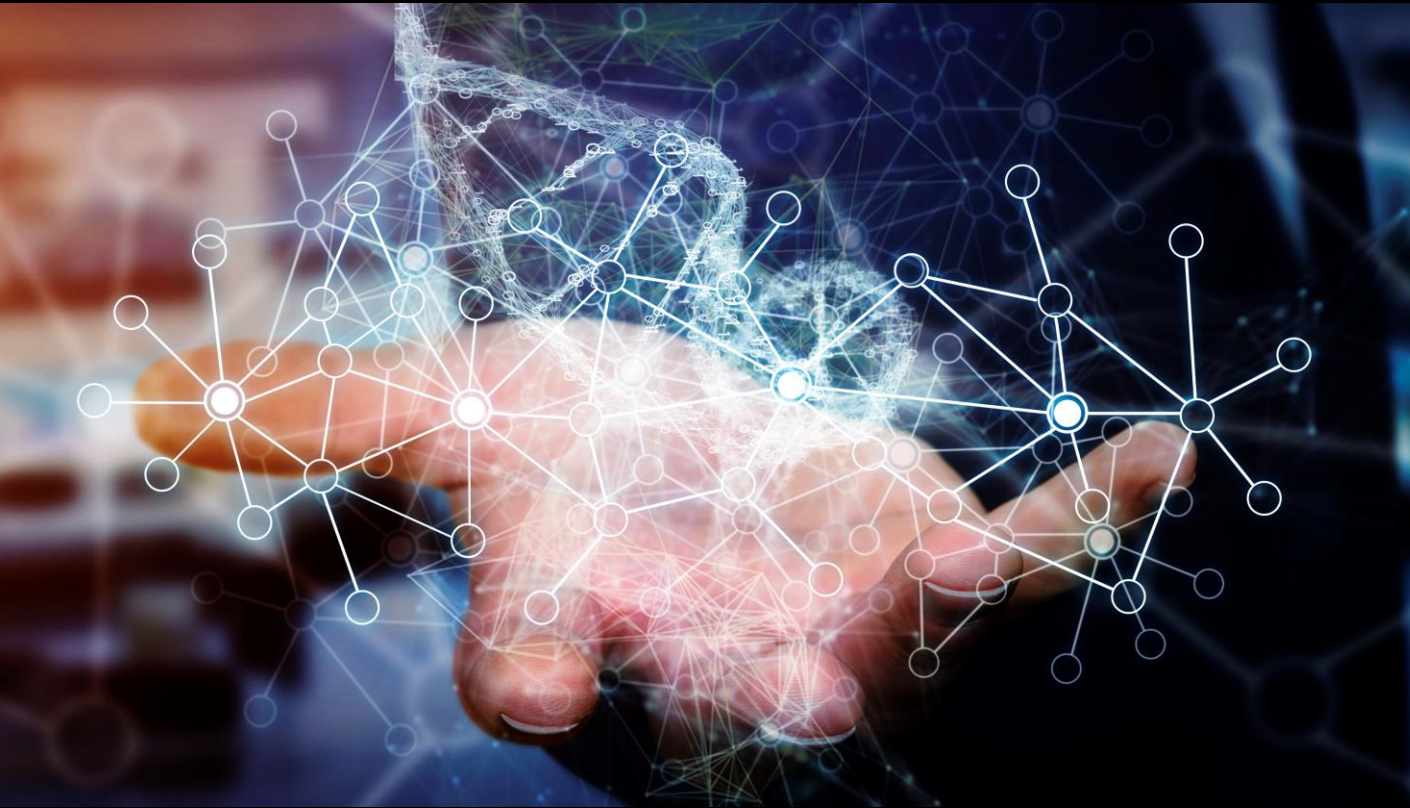


Introducing Gluware 5

Gluware Topology, API Modeling, Service
Connectors, & Enhanced Network RPA

October 2022

Introducing Gluware Release 5



We just took intelligent network hyperautomation to the next level.

Powered by embedded intelligence and unparalleled ease-of-use, **Gluware 5** delivers essential features and functionality that enterprises need to level-up and accelerate digital transformation and hyperautomation.

[Gluware.com/release5](https://gluware.com/release5)

with Topology, API Modeling, Service Connectors, and enhanced Network RPA

Agenda

- Brief Gluware Intro
- What's new in Gluware 5 release
 - Gluware Topology App
 - API Modeling
 - Gluware Service Connectors (GSCs)
 - Network RPA Enhancements

Gluware Summary

Intelligent Network
Automation software
platform that brings order
to inherent network chaos



Multi-vendor, multi-domain,
brownfield and cloud
architectures



Recognized by leading
industry analysts.



Expanding enterprise sales
from Fortune 500
enterprises to the Global
2000 market



World-class partners,
platforms and integrations



Management team with
200+ years enterprise
network experience. Backed
by Bain Capital.



Gluware's universal abstraction layer brings order to inherent network chaos

Intelligent Network Automation

Multi-Vendor, Multi-Domain, Multi-Cloud

- Brownfield and modern LAN, WAN, DC, cloud architectures

Intent-Based Deep Insight and Action

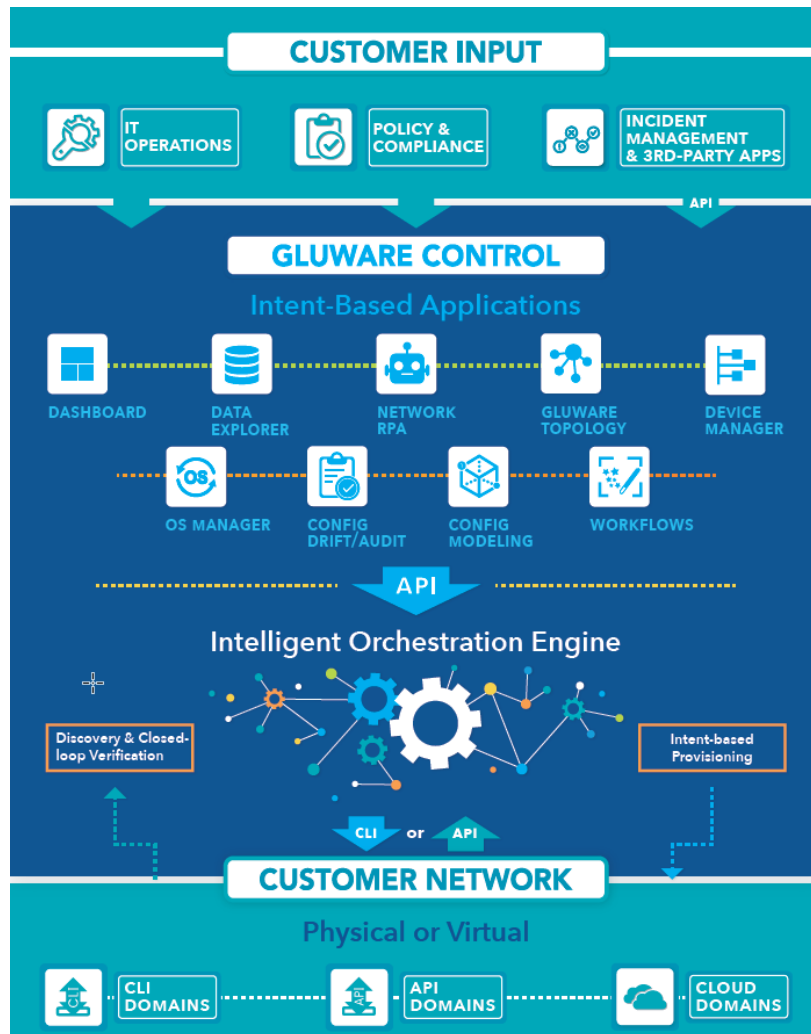
- Declarative brownfield and modern architecture policy automation

Continuous Optimization

- Network policy tuning
- Intelligent auto-remediation
- Integrated Development Environment (IDE) for CI/CD
- Network RPA for Drag-and-Drop NetDevOps



Gluware® Intelligent Automation Platform



- Suite of No-Code Intelligent Apps hosted SaaS or on-premises install
- Drag-and-drop Process Automation and new Gluware Topology App
- Gluware Multi-Engine Architecture with Zone Engine Servers and Secure Gateways
- Flexible deployment options based on customer requirements
- Scales to tens of thousands of devices supporting global enterprises
- Low-Code Gluware Lab IDE for customization, integration

Gluware 5 Release Summary

Gluware Topology

Use Gluware Topology to

- Visualize your network
- Enhanced troubleshooting
- Generate site documentation

API Modeling

API Modeling enables

- Gluware app support for API based network controllers (southbound)
- Support for Cisco Meraki
- Package releasable API support

Gluware Service Connectors(GSCs)

Gluware Service Connectors deliver

- Pre-built and supported API integration packages (northbound)
- REST Development Kit package for Gluware Lab
- ServiceNow, EfficientIP and more to come...

Network RPA Enhancements

Network RPA Enhancements

- More than a dozen new native Gluware tasks
- Variable management
- Enhanced sharing and comments
- Support custom integrations

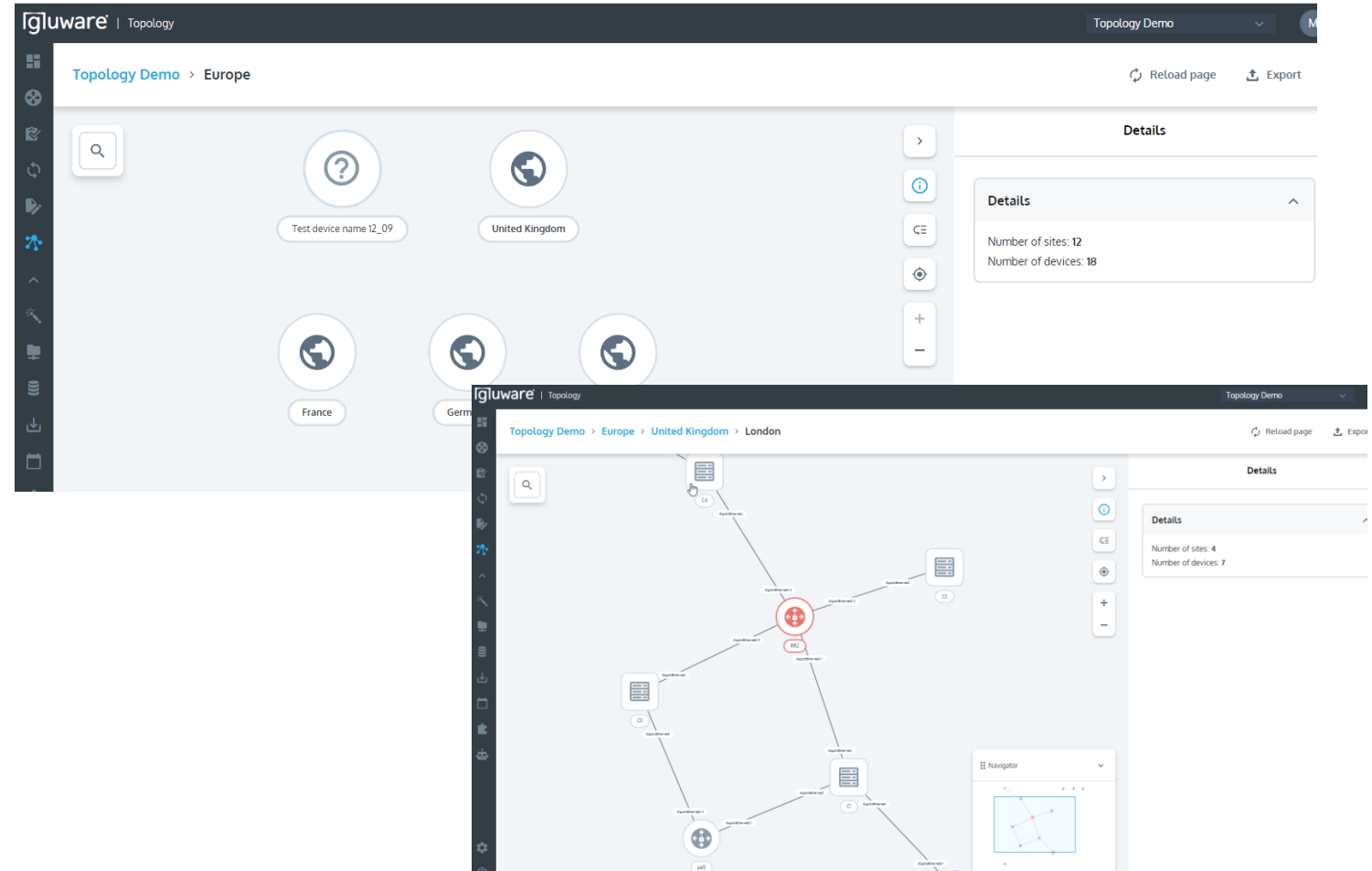
Gluware Topology

Gluware Topology

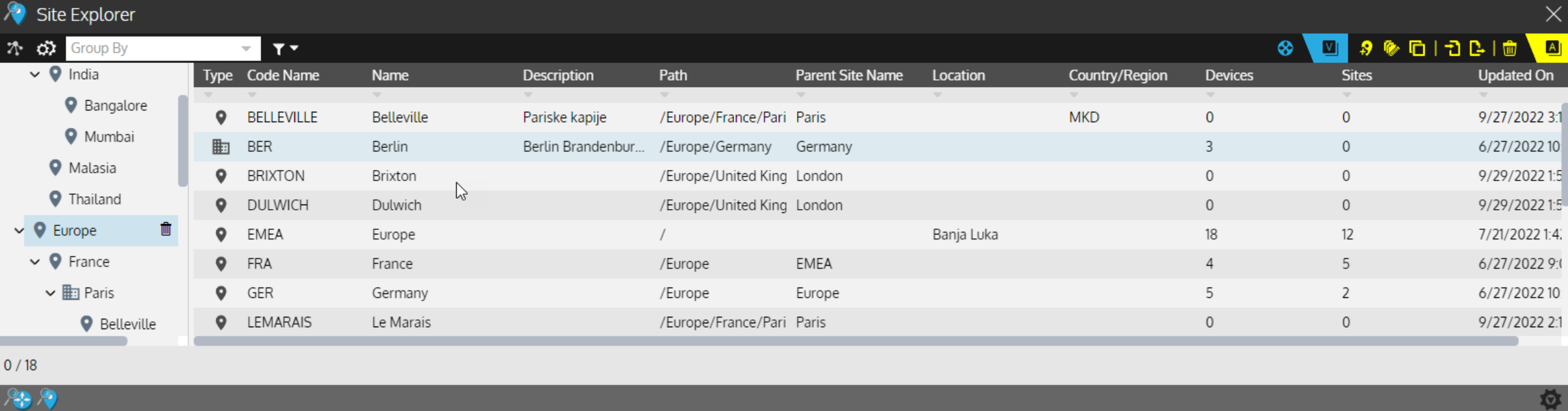
Network Visualization, Site Diagram, and Enhanced Troubleshooting

Introducing Gluware Topology

- Gluware vendor adapters
- Advanced discovery capabilities
- Network visualization
- Site documentation
- Enhanced troubleshooting



Gluware Topology – Site Explorer



Type	Code Name	Name	Description	Path	Parent Site Name	Location	Country/Region	Devices	Sites	Updated On
📍	BELLEVILLE	Belleville	Pariske kapije	/Europe/France/Pari	Paris		MKD	0	0	9/27/2022 3:1
🏢	BER	Berlin	Berlin Brandenbur...	/Europe/Germany	Germany			3	0	6/27/2022 10
📍	BRIXTON	Brixton		/Europe/United King	London			0	0	9/29/2022 1:5
📍	DULWICH	Dulwich		/Europe/United King	London			0	0	9/29/2022 1:5
📍	EMEA	Europe		/		Banja Luka		18	12	7/21/2022 1:4
📍	FRA	France		/Europe	EMEA			4	5	6/27/2022 9:1
📍	GER	Germany		/Europe	Europe			5	2	6/27/2022 10
📍	LEMARAIS	Le Marais		/Europe/France/Pari	Paris			0	0	9/27/2022 2:1

Site Explorer in Device Manager

Site Explorer provides the ability to define additional details about the device location and contact details that are used on the map

Gluware Topology – Label Settings

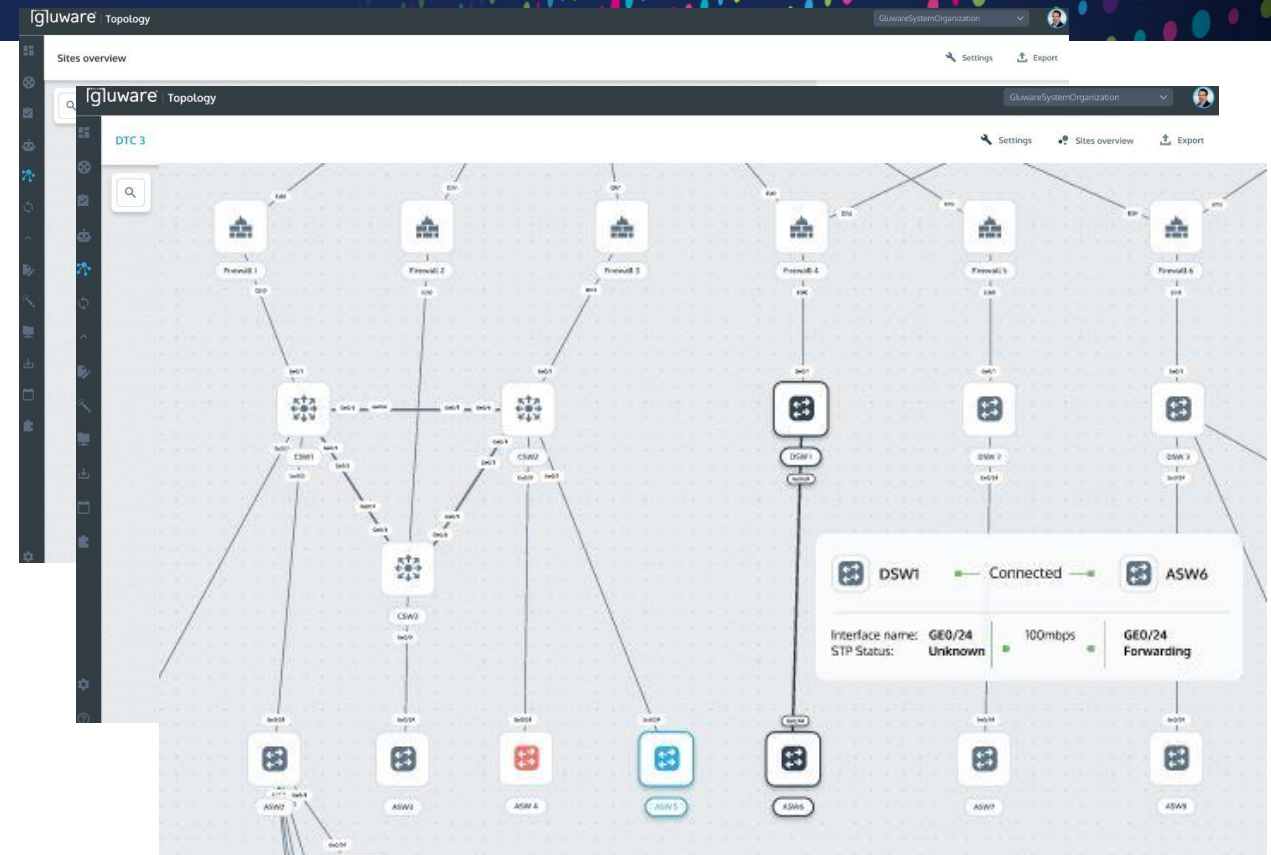
Label Settings enables

- User defined labels for Sites, Devices and Connections
- Select up to 5 labels
- Labels are visible on the map

The image displays the 'Label Settings' configuration window in Gluware. On the left, a sidebar contains icons for navigation, including a 'New Label Settings' button highlighted with a red box and an arrow. The main panel shows settings for 'Site', 'Device', and 'Connection'. The 'Device' section is expanded, showing a 'Selected' list with labels like 'Device name', 'Access status', 'OS version', 'Type', and 'Vendor'. Below this is an 'All' section with labels like 'Description', 'Hostname', 'OS', 'Serial number', and 'SKU'. A 'Connection' section is also visible. To the right, a network topology map shows a central router node labeled 'RR2 UNREACHABLE 15.7(3)M3 Router (WAN) Cisco' connected to four GigabitEthernet ports (0/1, 0/2, 0/3, 0/4).

Gluware Topology - Visualize Your Network

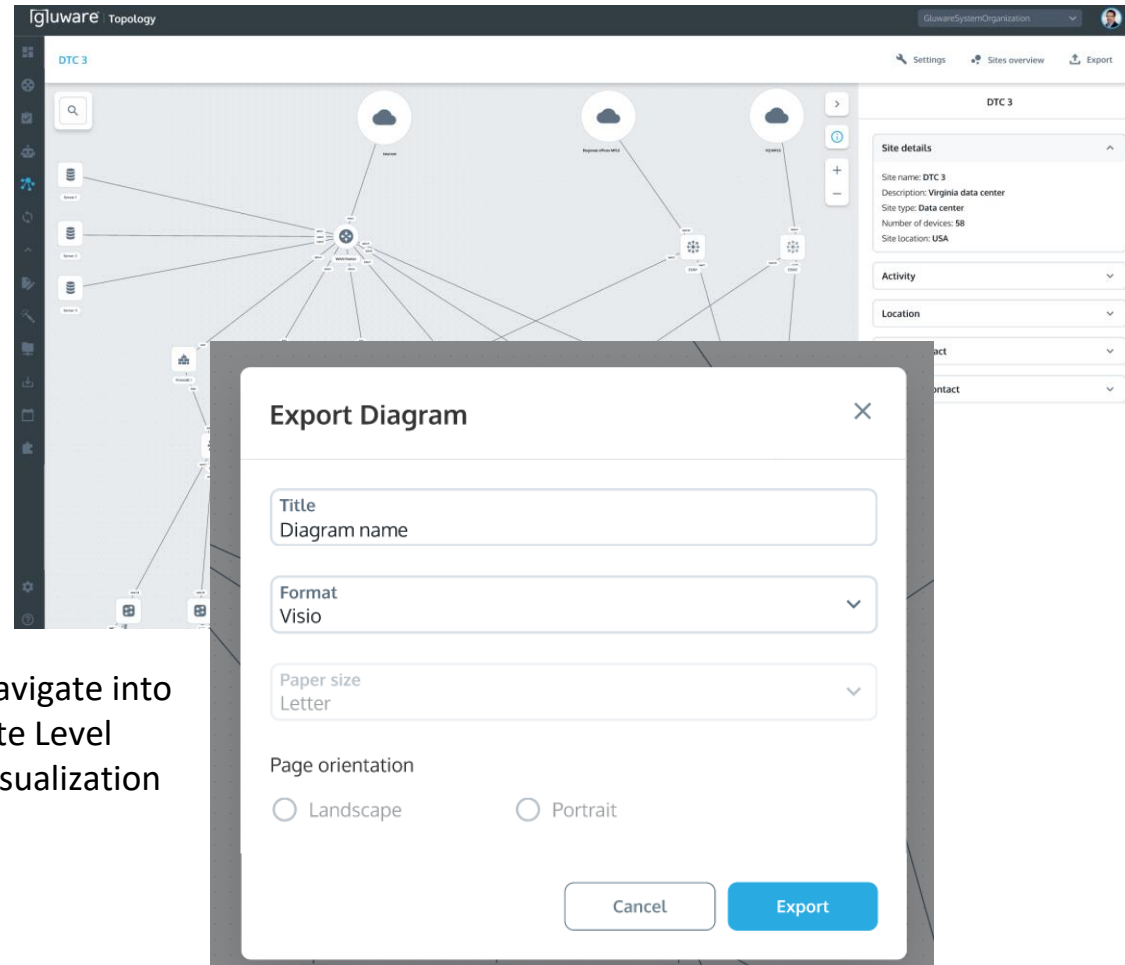
- Navigate directly into the topology view from the Device Manager inventory
- Topology provides a hierarchical view from a global level with a drill down into each tier
- See float-over summaries and right-side panel for detailed information
- Zoom in and out to adjust the focus of the view
- Network devices can be discovered, imported or loaded via API



Device and Link Details

Gluware Topology - Create Site Documentation

- Leverage the network discovery and detailed device discovery performed
- Generate visualizations from rich data sets
- Navigate the site visually to inspect sites, devices, links, and more
- Export to standard formats, including Visio and PDF
- Maintain site documentation for standards and compliance

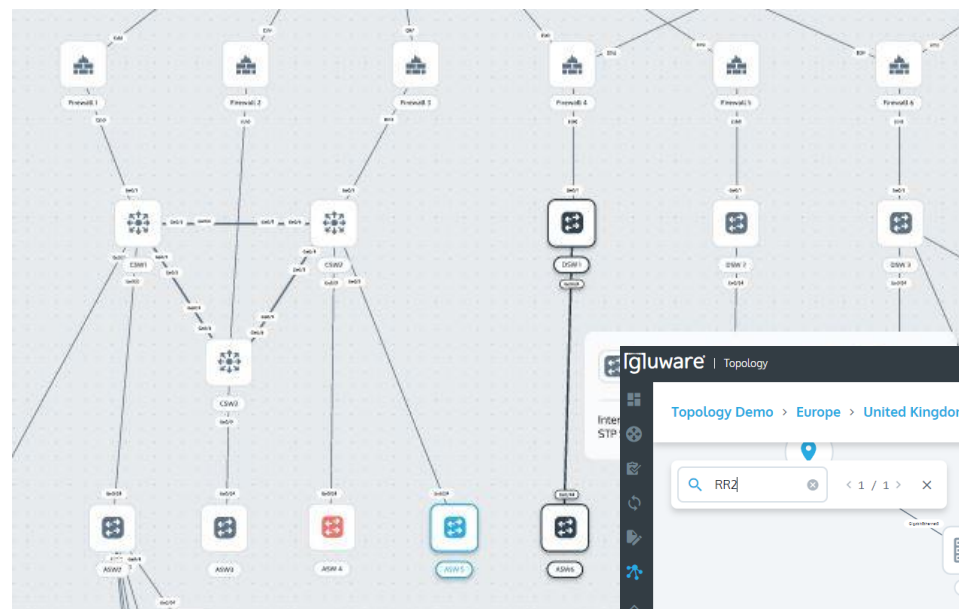


Navigate into
Site Level
Visualization

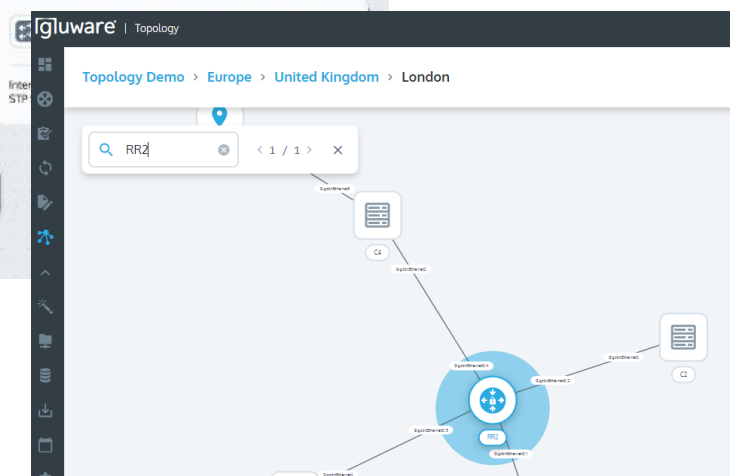
Export to Visio or PDF

Gluware Topology - Simplify and Accelerate Troubleshooting

- Color-coded health notifications to surface issues related to credentials, reachability and more
- Float-over links to see details related to the connectivity, link speed, operational state and health
- Search device names, MAC and IP addresses to identify the location of the resources in the topology



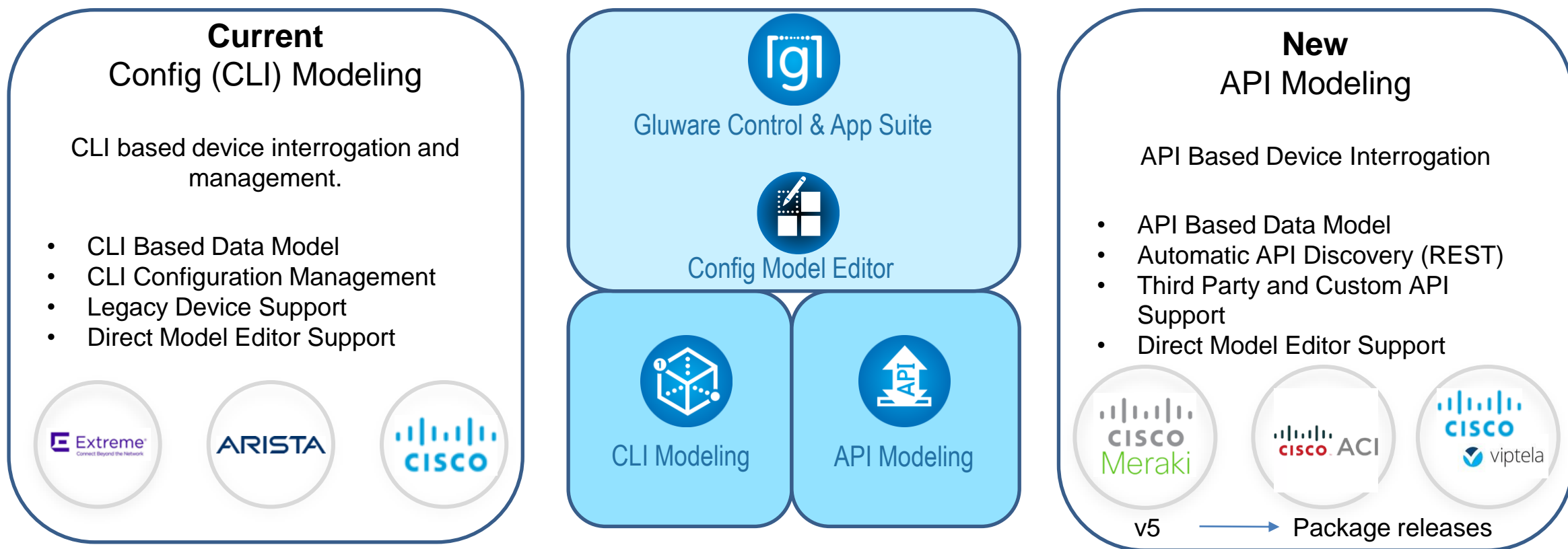
Device and Link Details to Accelerate Troubleshooting



Search the Network

API Modeling

Gluware API Modeling Available in Release 5



API Modeling – Cisco Meraki

Gluware **API Modeling** support for Cisco Meraki introduces support for the Gluware app suite including:



Device Manager

- View inventory across Orgs
- Search/sort, find
- Enables data to be used in Dashboard and Data Explorer for reporting



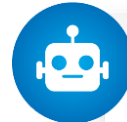
Config Model Editor

- Automate config changes across Orgs and Networks
- Modeled features for
- SSID, DHCP, SNMP, NetFlow, SAML...



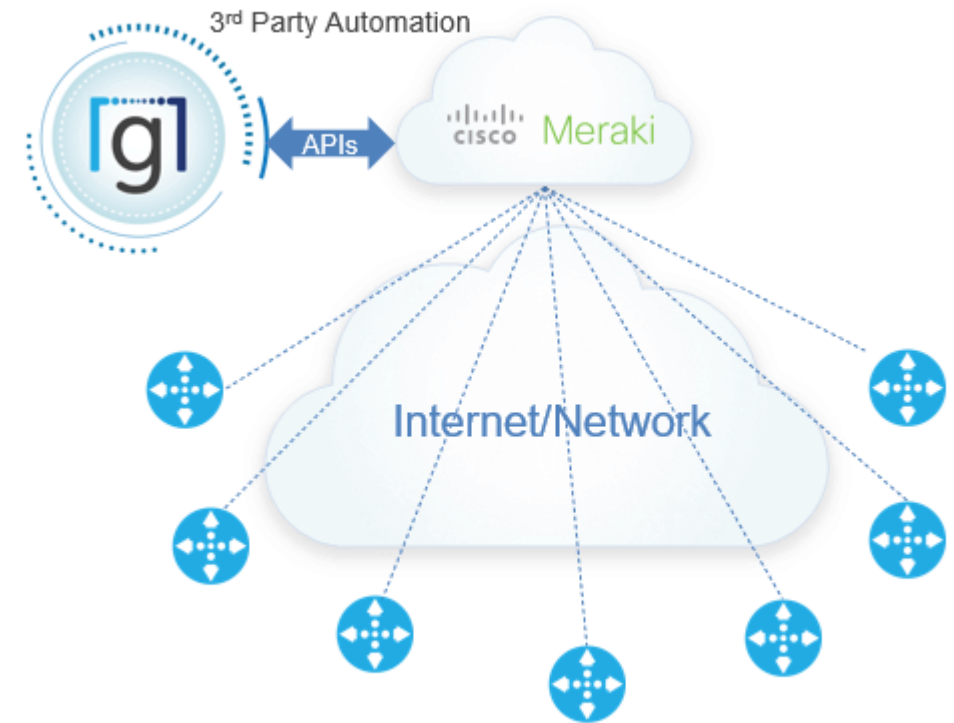
Config Drift / Audit

- Identify config drift
- Execute no-code config audits



Network RPA

- Automate end-to-end processes
- Integrated 3rd party service APIs



Meraki Devices (Access Points, Appliances, Switches)

API Modeling – Meraki Device Manager

The screenshot displays the Meraki Device Manager interface. On the left is a navigation sidebar with options: NETWORK, Office LAB, Network-wide, Security & SD-WAN, Switch (selected), Wireless, and Organization. The main dashboard area shows 'Switches for the last day' with status counts: OFFLINE (0), ALERTING (0), and ONLINE (4). Below this is a search bar and a list of 4 switches. An overlay window titled 'Device Explorer' is open, showing a table of device details.

Type	Name	Environment	Controller Type	OS	Vendor	Meraki Org	Meraki Network	Hostname	OS Version	Serial Number	SKUs
Meraki Cloud		Production	Controller								
Q2CX-K8MJ-A5RM		Production	Controlled	Meraki	Cisco	meraki@huynt	AMER Office 05			Q2CX-K8MJ-A5RM	MS120-8FP
Q2FW-8S2H-4ANY		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MS225-24-01	14.33	Q2FW-8S2H-4ANY	MS225-24
Q2FW-BAWT-WX2S		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MS225-24-02	14.33	Q2FW-BAWT-WX2S	MS225-24
Q2GW-A98J-FR8A		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MS225-24P-01	14.33	Q2GW-A98J-FR8A	MS225-24P
Q2GW-AT4F-YX4J		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MS225-24P-02	14.33	Q2GW-AT4F-YX4J	MS225-24P
Q2KN-NZWH-8JTQ		Production	Controlled	Meraki	Cisco	meraki@huynt	AMER Office 05	ac:17:c8:0f:2a:f8:test		Q2KN-NZWH-8JTQ	MX64
Q2KY-3D8E-PTQR		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MX68 - 98:18:88:cd...	15.44	Q2KY-3D8E-PTQR	MX68
Q2PD-J4W2-BLGL		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	MS225-AP-01	27.6	Q2PD-J4W2-BLGL	MR33
Q2PD-JQ8U-NXLY		Production	Controlled	Meraki	Cisco	meraki@huynt	Office LAB	0010C-AP-02	27.6	Q2PD-JQ8U-NXLY	MR33

Gluware Device Manager

- View inventory across Orgs and Networks
- Search, sort, find/filter



- Enables data to be used in Dashboard and Data Explorer for reporting

API Modeling – Meraki Config Drift

Comparison

10/11/2022 4:10:06 PM (admin from 172.16.0.5) | 10/11/2022 10:16:50 PM (jkleinbach from 172.16.0.5)

```
344 "trafficShapingRules": [
345   {
346     "perClientBandwidthLimits": {
347       "settings": "custom",
348       "bandwidthLimits": {
349         "limitUp": 25600,
350         "limitDown": 25600
351       }
352     },
353     "pcpTagValue": 2,
354     "dscpTagValue": 18,
355     "definitions": [
356       {
357         "type": "applicationCategory",
358         "value": {
359           "name": "Advertising",
360           "id": "meraki:layer7/category/27"
361         }
362       }
363     ]
364   }
365 ]
```

```
342 "firewallAndTrafficShaping": {
343   "settings": "custom",
344   "trafficShapingRules": [
345     {
346       "perClientBandwidthLimits": {
347         "settings": "network default"
348       },
349       "pcpTagValue": 7,
350       "dscpTagValue": 18,
351       "definitions": [
352         {
353           "type": "port",
354           "value": "23"
355         },
356         {
357           "type": "ipRange",
358           "value": "1.1.1.1"
359         }
360       ]
361     }
362   ]
363 }
```

Device Explorer

Type	Name	Environment	IP Address	Vendor	Hostname	OS	OS Version	Serial Number	SKUs	Captured Status
Meraki Cloud		Production								🔄
Q2CX-K8MJ-A5RM		Production		Cisco		Meraki		Q2CX-K8MJ-A5RM	MS120-8FP	🔄
Q2FW-8S2H-4ANY		Production		Cisco	MS225-24-01	Meraki	14.33	Q2FW-8S2H-4ANY	MS225-24	🔄

Gluware Config Drift

- Identify config drift – see exactly what changed

API Modeling – Meraki Config Audit

The screenshot displays the Gluware Config Audit interface. At the top, there are filters for 'Source' (Latest Snapshot), 'OS' (Any), and 'Concept Item' (No Concept Items available). Below these is a 'Scope' field and a checkbox for 'Evaluate each result of the filter individually'. The main configuration area is divided into 'IF' and 'THEN' sections. The 'IF' section is active, showing a rule where 'OS' is 'equal' to 'Meraki'. The 'THEN' section is also visible, showing a rule where the configuration must contain a specific regex pattern: 'network.netflow.collectorIp: 1.2.3.45', 'network.netflow.collectorPort: 2055', and 'network.netflow.reportingEnabled: true'. Both sections have 'Add rule' and 'Add group' buttons, and a 'Delete' button for each rule.

Source: Latest Snapshot OS: Any Concept Item: No Concept Items available

Scope: Scope

☐ Evaluate each result of the filter individually

☐ Simple ☒ IF...THEN ☐ IF...THEN...ELSE

IF

AND OR Add rule Add group

OS equal Meraki Delete

THEN

AND OR Add rule Add group

must contain (regex) Delete

network.netflow.collectorIp: 1.2.3.45
network.netflow.collectorPort: 2055
network.netflow.reportingEnabled: true

Gluware Config Audit

- Execute no-code config audits

API Modeling – Meraki Config Model Editor

- Automate config changes across Orgs and Networks
- Abstracted features to simplify configurations
- Example modeled features for SSID, DHCP, SNMP, NetFlow, SAML...

The screenshot displays the Gluware Config Model Editor interface. At the top, a dropdown menu shows 'Meraki Network'. Below it, a table lists various networks with columns for Name, Description, Version, Created By, Time Created, and a checkbox. A red box labeled 'Select Networks' points to the checkbox column. To the right of the table, a red box labeled 'Apply config policy changes across all networks' points to the 'Published' status column. Below the table, a 'Node Instance Map' section shows a hierarchical diagram of network instances. A red box labeled 'Visual representation of the data model' points to this diagram. On the right side, a 'Configuration' panel shows settings for 'NetFlow Settings', 'Network Settings', 'SNMP Settings', and 'Syslog Settings'. A red box labeled 'Apply config policy changes across all networks' points to the 'NetFlow Settings' section.

Name	Description	Version	Created By	Time Created	Published
Alex WLAN		v1.0.2	admin	3/30/21 9:00:59 pm	<input checked="" type="checkbox"/>
Office LAB		v1.0.1	admin	3/30/21 9:00:59 pm	<input checked="" type="checkbox"/>
AMER Office 15		v1.0.0	admin	4/05/21 11:01:35 am	<input checked="" type="checkbox"/>
AMER Office 48		v1.0.0	admin	4/05/21 11:01:35 am	<input checked="" type="checkbox"/>
AMER Office 11		v1.0.0	admin	4/05/21 11:01:35 am	<input checked="" type="checkbox"/>
AMER Office 05		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>
APAC Office 12		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>
APAC Office 56		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>
EMEA Office 05		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>
EMEA Office 44		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>
EMEA Office 33		v1.0.0	admin	4/05/21 11:01:36 am	<input checked="" type="checkbox"/>

Node Instance Map

AMER Office 15 Meraki Network
AMER Office 48 Meraki Network
APAC Office 12 Meraki Network
AMER Office 05 Meraki Network
EMEA Office 44 Meraki Network
Demol Meraki Organization

My Meraki Cloud Service Meraki Cloud Service
Sync Assembly Meraki Cloud Service
Global Sync Policy Item Synchronizer
Demol Meraki Organization

