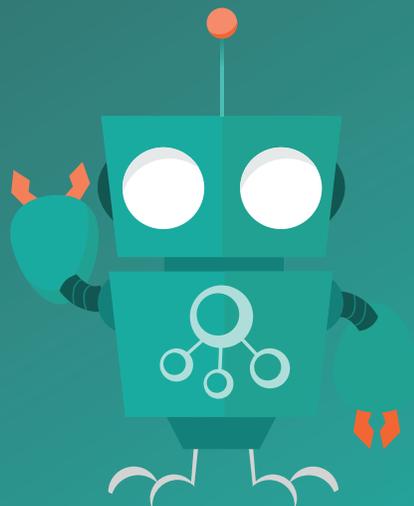# tokalabs®

LaunchStation Controller

Software Defined Labs Platform for
Hybrid Network Management, Topology Orchestration,
Advanced Automation, & Resource Utilization

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Tokalabs LaunchStation (LS) Series Controllers provide a simple push-button approach to building and sharing network resources and automated test beds unlike anything ever designed before. The platform is available in both physical and virtual forms and enables any team – Development, DevOps, QA/Test, TAC, IT Ops, PoC, R&D, QA, etc. – the ability to abstract, manage, and instantiate networking resources from an easy-to-use Web UI or through a robust set of RESTful APIs. That platform includes an integrated automation engine that allows teams to develop or import scripts for test and development purposes or to automate topology environments and reservation processes.

Key Features:

Hybrid Network Management

- Native support for virtually any IP-enabled device
- Create VM & VNF instances with or without external hypervisor
- Launch & manage 3rd party applications
- Add private & public cloud instances to inventory

Topology Orchestration

- Virtual/Physical resource abstraction
- Create & store an infinite number of software provisioned network topologies & test environments
- Automated provisioning of devices
- Execute internal and external scripts

Advanced Automation

- Powerful step-by-step Automation GUI for any device
- Ability to import existing test automation framework
- Integrated support for 3rd party tools
- Dropdown Web Options for quick automated provisioning
- RESTful API support

Resource Utilization

- Create user profiles and privileges
- Assign users to topologies
- On-demand topology reservation & scheduling
- Monitor resource utilization
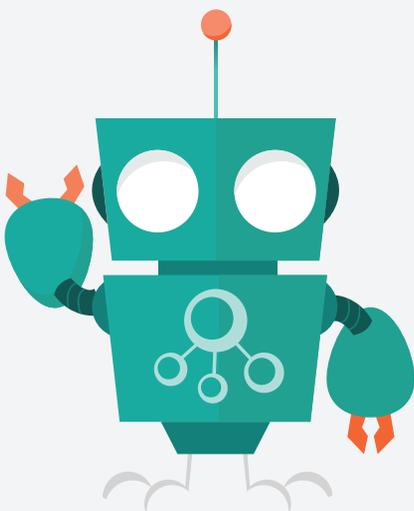
A Centralized View of All Network Resources

Enables teams to easily add any network element (devices, connections, private/public cloud resources) into an easy-to-use Web UI for drag-and-drop topology creation, reservation, execution of tests, orchestration, and automation. The LS enables utilization of resources for an infinite number of use cases and topologies.

Figure 1: Hybrid Network Management Web UI

Add Virtual & Physical Resources Using a Push-Button Approach

Add physical and virtual network elements as well as private and public cloud instances by clicking on the resource types in the Web UI menu. The physical model of the LS can host its own virtual elements. In addition, external hypervisors in a private cloud or through public cloud service providers can also be added and the orchestration of virtual elements can be achieved directly from the LS controller. 3rd Party applications such as file servers, Jenkins, LAMP, Traffic/Load Generators and a list of others can be spun up instantly for use.

