

Tegile Systems, ManTech International, and Cypherpath Team Up To Deliver a Converged Infrastructure for the US DoD Cyber Range



ManTech International Corporation was founded in 1968 and today, the company is a multi-billion-dollar public company that provides the innovation, adaptability, and critical thinking needs for defense, intelligence, and other fields internationally. ManTech's Cyber Security division designed, engineered, built and operates the Department of Defense Cyber Range to model and simulate the Tier 1 Global Information Grid (GIG) and provide a joint-service environment to enable cyber personnel to train, test, exercise, and evaluate functions they carry out operationally.

ManTech International Corporation

Challenges

- Organizations building test environments, test ranges, cyber ranges, etc. using traditional hardware approaches are limited in scale that are costly and time consuming to configure and set up.
- The DOD needed a solution that they could build on top of their apps and hardware.

Solutions

- Tegile and Cypherpath provided ManTech with hardware and software to build and deploy an entire Cyber Range in hours vs. weeks.
- Now testing new services and capabilities can be developed rapidly to meet mission needs.

Results

- Tegile and Cypherpath delivered a Converged Infrastructure platform.
- Cypherpath's Virtual Container Platform delivers an IT infrastructure on-demand by enabling any machines, networks, apps, storage and app containers to be placed inside a software-defined infrastructure container.

Traditionally, organizations would build test environments, test ranges, cyber ranges, etc. focused on using traditional hardware approaches that limit the scale, are costly and time consuming to configure and set-up. In many cases, these small test ranges have limited capabilities to emulate the real vulnerability to the operational network. By partnering with Tegile and Cypherpath, ManTech can build and deploy an entire Cyber Range within hours and minutes versus weeks and months. Furthermore, virtual environments can be copied and reused, saving time and money. Testing and experimenting with new services and capabilities can be developed and introduced rapidly to meet mission needs. Risks are also mitigated because mission-critical infrastructure remains untouched while mirrored virtualized environments are used to experiment and create better solutions.

Why Tegile Systems?

Ernest McCaleb, who works with the DOD on behalf of ManTech, turned to both Tegile Systems and Cypherpath to deploy a scalable, agile, cost efficient, and fast solution.

Ernest had worked with a number of storage companies, "But I found that Tegile Systems could offer the DOD a solution that had ease of use, agility and flexibility," he said, and also noted that Tegile had an excellent price point for a flash array storage solution.

Ernest continued, "Tegile has a great team. They react quickly to questions and they are very forward thinking in their approach to flash-centric storage architecture."

Tegile offers an extensive line of All Flash and Hybrid storage solutions as part of their Intelligent Flash Array portfolio. Tegile arrays can be optimized to maximum performance with all flash and mixed with hard disks to maximize economics, along with a feature rich IntelliFlash™ operating environment, delivering one flash platform for any workload.

A Partnership Delivering Converged and Software- Defined Infrastructure

Tegile joined with Cypherpath to deliver a Converged Infrastructure solution. Cypherpath's Virtual Container Platform delivers an IT infrastructure on-demand by enabling any machines, networks, apps, storage and app containers to be placed inside a software-defined infrastructure container.

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"We were excited to team up with Tegile," says Kevin Rogers of Cypherpath. "Just think of how much storage the DOD will generate from their machines, apps and servers. The DOD needed a solution that they could build on top of their apps and hardware. Tegile helped clear a path for them."

The combination of Tegile's flash-centric storage architecture that could work with thousands of existing machines and Cypherpath's software overlay created a strategic solution for the ManTech DoD Cyber Range. Tegile's all-flash arrays feature high-density enterprise flash SSDs designed to support mission-critical applications that require extremely high performance at low latency for extended periods of time. Issues that customers typically have with all-flash storage systems are expensive price per gigabyte, short-lived components and lack of density comparative to hard-disk drive systems have been rendered obsolete with the Tegile all-flash arrays. In a typical mixed-application environment, Tegile achieves a 5X data reduction to realize a \$1/GB street price. The arrays' 10PB per drive endurance allows Tegile to offer an industry-best seven-year warranty without the need for periodic wholesale system

upgrades. At 55 effective terabytes (TBs) per U, the arrays go well beyond traditional HDD-based array density.

Tegile's enterprise-class arrays are built on the company's third-generation IntelliFlash™ technology that provides the high performance, capacity and reliability that organizations desire at a relatively low cost. Data reduction technology provides a usable capacity that's greater than the arrays' raw capacity. A no-single-point-of-failure architecture, automated snapshot and thin replication features make them more reliable than competitive alternatives.

Tegile's all-flash arrays feature four eight-core Xeon processors, significant memory, sizable read and write caches using flash, multiple networking interfaces, dual power supplies and hot disk spares to provide high performance at low cost. The systems' software simplifies administration and optimizes storage for various applications, including virtualization, file services and databases. All-inclusive pricing for features such as auto-snapshot, auto-replication, near-instant recovery, on or offsite failover, and virtualization management provides simplified software licensing at a fraction of the cost of storage incumbents.

"Most storage vendors have a one size fits all but that is not the case with Tegile. Tegile has the most enhanced storage infrastructure we've seen," said Rogers.

"The collaboration of ManTech, Tegile and Cypherpath provides an extensible architecture and an indomitable cyber-security solution for government and financial institutions worldwide," said Jason Strawderman, VP Federal at Tegile. "The DoD Cyber Range is the first of many to come."

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