Automation with PowerShell

Landeshauptstadt München

Computacenter and ScriptRunner support the City of Munich with automation in the Microsoft and Citrix environment

Services
- Professional Services
- Technology Sourcing

User experience
- Improved cooperation
- Increased efficiency and improved performance
- Increased user satisfaction

Business impact
- Automation
- Standardisation and centralisation
- Increased productivity
- Reduced administration efforts
- Improved security
- Support for digitisation

Objective

The City of Munich uses the PowerShell scripting language for automation in the Windows and Citrix environment. Creating the scripts initially required a lot of 'manual labour' and meant that the already busy IT teams had to perform repetitive, sometimes monotonous tasks, working through them on an assembly-line basis. To counter this and reduce effort and costs, the City wanted to optimise automation with PowerShell by simplifying scripting.

Solution

As part of the consultancy provided by its technology partner Computacenter, the solution from the PowerShell expert ScriptRunner was presented to the City of Munich. The solution offers a central repository for PowerShell scripts, modules and credentials, and allows the automation of routine IT tasks as well as the delegation of administrative tasks to team members - regardless of their PowerShell knowledge. The solution thus met the City's requirements and has been successfully used by all three parties since its joint implementation.

Result

With the ScriptRunner software, the City of Munich was able to further advance automation in the Microsoft and Citrix environment, reducing the effort and costs in daily IT operations. After the solution was initially rolled out within the City's IT department, the number of employees benefiting from ScriptRunner steadily increased. Areas of application so far include the new printing environment for Windows systems, the connection of the ticketing system, the creation of backups and the collection of log files, as well as the central monitoring of the server farm. In this way, Computacenter and ScriptRunner simplified many recurring tasks to free up time for more exciting projects.

Objective

Exploit automation potential

The Windows and Citrix environment of the City of Munich has great potential for automation. To realise this, the Munich authorities use the PowerShell scripting language to configure and manage the servers.

At first, the administrators and IT professionals were left to their own devices when it came to scripting. In addition to writing the scripts, Graphical User Interfaces (GUI) had to be built so that colleagues without PowerShell knowledge could also execute a script. However, the executors still needed full rights to the system - a context separation (administrator vs. user) was not possible.

This required a lot of manual work and meant that the IT teams in the state capital, which were already very busy, had to perform repetitive, sometimes monotonous tasks, working through them on an assembly line basis. In view of the particularly tight market for IT specialists in Munich, no major relief for the teams was to be expected.

To counter this, the City's IT department had the goal of increasing efficiency and employee satisfaction, so that more time could be allocated to more meaningful tasks. At the same time, the effort and costs for managing the systems were to be reduced. It was therefore worthwhile to find bottlenecks, optimising automation with PowerShell across the entire IT landscape through simplified scripting.

Solution

Computacenter and ScriptRunner optimise automation

The City of Munich has relied on Computacenter as a technology partner for many years, and the IT service provider's consultants are experienced in finding and leveraging potential for automation. A recommendation within the scope of IT consulting finally led to a closer look at ScriptRunner's solution.

Martin Schmidt, Team Leader, Development and Infrastructure, Remote Desktop Services, recalls: "The product sounded promising and designed precisely to consolidate scripts and avoid duplication. We wanted to bring structure to our processes and establish a script repository. In addition, we hoped to save time through the automatically generated GUI and to establish a uniform operating concept including look-and-feel, which could be used to create further scripts."

As a business partner of ScriptRunner, Computacenter was not only able to advise the City, but also to accompany the implementation of the solution. In addition, the Computacenter consultants knew exactly which interfaces could be connected via which type of connectors. Thus, after the commissioning, nothing stood in the way of a successful cooperation and implementation.

But how well did the support and communication work, and how were the responsibilities regulated in such a constellation? Martin Schmidt sums up the experience of the last few years: "The contacts are always available; the information chain is short, and the exchange is very good. The cooperation with Computacenter and ScriptRunner is always solution-oriented and fast."

