



**InstantDataCenters**  
— MICRO-MODULAR DATA CENTER SOLUTIONS —

# Instant Data Centers

The Global Leader in Micro-Modular Data Centers™

## Case Studies





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# 100% Cloud Data Center



## AOL

American global brand company that develops, grows and invests in brands and websites in need of a rapidly deployable turnkey data center that could operate outdoors.

**Challenges:** AOL needed to address technical challenges and aggressive ways to enhance and bring greater scalability to its products and services. Its primary goal was to develop and deliver a data center environment without the need of a physical building. The environment needed to require as minimal amount of physical “touch” as possible and allow AOL the ultimate flexibility in terms of how it delivered capacity for its products and services.

**Solutions:** Deploying the R.A.S.E.R. DX allowed AOL to deliver that capacity, in an outdoor environment with no staffing. The data center can be moved and operate anywhere in the world .

**Benefits:** Rapid Deployable in one month vs. months or years; pre-planned versus reactive support model; modular compute capacity build-out package; pre-racked, vendor integrated deployment model; 100 % cloud technology facility.





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# Mobile Hardened Infrastructure



## NATO/OTAN

**Intergovernmental Military Agency in need of infrastructure in harsh environments.**

**Challenges:** NATO needed a data center to support a mobile communications platform. In the past, they had used hardened cases to house their IT. This meant they had to unplug and reconfigure their equipment every time they moved. Additionally, they were having cooling problems due to operating in harsh desert conditions.

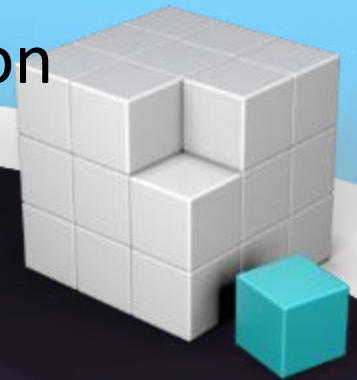
**Solution:** Deploying two NEMA 4 C3-S.P.E.A.R.s for Rugged Terrain will allow NATO to consolidate multiple cases into two small data centers. The adaptive suspension features will allow them to move their data center without having to remove and reconfigure the equipment.

**Benefits:** Eliminated cooling issues; perfect plug and play data center; rapid deployment; scalability, easy to relocate, ruggedized for outdoor conditions.





# High Density Data Center Consolidation



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## White Sands Missile Range, New Mexico

### U.S. Military Department in need of High Density Data Center.

**Challenges:** White Sands Missile Range needed to build a data center to support high density Cisco UCS and EMC without upgrading or modifying legacy traditional raised floor. They were planning to move in the next 24 months and wanted to go GREEN at the same time.

**Solution:** Deploying 2 R.A.S.E.R . DX with pre-installed IT equipment allowed WSMR to deploy a GREEN data center in under 8 weeks. Due to the high density IT equipment, WSMR was able to install more computing capacity in 2 racks than ten racks in the previous environment.

**Benefits:** Rapid deployment; \$900,000 in capital savings versus retrofitting current data center; scalability; and the ability to relocate the data center to a new locations as planned.







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# Data Center in Remote Location



## Large American Cruise Line

### Large American Cruise Line in need of remote site Data Center.

**Challenges:** A Large US-Based Cruise Line was in need of a simple way to deploy their IT equipment at one of the many island ports. The way they deployed IT to these ports in the past was expensive and time consuming.

**Solution:** Working with the company's architects, EMS helped to design a "hurricane proof server shack" at the Bahamas location that perfectly managed the environmental requirements for the product. Since the company could preconfigure the IT equipment in the US, it was able to simply install the solution in the shack upon completion.

**Benefits:** Simplified and streamlined deployment due to preconfiguring each R.A.S.E.R. DX centrally and deploying remotely; Capital Expense savings; and environmentally sound in a harsh environment.





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# Colocation with Onsite Network and Telecom



## Delta Dental

### Large Insurance Co. Moves from Relocation to Colocation

**Challenges:** Delta Dental Plan of Colorado is a large insurance company located in Denver. The Information Systems group had relocated the primary data center to a co-location site and had prepared to restore the data center space to premium office space. The network and telecom functions remained on site and needed to be housed in a closet.

**Solution:** Two R.A.S.E.R. DX units were selected in lieu of a closet. The R.A.S.E.R.s are quiet and locked, so walls are unnecessary. UPSs are located within the enclosures, so high quality, backed up power is provided from within. Cooling is self-contained and independent of the office building systems. Environmental and power monitoring are accessible via the UPS. Fire suppression is self-contained and provided within the R.A.S.E.R.s.

**Benefits:** By removing the data racks, the large UPS and the large A/C systems, premium floor area was recovered and returned to the business. Costs for construction of closets, cooling, power, security and fire protection were avoided. Closed-loop cooling protects data equipment at a fraction of the previous cost. On-board, high efficiency UPS provides conditioned and backed up power for reliable, uninterrupted operation.