Figure 2: Push-button UI for Adding Devices to Inventory
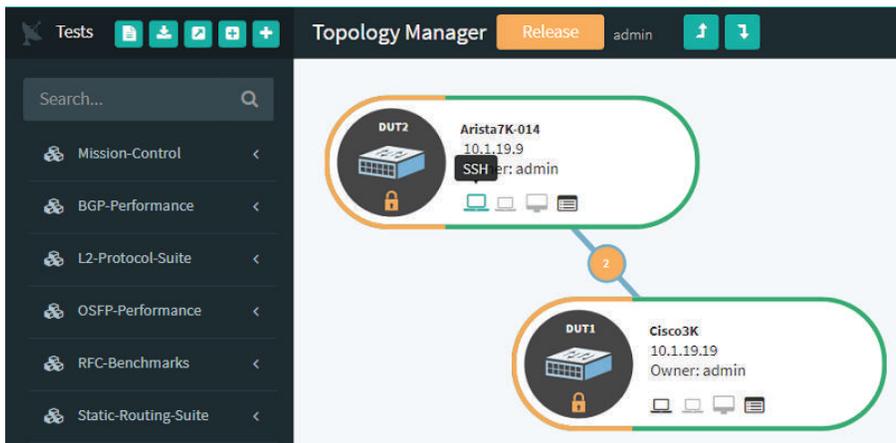
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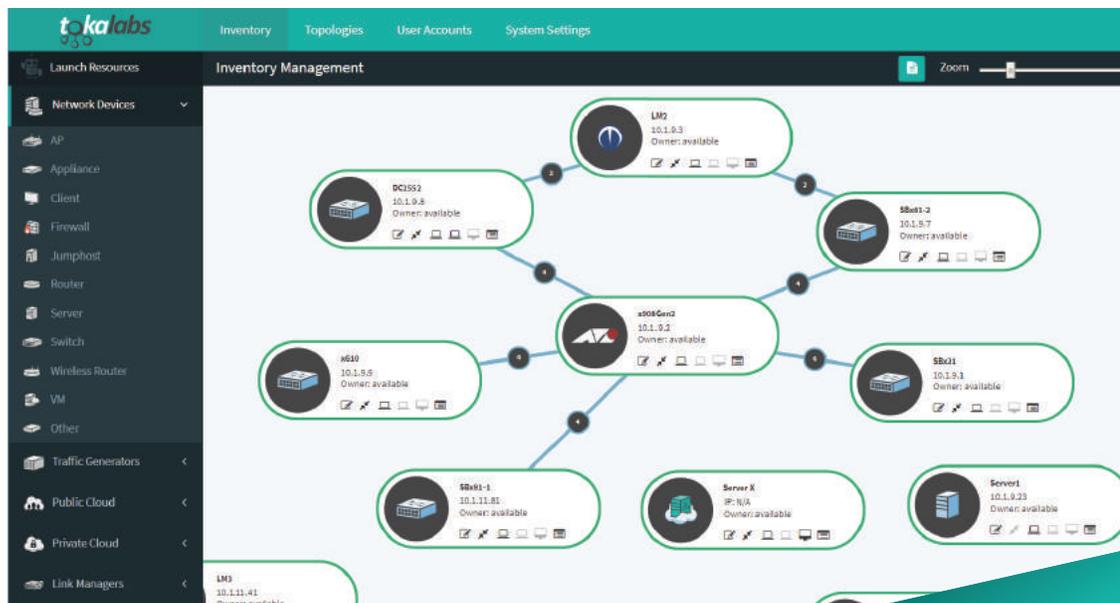
Access Any Resource From the Web UI

