CASE STUDY

SOITRON

INFORMATION TECHNOLOGIES

By deploying a software-defined architecture, Soitron confirmed its position as a network technology pioneer

"In software-defined network it is essential that communication follows specific rules and policies, and that the operation is auditable; this means that any security or operational issue can be traced back. And this is ideally, remotely, and centrally done from a single tool."

Branislav Bisák
Soitron, Senior Network Specialist

1. REQUIREMENTS

- **The update of Soitron's network infrastructure** after the end of its life cycle.
- Testing the **new architecture of software-defined networks** for themselves in order to acquire necessary competencies and be able to use it for their customers.
- One of the objectives was to **increase security and simplify network management** at a time when the nature of work and the working habits of users were changing.

2. SOLUTION

- The complete **modernization of Cisco network technologies** in three countries and on four separate sites.
- The deployment of the **Cisco DNA orchestrator** to make the infrastructure management easier and more efficient.

3. RESULTS AND BENEFITS

- **Streamlined infrastructure deployment.**
- More effective troubleshooting and **resolving of technical problems**.
- **Simplified infrastructure management** – policy updates, processing, deployment, and enforcement.
- **Saving administrators' time** by up to 60 and even 80 %.
- Help with issue prediction and **outage prevention**.

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The change

The acceleration of digitalization in recent years has significantly changed our lives, creating new requirements for technological infrastructure and its management. Back in the days when they were responsible for a few computers connected to an inhouse server, IT administrators had a relatively easy job. Today, however, employees work increasingly remotely – and not always from their homes. They often use cloud services and connect from various locations using multiple devices.

It is significantly more difficult to keep networks and data centres under control and to ensure high security alongside problem-free operation, service availability, convenience, and thus user productivity.

Soitron, a long-term renowned supplier of network solutions, was among the first to make these changes. *"The purpose of network technologies remains the same. They are intended to connect devices to each other and allow them to communicate with servers. But in the new world, it is essential that communication follows specific rules and policies, and that the operation is auditable; this means that any security or operational issue can be traced back. And this is ideally, remotely, and centrally done from a single tool,"* explains Branislav Bisák, Soitron's Senior Network Specialist.

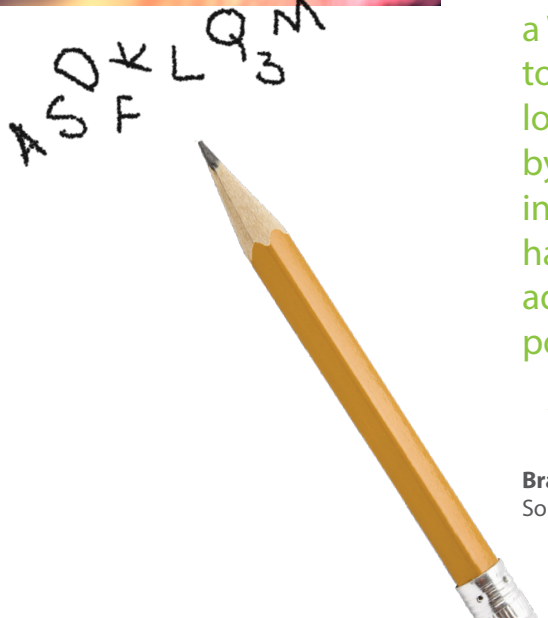
An innovative solution

For several years now, renowned suppliers such as Cisco have been addressing these changes and new needs by developing software-defined architectures. This is a new concept of networks and data centres that can be controlled by a so-called orchestrator. For IT administrators, this concept opens the door to new technology management models and user policies.

As Soitron's network infrastructure was approaching its moral obsolescence, the company decided to switch to an SDA network with centralized management using the Cisco DNA orchestrator. *"We wanted to benefit from the new concept and, as a pioneer in network technologies, examine it in detail so that we could use the acquired knowledge for the benefit of our customers,"* says Bisák.

The switch to SD Access (SDA)

The specific position of Soitron as a system integrator and a long-time partner of Cisco allowed it to modernize the access network with a "big bang". This meant that the company's specialists built the entire new infrastructure in parallel with operating the existing one. They got the orchestrator running, along with access control and security policy management for access to the Identity Service Engine (ISE)



"When users had a problem in the past, such as with a Wi-Fi connection in a building, it was necessary to physically come to the site, take measurements, and look for the cause. Today, we can identify the problem by looking at the records, and this is equally true for the infrastructure as well as for any end device, which may have a problem with things such as an antenna. The administrator sees the end devices from the infrastructure point of view as well as from the other side."

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infrastructure. They also prepared the network device parameters for individual locations and then redirected all network traffic to the new infrastructure.

Naturally, the technology components had to be physically installed in individual locations. With the use of the orchestrator, the setup and launch of the new environment was done remotely and automatically.

The immediate benefit of the orchestrator

It is not a problem to switch to the software-defined architecture and the new management concept gradually, step by step, either by network segments or individual network devices. *"Even new network elements that support software-defined architecture can be operated in the old conventional mode. The advantage with the orchestrator is that it is also possible to enjoy some of the new benefits, such as traffic monitoring, central policy enforcement, and troubleshooting,"* says Bisák.

