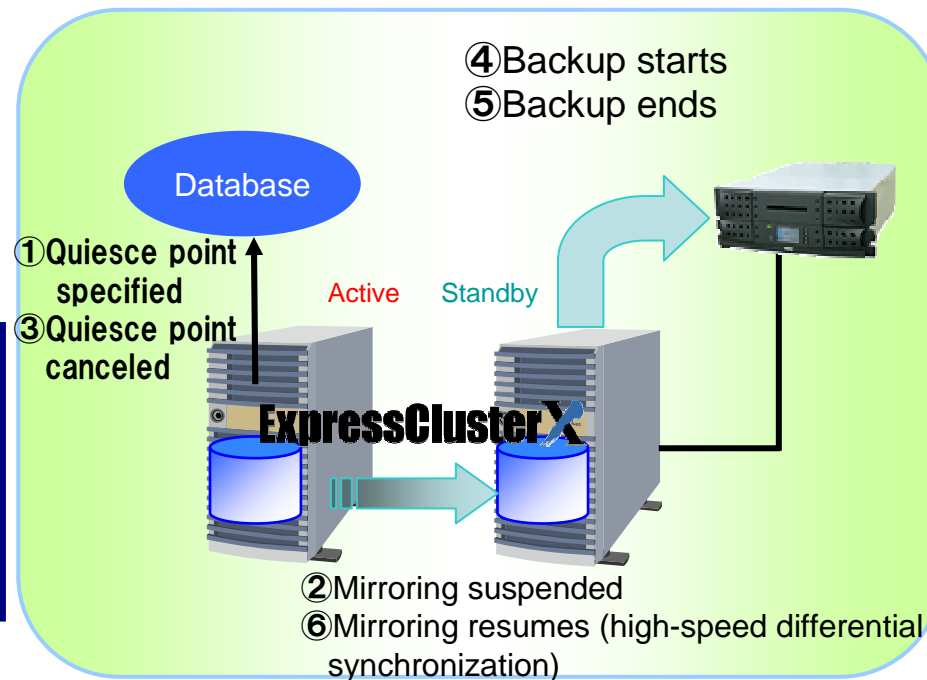
◆ Command to specify database quiesce points added

- This command specifies quiesce points for the major databases, keeping database consistency during data backup.
- Applicable databases:
 - Oracle 11g R1/10g R2 (Windows/Linux)
 - SQL Server 2008 (Windows)
 - MySQL 5.1 (Linux)

Backup processing places a load on the operating server, lowering the performance.

The backup processing load can be distributed to the standby server. Data can also be backed up while the database is consistent, so your data is safe, even during recovery.

Any backup software can be used.



* A sample script is included in the **ExpressCluster Startup Kit 2.1**.

Other Enhancements

- A **VMware•Hyper-V** sample cluster script is now included in the ExpressCluster Startup Kit. Guest and host clusters are also now supported.

Windows

Linux

- **Internet Server Agent** now supports the https protocol.

Windows

Linux

- ExpressCluster X 2.1 can now be used with the latest operating systems, including **SUSE Linux Enterprise 11**, **RedHat Enterprise Linux 5.3**, and **MIRACLE LINUX 4 SP3**.

Linux