

# EMC Symmetrix Q4 2013 Uptime Bulletin—BEST OF 2013!

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The EMC Target Code Policy is designed to provide EMC Support personnel and customers with recommendations and guidance for the best Engenuity version for the VMAX platform in order to facilitate upgrade planning activities.

To support that direction, EMC has updated the target code recommendation for all VMAX models to Engenuity 5876, due to the improved serviceability and reliability it provides.

EMC previously announced the End of Service Life date for Engenuity 5875 as March 31, 2014; Engenuity 5875 will continue to be fully supported through that date.

## BENEFITS OF ENGINUITY 5876

EMC® Engenuity™ 5875 End of Service Life (EoSL) was previously announced as March 31, 2014, with a recommendation to upgrade to target Engenuity 5876.

Examples of the serviceability and reliability improvements in Engenuity 5876:

- Direct member sparing provides the ability to directly copy data from the failing drive to the invoked spare drive. This feature adds robustness to the sparing process and reduces the risk of data unavailability in the event of a double-drive failure by minimizing rebuild activities.
- To address reported issues of extended recovery after air conditioning failures that result in extremely high data center temperatures that force a shutdown, Engenuity 5876 has added improvements that reduce the recovery time required, resulting in improved availability.
- Enhanced FAST™ (Fully Automated Storage Tiering) functionality and improvements to FAST algorithms, resulting in performance improvements over Engenuity 5875.

Effective March 31, 2014, Engenuity 5875 will become End of Primary Support (EoPS) and End of Service Life (EoSL). EMC requires customers to upgrade to Engenuity 5876 to ensure that hardware support on available memory, director, and disk drive replacement parts continues to be available. Upgrades and capacity expansions will only be available on Engenuity 5876 after March 31, 2014. For more detailed information see the Q3 2013 Symmetrix® Uptime Bulletin.



## NONDISRUPTIVE UPGRADES

Did you know that the Engenuity behind the EMC Symmetrix VMAX® platform greatly enhanced the online Engenuity code upgrade mechanism? Changes in Engenuity removed the need for a brief bounce in the host links during the upgrade. In older architectures, the hosts needed to log back in following the link bounce. Although Symmetrix DMX™ NDUs ran at very high levels of success, VMAX is even better, with success rates greater than 99.99% or higher after 3,800+ upgrades completed. The new structure produces very high resiliency and worry-free upgrades. The experience of “in-family” and “out-of-family” Engenuity upgrades are the same now, as each uses the same internal mechanisms. Take advantage of the latest Engenuity; utilize EMC’s most exciting features while taking comfort in enterprise-level quality. Contact your local team to discuss upgrading soon.

EMC has established target revisions for each product to ensure stable and reliable environments. As a best practice, EMC recommends that you operate at target code levels or above to benefit from the latest enhancements and fixes.

Current target code and adoption document are available at EMC Online Support: <https://support.emc.com>.

EMC World is returning to Las Vegas, scheduled from May 5 to May 8, 2014.

One of the highlights of EMC World 2013 was the Customer Connection room—a chance for unfiltered communication between EMC’s customers and its engineers. More than 230 customers met with engineers on topics of their choosing.

Meetings between customers and EMC’s top technical talent benefit both parties. The feedback from customers was excellent; they really appreciated the opportunity to meet with the development engineering team to discuss technical details. EMC’s engineers also appreciated meeting with customers and learning about their environments.

EMC would like to increase participation in 2014. Please let us know if you will be attending EMC World in 2014, and would like to take part in the Customer Connection room.

Email us at [ESDAdvocacy@emc.com](mailto:ESDAdvocacy@emc.com) with your contact information, company name, and any topics you would like to discuss. Don't worry if you have not booked yet!

When EMC World gets closer we will confirm all meetings. Be sure to check out [www.emcworld.com](http://www.emcworld.com) for more information on the conference.

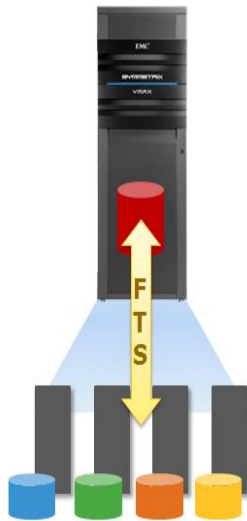
## FEDERATED TIERED STORAGE ZONING

Federated Tiered Storage (FTS) allows LUNs that exist on external arrays to be used to provide physical storage for Symmetrix VMAX arrays. The zoning configuration of FTS is important for adequate redundancy, and optimal performance.

If a single remote controller is zoned to both ports of any single Symmetrix DX director, data access could be limited during certain service activities. Zoning a single controller to only one Symmetrix DX director defeats the redundancy designed into the product.

Proper configuration is necessary to maintain data availability. There are certain service activities that could trigger data unavailability as redundancy would be lost. The potential activities include:

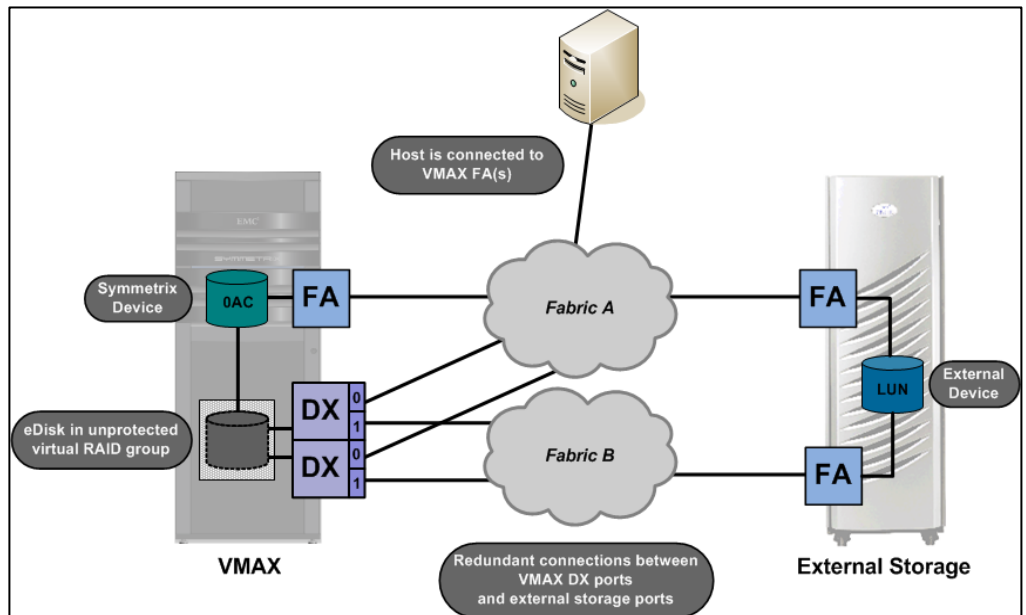
- Cable changes and individual FC port servicing
  - VMAX director and I/O modules
  - External array controller replacement
  - External array firmware upgrade
  - SAN fabric servicing



The resolution is to ensure that each controller is zoned to separate ports on different DX directors within the Symmetrix array. EMC has improved the documentation regarding this important aspect of configuring FTS.

The reference material can be found [here](https://support.emc.com) or you can locate the document by searching on <https://support.emc.com> for this title: *Design and Implementation Best Practices for EMC Symmetrix Federated Tiered Storage (FTS) - Technical Notes.*

The image below highlights the proper configuration of Federated Tiered Storage. More complex versions are available within the Technical Notes article mentioned above.





Do you want the latest information about your product? Want to know when a new version is available or when new documentation has been published? Would you like to control how and when you get these notifications? As an EMC customer, you now have the ability to do all this and more. With the new EMC Online Support functionality, you can subscribe to product updates, including new documentation and downloads. You decide when you get these updates—daily, weekly, or monthly. And you can do all this for multiple EMC products.

## PREVENTING VIRUS SCANS FROM CORRUPTING THE UNISPHERE FOR VMAX PERFORMANCE DATABASE



When using the Unisphere® for VMAX Performance option, customers should exclude the following directories from any virus scan:

- The data directory and all its subdirectories  
(*<InstallDirectory>\EMC\SMAS\jboss\standalone\data\msq\data*)
- The temp directory (*<InstallDirectory>\EMC\SMAS\jboss\standalone\data\msq\temp*)



**FAILURE TO FOLLOW THIS ADVICE MAY LEAD TO CORRUPTION IN THE PERFORMANCE DATABASE.**

An EMC Technical Advisory (ETA) identifies an issue that may cause serious negative impact to a production environment.

You can find the complete [Symmetrix Customer ETA List](#) on [Powerlink](#) at this path:

[Support](#) > [Technical Documentation and Advisories](#) > [Technical Advisories](#)



### Did you know?

It is recommended that customers schedule a drive firmware upgrade to the appropriate latest release for their Symmetrix system. The latest drive firmware provides added drive reliability enhancements that may help mitigate the impact of a failure. To determine whether an upgrade is appropriate for your environment, contact your local EMC Service Representative.

## DATA CENTER FIRE PREVENTIONS

Failure to properly design and position fire suppression systems could result in damage to spinning disk drives due to excessive noise force and vibration if a fire or false alarm emission occurs. Failure to properly design fire suppression systems could result in extended customer outages.



Fire prevention equipment in the computer room should always be installed as an added safety measure. A fire suppression system is the responsibility of the customer. Care should be taken by the customer when selecting appropriate fire suppression equipment and agents for their data center. Your insurance underwriter, local fire marshal, and local building inspector should all be consulted in selecting a fire suppression system that provides the correct level of coverage and protection. EMC designs and manufactures equipment to internal and external standards that require certain environments for reliable operation. EMC does not make compatibility claims of any kind nor does EMC provide recommendations on fire suppression systems. Customers and their responsible fire suppressant parties should consider gas nozzle size, nozzle position, and gas release time when designing their fire suppression equipment. EMC recommends that storage equipment not be positioned directly in the path of the gas discharge stream so as to minimize the forces and vibration during the discharge.

Note: The previous information is provided on an "as-is" basis and provides no representations, warranties, guarantees, or obligations on the part of EMC Corporation. This information does not modify the scope of any warranty set forth in the terms and conditions of the basic purchasing agreement between EMC and its customer.



Note: If you require the latest feature set, you may need to run a version of software later than the target version.

Note: For Solutions Enabler, always refer to Knowledgebase article emc201214 for any special considerations. If you require the latest feature set, you may need to run a version of Solutions Enabler later than the target version.

Note: Unisphere for VMAX 1.5 requires the most recent version of Solutions Enabler, SE 7.5.0.

Note: For Mainframe Enabler, always refer to Knowledgebase article emc138978. Customers installing new Symmetrix, implementing new solutions, or planning host and Symmetrix software maintenance should plan to upgrade to version 7.4 at Level Set EMC7401.

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## SYMMETRIX ENGINUITY TARGET REVISIONS

SYMMETRIX MODEL	ENGINUITY REVISION	RELEASED	% SYSTEMS
<b>DMX800, DMX1000, DMX2000, DMX3000</b>	5671.82.78	01/25/2011	56%
<b>DMX-3, DMX-4</b>	5773.198.142	07/15/2013	3%
<b>VMAX family</b>	5876.251.161	09/09/2013	15%

EMC has established target revisions for each product to ensure stable and reliable environments. As a best practice, EMC recommends that you operate at target code levels or above to benefit from the latest enhancements and fixes.

Current Target Code and Adoption documents are available on Support Zone: <https://support.emc.com>

## SYMMETRIX SOFTWARE TARGET REVISIONS

SYMMETRIX SOFTWARE TARGET REVISIONS	ENGINUITY 5671	ENGINUITY 5773	ENGINUITY 5876
<b>Mainframe Enablers</b>	7.6.7601 (1%)	7.6.7601 (7%)	7.6.7601 (19%)
<b>Solutions Enabler</b>	7.6.1 (7%)	7.6.1 (9%)	7.6.1 (15%)
<b>Unisphere for VMAX</b>	1.6.1 (21%)	1.6.1 (25%)	1.6.1 (16%)

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