> "
>
> The contacts are always available; the information chain is short and the exchange is very good. The cooperation with Computacenter and ScriptRunner is always solution-oriented and fast.
>
> **Martin Schmidt**
> **Team Leader, Remote Desktop Services**
>
> "

From Linux to Windows

The first application area where the City relied on ScriptRunner was the new printing environment for Windows systems. On the one hand, the software supported the switch from Linux to Windows. On the other hand, recurring tasks such as daily data synchronisation and synchronisation could be automated perfectly.

Automation: Connection to the ticket system via REST API

Other regularly occurring tasks within the IT department were also transferred step by step into so-called ScriptRunner 'Actions' triggerable by individual users, another system, or run in a time-controlled manner. In Munich, for example, the ticket system was connected via REST API. ScriptRunner and ServiceNow now exchange standardised information via this interface, which makes various tasks easier. Examples include group assignments for software installations or granting access to applications via Microsoft Active Directory within the remote desktop environment. The administrators appreciate the fact that they can flexibly adapt and easily modify actions, quickly finding solutions with ScriptRunner in case of changes in the workflow.

Security: Manage credentials securely

Furthermore, the security concept is convincing. When it comes to topics such as creating backups or collecting log files, colleagues in the IT department often have the problem of not having access rights to backend systems. But how can backups be initiated, or logs collected without appropriate access? ScriptRunner processes credentials securely and thus enables access for specially defined Actions. With the provided Actions, backups can be created, or logs collected manually or time-controlled as needed, without requiring administration rights.

Centralisation: Reliable IT processes with consistent quality

Over the years, further actions were added for various areas within the IT department. With ScriptRunner, the City of Munich now has a central software repository for the huge virtual server farm, in which the tasks are brought together, managed, and monitored.

ScriptRunner monitoring provides an overview of which manual or automatic actions were successful. Via PowerShell remoting, the administrators can work directly and without detours on remote systems.

In conversation with Martin Schmidt and his team, it is the clarity that is emphasised several times: "ScriptRunner was never overloaded with functions, but remained simple, clear, and concise. It gives us a great overview. This means that problems on the server can be quickly and easily detected and remedied. On top of that, the stability of the software reassures us."

> "
We host our own data center, our own network - we want to automate as much as possible.

Martin Schmidt
Team Leader, Remote Desktop Services

> "

Outcome
More time for more exciting projects

The ScriptRunner software was initially rolled out within the IT department of the City of Munich. The increasing number of Microsoft systems opened further opportunities to automate recurring tasks within the department using PowerShell scripts, thus making IT processes more efficient and reducing costs. Initially, the focus was on centralising and standardising scripts via a script repository, which saves time and ensures results with consistently high quality. The PowerShell team is proud of what has been achieved - such as the connection to the ticket system or the central monitoring of the server farm.

The number of employees who benefit from ScriptRunner is growing steadily, however, and in conversation it is noticeable that the team is far from running out of ideas. "We host our own data center, our own network - we want to automate as much as possible," explains Martin Schmidt.

The City of Munich is convinced by the concept, the reliability and the intuitively understandable interface of the software. Users from all units confirm this, and in many places, there is a desire to automate tasks and be able to delegate them securely. Log collection and the creation of backups are just two examples of tasks that can now be triggered by Actions without requiring administration rights. In the IT department, the Development and Infrastructure team is unanimous: Computacenter and ScriptRunner will simplify many a recurring task and free up time for exciting projects.

About The City of Munich

The City of Munich is one of the largest municipal employers in Germany. Its various tasks are organised into 15 departments, including labour and economy, education and sports, the district administration, and the social department. Together with six municipal enterprises, the state capital employs over 40,000 people. The IT department employs more than 1,100 IT specialists and is entirely dedicated to digitalisation. It is responsible for digital infrastructure and digital participation.

More information

To find out more about our enterprise services and read more customer case studies, visit
www.computacenter.com