Information & eGovernment Authority

iGA Bahrain is the umbrella for all Bahrain public sector entities. iGA governs and facilitates services within the IT sector, such as proposing public policies, suitable legislation, and decisions for the implementation of the eGovernment programs, as well as necessary IT and data programs.

Industry
Government

Strategic priorities
• Cloud Infrastructure

VMware footprint
• VMware® Aria Universal Suite™

• VMware Cloud™ on AWS

• VMware Cloud on AWS Outposts

• VMware Cloud Disaster Recovery™

• VMware Site Recovery™

iGA Embraces Hybrid Cloud to Transform Government Services

Information & eGovernment Authority, Bahrain (iGA) is on a mission to enable a new era of smart government in the kingdom. iGA is the umbrella for all Bahrain public sector entities, providing digital services to the government, including hosting, operating, and managing the government's systems. The services that iGA provides are effectively the digital backbone for the country, covering all government departments and public sector entities, including large-scale infrastructure such as Bahrain International Airport, King Fahad Causeway, and seaports, in addition to healthcare, education and all types of services for businesses, citizens, residents and visitors.

Establishing its eGovernment strategy

Demand for digital services is growing in Bahrain, with the government aiming to make the country the leading digital economy in the region to support its growing population of more than 1.5 million people. A major pillar of this will be the delivery of effective and efficient eGovernment services to support economic growth and diversification while improving the quality of life for citizens and residents.

Bahrain established its eGovernment strategy by driving the transformation of government services through advanced ICT including a smart hybrid cloud, which will help to raise efficiency, agility and security across government, empowering departments to use technology as an enabler of innovation to deliver outstanding services for citizens, residents, and businesses.

> "Running a traditional data center was labor intensive and made it tough to optimize our operations. One of the pain points was that we spent significant resources just to maintain the health of the infrastructure rather than proactively helping our customers to innovate."
>
> Dr. Khalid Ahmed Almutawah, Deputy Chief Executive, Operations and Governance, iGA

vmware®

Developing a platform for sovereign cloud and innovation

iGA faced numerous challenges as it devised its strategy to work toward the government's targets. While the organization has had about 75 percent of its workloads in the public cloud since around 2017, the remaining 25 percent of sensitive and critical workloads were held on-premises with a separate on-premises facility for disaster recovery. There was little coordination between the cloud and on-premises workloads, which led to increased complexity, especially when workloads needed to be moved between the two.

This setup also required significant resources to manage and maintain and iGA needed more agility to upscale capacity or offer new services and solutions to government departments. Furthermore, if iGA wanted to achieve its aims by doubling down on the same approach and expanding its on-premises infrastructure, it would mean expanding the team to manage and maintain it, countering the government's aim to control costs while increasing efficiency.

Dr. Khalid Ahmed Almutawah, deputy chief executive, Operations and Governance, iGA, says, "Running a traditional data center was labor intensive and made it tough to optimize our operations. One of the pain points was that we spent significant resources just to maintain the health of the infrastructure rather than proactively helping our customers to innovate. The lack of coordination with our public cloud resource was also stifling our ability to serve our customers and offer the kind of flexibility that they needed."

The disaster recovery setup also presented a risk: iGA was using a manual solution that required a minimum of six hours to start up, which in the event of a disaster could lead to loss of data and services to end users. In a worst-case scenario, this could have caused IT outages in mission-critical environments such as hospitals, transport infrastructure and border control.

Embracing the cloud for efficiency, resilience and innovation

The COVID-19 pandemic was just one example of a crisis that pressured government departments and services, especially healthcare, and put the need for agile ICT systems into stark focus. The team at iGA realized that situations change suddenly and that IT must be able to respond seamlessly to maintain operations.

iGA was already familiar with VMware, having used its technology to run some components of its existing cloud deployment, which led the organization to explore embracing a more holistic hybrid cloud approach with VMware. iGA opted to deploy a full hybrid cloud solution with VMware, including moving its remaining on-premises workloads and recovery site to a sovereign cloud solution, fully integrated with its public cloud workloads.

> "As the main provider of digital services to government agencies, iGA needed to have the most secure, flexible, efficient, and agile solutions available, and the ability to offer secure sovereign cloud services, disaster recovery, and DR as a service."
>
> Dr. Khalid Ahmed Almutawah, Deputy Chief Executive, Operations and Governance, iGA

"As the main provider of digital services to government agencies, iGA needed to have the most secure, flexible, efficient, and agile solutions available, and the ability to offer secure sovereign cloud services, disaster recovery, and DR as a service," Almutawah says. "It was vital for iGA to have flexible cloud infrastructure and cloud management capabilities in place to enable us to offer secure cloud services, including sovereign cloud and disaster recovery, to our end users."