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# Bank Data Center



## Co-Operative Bank, India

**CKP Cooperative Bank, India needed a cost-effective data center that could move and expand upon rapid growth**

**Challenges:** CKP Co-operative Bank, India is a bank with 8 branches. They needed to build a data center, but their office is in leased premises. They knew that eventually they would have to move their office to new premises to accommodate the rapid growth of the bank. CKP co-op bank wanted a cost-effective data center that could move with them.

**Solution:** Deploying RASER DX allowed CKP to deploy a data center in one of their offices; they can easily relocate the data center to a bigger office space when needed.

**Benefits:** Upfront capex saving ; scalability; security, and the ability to relocate the data center to a new location as the company grows.





## Data Center Infrastructure in Undeveloped Area of the World



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### IBM Global Services – Herat, Afghanistan

**IBM Global Services in need of data center infrastructure in under-developed locations throughout Afghanistan.**

**Challenges:** Together with the International Community, IBM Global Services is participating in an effort to rebuild Afghanistan. Bringing technology to the area was a challenge due to limited infrastructure.

**Solution:** Deploying a C3-S.P.E.A.R. will allow IBM Global Services to drive Data Center infrastructure throughout the country including business and banking applications.

**Benefits:** Capex upfront saving ; scalability; security, and the ability to deploy data centers at new locations throughout the country.







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# Data Center Retrofit



## Canadian Federal Agency

Canadian Federal Agency in need of Data Center Retrofit that could be easily relocated in the future.

**Challenges:** This Canadian Federal Agency was planning to move out of its leased building within two years. They had already relocated their facility a year earlier and did not want to move their core switches or build a new data center closet for \$250,000.

**Solution:** Deploying two C3-S.P.E.A.R.s with dual cooling allowed the agency to run its entire network throughout Canada. They plan to order additional C3-S.P.E.A.R.s this year to accommodate expanding needs.

**Benefits:** \$150,000 capital savings versus retrofitting current data center; scalability, and the ability to relocate the data center to a new location as planned.





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# High Density Zone within Data Center



## NCS - Singapore

**Largest System Integration company in Singapore in need of High Density Zone within existing Data Center.**

**Challenges:** NCS had the requirement to implement high density zones in the their data centers, specifically for one of their major clients, Singtel, the largest telecom provided in Singapore.

**Solution:** NCS bundled the R.A.S.E.R. DX as their value proposition and competitive edge to support clients' high power density servers as well as to showcase their leadership in Data Center Services.

**Benefits:** Able to host high density equipment in a "Data Center Friendly" environment quickly and cost effectively without extensive or complex renovations.





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# Remote Office Support



## The Los Angeles County Superior Court

**Largest trial court in the United States in need of remote office support**

**Challenge:** Los Angeles County Superior Courts had a budget deficit with little money to spend while needing remote data centers for their court system. A strained California power grid provided constant problems to power and cooling of their existing data center.

**Solution:** The courts purchased six C3-S.P.E.A.R.s with Mission Critical Venting. This allowed them to eliminate downtime while providing remote offices with a secure, flexible infrastructure to protect their court records and data bases.

**Benefits:** Ability to deploy in historic building locations; rapid deployment in 10 weeks; cost savings; security; scalability for long term growth and mobility.





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# Small Office Data Center



## Ecotality

**Small, rapidly growing company needed a small data center that could scale as needed.**

**Challenges:** Ecotality, a leader in clean electric transportation and storage technologies, needed to build a data center closet to support the rapid growth of the company. Ecotality knew that they would need to move buildings due to the rapid growth of their business and wanted a data center that could move with them.

**Solution:** Deploying the C3-S.P.E.A.R. allowed Ecotality to have a data center in one of their manufacturing warehouses in under 8 weeks. The C3-S.P.E.A.R. also provided a “Clean IT” solution consistent with the company’s mission.

**Benefits:** \$120,000 capex savings by not converting valuable office space into a data closet; rapid deployment; scalability, and the ability to relocate the data center to a new location as the company grows.







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# Remote Application Support in a Harsh Environment



## Redstone Arsenal

US Military missile testing and deployment site needed a hardened Data Center for remote applications.

**Challenges:** Redstone Arsenal needed to build a data center for remote applications in a harsh environment. A containerized data center was not practical in terms of cost and size.

**Solution:** By deploying the NEMA 4 C3-S.P.E.A.R., Redstone Arsenal was able to implement a data center that can operate indoors or outdoors and be moved to another location when needed.

**Benefits:** Rapid deployment; ease of implementation; space savings; scalability; and mobility.





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# Disaster Recovery



## Cardio Vascular Consultants

**Large medical group in need of a relocatable disaster recovery solution.**

**Challenges:** Cardiovascular Consultants was in need of a disaster recovery solution, but did not want to use a hosting facility or build a data center closet in a separate location or facility.

