Hybrid management platform that provides internal and external access to data

Ready for a state-of-the-art and future-proof architecture with Azure API Management

A port authority is a dynamic environment. Containerships come and go, loading and unloading large quantities of containers. A constant flow of trucks enters the port area to unload containers or to take them to their final destination. And staff works in shifts to keep the terminals running 24/7. Easy and continuous access to data can increase the efficiency of these processes.

"Knowledge is a valuable asset, also in ports", says René Hassfeld project manager at ICT Netherlands. "Large amounts of data are available. For instance, the status of a container, when it is ready to be collected. But also information that is required internally, such as work schedules and changes to the shifts. ICT Netherlands (ICT) has developed a framework to provide access to this type of information. All data is provided via multiple API's, in effect an Application Programming Interface. API Management allows you to determine the amount of data that can be retrieved per time unit, for example the frequency per second or per hour. In addition, you can determine who is allowed to receive the information."

Key to success

Providing access to data is a challenge in terms of logistics. ICT supports this process by means of Microsoft tooling. "We used Azure API Management to design, build and implement a hybrid management platform. "ICT is also available for maintenance and further development of the API Management solutions. "Deployability and robustness are key to success. Improvements, adjustments and support occur simultaneously and 24/7 support is an absolute must. In addition to continuous availability, we can also take care of management tasks and the further development of the integration and information platform, websites and back office systems."

ICT

Two 'target groups'

Access to relevant information can be provided either for clients (external) or for employees (internal). An external client can choose from several subscriptions, ranging from the free of charge option for limited amounts of data to paid options for larger amounts of data. "Microsoft tooling is also used to control the various subscription types. We use it to determine whether a client can receive data on 10, 100 or 1000 containers per day. The API can be embedded into the system. And this is extremely convenient, for it provides the client with an easily accessible and transparent overview."

Bronze, silver or gold

ICT uses Microsoft Azure API Management for technical access to the API's. The RP-STS (Relying Party Security Token Service) authenticates the users and determines which data can be retrieved by which user of which client. The products in Microsoft Azure API Management determine the amount of data that may be retrieved. One or several products can be configured per client. This opens up the possibility of offering multiple types of subscriptions. "Keeping a driver waiting costs money. When the client has an overview of the containers that are ready and those that are not, the driver can also be directed to load a different container. This creates an

enormous increase in efficiency", says René. "An additional benefit for the port authority is a reduction of the number of trucks that are waiting, or even traffic jams in the terminal area, as well as a reduced number of containers waiting to be loaded."

Note: new message

The second target group that benefits from data access consists of the employees working in the port. They often work in shifts, and their work schedule depends on the arrival or departure times of container ships. Any delay involves a change in the deployability of employees. Whenever something changes in the planning these employees receive a push message to inform them in a timely manner." The Microsoft Azure Notification Hub is used to enable these push messages. "This solution ensures that they receive relevant changes directly on their phone."

Many demands, and even more possibilities

In addition to providing access to data ICT group has also realised a number of supporting functions. "We configured a Developer Portal within Azure API Management for parties that want to build their own application to process the data made available by the port authority. This portal allows developers to retrieve documentation, request API-keys for their application and run tests." But we also thought of the end-user. "The Self Service functionality allows end-users to maintain their own user profile and request a new password when they have forgotten it." René is enthusiastic about the various features and opportunities offered by Microsoft Azure. "As a Microsoft Gold Partner we are always up to date on the latest Azure Cloud developments. This allows us to deliver a state-of-the-art and future-proof architecture. Whatever the demands of the port authority – or any other company – may be, we can meet them with Microsoft tooling.

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