Resources are accessible directly from the LS controller's Web UI by simply clicking on the management icon. Resources can be accessed using a variety of methods including but not limited to:
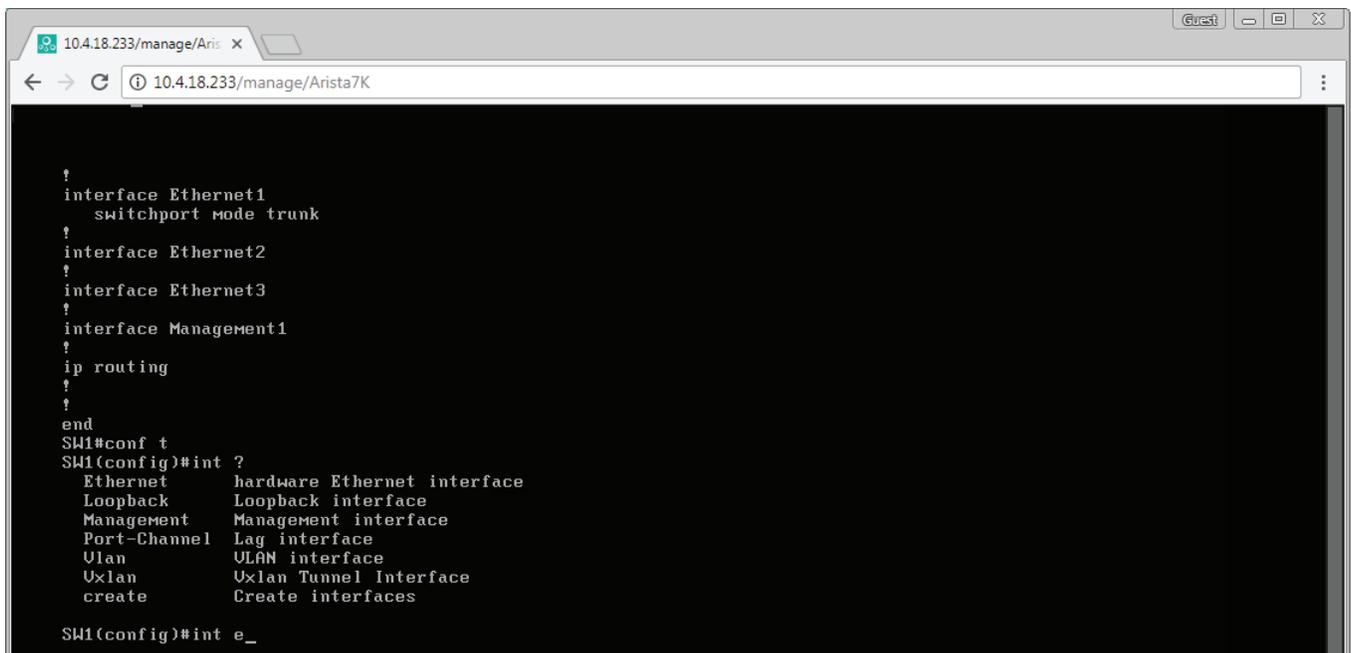
- Telnet
- RDP
- HTTP/S
- SSH
- VNC
- SNMP

Figure 3: Managing Devices from the UI

Each resource can be managed directly through the web session regardless of the management protocol type.

Figure 4: Console Management Example

Topology Creation Using a Seamless Software Defined Approach

Creating topologies within the LS Controller is easy! Users simply select the resources and connections they want to include in a topology and the LS Controller will handle the heavy lifting on the backend to configure the network as needed.

Since topology creation is achieved at a software level, no physical manipulation of the connections is needed. Users can create many topology templates using the same resources for future use and these topologies remain reusable and shareable.

