



# NETWORK AUTOMATION

## WHITE PAPER 2021

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# WHAT IS A NETWORK?

A network is used to transfer data bit by bit from one medium to another. Not only does a network consist of how it is designed, but it also handles the data transferring, building the network, managing the network's hardware and software, and managing the overall policies.

# WHAT IS AUTOMATION?

In order to replace any sort of human assistance, technologies are used to perform IT tasks. Automation works with a set of constant instructions to perform a certain task with little to no human interruption.

## AN OVERVIEW

Network Automation is basically the process of automating a layout, along with the testing, operating, and managing of both hardware and software devices of a network. The functions and daily tasks are managed automatically because of which the network services improve.

Any business that requires efficient work, reduced errors by humans or a low expense can opt for network automation.

## WHY NETWORK AUTOMATION?

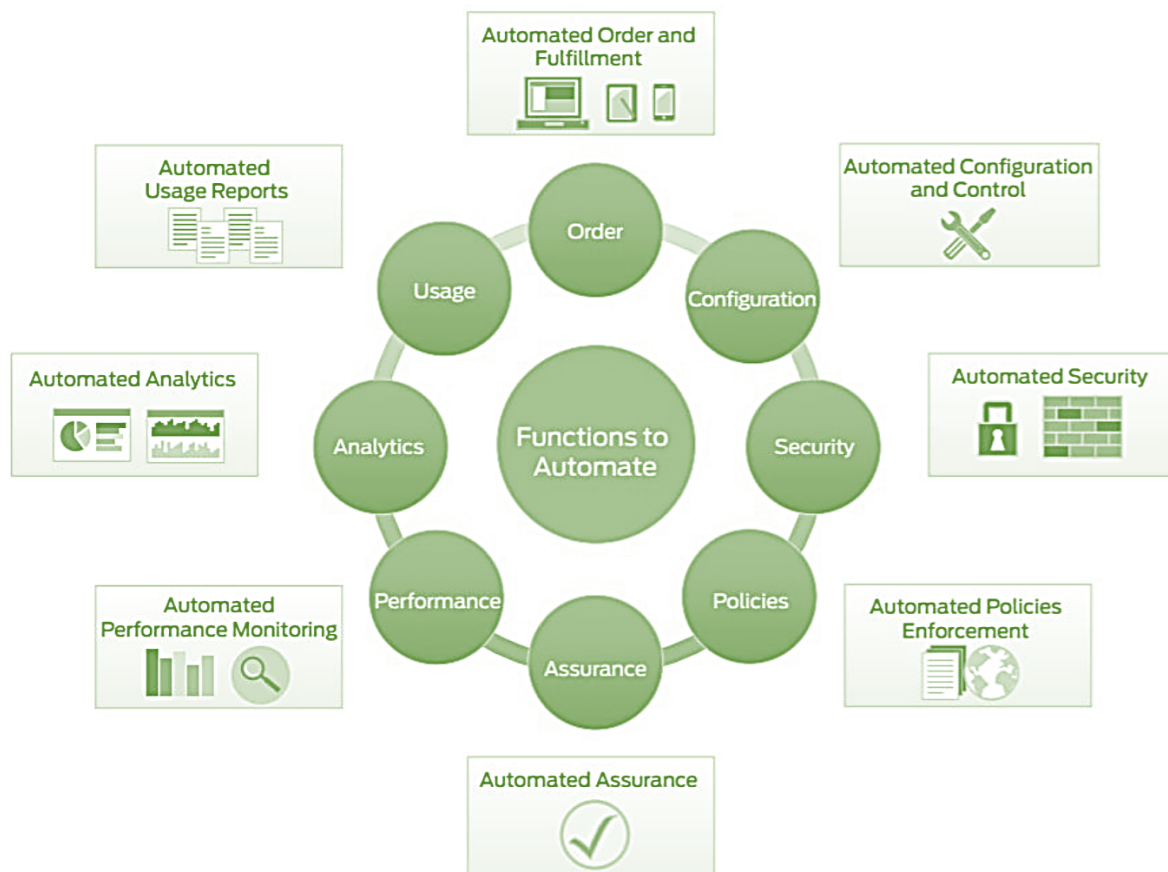
Over the decades the management of networks has remained the same no matter how much the technologies have evolved. The networks are made, operated and managed by human hands which increases the chances of errors and the overall process is slowed down.

❖ IT automation that can be accessed both remotely

and centrally is necessary for the companies as:

- ❖ Up to 95% of the changes in networks are done manually which can slow down networking.
- ❖ it can also lead to configuration mistakes.
- ❖ Large scale expansion of networks can cause problems as it can become tricky to deal with them manually

In short, the traditional methods of network configurations are slow and less efficient with more chances of mess ups. Therefore, to keep up with the constantly changing networks and workload shifting rapidly, network automation is required. It allows the operations team to work more flexibly and produce efficient results.

