INGRAM MICRO®

Hewlett Packard Enterprise

MSA Health Check

Today many customers are not running current firmware or following other best practices with their arrays, increasing the chances of outages and avoidable downtime. This tool is an advanced analytics engine which enables a holistic approach in delivering insights into system health and seeks to ensure conformity with best practices.

4 SIMPLE STEPS

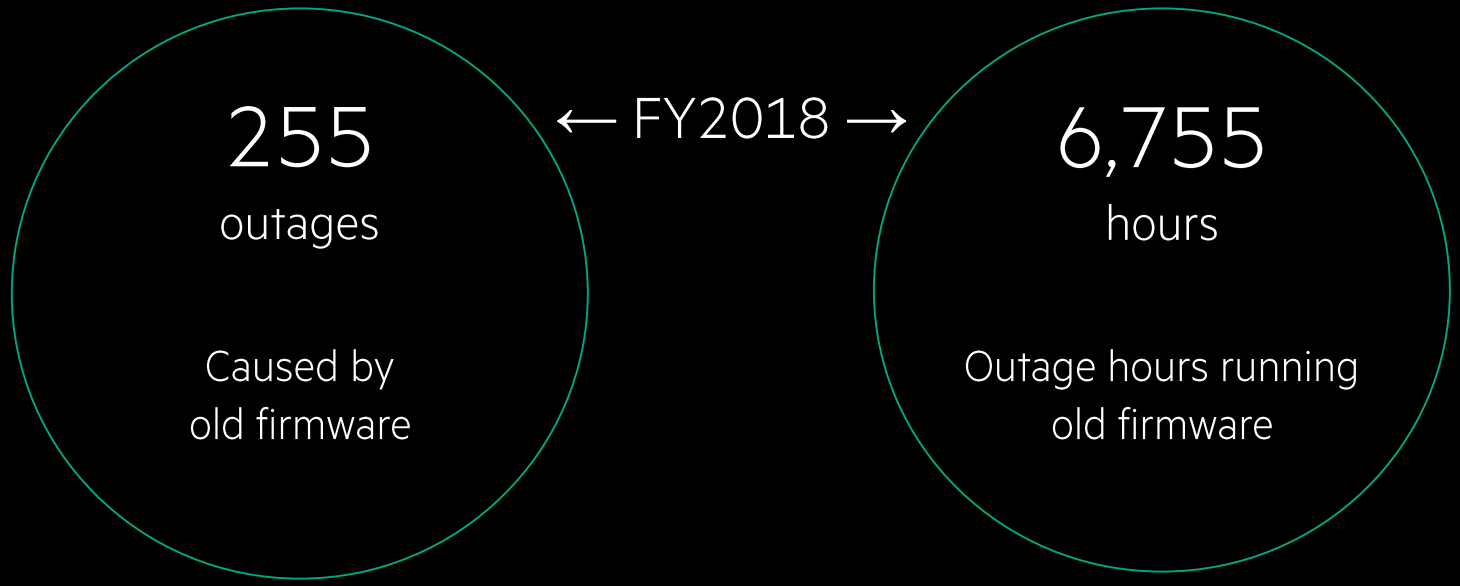
1. Download MSA Log File from the MSA Storage Management Utility (SMU)
2. Upload MSA Log File in the MSA Health Check website
3. Review Results by clicking through the tabs and saving the PDF report
4. Take Action and start improving your MSA availability

THE PROBLEM

- Five generations and soon six
- ~140,000 five-year install base
- Largest install base of all HPE storage arrays
- No call home capabilities