Figure 6: Topology Creation
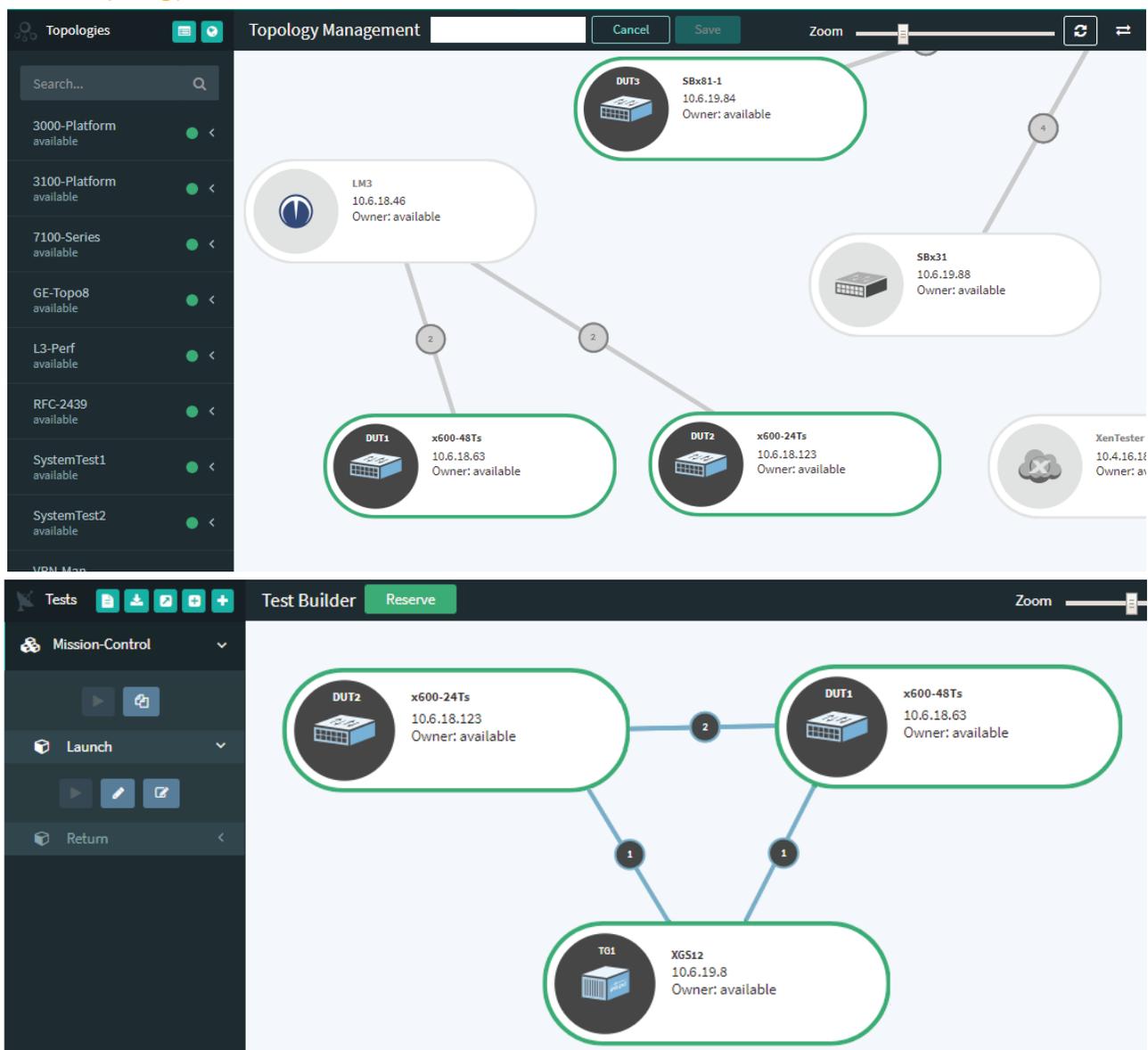
Automated Provisioning of Resources

Easily provision the orchestration of any number of actions within a topology once activated. A topology template can include bringing up devices - regardless of vendor or device type - with specific software releases, configurations, and even the execution of external scripts.

Upon reservation of the topology, this specific snapshot will be loaded for the duration of its use and then removed when the topology is released.

Users can also "clone" topologies to make two topologies with the same attributes and provision them with specific changes (such as a different firmware on one device or a set of devices).

