The IBM Peace of Mind initiative

Three IBM Storage programs help customers lower costs, reduce risk and maintain the latest technologies
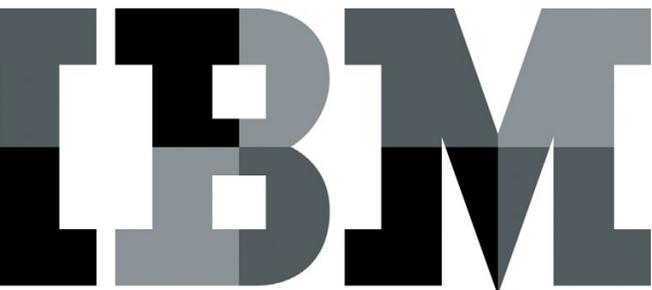
Highlights

- Decrease storage capacity requirements to help reduce IT costs with the IBM® Data Reduction Guarantee

- Help lower the costs of maintaining the latest storage technology using the IBM Controller Upgrade Program

- Reduce concerns about costly IT outages through the power of IBM HyperSwap® technology and the confidence provided by the IBM High-Availability Guarantee

Lowering risk and reducing costs are as important today as they have ever been to enterprises large and small. This was borne out in a recent market survey conducted by analyst firm Enterprise Strategy Group (ESG). While cybersecurity is the most commonly cited business directive expected to impact IT investments for the next year, reducing costs came in a close second place, identified as a priority by nearly one-third of respondent organizations. And nearly 90 percent said they will take steps to lower IT expenses in 2017.[1]

In the same survey, nearly one third of IT decision-makers expected that risk management technologies and processes would be key factors in getting executive management to sign off on IT investments in 2017.[1]

To help organizations lower risks and reduce costs while maintaining competitive advantage through leading-edge technology solutions, IBM Storage has developed three new programs anchored to all-flash IBM storage offerings.

This trio of cost and risk reduction programs demonstrates the confidence that IBM has in its storage products and technologies.

- A new data reduction program is designed to reduce planning risks and help lower storage costs by meeting baseline levels of data compression effectiveness in IBM Spectrum Virtualize™-based offerings.
- A new controller upgrade program enables customers of designated all-flash IBM storage systems to reduce costs while maintaining leading-edge controller technology for essentially the cost of ongoing system maintenance.
- A new high-availability program helps enterprises avoid the costs and risks related to business downtime by ensuring the availability of business-critical data and storage systems.

IBM understands that its storage solutions lie at the foundation of many of the world's most vibrant and successful businesses. IBM wants its customers to feel confident when they choose IBM Storage. For this reason, IBM calls the initiative that produced these programs "*Peace of Mind*."

IBM Data Reduction Guarantee

Market research by IT analyst firm ESG confirms the popularity of data reduction technology. Data reduction ranks second on a list of storage "must have" features that includes a wide range of features, from high availability through flash storage to asynchronous replication.[2]

Data compression reduces the number of bits needed to represent data. Compressing data can save storage capacity, speed file transfer and decrease costs for storage hardware and network bandwidth.

IBM is confident in the results provided by the compression solutions engineered into IBM Storwize®, IBM SAN Volume Controller (SVC), IBM FlashSystem®, and IBM XIV® storage systems. The result is the Data Reduction Guarantee with designated models.

IBM data compression solutions leverage proprietary algorithms that produce extraordinary results in just one cycle. Though some approaches utilize a second cycle of "re-compressions," this additional step can actually slow performance. And if compression is done right in the first instance, it is not necessary. IBM data compression solutions are designed to provide the greatest compression results with minimal impacts to storage latency and performance—while utilizing only a single compression cycle.