THE PROBLEM

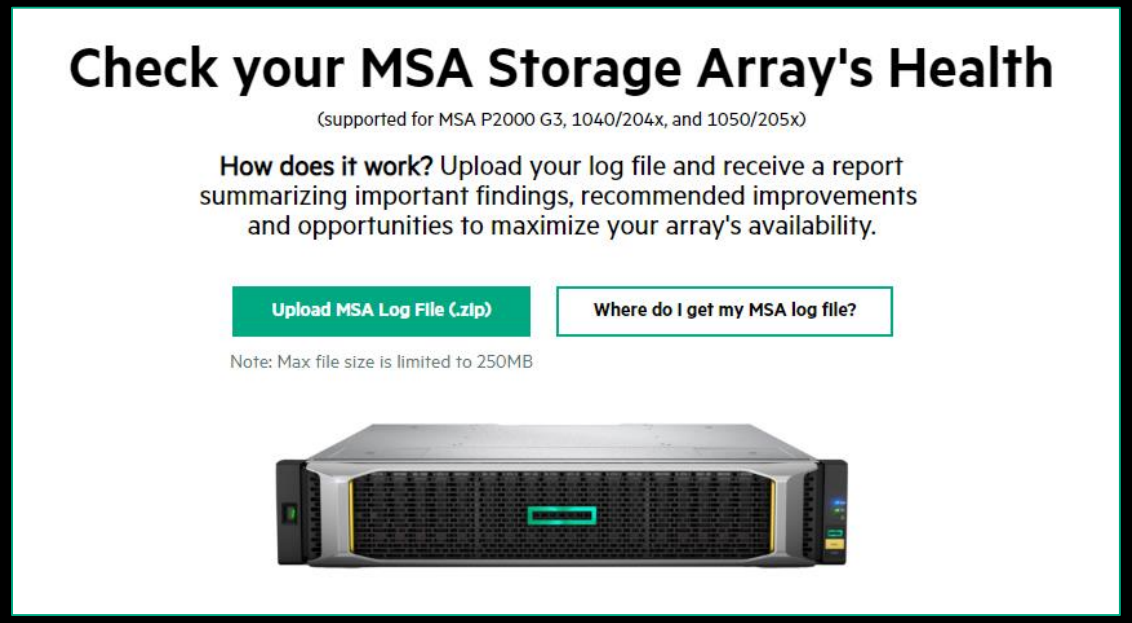
Customers not running current firmware or following best practices