Configuration

Updating 9 Instances

Network Configuration Identifiers

Settings Wireless

NetFlow Settings
Policy
Netflow OFF

Network Settings
Policy
Corporate Network Settings

SNMP Settings
Policy
Corporate Snmpv2c Settings

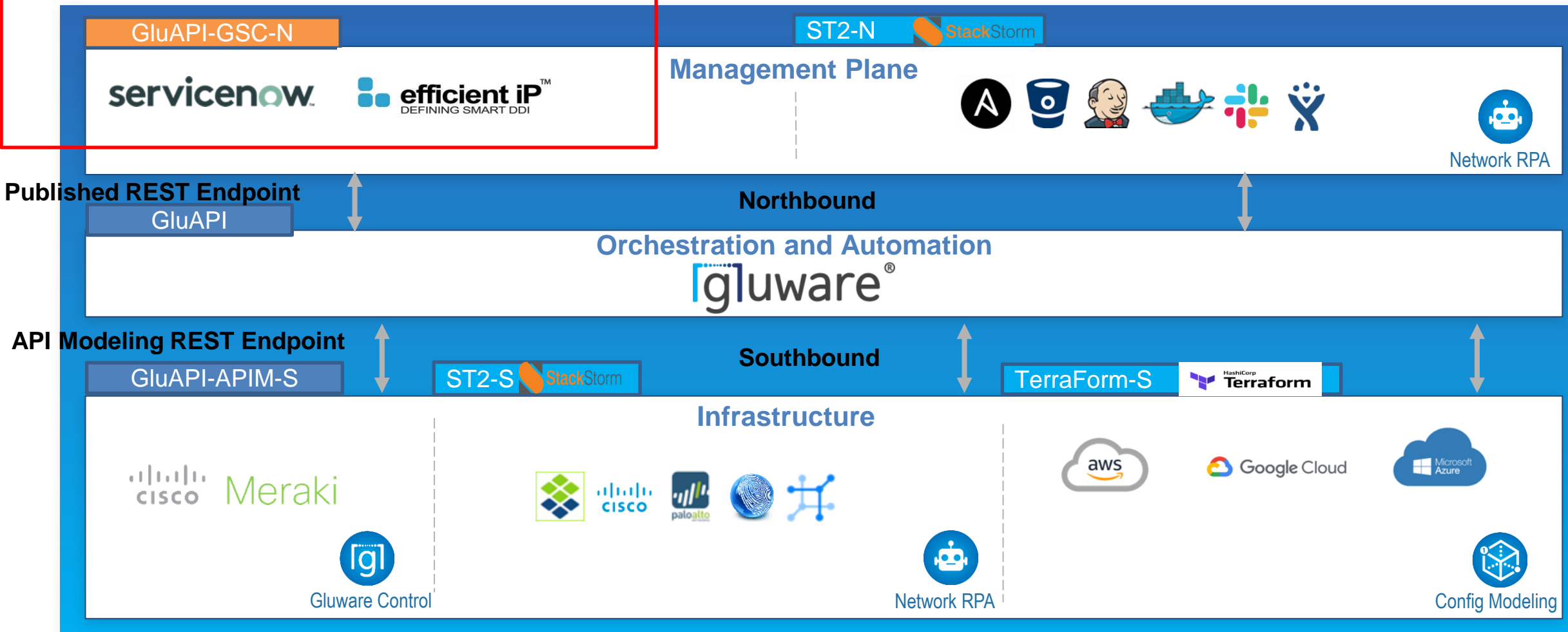
Syslog Settings
Policy
AMER Syslog Servers

Gluware Config Model Editor

Gluware Service Connectors

Gluware API Architecture

Gluware Service Connectors



gluware

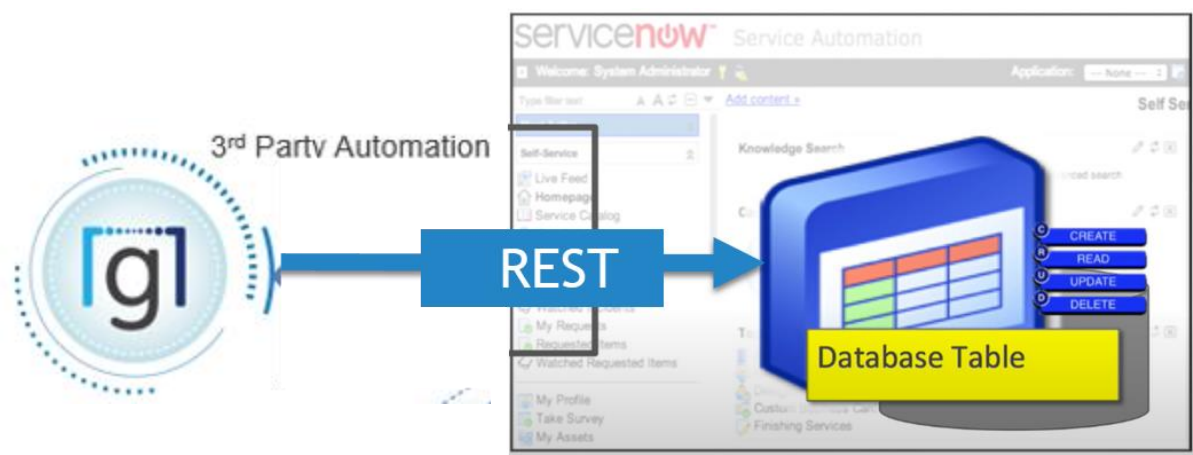
GluAPI-GSC-N

= Purchased Packages



= 3rd Party Open-Source Integrations

Gluware Service Connectors (GSCs)



ServiceNow IT Service Manager GSC

- API onboarded with support from Gluware
- Package of no-code Network RPA tasks for drag-and-drop process automation
- REST Development Kit Package with Lab License

REST-based capabilities include:

- ServiceNow Problem Management
- ServiceNow Asset Management
- ServiceNow Incident Management
- ServiceNow Change Request Management

Expected to Release Q4 (as a package)

EfficientIP DNS, DHCP, IPAM (DDI) GSC

- API onboarded with support from Gluware
- Package of no-code Network RPA tasks for drag-and-drop process automation
- REST Development Kit Package with Lab License

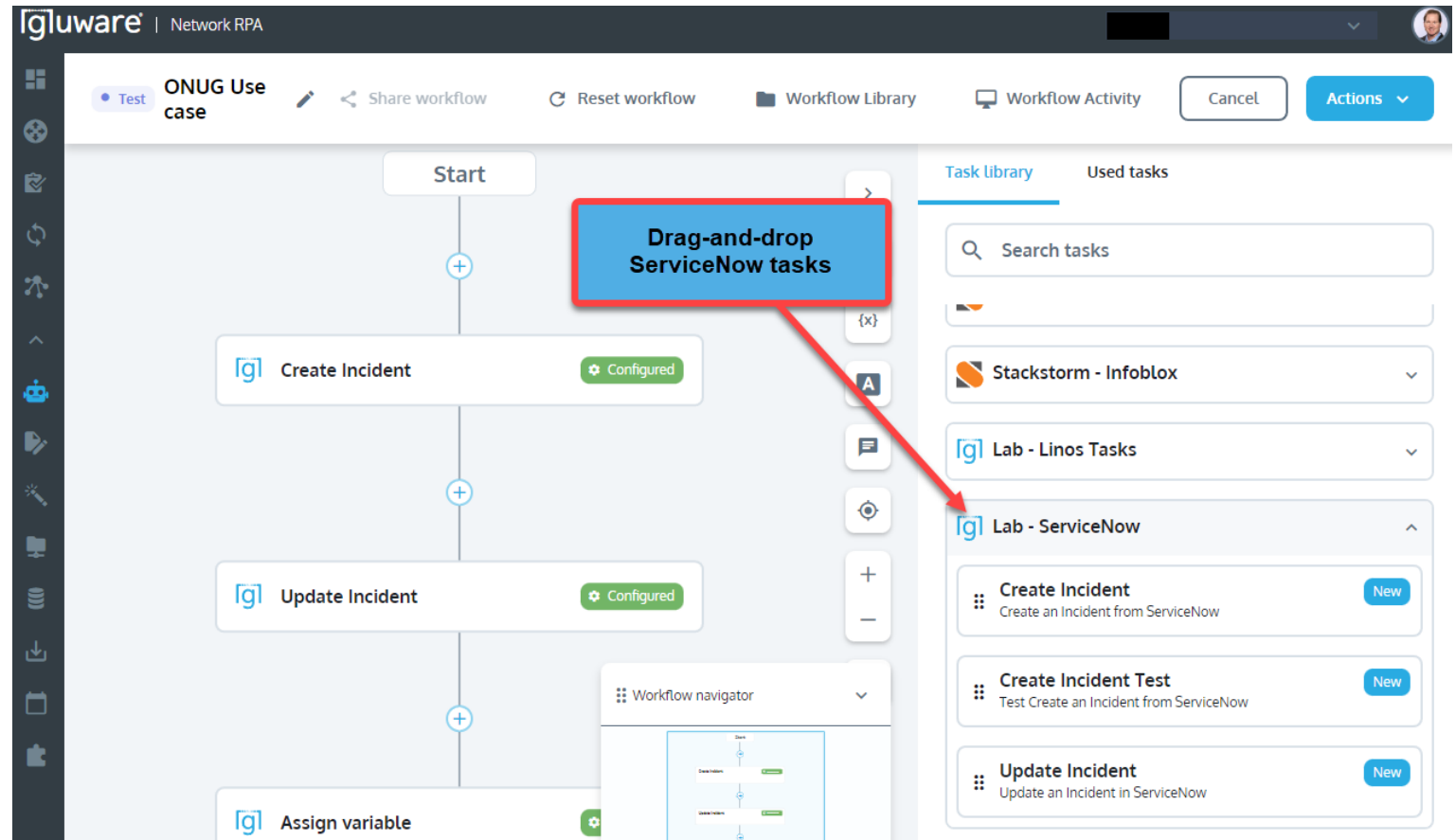
REST-based capabilities include:

- DNS Service Management
- DHCP Service Management
- IP Address Management (IPAM), VLAN, VRF

Gluware Service Connector for ServiceNow

N-RPA Task Category: ServiceNow

- No-code Drag-and-drop canvas
- Pre-built ServiceNow tasks
- Variable handling
- Build workflows with Gluware and 3rd party tasks
- Event-driven with specific triggers or API call
- Run manual, or schedule



