



# Kuwait Government Initiative for ICT Disaster Response

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# The Initiative

Under the initiative of Kuwait Government towards ICT business continuity and disaster recovery response in Kuwait, The Council of Ministers has issued a decree obligating all government agencies to do the following:

- Prepare Disaster Response Plans.
- Host their critical systems in a fully-equipped Data Center.
- And has mandated the Central Agency for Information Technology (CAIT) to supervisor its implementation.



# TELECOMMUNICATIONS/ICT TO SUPPORT THE DISASTER RESPONSE

The Central Agency for Information Technology – CAIT has commenced the following:

- Organized a National Data Center to host critical government systems.
  - Communicated with all government agencies to develop an emergency response plan.
  - Allowed government agencies to utilize Kuwait Information Network- KIN for disaster response.
  - Adopted a network connectivity between KIN and the GCC countries.
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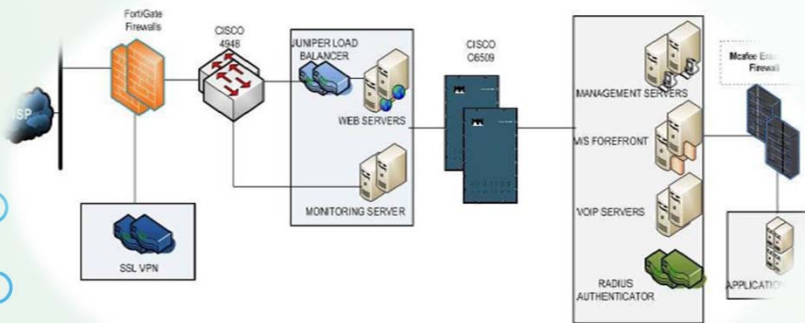
# THE NATIONAL DATA CENTER



- To fulfil this requirement, CAIT has set up a National Data Center to service the Government at all levels.
- Government agencies are able to allocate backup systems and replicate critical data.
- The infrastructure facilitates high availability, quick scalability, efficient operation and management, and optimized utilization of resources.
- Reliable, organized and practical response in the case of any disaster and in the recovery of crucial data.

# GOVERNMENT EMERGENCY RESPONSE PLANS

DR RLD with current devices



- Government agencies requested to be prepared for critical incidents by developing a Business Continuity Plan, and reviewing, training, and testing it frequently.
- CAIT has developed policies and guidelines which every agency must comply with in order to host their systems in the National Data Center, and to organize the responsibilities between CAIT and the agencies.

