Milestone Certified Solution

NEC EXPRESSCLUSTER X

Certified Solution for milestone

EXPRESSCLUSTER X

Date certified: 19-11-2018

Table of Contents

About NEC

NEC Corporation is headquartered in Tokyo, JAPAN was established in the year 1899. Presently NEC employees more than 100,000 people and has 303 consolidated subsidiaries across the globe (as of Mar, 31, 2018). Visit www.nec.com for more information.

NEC's EXPRESSCLUSTER X is a "Business Continuity / Disaster Recovery" solution which is designed to maximize uptime for any critical system. EXPRESSCLUSTER X solutions can minimize the damage organizations experience from system outages, whether they are planned or unplanned. EXPRESSCLUSTER X solutions are cost effective and easy to deploy. EXPRESSCLUSTER X is a scalable High Availability (HA) clustering solution across LAN and WAN environments. It can gracefully scale to meet the needs of both small businesses and large enterprises at the same time. It protects critical systems that run industry-standard applications, operating systems and virtualization platforms.

It offers Advantages as it is

- Reliable
- Flexible
- Monitoring Capabilities

Visit https://www.nec.com/en/global/prod/expresscluster/ for more information.

About Milestone Systems

Milestone Systems is a global leader in providing open platform IP video surveillance software. Milestone has provided easy-to-use, powerful video management software in more than 200,000 installations, worldwide.

Milestone XProtect® provides open architecture products that are compatible with more IP cameras, encoders, and digital video recorders than any other manufacturer. Because Milestone provides an open platform, you can integrate today's best business solutions and expand what's possible with future innovations. Visit www.milestonesys.com for more.

Executive Summary

NEC EXPRESSCLUSTER X is an integrated software solution that can cater to the High availability / Disaster Recovery needs of an organization. It has the capabilities of monitoring and detecting failures on Operating System, Network, Hardware and Application and based on the user settings can failover the application / database workload to standby server.

It can not only perform the failover of the application / database but has inbuilt capabilities to protect data by means of replication (Synchronous / Asynchronous) over LAN / WAN. EXPRESSCLUSTER X is hardware agonistic and can be deployed in Physical as well as Virtual or Hybrid environment. NEC EXPRESSCLUSTER X is cloud ready and can failover from / to On-premises servers to / from cloud deployment.

Certified Products

- NEC EXPRESSCLUSTER X 3.3
- Milestone XProtect Corporate 2018 R2

Test Setup

Two server with Windows 2012 standard operating system has been installed on the test machines. Both the servers have been installed with Milestone xProtect Corporate 2018 R2 and NEC EXPRESSCLUSTER X.
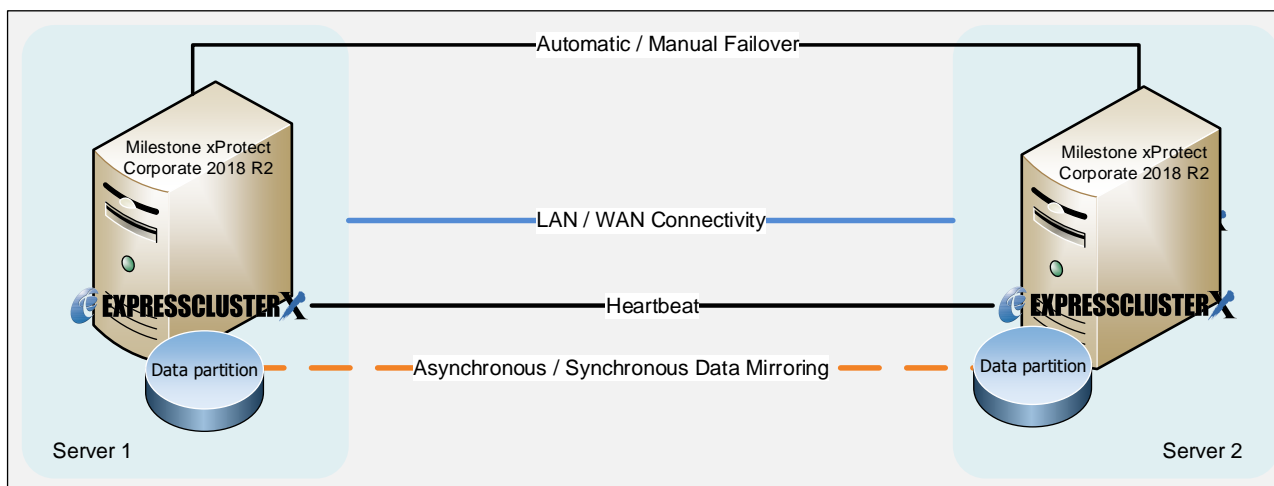
Configuration to cluster Milestone xProtect using NEC EXPRESSCLUSTER X had to be performed on the systems. Therefore, all the required service of the Application and its database were configured as per EXPRESSCLUSTER X requirement considering no impact of functioning of the application and its database.

Performance Results / Features Tested Described

S. No.	Test Case	Expected Result	Observed Result	Status
1	Groups creation	Create failover group with resources like mirror disk, services resources, Network resources	Failover group created	
2	Power off active server	Application should failover to secondary server	Application starts at secondary server	Completed
3	Database services stopped on primary server using tool	Database services should failover to secondary server	Database Services started on its secondary server	Completed
4	Database services stopped on secondary server using tool	Database services should failover to primary server	Database Services started on its primary server	Completed
5	Application services stopped on primary server using tool	Application services should failover to secondary server	Application Services started on its secondary server	Completed
6	Application services stopped on secondary server using tool	Application services should failover to primary server	Application Services started on its primary server	Completed
7	Run cluster on primary server, add some data on its data partition and then move the cluster service to secondary service	Data should be visible or replicate on data partition of secondary server	Data is visible and has been replicated on data partition of secondary server	Completed
8	Add some data on data partition of secondary server and then move the cluster to Primary server	Data should be visible or replicate on data partition of primary server	Data is visible and has been replicated on data partition of primary server	Completed
9	Manual failback from secondary to primary server	Failback to primary server	Seamless failback to primary server	Completed

S. No.	Test Case	Expected Result	Observed Result	Status
10	Failover time	< 4 Minutes	Successful failover within 4 Minutes	Completed
11	Failback time	< 4 Minutes	Successful failover within 4 Minutes	Completed
12	For any reason primary goes down	Failover takes place to secondary server	Seamless failover recorded	Completed
13	After diagnostic primary return to cluster	Failback is done manually	Seamless failback recorded	Completed
14	EXPRESSCLUSTER X UI accessibility using floating IP	EXPRESSCLUSTER X UI should open using Floating IP	EXPRESSCLUSTER X UI opens seamlessly in browser	Completed

Conclusion

The cluster configuration got applied successfully from the EXPRESSCLUSTER X web console and the entire cluster came online successfully. Starting the services on manual and automatic failover was successfully executed without any errors or warnings. The clustering of Milestone xProtect Corporate 2018 R2 started seamlessly from secondary server on failover and also started successfully on primary server on failback. The data was also protected by continuous replication and no data loss was reported on failover and failback.

<u>Resources</u>

Virtual Machines: 02

OS: Windows 2012 R2 Standard

Application: Milestone xProtect Corporate 2018 R2

Clustering Solution: NEC EXPRESSCLUSTER X

https://www.nec.com/en/global/prod/expresscluster/