Prevention: Reduce MSA outages by running current firmware and best practices

THE SOLUTION

MSA Health Check



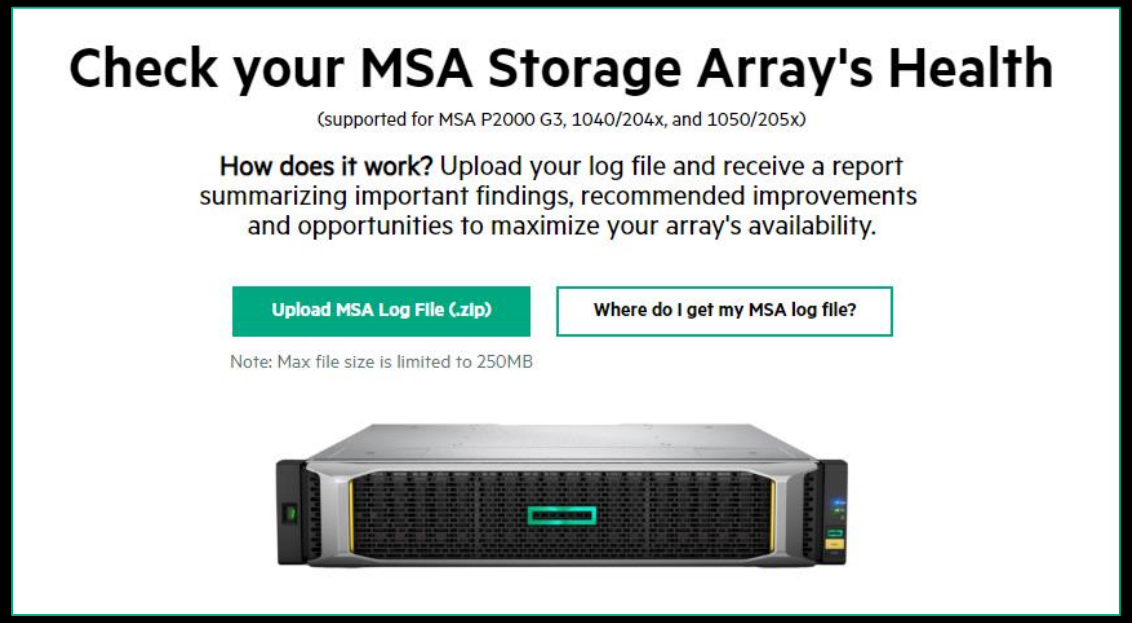
Customer accessible web-based interface

The log is inspected for:

- Best practices and signatures
- Complete firmware inventory
- Unhealthy components

THE SOLUTION

MSA Health Check



Customer accessible web-based interface

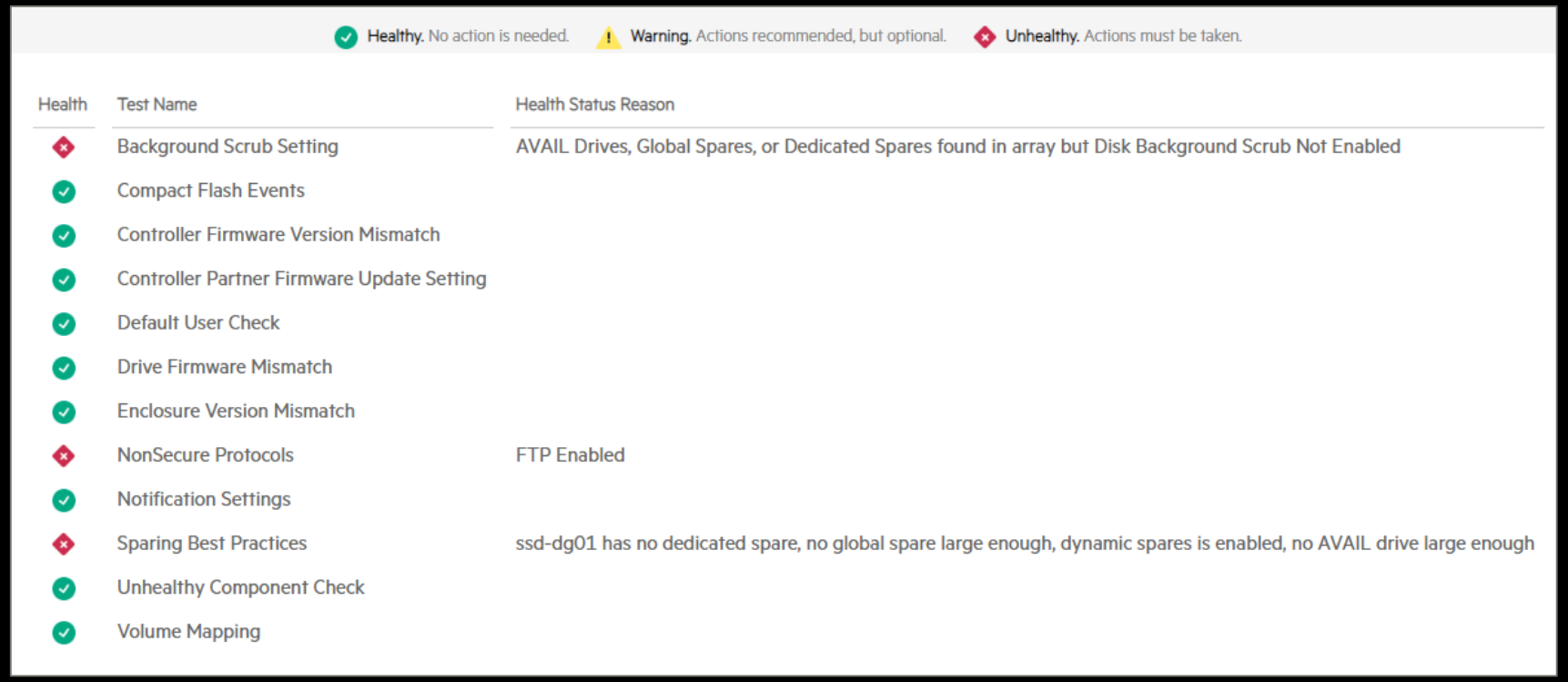
- Each call center interaction performs a health check[1]
- Checks for drive firmware upgrades and best practices
- Improve customer experience
- Improve quality by reducing outages