# RESPONSIBILITIES

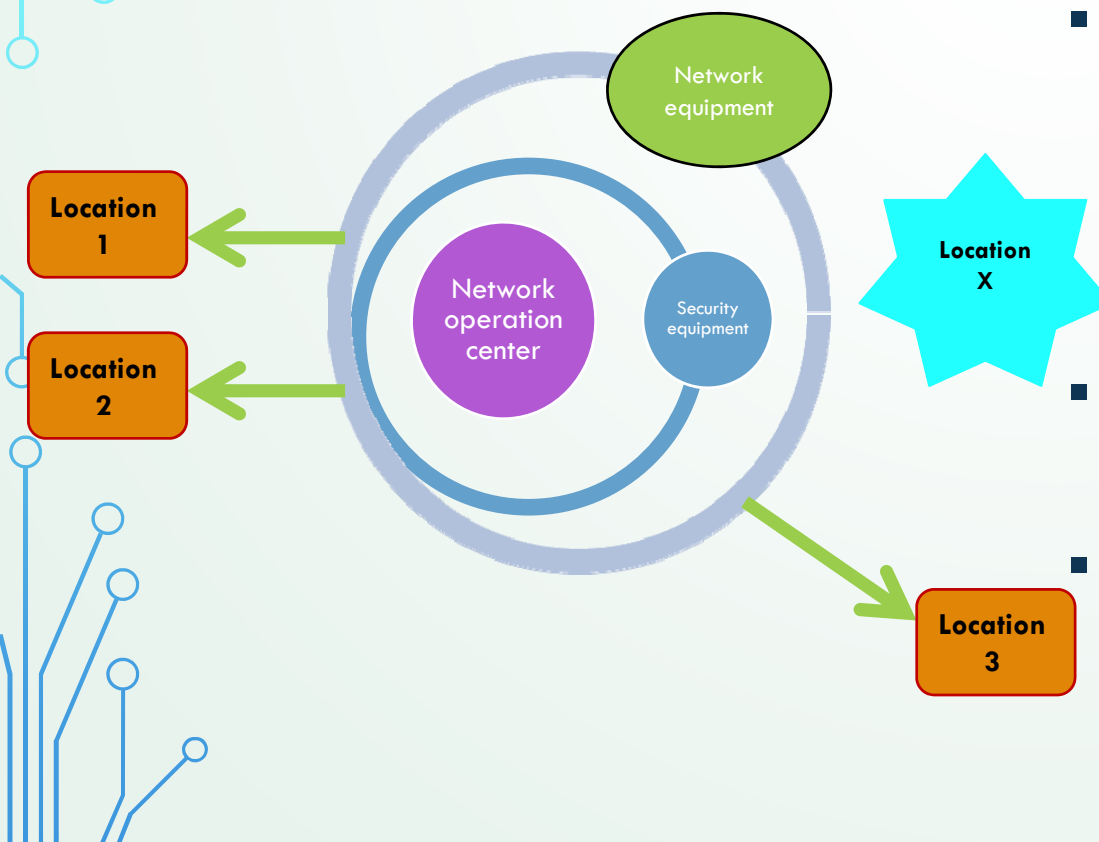
## **CAIT:**

- Environment setup and design that meets the pre-requisites of government agencies.
- The provision of office space for use by staff in the event of maintenance or an emergency.
- The connection of systems located in the National Data Center to the government agencies' data center.
- The provision of physical and network security.
- The Maintenance of the data centers' equipment and services.

## **Government Agencies:**

- Install, operate and maintain their systems.
- Perform all jobs relating to technical support of equipment.
- Provide the proper level of systems' security.

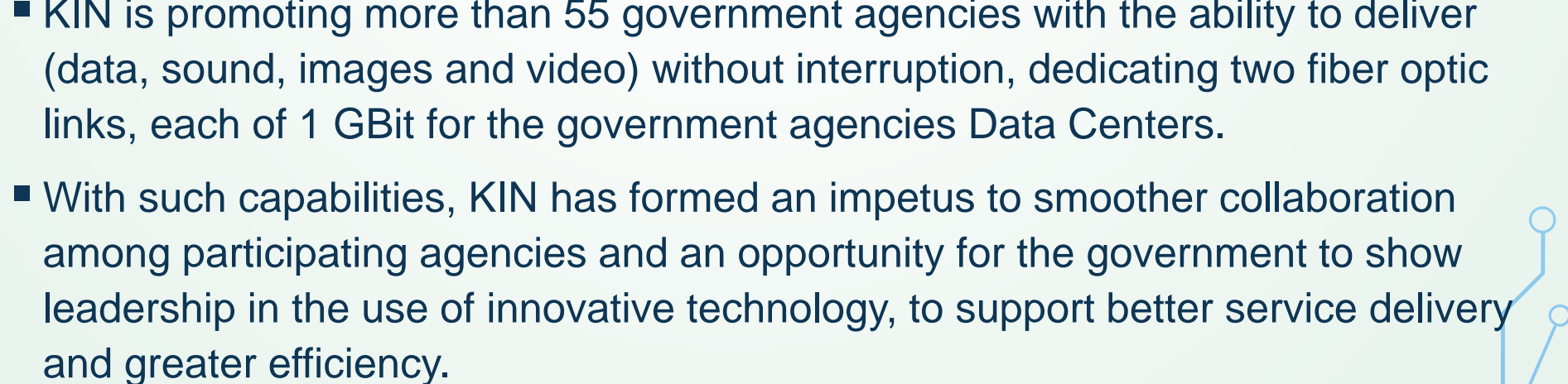
# UTILIZE KUWAIT INFORMATION NETWORK FOR DISASTER RESPONSE



- KIN represents the official government network running on top of a secure DWDM/MPLS technology (Layer 2 and Layer 3 virtual private networks [VPNs]) that is capable of connecting the private networks and datacenters of the different agencies, as well as to the wide area connectivity such as the Internet.
- KIN is capable to deliver high speed connectivity, government and enterprises can deploy their applications throughout the rapid pace.
- Moreover to the centralized enforcement of confidentiality and protection of government transactions, data and information that is also seen as a strategic objective of KIN project.