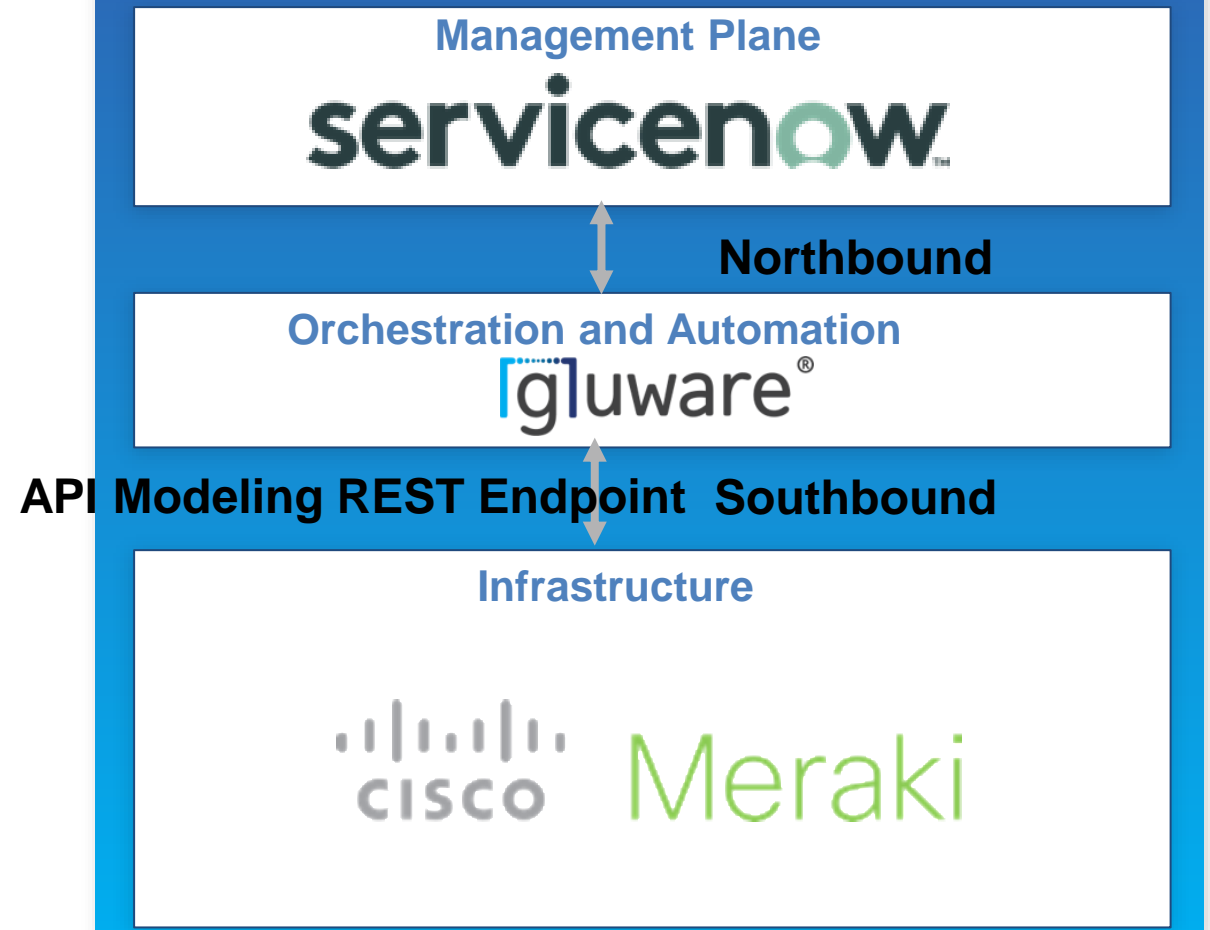
Gluware Network RPA

Use Case Example – No-Code API Integrations Automating Meraki and Service Now

Moving from Task to Process Automation

- Automating Meraki using no-code app suite, inventory drift/audit
- Automating Meraki using Gluware API Modeling, config policies
- Automating ServiceNow using Gluware Service Connectors
- Using no-code Gluware Network RPA (process automation)

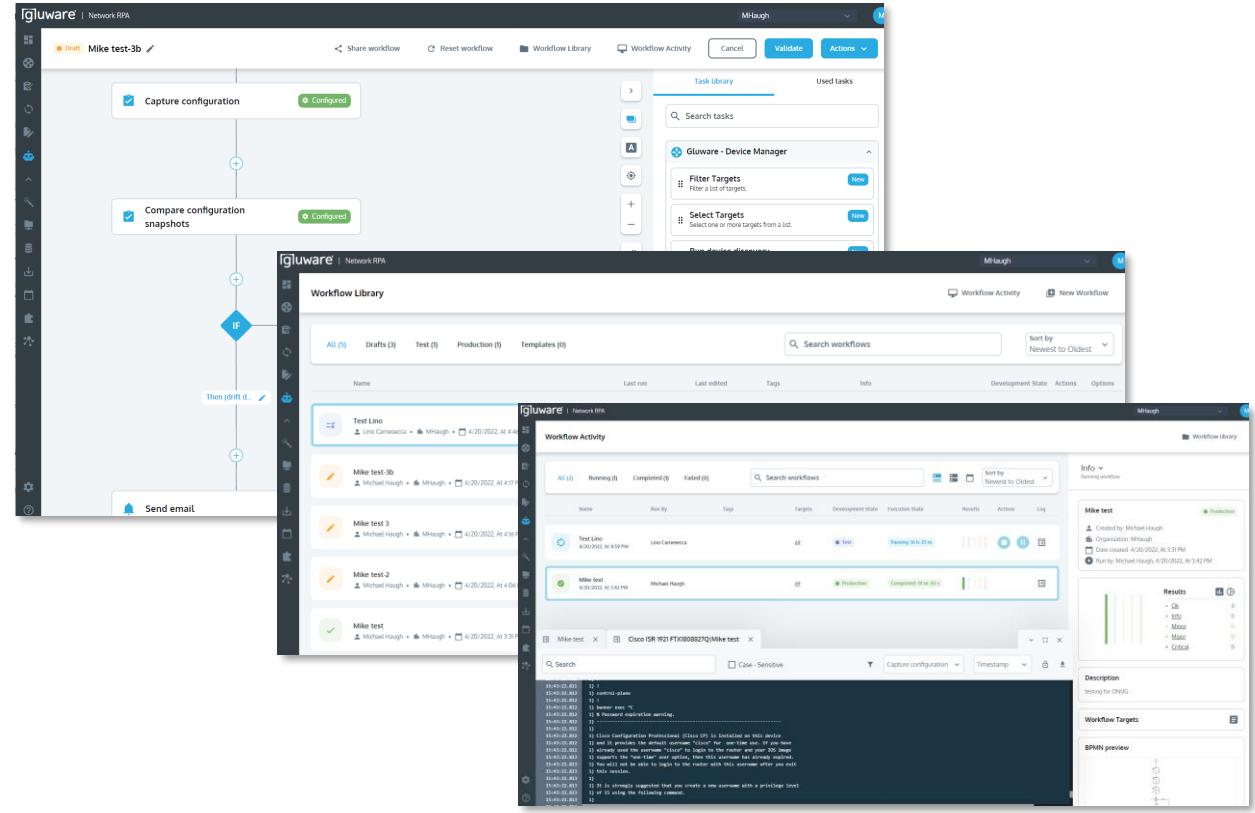
Gluware Service Connectors



Network RPA Enhancements

Network hyperautomation is just a few clicks away.

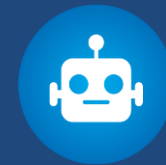
Get to know Network RPA from Gluware.



Library of Pre-Built Automated Tasks



API Exchange & Vendor Ecosystem -- 200+ Integrations



Utilize Gluware BOTs or Build Your Own

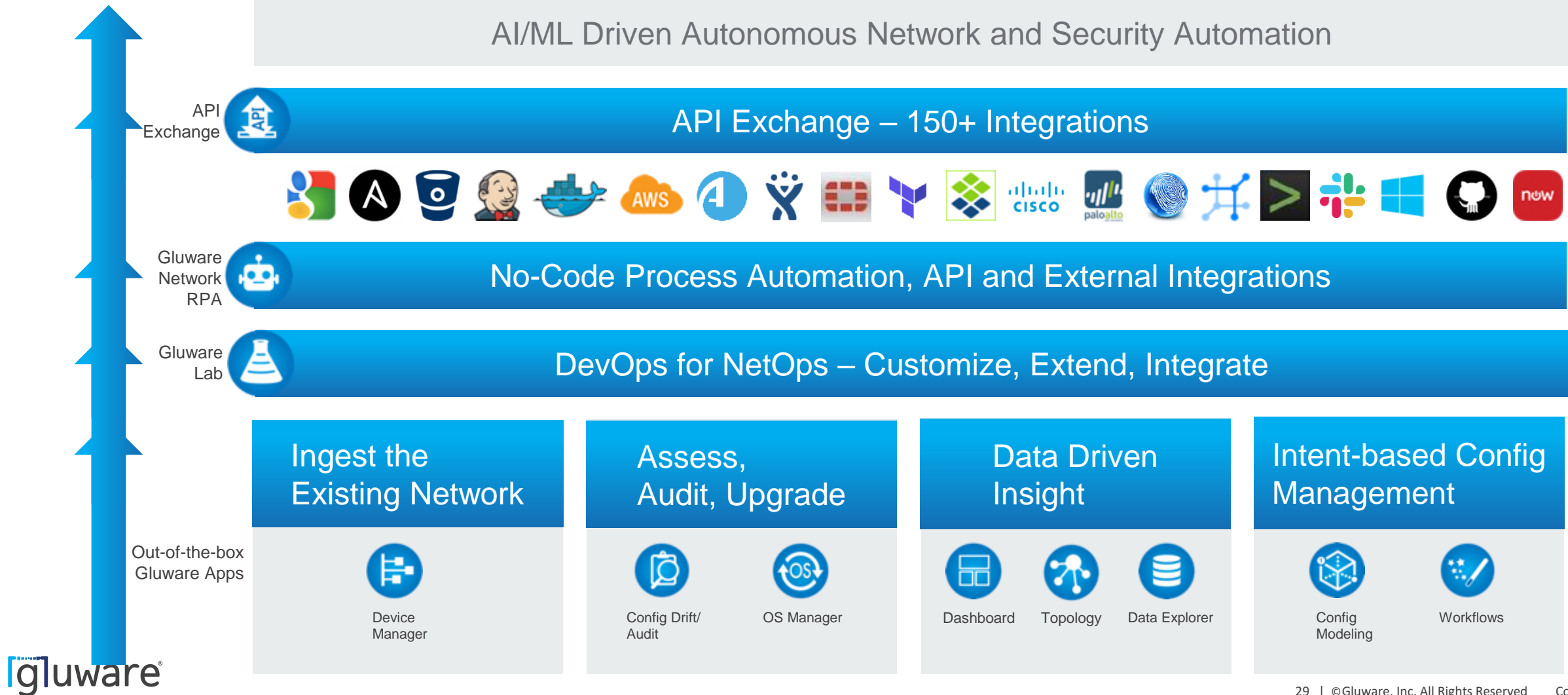


Patented Award-Winning Platform

Superior technology in a drag-and-drop environment. Fastest time to value in the industry.