To achieve this, iGA deployed a hybrid cloud platform consisting of several integrated VMware solutions, including VMware Aria Universal Suite. iGA opted to deploy VMware Cloud on AWS Outposts to give a completely managed sovereign cloud solution for its on-premises workloads. It deployed VMware Cloud Disaster Recovery and VMware Site Recovery to ensure maximum availability and business continuity for its users.

vmware®

Delivering smart hybrid cloud

With VMware Cloud on AWS Outposts, iGA has achieved a cloud-like experience on-premises, providing its customers with a secure sovereign cloud experience. Meanwhile, less sensitive data can be stored and managed on VMware Cloud on AWS Bahrain region.

iGA uses VMware Cloud Disaster Recovery to protect its data and applications in the most efficient way possible. The solution is available as a SaaS solution, which means it helps iGA to efficiently secure its data and services. This is especially useful for supporting government agency users whose requirements can change suddenly.

> "These solutions, including VMware Aria Universal Suite, will allow iGA to focus on higher value-added activities while aligning with the government's cloud-first strategy. By offering secure, flexible cloud solutions to government agencies and private sector organizations, we can ensure workloads are operating at maximum efficiency and availability. This will help the government to fulfil its mission of helping Bahrain to transform into the finest country in GCC to visit, live, work and conduct business."

Dr. Khalid Ahmed Almutawah, Deputy Chief Executive, Operations and Governance, iGA

To ensure a rapid return of its sites to normal operations in a disaster recovery scenario, iGA Bahrain also deployed VMware Site Recovery, allowing for the rapid replication and restoration of the on-premises component of iGA cloud infrastructure.

With VMware Aria Universal Suite, a SaaS management suite, iGA has achieved consistent operations and optimization across its infrastructure and applications, from its on-premises data center to the edge and across clouds. This has enabled iGA to provide its customers the flexibility to deploy

on-premises or SaaS interchangeably for a consistent hybrid and multi-cloud management experience. The solution's flexible licensing and delivery model means that iGA can help Bahrain's government agencies to become more agile, scalable, and efficient.

Enabling smart government services

By providing a cloud experience across all workloads through its combination of on-premises and public cloud, iGA enables its government agency customers to innovate and improve reliability. For citizens and residents of Bahrain, this improves systems for services such as booking doctor's appointments from any device or the ability to renew visas and driving licenses online more quickly, while businesses will benefit from a more seamless experience when applying for licenses or gaining accreditations. This also offers government agencies significant cost savings on IT by using only the capacity they need and reducing the need for day-to-day maintenance.

"These solutions, including VMware Aria Universal Suite, will allow iGA to focus on higher value-added activities while aligning with the government's cloud-first strategy," Almutawah says. "By offering secure, flexible cloud solutions to government agencies and private sector organizations, we can ensure workloads are operating at maximum efficiency and availability. This will help the government to fulfil its mission of helping Bahrain to transform into the finest country in the GCC to visit, live, work and conduct business."

Furthermore, deploying VMware Cloud Disaster Recovery and VMware Site Recovery has given iGA and the agencies it serves peace of mind that all the services are highly available. Even in a disaster, such as damage to the on-premises data center, workloads could be reallocated to maintain the end-user experience with almost no discernible impact. In the case of mission-critical applications such as hospitals and transport, these solutions will provide a seamless continuation of services.

vmware®

Path to app modernization

With its hybrid cloud infrastructure and systems in place, iGA is also keen to help government agencies use the new platform to maximum effect by developing, managing, and maintaining modern applications from the cloud. "We want to encourage them to develop applications with tools such as Kubernetes and containerization, which will help them to improve and optimize their applications while boosting efficiency. This, in many ways, represents an evolution of what we have already achieved," Almutawah says.

To help government agencies drive further app modernization, iGA is exploring the idea of deploying VMware Tanzu® solutions. "The team at iGA is excited to build on the momentum we have already achieved and continue to help the Government of Bahrain achieve the aims of its eGovernment strategy to deliver outstanding digital services and drive economic diversity and prosperity," Almutawah says.