Data compression, in general, is more effective when applied to certain types of workloads. These include:

- Traditional databases such as Oracle, IBM Db2® and Microsoft SQL Server
- Virtualized environments utilizing VMware, kernel-based virtual machine (KVM), Citrix Xen and other hypervisors
- Many other structured data environments such as computer-aided design/manufacturing (CAD/CAM) and high-performance computing applications

Deploying the IBM storage systems covered under the *Data Reduction Guarantee* gives organizations two options for how to leverage the program's advantages. The *IBM Flexible Compression Guarantee* option provides capacity savings of up to 80 percent based on IBM Comprestimator reports or other analysis. This option requires collecting data from the storage system and analyzing it to determine the compression rates that are possible.

In some cases, allowing technicians from IBM or IBM Business Partners to analyze data compression effects during solution design and installation processes may not be convenient. When that's the case, the *IBM Estimate Free Compression Guarantee* option provides an effortless compression guarantee of 50 percent capacity savings without collecting data and generating reports. Users can select the option that works best for their environment.[3]

IBM Controller Upgrade Program

Capital expenditures can be issues in the IT world. The same innovation that constantly drives remarkable improvements in IT infrastructure also makes that infrastructure potentially obsolete every few years. This forces businesses to consider upgrades in order to remain competitive.

But "upgrade" often means injecting additional capital investments. Or does it? Imagine making the capital investment in a solution only once. Imagine gaining all the ongoing advantages of innovation—but with very little ongoing capital investment.

This is the concept behind the new *Controller Upgrade Program*. Under this program, IBM customers make a one-time investment in designated IBM all-flash Storwize and IBM FlashSystem solutions, then after three years IBM upgrades the controllers in these arrays to equivalent next-generation technology, including NVMe support, if appropriate, for only the cost of ongoing hardware and software maintenance.

As a result, flash storage array upgrade costs shrink significantly. Now IBM can help customers move some of their precious business investments away from basic IT infrastructure and instead toward creating new business opportunities or capturing and keeping competitive advantage.

For IBM customers, the *Controller Upgrade Program* offers multiple benefits. It:

- Significantly reduces future IBM flash storage procurement costs and headaches
- Reduces the risks associated with deploying new controller-related technologies in business-critical environments
- Helps ensure organizations can continue to operate with state-of-the-art storage technology
- Reduces planning cycles. Because IBM all-flash storage arrays can be configured with capabilities such as hybrid cloud management, planning horizons can be extended for years—as far into the future as cloud dominates the IT landscape.

The *Controller Upgrade Program* requires no up-front contract, no up-front work, and no up-front decisions. Organizations are not forced to buy a "premium" maintenance plan, pay anything extra up front or become locked into any future unknowns. Ninety days before the maintenance agreement for the customer's original equipment purchase expires, the organization simply alerts its IBM representative if it wants to participate. The choice is the customer's—as it should be.

Perhaps most important, this new IBM program turns the traditional IT innovation benefits/cost cycle on its head. Instead of a mixed bag of exciting improvements tangled with the relentless requirement to keep pace, the *Controller Upgrade Program* helps address some of the challenges that naturally come with flash storage evolution. IBM anticipates this will be especially important to customers who have grown accustomed to benefitting from some of the finest storage engineering on the planet.

IBM High-Availability Guarantee

Business downtime is very costly. Some IT industry analysts estimate that the average per-minute cost to businesses of data center downtime can be nearly *eight thousand dollars*. And in 2016 the average outage duration was 95 minutes.[4] This is up from five thousand dollars a minute just a few years ago.[5]

IBM data storage solutions such as those in the Storwize family of systems are deployed in tens of thousands of business-critical environments around the planet.[6] This gives IBM first-hand experience helping to solve the problems associated with scheduled and unscheduled IT systems downtime. Now, IBM has taken the quest to reduce downtime a significant step further by offering an all-flash array (AFA) *High-Availability Guarantee* that essentially eliminates IBM storage system downtime worries for enterprises deploying designated Storwize and IBM FlashSystem solutions.