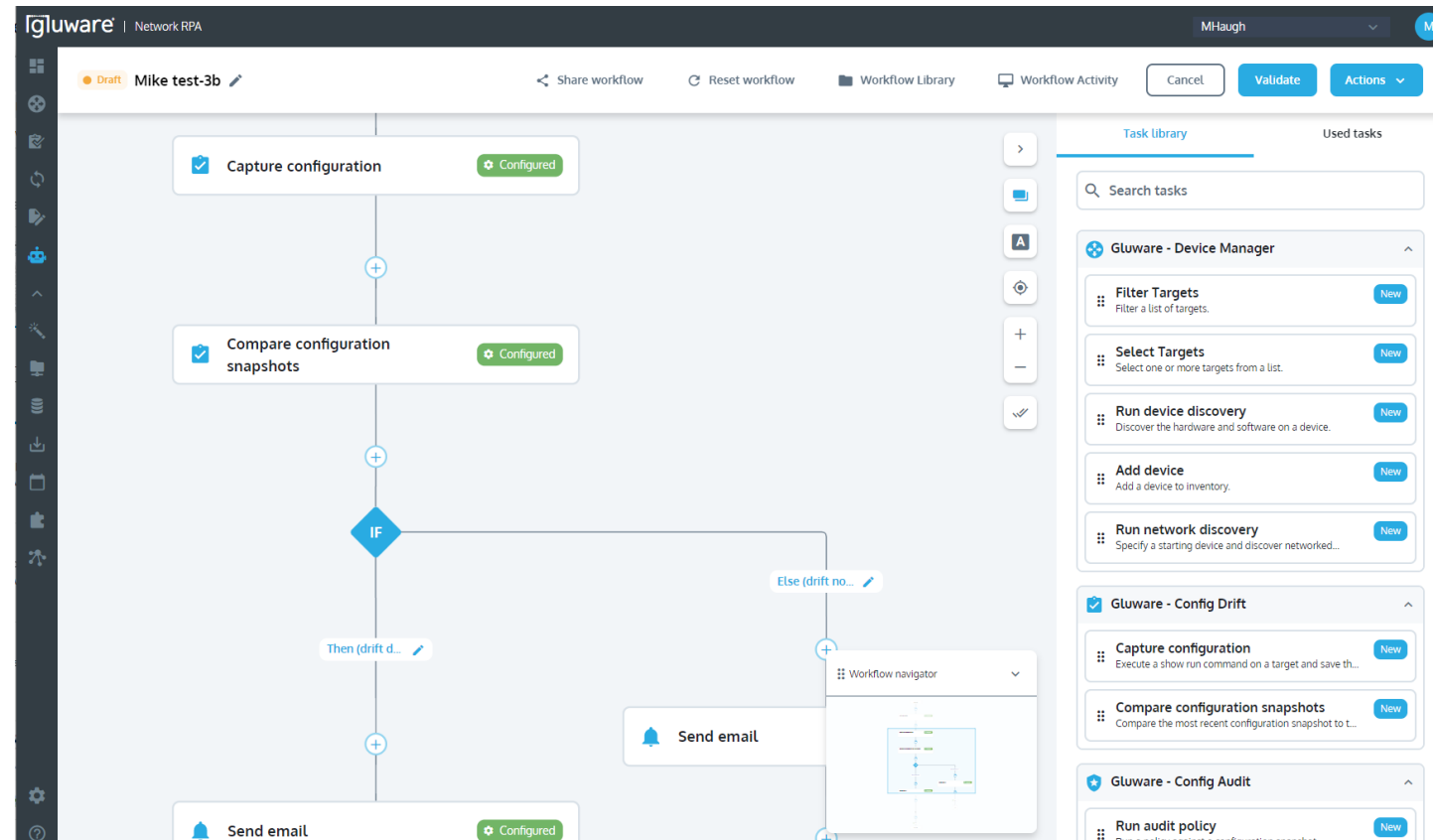
Gluware Intelligent Network Automation:

Rapid time to value out-of-the-box increasing with more abstraction



Network RPA No-Code Editor Simplifies Workflow Design

- ✓ Create public or private workflows
- ✓ Library of Pre-built tasks
- ✓ Support for complex rule-based logic
- ✓ Integrated email messaging
- ✓ Workflow test and validation



New Network RPA Core Enhancements in Gluware 5

- Workflow comments
- Support for workflow variables
- Enhanced custom task support including support for custom forms created in Gluware Lab
- StackStorm support for internal CA for SSL
- Enhancements to workflow sharing settings
- Network RPA data retention settings

New Network RPA Tasks in Gluware 5

Device Manager

- Change device information
- Update support information
- Delete device
- Ad-hoc query for public workflows

Config Drift and Audit

- Set default snapshot

OS Manager

- Validate an OS plan
- Run an OS plan

Config Modeling

- Config Modeling filter task
- Run a state assessment
- Edit Globals using CLI command list
- Assign/change assembly to device

Gluware Script

- Run custom script

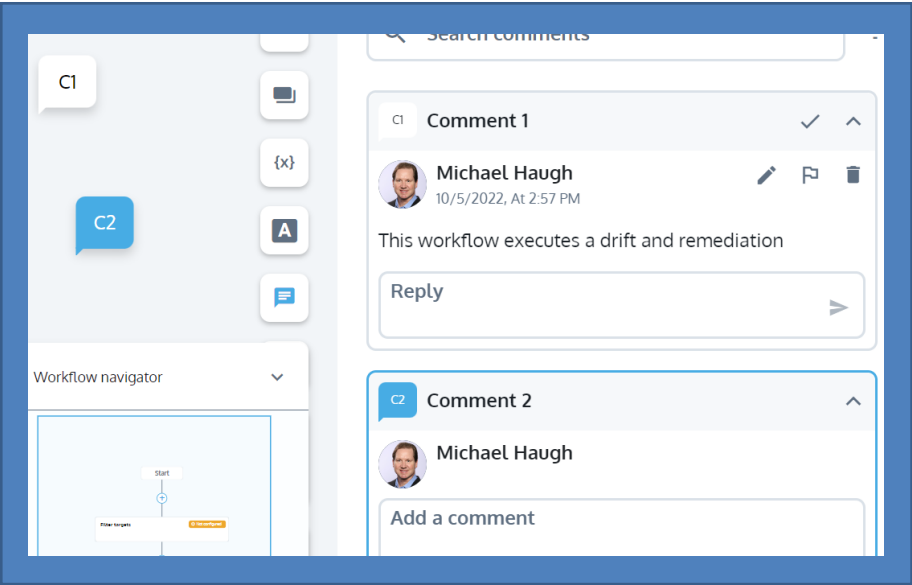
Data Explorer

- Email report task

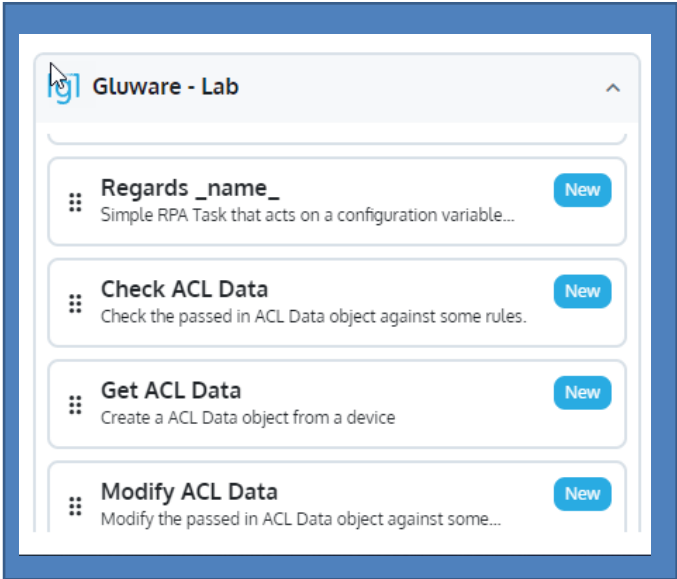
Gluware Lab

- Enhanced custom tasks (built in Gluware Lab)

Network RPA Feature Highlights



Workflow Comments



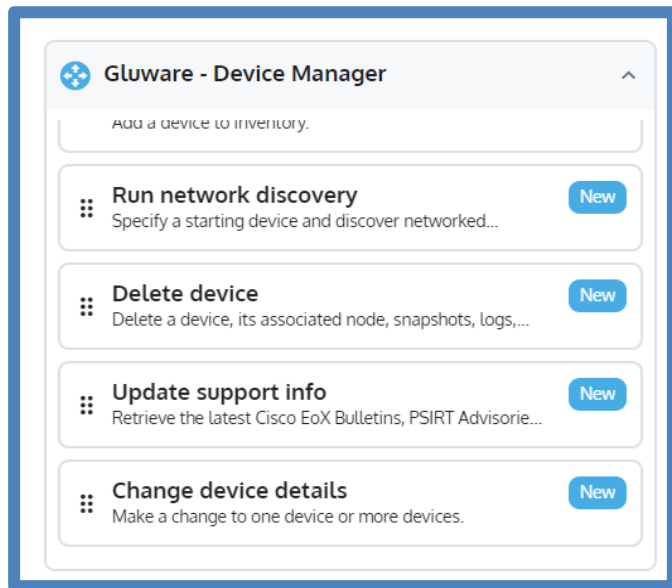
Custom Task Support

A screenshot of the 'N-RPA Data Retention Settings' interface. It shows a table with columns for 'Data Retention Policy', 'Captured Configs', 'Captured device configurations', 'Run Now', and 'Run Now'. The table lists various data retention policies and their corresponding retention periods and run now status.

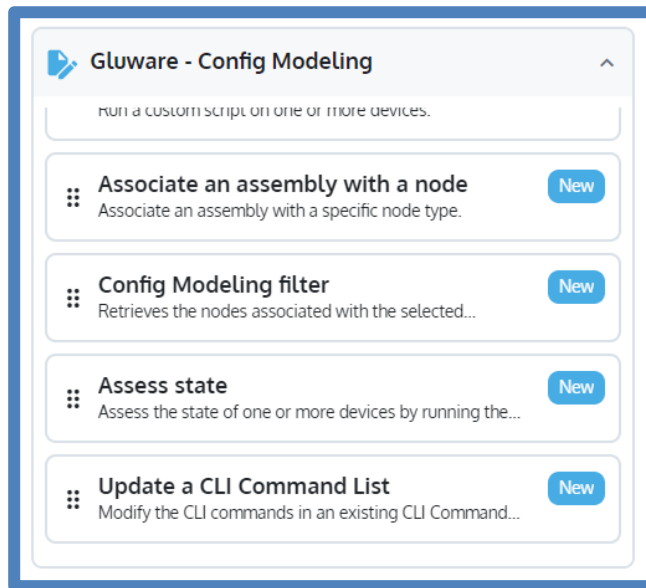
Data Retention Policy	Captured Configs	Captured device configurations	Run Now	Run Now
Activity	Recorded device activities	10	1	Run Now
Audit Results	Configuration Audit results	10	1	Run Now
Audit Policy Activity	Configuration Audit activity	10	1	Run Now
Completed OSM Plans	Completed OS Management Plans	10	1	Run Now
File Server Activity	File and File Server Activity	10	1	Run Now
Schedule Activity and History	The activity and history for active schedules	0	1	Run Now
Exhausted Schedules	The schedule, activity, and history for exhausted schedules	0	180	Run Now
Failed Production Workflow Instances	Failed production RPA workflow activity instances	10	365	Run Now
Successful Production Workflow Instances	Successful production RPA workflow activity instances	10	365	Run Now

