InSync Automation Engine

Businesses today are heavily disrupted by innovative business models and new entrances. In order to keep up with pace and to grow, businesses require to respond to customer needs immediately. Superior customer experience, market readiness and responsiveness have become increasingly important. In order to stay ahead of the game, businesses need to be agile and innovative. This is where technology can support businesses to become market ready and innovative. Ability to manure changes on a timely, consistent and precise manner is a vital factor in becoming market ready and this is where automation plays a crucial role.

Drivers behind network automation

There are globally known benefits of automation of any form such as productivity growth, efficiency, accuracy, precision etc. As widely accepted automation of any form is a no brainer in today's competitive environment but if you closely look at imperatives behind adopting network automation, they revolve around;

- Minimizing human error whilst handling volumes of transactions
- Offering a superior user experience to gain competitiveness
- Increasing productivity and agility

InSync Automation Engine

InSync automation engine offers solutions across network lifecycle that helps businesses improve its efficiency, build capacity and manageability. It has multiple use-cases across both enterprises and telecommunications industries and can be used for custom purpose use-cases. Built on 'python' InSync automation engine's architecture consist of four pillars.
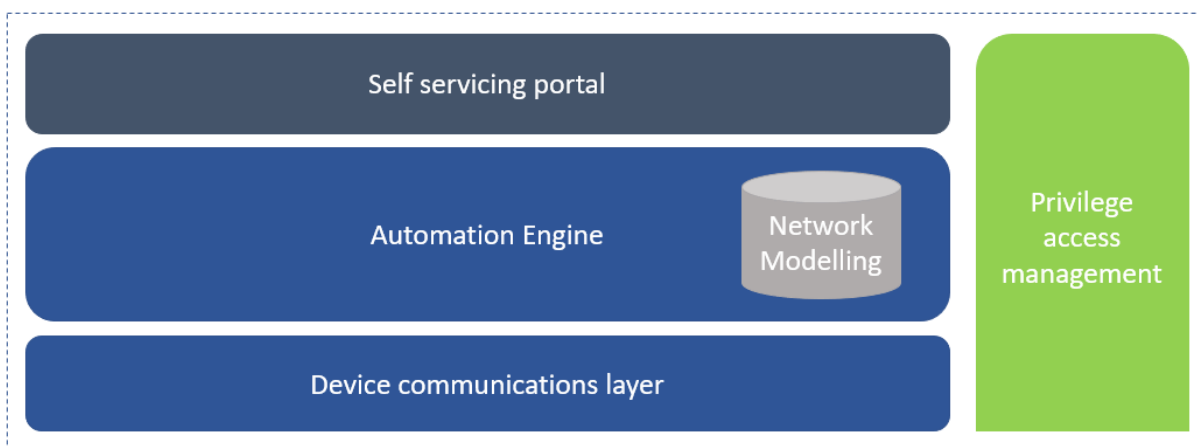

Figure 1: InSync Automation Engine Architecture

Device communications layer: This layer consists of adaptors that can communicate with devices over standards such as NETCONF, SSH, APIs in a vendor agnostic way. Both read and write functions for monitoring, discovery and provisioning are enabled and executed through this layer.

Automation Engine: This is the core of InSync's automation engine and consist of functions such as processing of data collected through 'Device communications layer', network and network services modeling, general and custom build logics, policy framework and schedulers.

Self-servicing portal: This is the external facing portal that is used by both administrators and service users. In addition to its web-based user interface, this layer also consists of gateways that connects to third-party applications such as ticketing systems, OSS/BSS for external inputs.

Privilege access management: Purpose of this module is to manage the administration of the software, store files, logs and to manage user privileges.

Features

- Role based access for privilege management
- Third-party tool integration through REST API
- NETCONF/YANG, API, SSH for southbound communication
- On-demand and scheduled services provisioning
- Service discovery
- Topology discovery and view
- Network monitoring with streaming telemetry
- Customizable Web GUI
- Reporting and logging
- Vendor agnostic

Use cases

Everyday network administrators handle many tickets raised by users for routine operations such as VPN creation, firewall enablement's, IP address assignment, user onboarding/deboarding. InSync automation engine can handle these tasks through network automation. Templated workflows will automatically trigger actions with respective network devices once a request is received through its web portal or through a third-party ticketing system. Going beyond routine tasks, InSync automation engine can be used for network wide configuration, health-checks, service discovery, devnet and for automated self-servicing provisioning needs.

Design and configuration of network services such as VPN circuits or provisioning of packages in enterprise WAN environments for service providers are use-cases that can be catered through the automation engine. Routine tasks such as firmware upgrades of network nodes and regular audits are some other compelling use-cases that are sought after by service providers.

For more information

Contact info@insyncit.net, visit www.insyncit.net. InSync information technologies is a specialized IT services provider in the field of networking & network automation. What drives InSync is its passion towards building business aligned technologies.