Figure 7: Provisioning Startup for Devices in Topology
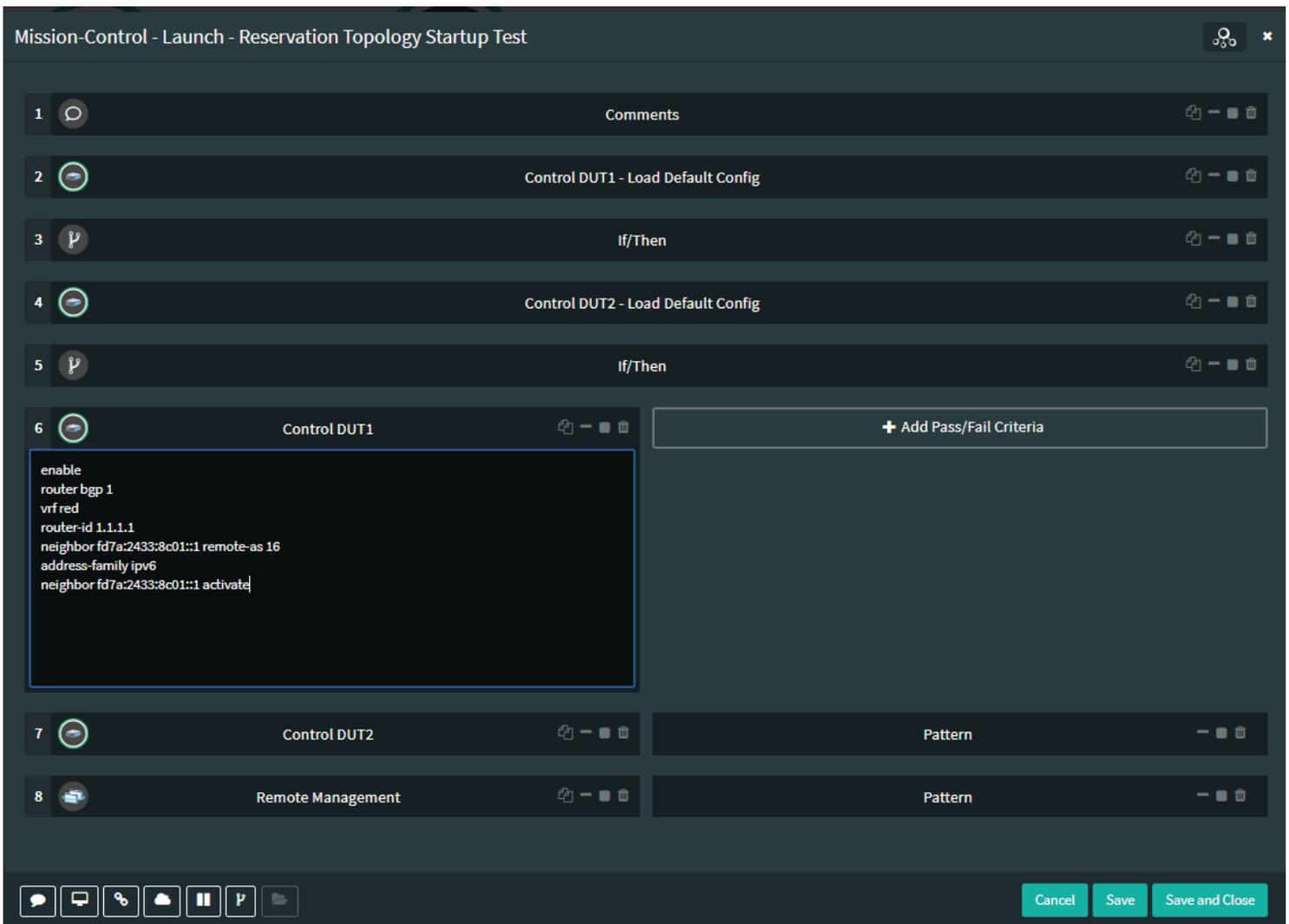
Test Suite Creation and Execution

Run tests by simply importing existing test suites, cloning tests from existing suites, editing from the library, or creating brand new test cases using a powerful step-by-step Web UI. User inputs are captured and new test scripts are constructed by the Tokalabs Automation Engine.

Users can integrate physical and virtual resources in the test framework including load generation tools from vendors such as IXIA and Spirent.

