

IOT Business Continuity/Disaster Recovery/Data Center Management - 2020

Who We Are:

Our team works with the operational teams of IOT and the agencies to devise a recovery plan for the critical systems in an Operational outage or in a declared Disaster event.

Our Mission:

To provide consistent delivery of Disaster Recovery services to enhance the availability and recoverability of state-held critical assets hosted at IOT Data Center while supporting the State's business objectives.

Department: Disaster Recovery and Business Continuity Services/Data Center Management

Managers Steve Kremer, Deputy COO Hosting and Shared Services; Ram Annamalai, Director of Disaster Recovery and Business Continuity

Formed: The IOT DR team formed 2007 under Security team and moved to Server hosting and Shared Services team November 2017

What We Do:

IOT Disaster Recovery and Business Continuity Team

- Collaborate and partner with agencies to design, plan, standardize, implement, test, and document the critical systems DR plan in accordance to the compliance set forth with the policies directed by IOT Security.
- We also manage yearly contracts and maintain a positive partnership with the colocation datacenter provider
- Collaborate and partner with IOT Operational teams to devise a COOP plan for Business and Operational outages for IOT as an agency.

Data Center (Server) Management

- support the hardware and operating system platforms.
- Support new operating software releases and support product software upgrades to provide new functional and efficiency options to different applications.
- Troubleshooting system issues and addressing performance issues to assist with application performance, building and decommissioning of servers, monitoring, troubleshooting and racking of physical servers.
- Also responsible for building and decommissioning server rows in the datacenter.

Our Products:

IOT Disaster Recovery and Business Continuity Team

1137P	DR Traditional - Physical Server	1137V	DR Traditional - Virtual Server
1137MP	DR Premium - Physical Server	1137MV	Disaster Premium - Virtual Server
1137R	Rack Hosting (Bloomington only)		

Our Tools:

IOT Disaster Recovery and Business Continuity Team

Colocation Data Center

IU Data Center, Bloomington

WAN Connectivity

I-Light 10 GB (Protected Zone)
I-Light 10 GB (Intranet – December 2019)

Replication

EMC VMAX3 SRDF/Metro
PureStorage
DataGuard (EXADATA, OracleRAC)

Storage

EMC VMAX3
PureStorage

Network Attached Storage

ISILON

Archive

EMC Elastic Cloud Service

Backup

AVAMAR
EMC DataDomain (Oracle database backups)

Data Center (Server) Management

Microsoft Deployment Tool (MDT) – Building Physical Servers
vRealize Automation (VRA) – Decommission of Virtual Servers

Our Metrics:

IOT Disaster Recovery and Business Continuity Team

- Tracks metrics for its agency critical systems DR tested every year.

Data Center (Server) Management

- vFire Monthly Reports with number of server builds, decommission, and maintenance

Our Customers: All Executive Branch agencies, Secretary of State, and Department of Education

Our Budget: \$0.5M

Our Growth:

20 Agencies are using the Disaster Recovery services

Major Accomplishments - 2019:

IOT Disaster Recovery and Business Continuity Team

Year	DR Tests /MHA Tests /Table Top Exercises Executed	Systems	Status
2019	DR/MHA Tests	26	Successfully Completed
		03	Partial Success
		09	Failed
	Table Top Exercises	21	Completed
	COOP Spring 2019 version (Approved by CIO Dewand Neely)		May 2019
	COOP Tabletop Exercise		May 2019
	IOT Safety and Emergency Management Formation		August 2019
	FY20/21 IU Contract Renewal		September 2019
	AED Procurement and Installation		November 2019
	COOP Tabletop Exercise		December 2019
ISI Archer Profile for IOT Infrastructure Systems		December 2019	

DR Tests

[Agency IT DR Tests/Tabletop Top Exercise - 2019](#)

Data Center (Server) Management

1. Automated REMI maintenance cancellation for decommissioned servers
2. DCM member now perform all the tasks without any specific team member specialized in one task without any continuity
3. DCM team follows CMR process for hardware maintenance on production servers
4. SLAs being improved
 - Physical server/virtual server builds – 5 business days
5. Effective communication to IOT internal operational teams with timelines have been encouraged.
6. Collaboration with Remote Field Tech to have their surplus old servers sitting in various sites so it can be picked instead of DCM team. Meeting with them again next week to provide plan for implementation (Thanks Kevin Kraus)
7. 10.19.23.xxx subnet now available on all racks for physical server builds
 - Now we can do unlimited physical server builds without any DHCP scope limitation
 - Communicated to all operational teams with that change
8. VRA tool to decommission all virtual servers whether it is from automation or not
9. Audit of the data center to improve the asset inventory and also power redundancy of equipment

Current Projects:

IOT Disaster Recovery and Business Continuity Team

[Agency IT DR plan 2020](#)

COOP/Safety & Emergency Management

- Tabletop Exercise Spring 2020 – Pandemic
- Evacuation Drill Summer 2020
- Emergency Notification System
- Hygiene Improvements
- Floor Marshal and Volunteers
- COOP Simulation Exercise Fall 2020

Data Center (Server) Management

- Standard Operation Procedure
- REMI Maintenance process for Physical Servers
- SLA for Server Build and Decommissions in the data center
- Transition planning to Operations FY21