[1]3K logs collected each quarter

BEST PRACTICES

The log is analyzed for 12 best practice signatures

- Healthy, warning, or unhealthy
- Signature descriptions provided to resolve issues



Health	Test Name	Health Status Reason
✖	Background Scrub Setting	AVAIL Drives, Global Spares, or Dedicated Spares found in array but Disk Background Scrub Not Enabled
✓	Compact Flash Events	
✓	Controller Firmware Version Mismatch	
✓	Controller Partner Firmware Update Setting	
✓	Default User Check	
✓	Drive Firmware Mismatch	
✓	Enclosure Version Mismatch	
✖	NonSecure Protocols	FTP Enabled
✓	Notification Settings	
✖	Sparing Best Practices	ssd-dg01 has no dedicated spare, no global spare large enough, dynamic spares is enabled, no AVAIL drive large enough
✓	Unhealthy Component Check	
✓	Volume Mapping	

BEST PRACTICES

Best practice check	Information pop-up description
1. Compact flash events	Scans log events to detect known issues with compact flash cards
2. Controller firmware version mismatch	Ensures controllers are on the same firmware version
3. Default user check	Checks to see if a new user, other than the two default users, has been created
4. Drive firmware mismatch	Ensures that all drives of the same model run the same firmware version
5. Enclosure firmware mismatch	Ensures that all drive enclosures run the same firmware version
6. Notification settings	Checks that notifications are set up for email and SNMP is configured
7. Controller Partner Firmware Update setting	Checks whether Partner Firmware Update is enabled
8. Unhealthy component check	Scans log events for a health status other than “OK” for one or more components
9. Volume mapping	Checks that volumes are mapped through ports on both controllers
10. Scrubbing	Verifies that Disk Group Background Scrub is enabled
11. Drive sparing	Checks that suitable drives are available for dynamic sparing or are assigned as spares
12. Nonsecure protocols	Checks if nonsecure protocols are enabled (HTTP, Telnet, unsecure SMI-S, FTP, debug, activity progress monitor)

FIRMWARE

Firmware inventory is pulled from all major components

If firmware is not current, download links are provided

Component	Installed Version	Recommended Version
Enclosure 1 - Controller A	GL220R005	GL225P001 (Windows, Linux)
Enclosure 1 - Controller B	GL220R005	GL225P001 (Windows, Linux)
Drive Model - EG000600JWJNH	HPD1 (23)	
Drive Model - EG0600FBVFP	HPDE (1)	
Drive Model - EG0600FCVBK	HPD9 (23)	
Enclosure 2 - IOM A	unknown	S200B41 (2041) (Windows, Linux)
Enclosure 2 - IOM B	2041	

Controllers

Drives

I/O modules

COMPONENT HEALTH

Looks for unhealthy components

Provides overview and recommended course of action

Unhealthy Component	Description	Recommendation
Disk 2.10	The disk has a probable hardware failure.	- Replace the disk.
Vdisk vd02	The vdisk is not fault tolerant. Reconstruction cannot start because there is no spare disk available of the proper type and size.	- Replace the failed disk.\n- Configure the new disk as a spare so the system can start reconstructing the vdisk.\n- To prevent this problem in the future, configure one or more additional disks as spare disks.

LINKS

MSA Health Check

MSA Gen5 virtualization technology white paper

TekTalk on Point: MSA Mid Year Update


THANK YOU