Figure 8: Import an existing test suite and add new tests to existing or newly-created test suites
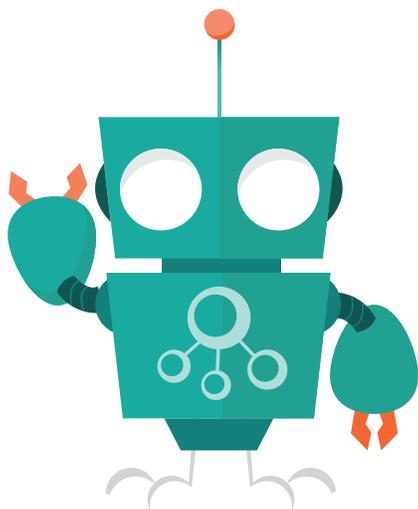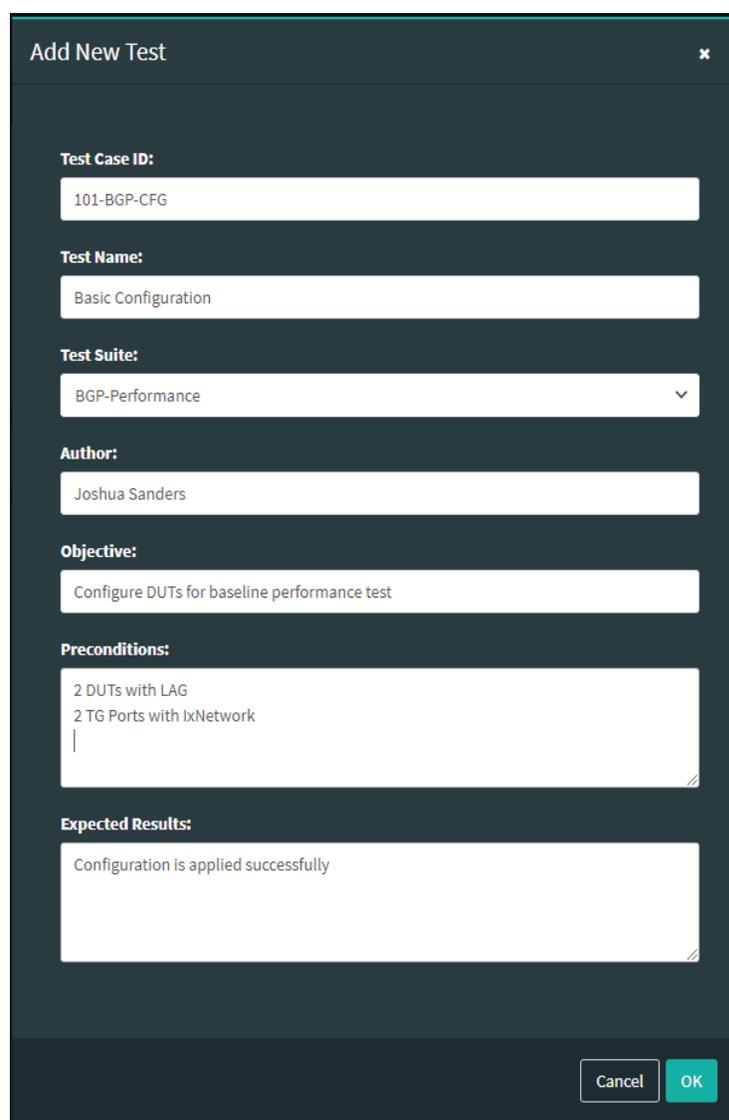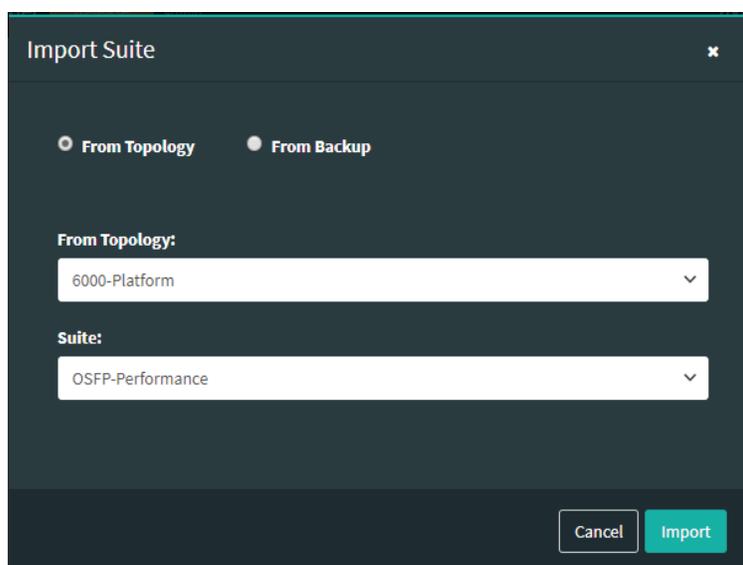
Monitoring Automation Workflow

Click-and-run test execution allows users to monitor automation workflow and provides automatic reporting. The Automation Engine generates complete records of test results, logs, tables and graphs for in-depth test analysis.