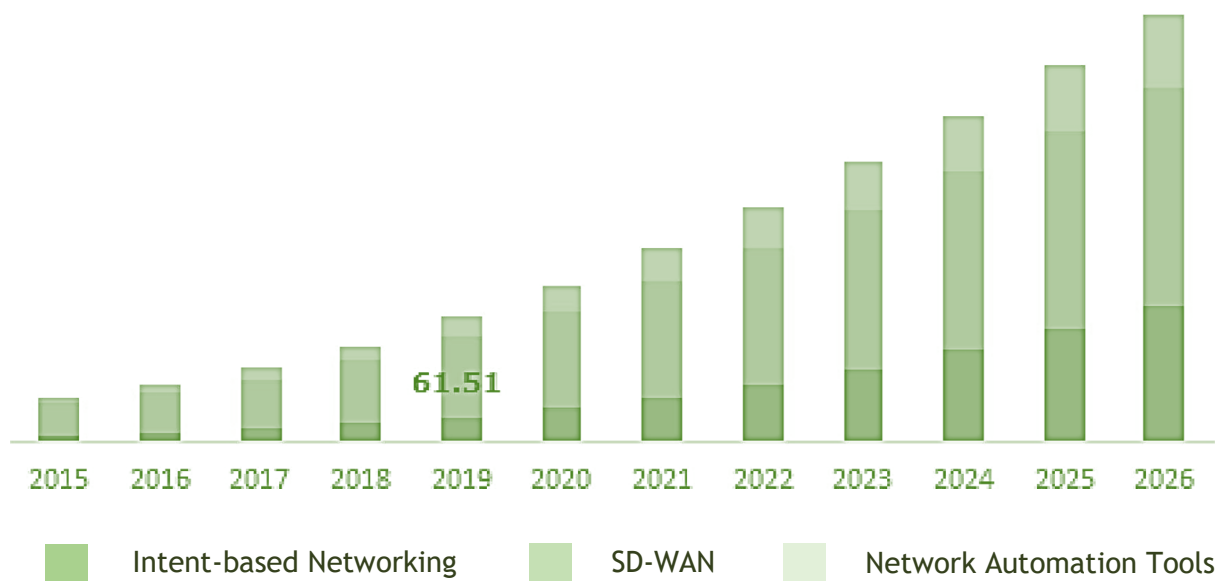


# INCREASE IN DEMAND

According to a research report given out by the Global Market Insights, Inc. The network automation market demand is predicted to cross 18 USD billion by the end of 2026. Moreover, an outpour in the complexities of traditional networks and an increase in the use of data centers will result in the creation of new opportunities and demands for the network automation market in the coming years.

**\$18B**

**BY 2026**



**GERMANY NETWORK AUTOMATIO MARKET, BY SOFTWARE, 2015-2026 (USD Million)**

# **BENEFITS AND CHALLENGES OF NETWORK AUTOMATION**

## **BENEFITS OF NETWORK AUTOMATION**

### **WORKLOAD REDUCTION FOR IT**

Network automation helps to deal with the problems automatically so it becomes easier for the IT staff to keep up with the follow-up. Instead of dealing with every route manually the staff now has to deal only with the supervision most of the time that all the network-related activities are flowing without a hitch. This helps them to focus more on productivity growth and innovative ideas for the company.

### **LOWER RISK OF HUMAN ERROR**

No matter how capable the employees are, the networks involve lengthy manual processes which means hours of precise work. This increases the risk of human errors. So, to avoid incidents that can cause human errors and increase reliability, network automation has opted.

### **INCREASES FLEXIBILITY**

Unlike in a manual setup where long-term processes are most likely to be ignored because they required a lot of effort, network automation increases the resilience through automatic changes and updates without any errors.

## **STANDARD PROCESSES**

As the daily maintenance activities become routine, the infrastructure issues can be decreased once the standardized processes are implemented along with the network. You do not require a network administrator to fix it for you if there are any issues, any capable person in the house is just as eligible to sort it out.

## **DYNAMIC NETWORK**

By shifting the manual changes and updates to automatic, the network performance optimizes and accelerates the overall performance. The network dynamically adapts to the business needs and user demands.

## **REDUCED OVERALL RISK**

As network automation improves network reliability, minimizes human error, and maintains consistency in device and service deployment and configuration. Performance issues, equipment failure, data breaches, and regulatory compliance violations are all reduced as a result.

# TOP 5 COMPANIES PROVIDING NETWORK AUTOMATION



Since its inception in 2001, many off DDI systems have remained unchanged.

However, business organizations have. They've gotten a lot more difficult. Through Adaptive DNS, we're flipping that scenario on its head.



Red Hat, Incorporated is a division of IBM and a programming corporation that sells public sourced software to businesses. Incorporated in 1993.



Micro Focus International plc, situated in Newbury, Berkshire, England, is a British global programming and informational tech company. The company offers software as well as consulting services.



SolarWinds Inc. is a software development firm based in the United States that helps organizations monitor their networks, servers, and IT equipment.



AlgoSec is a software company that specializes in network protection policies administration, commonly referred to as firewall policy control.



# CISCO FOR NETWORK AUTOMATION

The rise in IT prices for network services is one of the most pressing concerns confronting network operators. Information and technology development is beginning to outstrip IT potentials, rendering traditional procedures practically unfeasible. Despite this, up to 90% of network updates are done by hand, leading in operating expenses that are three times greater than the network's value. For organizations to catch up with the modern age, they need more IT automation that can be handled locally and remotely.

## WHAT DISTINCTIVE FEATURES CISCO HAS?

- ❖ Only Cisco can provide what you require in a way that positions your system for success now and in the future. Cisco frees IT personnel from time-consuming, repeated network configuration procedures, allowing them to concentrate on the creativity that their company requires. Cisco DNA Center was pitted against HPE-Aruba and Huawei in a blind testing of network automation skills. “Cisco delivers end-to-end network automation, that reduces effort, energy, and cash for IT services, as compared to HPE and Huawei, that incorporate various processes and contact points,”. HPE-Aruba, for example, only provides wireless operations that are built on a hierarchy.
- ❖ Only Cisco can provide IBNs that combine automation, analytics, and human experience to assist minimize complexities, optimize IT, and cut costs.
- ❖ Cisco DNA automation tools ease and extend network operations while reducing setting faults.

- ❖ Cisco offers network automation technologies to easily transport applications and services across on data centers and clouds, including configurable architecture, single-pane-of-glass administration, and uniform policies for information Centre activities.
- ❖ Cisco's products are designed to operate collectively to give you the network automation components you require.
- ❖ Move at your own tempo. Transfer any previous device mappings and policy work that you've done.