Under this program, customers deploying a high-availability configuration utilizing the HyperSwap function are assured of zero interruption to data availability for the duration of the three-year warranty period. The HyperSwap implementation must be performed by IBM Lab Services, and the guarantee is valid only for eligible, newly purchased IBM Storwize V5030F, IBM Storwize V7000F, IBM FlashSystem V9000 and IBM FlashSystem A9000 storage systems.[7]

The new AFA *High-Availability Guarantee* highlights the advantages of the deeply integrated IBM storage portfolio. HyperSwap technology lies at the heart of this extraordinary ability to offer IBM customers the opportunity to implement zero-downtime storage solutions. HyperSwap allows systems to automatically fail over from a primary data copy to a locally stored secondary copy in the event of a storage failure. This capability is available across the IBM storage portfolio. It allows customer operations to automatically fail over within seconds without human intervention or additional application code.

The implications for IBM customers are significant. Storwize and IBM FlashSystem arrays designated for the zero-downtime program offer a wide range of capabilities and price points. This is not a program limited to only a few organizations that can afford complex and expensive storage solutions. Instead, thanks to the cost-efficiency inherent in Storwize solutions, enterprises with many different storage requirements and budget constraints can participate. Yet for those organizations needing consistent microsecond storage performance, a rich set of storage virtualization, security and management capabilities, and simplified scalability into the petabyte range, IBM FlashSystem arrays offer industry-leading solutions.

Perhaps most important, with this new high-availability program, IBM has moved beyond the industry-standard rhetoric that carefully suggests very high storage availability can be achieved. Instead, this is an IT industry leader assuring zero storage system downtime for AFA high-availability program participants. For IBM customers who adhere to the program guidelines, business risks can be reduced. The costs associated with traditional high-availability architectures can be lowered by streamlining system redundancies. And thanks

to the virtualization capabilities offered with IBM Spectrum Virtualize-based members of the eligible IBM arrays, very high availability can be extended to existing systems from other storage vendors, adding to their value and longevity.

Unscheduled IT system outages cause airlines to lose revenue and reputation, healthcare organizations to place patients at greater risk, and customer experience and satisfaction in many industries to plummet. The costs of downtime are real. Now, some real solutions are available from IBM.[8]
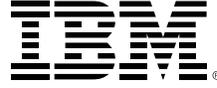
Peace of Mind from IBM

Separately, the *Data Reduction Guarantee*, *Controller Upgrade Program* and *High-Availability Guarantee* each offer many benefits. But when combined as part of an IBM all-flash storage solution, the power of all three to help customers lower costs, reduce business risk and maintain the most current technologies can be even more significant. Confidence. Trust. Peace of mind. IBM understands that real solutions include more than simply great engineering.

For more information

To learn more about programs in the IBM Peace of Mind initiative, contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/storage/flash

Additionally, IBM Global Financing provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit: **ibm.com**/financing

[3] The compression guarantee requires a contract specifying the terms and limitations of the guarantee. Savings rates greater than 50 percent require workload analysis using the IBM *Comprestimator* tool. Please see your IBM sales representative for details.

[4] Andy Lawrence, "Datacenter downtime: when it happens, it (still) really hurts," *451 Research*, March 24, 2016.

[5] Chris Preimesberger, "Unplanned IT Downtime Can Cost $5K Per Minute: Report," *eWeek*, May 13, 2011. http://www.eweek.com/networking/unplanned-it-downtime-can-cost-5k-per-minute-report

[6] "Got Mid-size Workloads? Storwize to the Rescue," *Taneja Group*, June 24, 2016. http://tanejagroup.com/profiles-reports/request/got-mid-sized-workloads-storwize-to-the-rescue#.WbLrXeTmpPY

[7] Your IBM representative will provide complete details on the terms and conditions of this program.

[8] Ian Shave, "Lowering the costs of downtime," *IBM Corp.*, July 5, 2017. https://www.ibm.com/blogs/systems/lowering-the-costs-of-downtime/

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Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.

[1] "2017 IT Spending Intentions Survey," *ESG Research*, March 2017. http://www.esg-global.com/2017-it-spending-intentions-survey

[2] "ESG Research Report: 2015 Data Storage Market Trends," *ESG Research*, October 2015. http://research.esg-global.com/reportaction/2015datastoragetrends/Marketing

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