## UTILIZE KUWAIT INFORMATION NETWORK FOR DISASTER RESPONSE

- KIN provides high availability and an Optical DWDM infrastructure forms the data super highway between 4 different locations represented by MOC exchanges.
  - This Optical/DWDM seamlessly expands on the existing Infrastructure of KIN to cover more new 20 MOC exchanges.
  - KIN is promoting more than 55 government agencies with the ability to deliver (data, sound, images and video) without interruption, dedicating two fiber optic links, each of 1 GBit for the government agencies Data Centers.
  - With such capabilities, KIN has formed an impetus to smoother collaboration among participating agencies and an opportunity for the government to show leadership in the use of innovative technology, to support better service delivery and greater efficiency.
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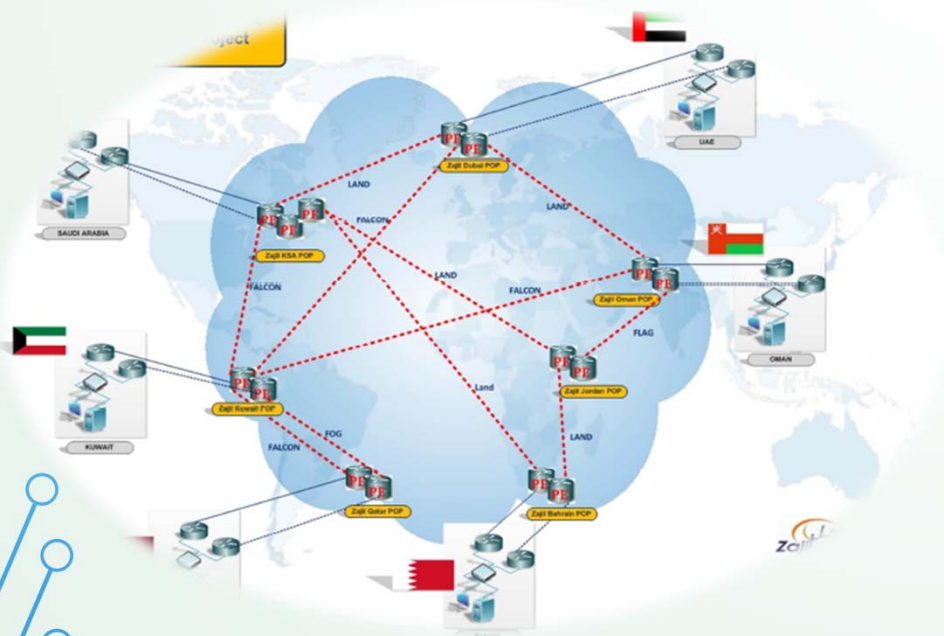


# KIN MANAGEABILITY- NOC



- CAIT implemented a state of the art Network Operations Center (NOC) that delivers all monitoring and management services. NOC is a 24/7 operations facility that monitors all KIN devices, and sends the necessary alerts to management console (local or remote) as they happen.
- NOC runs proactive monitoring and expectation systems. The systems are able to discover the devices malfunctions even before they turn into downtime or before they start to affect KIN efficiency or performance.
- In addition, NOC systems are also able to analyse, define the real cause of problems, and build historical reporting and an advanced knowledge base.

# ADOPTING A NETWORK CONNECTIVITY BETWEEN THE GCC COUNTRIES



- Based on the initiation of Kingdom of Saudi Arabia, CAIT connects KIN to the national networks of Gulf Cooperation Countries (GCC).
- Connect with GCC governmental networks established through a private and secure network that runs on top of DWDM/MPLS technology using VPN tunnels.
- Government agencies are now capable to utilize the GCC network for disaster preparedness and response.

# GOVERNMENT CHALLENGES

To optimize the ICT disaster response, Kuwait Government should consider the following:

- Develop a comprehensive governmental disaster response plan involving all the agencies to cooperate in a seamless and integrated way during the event of a crisis.
- Roll out business continuity awareness programs.
- Utilize local and regional networks in the management of disasters.
- Finance the government agencies for the various resources required for the disaster response requirements, recovery and continued operation.



**Thank You**