Figure 9: Monitoring Automation Workflow in real-time
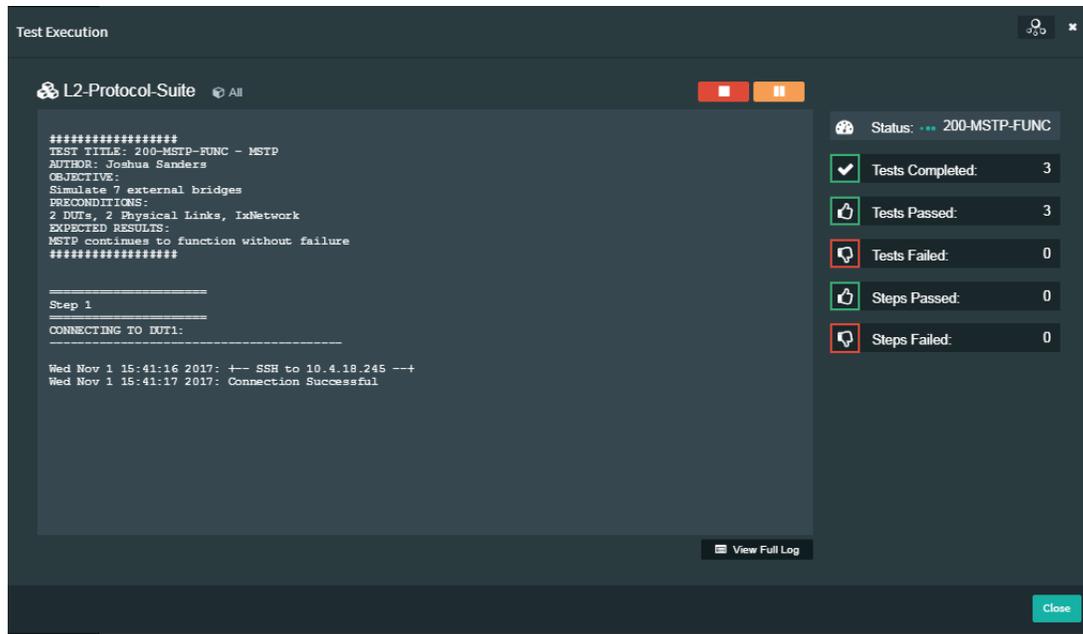
Automated Web Options

Drop-down Web Options can be added to any Telnet or SSH-Enabled resource to enable quick automated task execution. Some examples of these tasks could include enabling or disabling interfaces, configuring specific features, or executing entire scripts on a device by simply clicking on the dropdown menu icon on the resource widget. Web Options can also be executed within any automated test.

Figure 10: Customized Web Options can be accessed from a simple drop-down menu

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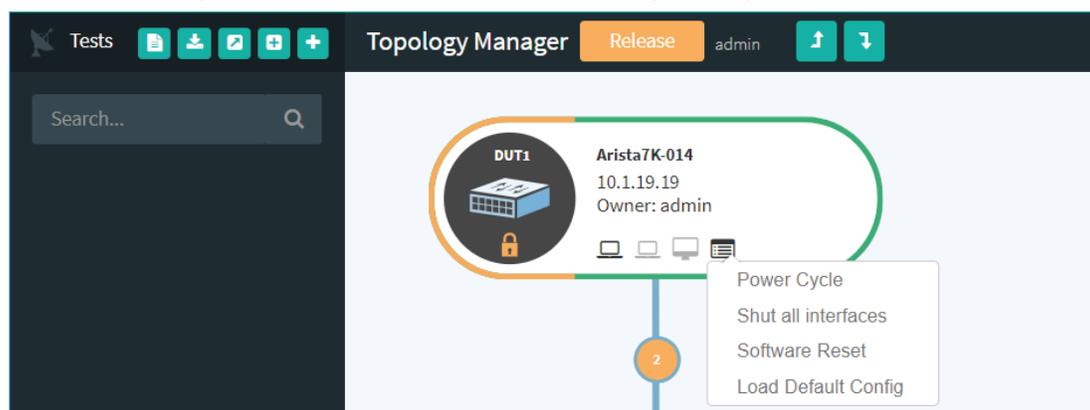
RESTful API Support

Nearly every action available in the Web UI can also be executed through a robust set of RESTful APIs.