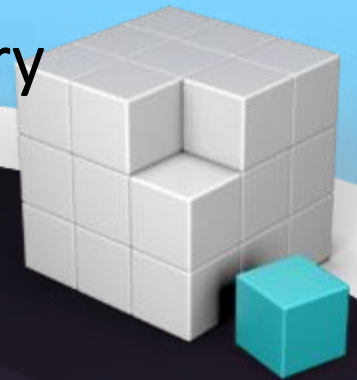
**Solution:** The group purchased a C3-S.P.E.A.R. with a skid cart bottom to house its IT equipment. Located in an empty room in one of its thirteen offices, the enclosure serves as an ideal disaster recovery solution and can easily be relocated to a different location using a pallet jack.

**Benefits:** Rapid deployment in 8 weeks and under budget; less expensive and more secure than a collocation facility; improved performance and simplified implementation.





# Mobile Coop Site for Disaster Recovery



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## Connecticut National Guard

### Department of US Military in need of mobile Coop for Disaster Recovery.

**Challenges:** The Connecticut National Guard needed to have a mobile continuity for operations plan (COOP) for disaster recovery.

**Solution:** The C3-S.P.E.A.R. provided the perfect platform as it allows a data center to be easily moved while populated with equipment. Cyber security keeps data safe in any operating environment.

**Benefits:** Rapid deployment; scalability, and the ability to easily relocate the data center to a new location.





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# Data Center in a Harsh Environment



## Hopi Information Technology Division

**Native American Tribe in need of a data center closet/  
mobile disaster recovery solution.**

**Challenges:** The Hopi Data Center often experienced IT downtime due to frequent power outages, unreliable backup power generation, flooding during monsoon season, and snow during the winter. The Hopis wanted to have the ability to relocate their environment to their other office in Flagstaff if necessary.

**Data Center Retrofit Solution:** The Tribe purchased 1 C3-S.P.E.A.R. and 1 C-S.P.E.A.R. which provided it with a secure, reliable and flexible infrastructure to protect their data bases. The mobility feature of the enclosure made it the most practical choice as both enclosures can easily be relocated in the event of severe weather.

**Benefits:** Rapid deployment in 8 weeks and under budget; drop in place architecture which greatly reduced CapEx and OpEX costs; improved performance and simplified implementation.

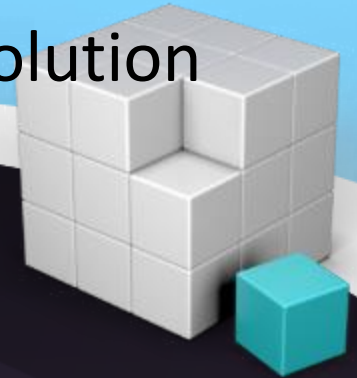






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# City Government DR and Back Up Solution



## City of Flagstaff, AZ

### Growing City Government in need of Disaster Recovery

**Challenges:** The City of Flagstaff faced challenges common to many municipalities across the country: provide sufficient IT that is vital to government operations; secure and protect data; and react quickly to government and IT changes. Additionally, the City had limited infrastructure to expand its data center.

**Solution:** The City purchased a C3-S.P.E.A.R. which provided it with a compact, secure, reliable and flexible infrastructure for disaster recovery and remote backup support. The data center is situated in a warehouse saving office space and money.

**Benefits:** Rapid deployment; drop in place architecture which greatly reduced CapEx and OpEX costs; improved performance and the ability to expand as the City continues to grow.





# Conclusion



- 70% Less Power Consumption
- 50% Less Cost
- 75% Less Footprint
- 70% Reduction in Total Cost of Ownership
- Survive/avoid disasters, deploy anywhere in any conditions
- Redundant built-in disaster recovery at the rack level
- Redundant Active and Passive Fire Suppression at the rack level
- Fixed or mobile deployments or a combination of both
- Eliminates traditional, fixed, brick & mortar data centers
- Increases flexibility and decision making capabilities concerning your data centers
- Resilient against natural disasters, random or coordinated attacks and accidents
- Scalable “Pay as you grow” modularity
- Dramatically reduces carbon footprint
- The ultimate in Sustainability



# For Additional Product Information Please Click the Links Below



**InstantDataCenters**  
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- [AOL CTO Mike Manos Blog on Building Less R.A.S.E.R. Dx](#)
- [GigaOm Article: Meet the Company Building AOL's Micro Data Center](#)
- [Gartner Report Recognizes EMS as Key Player in Modular Data Center Market](#)
- [R.A.S.E.R. HD & DX Product Video](#)
- [C3-S.P.E.A.R. Product Video](#)
- [R.A.S.E.R. HD Testing Video](#)
- [Alpha White Paper – R.A.S.E.R. HD Closed Loop Cooling Validation Testing](#)
- [EDI Case Study Finds EMS R.A.S.E.R. DX Saves Time, Space and Money](#)
- [Uptime Institute Case Study](#)



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For more information, please contact:

[Info@instantdatacenters.com](mailto:Info@instantdatacenters.com)

510 S 52<sup>nd</sup> #103 Tempe, AZ 85281 (480) 526-5899