

## EMP Resilient Facility

### Delivers:

- Tier 3+ availability, with uncompromising security, reliability, and control supported by industry-leading SLAs.
- Highest level of compliancy - PCI, HIPAA, HITRUST, ISO, SSAE 16, SOC 1 and SOC 2
- Six-tiered security perimeters, fully monitored 24x7, with on-site live hands support.
- Customizable and scalable solutions to ensure ongoing business support and reliability
- Custom designed HEMP enclosures and shelters

### Electronic Equipment Will Render Useless

A single atmospheric nuclear detonation releases enough (EMP) to equal 100,000 volts per square centimeter on the ground.

A single detonation 200 to 400 miles over the center of the United States would fry every unprotected computer chip coast to coast; from the middle of Canada to the middle of Mexico.

A widespread collapse of the power grid could lead to cascading effects on infrastructures and make recovery and repair next to impossible.



## EMP Resilient Facility Solution

Enterprise-class data centers require sophistication in design, management, compliance, scalability and Electromagnetic Pulse (EMP) protection to support a wide variety of client IT needs. The EMP Resilient Facility solution, coined by EMP GRID Services, leverages best-of-breed technologies to furnish enterprises with complete access, managed data capabilities and EMP hardening across the entire communications infrastructure.

There are two types of Electromagnetic Pulse (EMP) threats:

- **Intentional Electromagnetic Interference (IEMI)** - electromagnetic energy disturbance, emitted from an external force, which affects electronic systems and signals.
- **High-Altitude Electromagnetic Pulse (HEMP)** – a nuclear burst detonated at high altitudes causing a functional collapse of the electrical power grid.

The IEMI threat is typically associated with criminal groups. IEMI can infiltrate modern data center physical and cyber defenses, shut down support systems,

disrupt center operations, corrupt data and damage circuit elements if the electronic interference levels are strong enough.

HEMP is produced when a nuclear weapon is detonated, creating gamma-radiation that interacts with the atmosphere to create an instantaneous and intense electromagnetic energy field that overloads computer circuitry.

### Media Coverage On the Rise

Data Center World Conference 2013 includes a general session highlighting U.S. electric grid reliability, including EMP attacks. Several media outlets including *USA Today*, *The Wall Street Journal* and FOX News recently reported on the impact of EMP and a variety of strategies used to counter and survive these threats.

### Governments Are Being Proactive

In 2001, recognizing the potential of this powerful nuclear phenomenon, Congress established the EMP

Commission, to provide an independent assessment of this threat against the United States. Since its inception, several ongoing reports have been released citing findings and recommendations to thwart this threat including:

- The nature and magnitude of potential HEMP threats, such as nuclear and ballistic missiles
- The vulnerability of U.S.

military and civilian infrastructures and systems

- The capability of the U.S. to repair and recover from damage
- The feasibility and cost of hardening select military and civilian systems against EMP attack

### HEMP/IEMI and Geomagnetic Storms - the "Godzillas" of lethal threats to critical infrastructure survival

### Enhance Business Continuity and Disaster Recovery Strategy

Business continuity/disaster recovery planning is required to assess the involvement of resources in dealing with the consequences of EMP catastrophes. All sectors should harden infrastructures to protect critical communications / intelligence systems to ensure operational post EMP.

**Homeland Security Expert Warns:**

"The catastrophic effects of an electromagnetic pulse-caused blackout could be preventable, but experts warn the civilian world is still not ready. "If you do a smart plan - the Congressional EMP Commission estimated that you could protect the whole country for about \$2 billion. That's what we give away in foreign aid to Pakistan every year."

- Peter Vincent Pry,  
Executive Director of the  
Task Force on National  
and Homeland Security  
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**Real World Examples**

***Carrington Event***

September 1859, the largest recorded geomagnetic storm occurred. The solar storm battered the world's infant communication network. Telegraph wires burst into flames, touching off fires. Telegraph machines scorched paper printouts, stunned operators with electric shocks, transmitted gibberish and continued working for hours after being unplugged from the batteries that powered them.

***Quebec Grid Failure***

March 1989, the power grid in Quebec went from normal to shutdown in 92 seconds during a large geomagnetic storm, according to a report by insurance giant, Lloyds of London. It took 9 hours to restore normal operations, during which time five million people were without electricity. Total cost: about \$2 billion.

**Building NEXT-GEN Resilient Infrastructure Shield**

**Facing the Shift Towards the Threat Assessment Paradigm**