Adding and removing resources, management of devices, construction and provisioning of topologies, and the execution of tests can all be automated tasks.
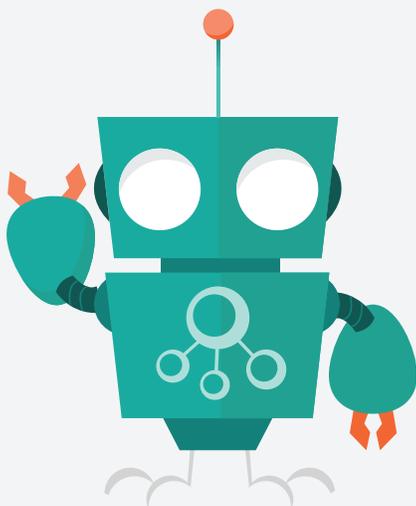
Figure 5: RESTful APIs Capabilities

REST

Management

Orchestration

Automation

Scheduling

Analytics

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Highly Scalable User Services

An unlimited number of user profiles with different privilege levels or roles can be assigned to segment resource access. Resource utilization can be monitored on a per device, per topology, or per user basis. Limiting access and control of resources is also possible by assigning privileges to users.

Table 1: User Privilege Levels

Admin
- System Settings
- System Reports
- User Settings
- Inventory Management
- Physical Connection Management
- Logical Connection Management
- Testbed Creation
- Testbed Control
- Testbed Assignment
- Test Edit & Execution

Manager
- Inventory Management
- Physical Connection Management
- Logical Connection Management
- Testbed Creation
- Testbed Control
- Testbed Assignment
- Test Edit & Execution
- Reports

Engineer
- Logical Connection Management
- Testbed Creation
- Testbed Control
- Testbed Assignment
- Test Edit & Execution
- Reports

User
- Testbed Control (by assignment only)
- Test Edit & Execution
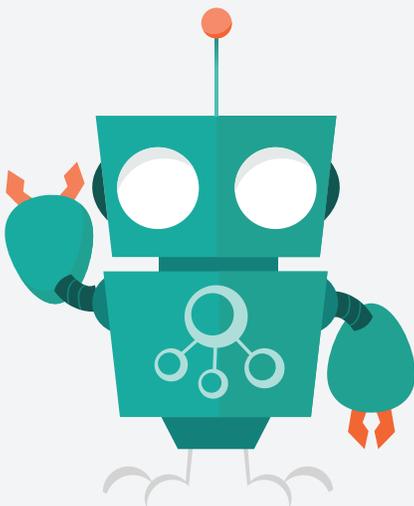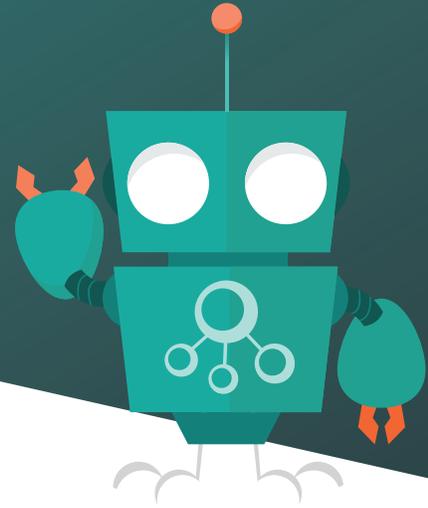
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To learn more, contact us at learn@tokalabs.com or visit our website at www.tokalabs.com

About Tokalabs

Tokalabs enables customers to create Software Defined Labs (SDL) - a simple push-button approach to building and sharing network resources, topologies, and automated frameworks. Through Tokalabs, teams in the IT space can design, create, manage, and automate functions across any network device regardless of vendor or supported management protocol. Whether it's automating simple device functions or full-scale network orchestration, Tokalabs removes the pain and complexity out of the process.

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