

Istanbul Grand Airport

Micro Focus enables IGA to deliver production-ready, public and private cloud infrastructure and IT services for the world's largest airport.



Overview

Istanbul Grand Airport (IGA) is a consortium company, founded to construct and operate Istanbul Airport for 25 years. The airport opened with its first commercial flight in October 2018. The airport hosts flights to more than 300 destinations with an annual capacity of 200 million passengers.

Challenge

As a complete green-field project, Istanbul Grand Airport experienced very tight deadlines; the airport needed to be completed and open within four years of the start of construction. During the final year, one key objective was the design and implementation of the full IT infrastructure needed for running the airport

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Datcenter & Network Manager
IGA

in addition to supporting the IT service requirements of all onsite organizations. The overall IT project was broken down into 50+ sub-projects with different teams. The IT architecture was carefully designed to ensure there would be no single point of failure, since each IT component has availability and redundancy built in as standard.

The complexity of the airport environment puts a huge administrative burden on IGA. 750 different IT rooms and three datacenters house 5,000 servers and 6,500 network devices. 40,000 Internet of Things (IoT) devices such as security cameras, intercoms, AC units, lifts, and escalators are connected to the network. Each hour 100,000 health status data points are recorded, analyzed, and actioned, while 150,000 key metrics are constantly monitored.

It soon became clear to Emrah Bayarçelik, Infrastructure & Security Group Manager for IGA, that simply investing in human resources would not be sufficient to get the job done: "During the planning phase, we defined all IT and non-IT assets that make up our architecture. For the cloud automation project, we needed to consider our internal customers, the airport departments, but we also provide network services to everyone associated with the airport, such as airlines, ground services, food and beverage, duty-free, hotels, cargo companies, and medical facilities, including hospitals. We receive



At a Glance

Industry

Hospitality and Travel

Location

Turkey

Challenge

Effectively automate the provisioning of production-ready cloud infrastructure resources for the world's largest airport and provide IT services for all onsite organizations and public services.

Products and Services

Hybrid Cloud Management
Server Automation
Operations Bridge including data collectors
Network Operations Management
Universal CMDB Configuration Manager
Management Automation
Operations Orchestration

Results

- + 12x faster physical and virtual server provisioning
- + 80% improved IT administration productivity
- + Reduced operational costs
- + Reduced issue resolution time
- + Proactive fault management



IT requests from them all. Our challenge was hiring qualified IT administration resources to manage these. We soon determined that we needed elasticity, automatic provisioning, easy management, and standardization of our IT processes.”

With an increasing number of IT and IoT endpoints and mounting integration complexity, IGA looked for a comprehensive cloud

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EMRAH BAYARÇELİK
Infrastructure & Security Group Manager
IGA

automation solution that worked seamlessly with monitoring and process automation. The chosen solution needed to provide multi-vendor Hypervisor support, physical and virtual server provisioning, ‘what-if’ modeling for a hybrid IT platform, and native integration with enterprise applications.

Solution

IGA prepared a proof of concept (POC) scenario for IT vendors to participate in. A technical scoreboard was created to present the findings for each vendor. Micro Focus teamed with local IT partners Duosis and Netaş to prepare a bid. Together, they demonstrated automated virtual and physical server provisioning directed by a standard workflow. This did not just include server OS provisioning, but also database and application installation and configuration. Mr. Bayarçelik was impressed: “Micro Focus, Duosis, and Netaş received the best technical score in the POC evaluation. Micro Focus was also fully compliant with our cloud project tender, provided out-of-the-box integration with our existing applications, and could provide a complete, single-vendor solution with the addition of its established suite of end-to-end monitoring and automation solutions.”

The IGA team worked closely with Micro Focus and the partners over the following six months to implement Micro Focus® solutions at the heart of the IT architecture, following a defined project lifecycle. Micro Focus Hybrid Cloud Management (HCM) provides a self-service portal for delivering hybrid and multi-cloud resources and services. This is now used by internal customers to submit a server provisioning request. Previously, these requests were processed through IT administration. This was a manual, error-prone, and time-intensive process. Burak Çetinkaya, Datacenter & Network Manager for IGA, explains the automated process: “The request is received in the HCM portal which starts an end-to-end server provisioning process. Server installation includes agent installations, DNS registrations, IP and hostname settings, database and application installation and configuration. Incredibly, HCM completes the provisioning process automatically within minutes of receiving the request. We have provisioned nearly 850 virtual servers through this tried and tested method.”