N-RPA Data Retention Settings

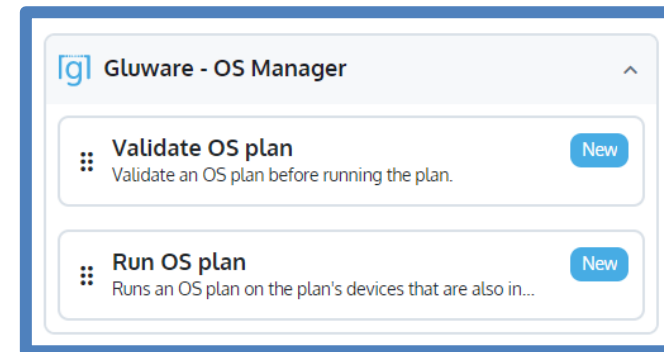
New Network RPA Tasks



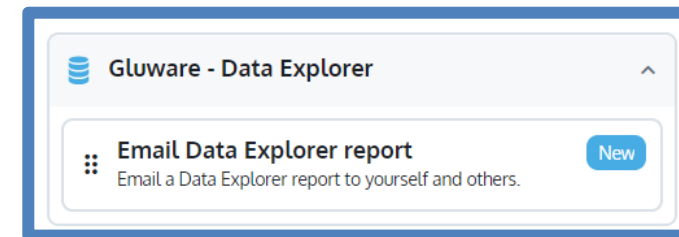
Device Manager Tasks



Config Modeling Tasks



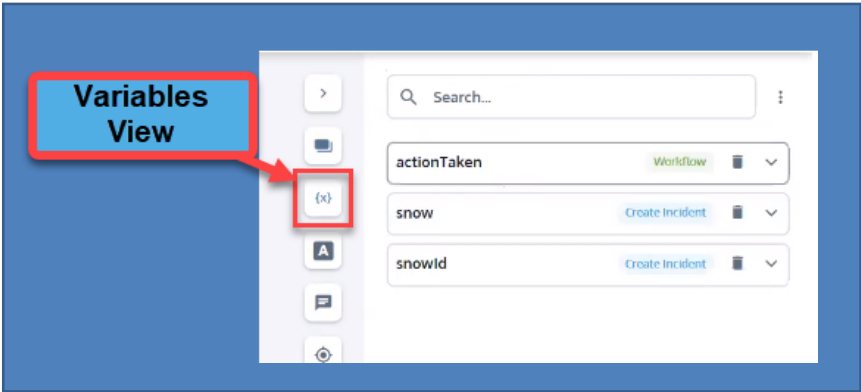
OS Manager Tasks



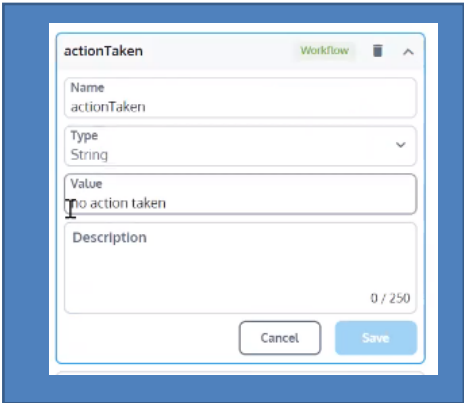
Data Explorer Task

More than a dozen new
Gluware Tasks available!

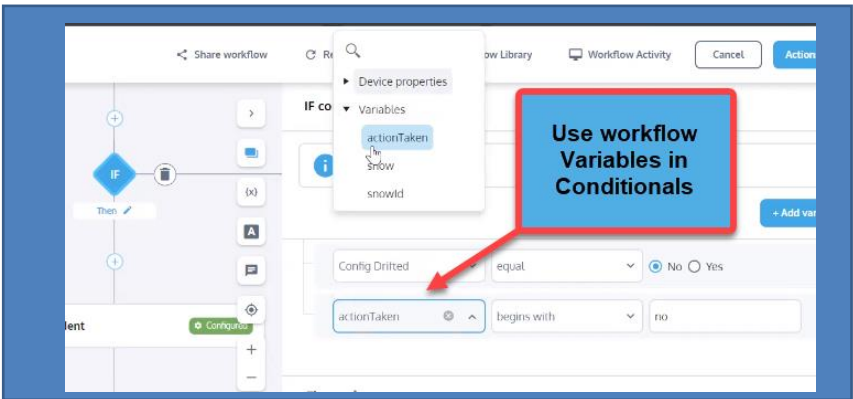
Network RPA – Variable Management



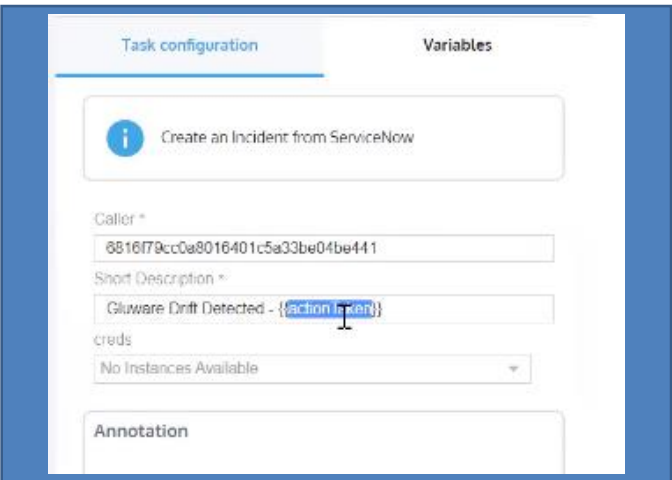
Workflow variables view



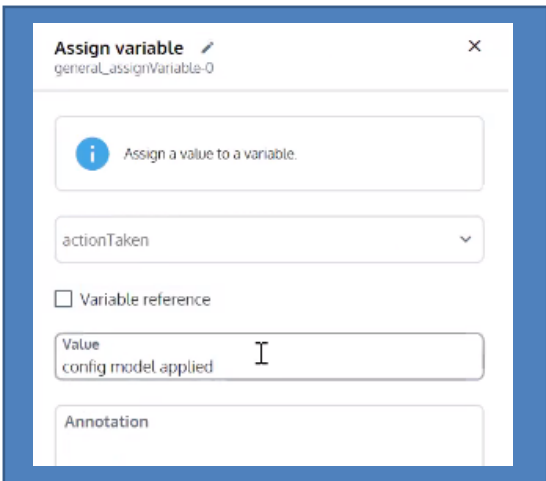
Create workflow variables



Use workflow variables in if/then conditionals



Use workflow variables in other tasks



Use assign variables task to change the value

Network RPA – Task Variables

Create Incident

Task configuration

Variables

+ Add variable

snow

snowid

Create task variables

snow

Name

snow

Type

Object

Value

{{taskResponse}}

Description

0 / 250

Cancel

Save

Use Type Object variables for JSON object responses

snowid

Name

snowid

Type

String

Value

{{taskResponse.inc.sys_id}}

Description

0 / 250

Cancel

Save

Use Type String variables when assigning a value using dot notation within a JSON object

Task configuration

Variables

Assigned Group

Assigned Group

Short Description *

Gluware drift detected - {{actionTaken}} {{orgName}}

Description

Description

Work Notes

Work Notes

problem_id

problem_id

Sys Id

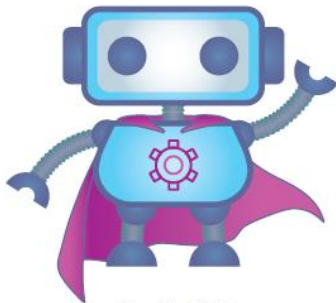
{{snow.sys.id}}

Use task variables in other tasks

Network RPA - Robotic Use Case Examples



Communications BOT



Config BOT



ITSM BOT



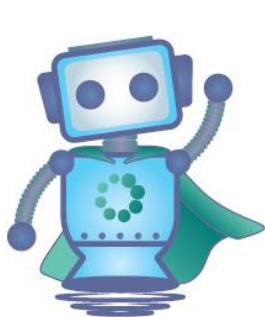
Trigger/Event BOT

Use case #1

Auto remediation of application performance issues due to network misconfiguration

Use case #2

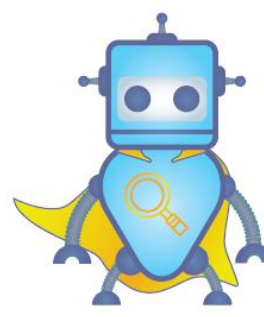
Cloud auto remediation of a known bad actor learned through the ONUG Cloud Security Notification Framework



Software Upgrade BOT



Security BOT



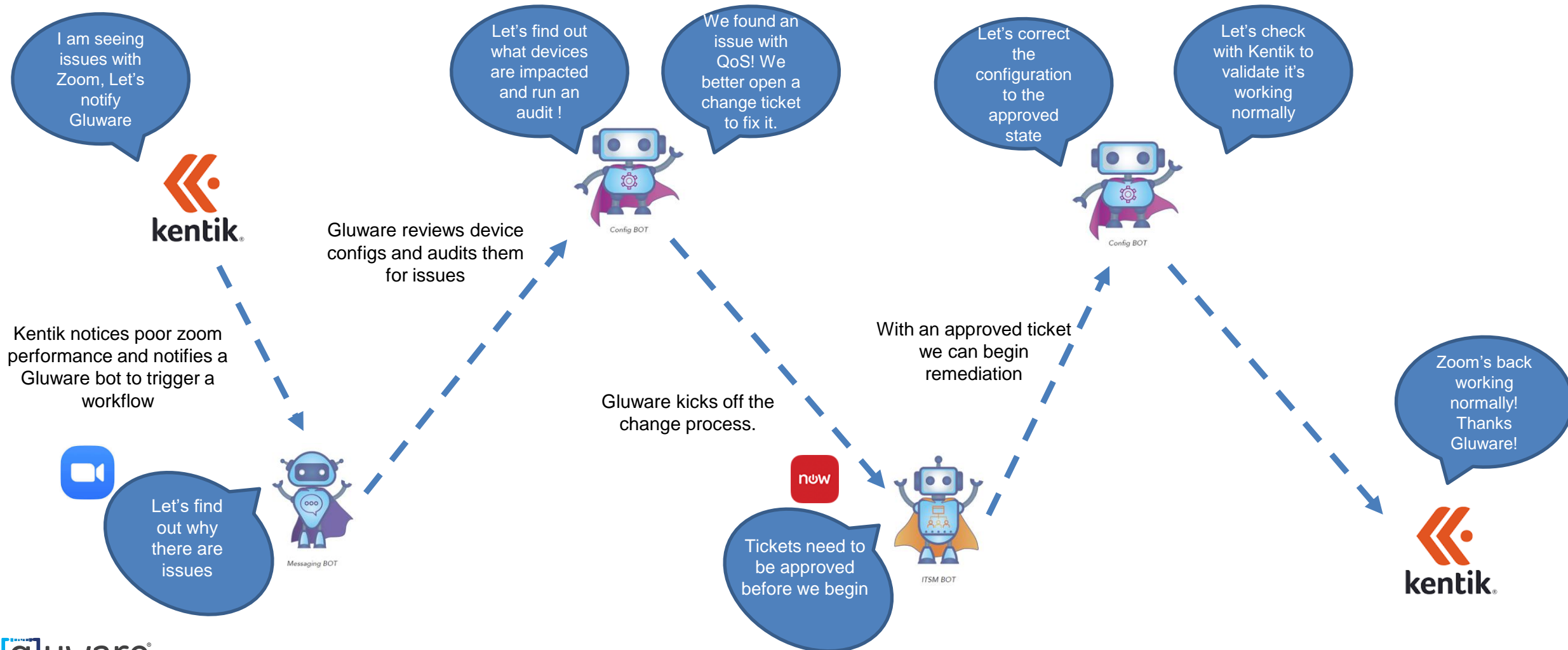
Discovery BOT



Audit BOT

Use Case #1

Auto-remediation of application performance issues



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