A typical implementation for a customer therefore usually starts with orchestrator deployment. An orchestrator allows for the collection of network telemetry data and provides a view of past and present data traffic; thus, even without the full transition to SDA, an organization can immediately benefit from better infrastructure management, including more effective troubleshooting and resolving technical and operational issues.

Software is elevated above hardware

In this case, the client receives the full range of benefits when they modernize their network technologies or their data centre. This will happen gradually in every organization because all current technologies already comply with the software-defined architecture concept.

The only remaining dilemma for the future is whether or not organizations should utilize the potential of a DNA orchestrator. Soitron's experience speaks clearly. An orchestrator is the perfect choice for those who want to effectively manage network authorizations and connections, record what is happening in their network, be able to track and analyse the traffic, effectively identify problems, and configure network elements without the need for a physical presence.

Multiple benefits

Soitron was one of the first companies in the world to successfully deploy Cisco's new software-defined infrastructure with a DNA orchestrator, and it did this in three countries and on four different sites. There are multiple benefits to the new solution: higher security, simpler and more efficient infrastructure management, and the possibility to connect with other applications via an Application Programming Interface (API) which can be used, for example, to send information about incidents to a ticketing system.

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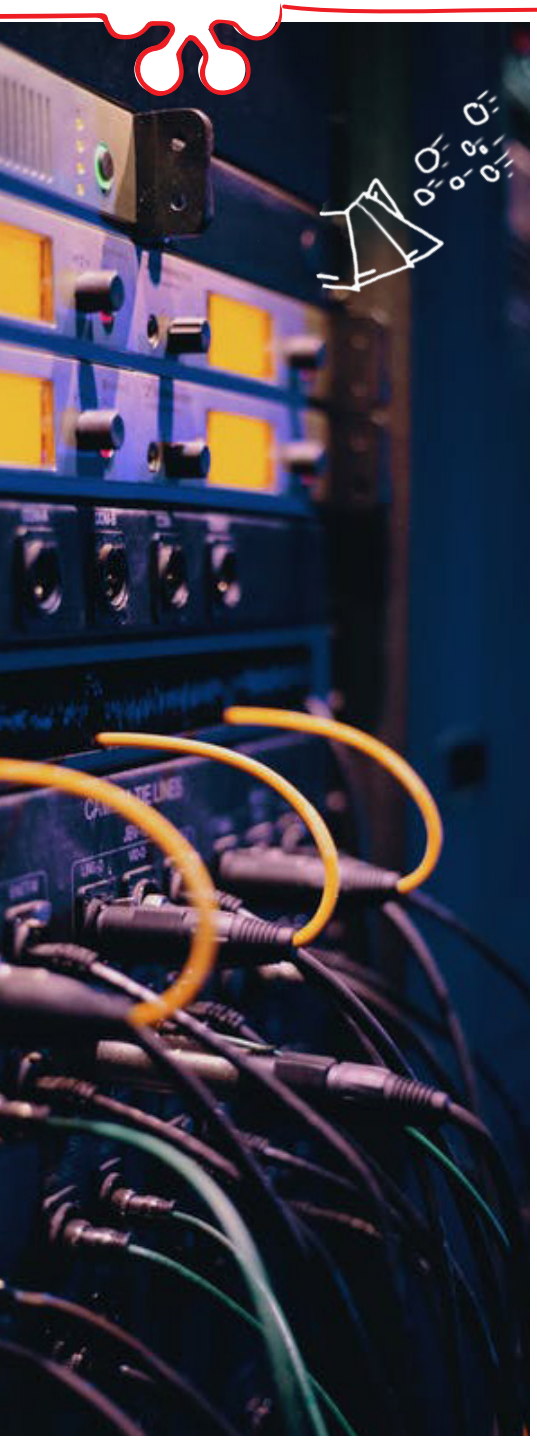

The solution makes it easier for administrators to do things such as deploy a new network or add additional network elements which, once physically connected, can be completely managed remotely. Above all, it allows users to operate and to address security and operational issues.
For example, with the help of an orchestrator, it took a Soitron specialist less than half the usual time to fully deploy an SDA network; the specialist didn't even need to travel to individual sites. Having said that, the primary savings are achieved in the network operation.

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Other benefits include the ability to define access policies for LAN as well as WAN and data centres from a single point, allowing the user to get authorizations for the entire infrastructure. The new architecture also makes it possible to identify problems, such as a faulty source, even for redundant devices. With such broad ranging functionalities, administrators can predict and prevent many operational and security issues in advance.

In Soitron's experience, admins can save up to 60 and even 80 % of their administration and troubleshooting time when using the software-defined architecture and orchestration.

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SOITRON, member of SOITRON Group

Soitron is a Central European integrator operating in the IT market since 1991. The company's philosophy is to constantly move forward, and that is why it is a leader in implementing unique technologies and innovative solutions. It offers its clients products and services in the field of robotization and process automation, cybersecurity, data centres, IoT solutions, IT outsourcing, communication and network solutions, IT support and advisory. Its product portfolio includes smart police car solutions – Mosy and cybersecurity services – VOID Security Operations Center.
Soitron is a part of the Soitron Group and employs more than 800 international experts. The group brings together professional teams in Slovakia, the Czech Republic, Romania, Turkey, Bulgaria, Poland, and the UK.