IGA uses both public and private cloud environments, depending on which customer it serves. The Micro Focus suite of solutions enables IGA to manage this hybrid environment from one single interface, as Mr. Çetinkaya explains: “We are delighted that we don’t need to use different vendor tools in our multi-Hypervisor architecture. Our ‘what-if’ capacity modeling operates automatically through HCM without needing a Hypervisor console.”

He is equally impressed with the provisioning capabilities: “We provision physical and virtual servers from the same interface. HCM includes a library of over 8,000 workflows and actions to leverage and automate typical IT processes and repetitive actions. These are easily integrated into our own systems and increase our productivity immediately. We also leverage Operations Orchestration, a key component

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of the HCM suite, to transparently track all provisioning steps in orchestration flows.”

Post-Provisioning, Monitoring and Automation

After the server is provisioned, Micro Focus Server Automation takes over and installs anti-virus, audit, backup, monitoring and vulnerability agents to provide maximum protection and monitoring. Automated patch management, including OS patches, is also part of Server Automation. Micro Focus Operations Bridge works in close partnership with Micro Focus Network Operations Management (NOM) to monitor all system endpoints.

When an event occurs, log correlation is critical in determining the level of alarm severity and the correct response. Every alarm is linked to many others. For instance, when a network switch is down, there will be a critical alarm for this, but also for all the endpoints connected to this device. This can cause confusion and duplication of effort in identifying the root cause of the problem. Operations Bridge and NOM hold the topology of all defined relationships and can easily determine where the resolution effort needs to be focused.

Operations Bridge Reporter (OBR) manages service availability and performance reporting. Micro Focus Universal CMDB Configuration Manager is deployed to monitor server inventories, analyze the OBR performance logs, and leverage ‘what-if’ modeling to confirm a healthy balance of resource usage after the provisioned server goes live. Full data analytics are provided by the Vertica Analytics Platform. This analytic data is used for predictive maintenance,

operations planning, commercial area planning, and marketing purposes by the IGA operations departments.

The output from all Micro Focus solutions are captured in a clear visual representation of the real-time state of the three data centers. It shows values for capacity, datacenter sensors, network performance, cloud usage, and compliance. An executive dashboard shows a status summary of all IT and non-IT endpoints, giving a clear overview of the health of Istanbul Grand Airport.

Results

Istanbul Grand Airport IT operations is still in its early stages, and the team have many plans for the future, to further automate and standardize IT processes, as Mr. Bayarçelik comments: “We will be defining additional automation rules within Operations Orchestration to include areas such as baggage handling and airport management systems, and are also planning to implement auto-remediation rules within Operations Bridge. Our cloud services portal will be extended to our external customers which will further streamline our service delivery.”

Implementing end-to-end cloud service provisioning and automation with Micro Focus and the partners has already delivered great benefits, as Mr. Çetinkaya comments: “We analyzed the time it took to provision servers without automation support, and calculated that HCM accelerates our delivery by 12 times. In addition, the full Micro Focus suite has increased our IT administrator’s productivity by 80 percent.”

The Micro Focus monitoring solutions enable full log correlation from both systems and networks. This pinpoints root cause more quickly, with less manual effort and reduces issue resolution time. Because the solution is so transparent, production issues are often highlighted and addressed before users are able to notice the concern, resulting in more robust systems.

Mr. Bayarçelik concludes: “To reduce IT administration effort and human resources, it was clear that we needed to simplify IT complexity in our infrastructure, through provisioning, process automation and standardization. Selecting the right vendor and implementation partner was key, and we are very pleased with our choice for Micro Focus, Duosis, and Netaş. The component parts of our IT infrastructure fit together perfectly and are as beautifully designed as the architecture of our airport terminal; ready to shape the future of aviation.”