The state of data center network automation

Analysys Mason, in partnership with Juniper Networks, carried out a global study in 4Q 2022 through an online survey and interviews to assess the current state of data center network automation. The survey results show that the level of automation in data centers has been limited to-date and organizations struggle to make progress with their do-it-yourself (DIY) automation approaches.



CSPs

ENTERPRISES





SURVEY DEMOGRAPHICS

Level of data center network automation is low across all segments

Average level of automation achieved in Day 0,1 and 2+ operations



5G and cloud are the major drivers reshaping CSPs' data center and automation

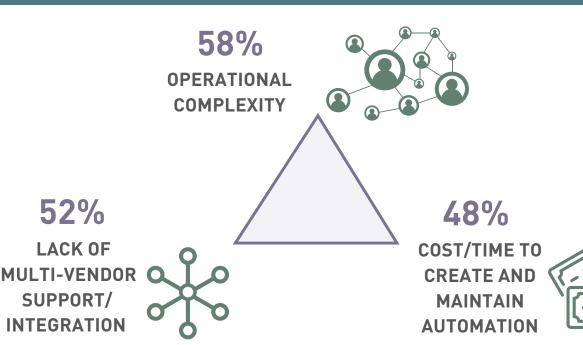
strategies

The level of automation varies significantly within the same industries, but not as much across different industries.

CLOUD PROVIDERS

Small to mid-sized cloud providers are facing strong pressure to match the agility and customer experience offered by the major cloud providers

Operational complexity and siloed technology/operations are the biggest barriers to data center automation



needs and overcome barriers... Average use of automation tools in data center network automations

Organizations mainly rely on DIY tools to fulfill their automation

CSPs CLOUD PROVIDERS ENTERPRISES









solution (e.g., Puppet, Chef), Terraform, Shell scripts, Other ...but these tools often present major resource and ROI-related challenges

scripting tools (e.g., Ansible), agent-based

Third party vendor solutions

Lack of resource availability to manage software lifecycle 54%

Dependencies of key development staff

38%

42%



ROI/cost of ownership

Third party vendor-reliant DIY automation-reliant companies companies

DIY automation comes with significant hidden opex costs and a lack of efficiency in achieving automation

35-40%

35-40%

0-10%



DC budget dedicated to DIY automation

26-50%

Very high

Level of effort by network engineers

11-25%

Medium

51-75%

Every 3-6 months

% of staff writing their own scripts

Daily

Frequency of creating/adjusting scripts

Just 3% of organizations surveyed are fully satisfied with their DIY automation approach



53% would choose a third-party vendor 53%

in retrospect

automation solution



For further insights into this study, please see these reports: