



Velocity Core

Version 25.4.0

System Release Summary (Rev A)

December 2025

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Overview

This document contains information about the enhancements, fixes, and known issues in Spirent Velocity release 25.4.0. In addition, a summary of a few of the new features and enhancements is now included in this document. See section [Velocity Core Feature Summary](#).

Enhancements

Each major release of Velocity has one or more themes that drive feature selection. The primary focus of the GA Velocity 25.4.0 release is listed below.

Note: The link in the **Functionality/Capabilities** column takes you to the section that describes the feature summary.

Theme	Functionality / Capabilities
Functionality	Multi-Topology Runlists - Ability to use more than one topology in an execution of a runlist - Wider test coverage with the ability to test nodal, adjacent, and end-to-end topologies in the same execution
	Interactive Workflow (SLC) Session Logs - Download SLC session captures as a log file from a reservation - Share troubleshooting records with other team and technology partners
	Admin and User Configured Token Lifetime Admin user: Sets system-wide maximum allowed token validity for token generation. Velocity user: Sets a custom duration for generating a token used for API authentication.
	Multivalued Resource Properties - Set multiple values to a resource property from a list of valid choices from a drop-down display - Expanded inventory tracking capability, enhanced abstraction functionality
	Telescent Driver - Layer 1 switch driver for the Telescent NTM G5 - Create high scale Layer 1 switch matrices with Telescent G5 and seamlessly automate its cross-connects in Velocity Core
Performance	Improve online backup time
Security and Third-Party Upgrade	Upgrade PostgreSQL, Java, WildFly, Kafka, and OpenSearch

Important:

OpenSearch Upgrading

Before upgrading read the details in [OpenSearch Upgrading](#) below.

Deprecate Cluster Support for Velocity Core Datastore (VDS)

The Velocity 25.4.0 release removes support for clustering instances of the Velocity Datastore (VDS) VM.

End of .ISO format support to Deploy Velocity on OpenStack and KVM environments

Velocity 25.4.0 supports **qcow2** image file to deploy Velocity on both OpenStack and KVM environments and no longer supports **.iso** image file for deploying Velocity on OpenStack and KVM environments.

Note: Velocity and VDS can be deployed using HEAT templates on OpenStack Caracal. Contact support if you need an example HEAT template.

NetScout Driver Support

Velocity 25.4.0 does not support the NetScout driver even though the driver is still included. It is recommended to use the **Velocity L1 Switch Driver** instead of NetScout driver.

Note: Velocity 26.2.0 will remove the NetScout asset.

Additional Notes:

If you use external console server to provide additional security for terminal sessions, follow the instructions provided in the *Velocity Core Deployment Guide* to download the Distributed Console Server package and configure the external console servers.

Velocity Compatibility Matrix

The following table identifies the software versions supported.

Item	Type	Versions
Velocity VM Deployment Environment	Hypervisor	ESXi version 8.0.3 KVM Version 1:4.2-3ubuntu6.30
	OpenStack Caracal	Version 2024.1
User Interface—Browser	Edge	Version 142 based on Chrome
	Google Chrome	Version 142 (64-bit)
Velocity Agent	Windows	(64bit OS only) Windows 11 Pro, Windows Server 2022
	Linux	(64-bit OS only) RHEL 9.5, Ubuntu 24.04 LTS
L1 Switch	MRV**	MCC and OCC supported using MRV releases: - EM316LNXNM v4.6 mcc 04 - EM316LNXNM v4.10 mcc 01
	Calient	Version B6.0-7, Model:S324 Version 6.1-3a, Model: S320(for E640 solution) - validated in 9.0 release
	Velocity L1	Test Stream Management Software, version 04.08.200.025 Model: 3901R
	Telescent	Model: NTM Software version: 25.7 Serial number: ST101141
	Polatis	Model: N-VST-48x48-HU1-DMHNS-800 Name: POLATIS Inc . Version: 6.8.1.4
	Lepton	Model: ColdFusion-1 Software Version: 1.5.84
L2 Switch	Cisco	Model: 3850, Version: 16.6.7
Spirent TestCenter Avalanche	Application	5.60 5.57
OpenStack	Cloud Manager	Caracal Version 2024.1
VMware VSphere		Version 7.0
Amazon Web Services (AWS) CLI		Version 2.32.21
Kubernetes		Version 1.28.1
Database	POSTGRESQL	17.7
	OpenSearch	3.3
	Minio	2021-04-22T15:44:28Z
	Kafka	4.1.1

** Tested on:

U-Boot 1.0.3.4 Linux kernel v2.6.32.1-mrv EM316LNXNM (firmware 5c.1c)

U-Boot 1.0.3.4 Linux kernel v2.6.32.1a-mrv EM316LNXNM (firmware 5e.23)

Known Issues in Velocity 25.4.0

This section lists known, unresolved issues in this release.

Issue Key	Summary
RM-38568	If a runlist is executed using a topology to which the non-admin user does not have access, the runlist will run without a topology. The runlist will still execute successfully, but no topology reservation will be made, effectively behaving as if the runlist had been created without a topology.
RM-38563	In rare situations, if Velocity restarts during an active runlist execution, the runlist may remain in an “In Progress” state for an extended period. If the runlist stays in this state significantly longer than expected, it may be stuck. Workaround In such cases, the issue can be resolved by restarting the execution service. Contact Spirent Support for guidance on restarting the execution service safely.
RM-38075	VDS 25.4.0 upgrades OpenSearch Database which requires data migration. The OpenSearch migration creates a complete copy of the existing OpenSearch data, so sufficient free disk space must be available before starting the migration. - It is recommended that you have at least twice the size of the current OpenSearch database available as free disk space. For example, if the OpenSearch data size is 15GB, there should be a minimum of 30GB of free disk space. - The time required to complete the OpenSearch migration depends on the size of the OpenSearch database and can take several hours. Based on our testing, migrating 13GB of data took approximately 3 hours and while migrating 31GB took more than 7 hours. You can determine the size of the OpenSearch database by using the OpenSearch REST API with tools such as curl, Postman, or any other REST client. For example, the database size can be retrieved using the following curl command: <pre>{code} # Command template. curl -k -u<admin-user>:<admin- password> https://&lt;vds- host>;9400/ cat/allocation?v # Example where admin user is "admin", admin password is "MySecret456", and VDS address is "my- vds-host.com" curl -k -uadmin:MySecret456 https://my-vds- host.com:9400/ cat/allocation?v #Sample return from OpenSearch that uses 17.5 gb of disk space. shards disk.indices disk.used disk.avail disk.total disk.percent host ip node</pre>

Issue Key	Summary
	500 17.5gb 66.8gb 83.1gb 149.9gb 44 127.0.0.1 127.0.0.1 VDS 1 UNASSIGNED
RM-38332	We identified an issue with the OpenSearch index mapping field count that may cause the upgrade to version 25.4 to fail. Pre-upgrade step It is recommended to update the index mapping to support a higher number of fields. Contact Spirent Support for detailed instructions.
RM-38370	Issues with Kafka errors on IPv6 setup after upgrading to 25.4.0. Contact Spirent Support for detailed instructions
RM-38151	After the Property Type is changed to Multi Drop-down , the comma remains available for selection. Additionally, even if it is removed from the list and other values are added, the comma value continues to be saved until another value is manually selected.
RM-35753	When attempting to generate a report for download, the message “There was an error generating this report” appears.

Fixes in Velocity 25.4.0

This section lists the fixes in this release.

Issue Key	Summary
RM-38494 SR-01696815	Velocity Inventory-Property Hyperlink value not getting exported to CSV file.
RM-38333 SR-01696035	Critical Vulnerabilities found in Velocity Core.
RM-38194 SR-01694498	Issues with cable visibility for non-admin users in Velocity.
RM-38189 SR-01695283	Issues with external Agent qc_driver on Velocity instance.
RM-38137 SR-01695191	The endpoint GET /device/{deviceId}/nested_resources is missing from the API documentation.
RM-38053 SR-01693524	Issues with some of the Velocity test case execution when running the tests.
RM-38002 SR-01693596	Issues with displaying the selected ports on the "Create Connections" window.
RM-37995 SR-01693427	Issues with Velocity Core UI performance when viewing Reservations > Resources.
RM-37980 SR-01693326	Links not visible in topology after Velocity upgrade.
RM-37959 SR-01693327	Performance issues after Velocity upgrade.
RM-37854 SR-01692320	Topology View becomes unresponsive in reservation with many assets.
RM-37876 SR-01692348	Issues with setting up certain pages as Home Page in Velocity.
RM-37843 SR-01691745	Issues with email being sent every minute.
RM-37711 SR-01689770	Issues with connecting/disconnecting to patch panel with API.
RM-37681 SR-01689249	Resource import from csv file deletes empty lines from description field.
RM-37679 SR-01689881	Issues with right-clicking and copying the inventory resource name in Velocity.

Issue Key	Summary
RM-37637 SR-01689120	Reloading calendar page deletes the filters and changes the displayed information.
RM-37541 SR-01686488	Issues with obtaining resource status information using Real-Time Monitoring (displays the message “Cannot obtain information about device statuses”).
RM-37495 SR-01686873	Issues with Orchestrated resource name changes resulting in an unclear error message.
RM-37460 SR-01686421	Triggered automation tasks for “resource modified” events are activated even when the resource has not been modified.
RM-37069 SR-01679755	Issues with receiving email notification configured on Velocity Datastore (VDS)..
RM-36727 SR-01672971	Issues with size and duration of Auto Backup in Velocity Production.
RM-36446 SR-01666489	Issues with Driver Polling and Execution Delays
RM-36338 SR-01665294	Inconsistent permission behavior for the Resource Group Admin.
RM-36336 SR-01666323	Port group is not being expanded and ports are not displayed.
RM-36242 SR-01664036	Issues with activating a resource belonging to a reservation in queue.
RM-35889 SR-01647328	Issues with URI sent to Velocity driver "setImage".
RM-35753 SR-01651002	Issues with generating a report for download.
RM-33063 SR-01594628	Issues with resource export to ZIP take a very long time.
RM-28257 SR-01545774	Issues with Topology page take a long time to load when navigating between pages.

Planning for Upcoming Upgrades

Support for Velocity Core and Velocity Datastore (VDS) on KVM Hypervisor

Velocity 25.4.0 will be the last release to support deployment of Velocity Core and VDS on KVM Hypervisor.

Legacy vSphere and OpenStack integration

Velocity 25.4.0 will start deprecating its legacy integration with vSphere and OpenStack in phases over time. We recommend using the Velocity Core provided orchestrated interface, which allows flexible orchestration of containers and VMs on different hypervisors and clouds.

Velocity Core Feature Summary

These sections include information relevant to the feature updates in Velocity Core version 25.4.0. Refer to the Online Help embedded with the product for details.

Note: Refer to the product documentation ([Installation Instructions and Documentation](#)) for information on where and how to access Velocity documentation.

Multi-Topology Runlists

- Ability to use more than one topology in an execution of a runlist
- Wider test coverage with the ability to test nodal, adjacent, and end-to-end topologies in the same execution

Runlists

Velocity enables you to create and execute structured sequences of tests or automation steps through Runlists. A Runlist serves as a reusable workflow that organizes, automates, and consistently repeats test executions. Each Runlist can include references to multiple test cases, parameters, and agent allocations required for execution.

The **Runlists** page (**Library >Runlists**) displays a list of existing Runlists created in the Velocity repository. You may also perform these actions on the **Runlists** page: Add Runlists, run individual Runlist, remove an individual Runlist and Remove multiple Runlists at a time.

Tip: You can apply filters so that only particular items appear in the list. Use the filters below on the left of the page to limit the relevant details that appear in the list.

Filters

The **Search** box on the left of the **Runlists** page enables you to quickly find specified items. It operates as a wild card search based on the characters you type. This enables you to enter either a portion of the name or description or the full name to filter the choices items that are displayed in the list to just those that match.

Velocity searches for the letters in the name of the item or any word within the full name. For example, if the name is “launch initial test”, then you may find it by typing any of “launch”, “initial” or “te” or “au” or “nit” (i.e., any consecutive letters in the word of the name). Search is also performed over the location similarly.

In addition, you may also filter your search to display the items created by a particular user/owner. The table below lists the search criteria available on **Runlists** page.

Runlists	Search box: Search by name
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	Owner: The dropdown list displays names of the users who created Runlists.
	Use the search box to find and select individual user to display the Runlists created by the particular .
	The list display depends on the Admin user settings on the Application settings page (Reservations > Enable filtered user search). • If a list of all users is displayed, you may use the Search box to filter the relevant list of users as required. • If no user list displays, enter the full username or email address of the required user in the search box. Velocity displays the individual username for whom you search if the user exists.
	The Search box is not case sensitive.
	Repositories: All, Selected. Select folder to display all contents matching the filtered criteria.

When you select any filtering option, **Reset All Filters** display to indicate that filtering is applied, and you may clear this filtering. Click **Reset All Filters** to clear the filters set and return to the default display.

Velocity saves your selected filter and displays the filtered list on your subsequent visits.

The following describes the **Runlists** page view and actions you may perform on the **Library > Runlists** page

View Runlists

View the existing Runlists in your library with the individual Runlist information.	
Column Labels	Description
Name	Indicates the name of the Runlists created in the repository.
Last Modified	Indicates the date and time the Runlist was last modified.
Last Execution	Indicates the date and time the Runlist was last executed.
Number of Executions	Indicates the number of times the Runlist was executed.

Owner	The name of the user who created the Runlist.
Run	Click  to run the Runlist.
Delete	Only the owner and admin user can delete a Runlist.
	Click  to delete the Runlist. The Remove Runlist dialog displays the following message: The Runlist will be permanently removed and cannot be recovered. This action will not affect scheduled executions of the Runlist. Click Cancel to discard the delete operation or click Remove to delete the Runlist.

Add

Add	Click the Add button in the top-right corner of the Runlists page. The Add or Edit Runlist Items page displays, allowing you to create a new Runlist by: • Adding a unique Runlist name • Selecting a parameter file • Specifying agent requirements • Adding Runlist items (each item can include one or more Runlist sections, with each section containing a topology, a sequence of automation assets, parameters, and agent requirements).
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Run Runlist

Run	Click  to run the Runlist. The Run Runlist details page is displayed, where you can: • Schedule the Runlist • Select or replace a parameter file • Specify or update agent requirements • Add or modify Runlist items (including topology, sequences of automation assets, parameters, and agents) • Execute the Runlist
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Remove

Remove	The Remove button appears when you select one or more Runlists.
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	Only the owner and admin user can delete a Runlist.
	Click Remove and the Remove Runlist dialog displays the following message: The Runlist will be permanently removed and cannot be recovered. This action will not affect scheduled executions of the Runlist. Click Cancel to discard the delete operation or click Remove to delete the Runlist.

Runlists details page

The **Runlist details** page is displayed when you click **Add** and also when you click **Runlist name** on the **Library > [Runlists](#)** page.

Click Add	The Runlist Details page opens with several tabs where you can: • Define a unique Runlist name • Select a parameter file • Specify agent requirements • Add Runlist Items (you may add one or more Runlist sections, with each section containing a topology, a sequence of automation assets, parameters, and agent requirements). See Add or Edit Runlist Items.
Click Runlist Name	The Runlist details page opens where you may view relevant information on the various tabs: Information, Last Results, Parameters, Agent Requirements, and Runlist Items.
	The tabs displayed depend on whether they are populated with relevant selection. For example, only the Information and the Last Results tabs display if you have not populated Runlist Items, selected a topology, specified parameters or Agent requirements.

In addition, the **Runlists details** page allows you **Run**, **Edit**, and **Remove** the **Runlist**.

View Runlist details page

The following describes each tab on the **Runlist details** page. The **Information** tab is the default view. Click the **Last Results** tab, **Parameters** tab, and the **Runlist Items** tab to view the details displayed on these tabs.

Information Tab

Displays the individual Runlist information.

Column Labels	Description
Name	Indicates the name of the Runlists created in the repository.
Owner	The name of the user who created the Runlist.
Last Modified	Indicates the date and time the Runlist was last modified.
Last Execution	Indicates the date and time the Runlist was last executed.
Number of Executions	Indicates the number of times the Runlist was executed.

Last Results tab

Displays information about Runlist execution.

Last 5 Results View All	Now Executing View All	Next 5 Scheduled View All
Lists the results of the Runlist run the last 5 times (most recently). - Click the Runlist name to view the run result details (Runlist Report). - Click View All and the Execution Reports page displays.	List the currently running tests. - Click the Runlist name to view the run result details (Runlist Report). - Click View All and the Execution Reports page displays.	Each queued and scheduled Automation Asset executions. - Click the Runlist name to view the run result details (Runlist Report). - Click View All and the Execution Reports page displays.

Parameters tab

Displays the default Parameter settings (name of each parameter and its value) that are included in the Runlist.

You cannot modify the default parameter values on the view page.

- To specify a different value for a parameter, specify the value while running a Runlist. See [Run Runlist details page](#).
- To change the value in the parameter file, you must edit the file and then upload the updated file into Velocity.

See [Precedence of parameters — Which parameter value is used during a run?](#)

Agent Requirements

Displays the requirements specified for the Runlist.

Lists the agent requirements to be considered as the candidate for execution of Runlist. The requirements also indicates whether the Agent requirement is disabled and not considered as the candidate for execution.

Velocity detects the type of automation asset selected for execution and displays the relevant **requirement** (language, pool, number of Agents and their names) as **read-only**. This ensures that the test execution is assigned only to an agent that supports the required language and pool.

You cannot remove or ignore the following reserved types of requirements when executing Automation Assets:

- **pool** with one of values: **driver**, **startupteardown**, **triggered**
- **language** with one of values: **itest**, **bash**, **python**, **batch**, **powershell**
- **Number** of agents that satisfy the requirements.
- **Names** of agents that satisfy the requirements.

Runlist Items tab

Displays the Runlist Sections along with the topology and the Runlist Items included to run sequentially in the Runlist.

Each section is collapsed and displays the Runlist execution setting, topology and the list of automation assets included for execution.

Section name	Name of the Runlist Section. Default is Section 1, Section 2, and so on.
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Terminate Runlist section execution if any item fails	Select Yes to terminate execution of the Runlist Section if any asset within the section fails.
Topology	Topology selected, collapsed Topology Preview panel.

The following details are displayed for each automation asset included in the Runlist.

#	Indicates the sequential order in which the item was included to be executed.
Name	Indicates the name of the Automation Asset
Location	Indicates the Automation Asset file path.
Settings	Indicates whether Custom or Default settings are used. Default Indicates that the parameters and Agent requirement settings are used from the Runlists for execution. In view mode, click the Default link to display the Parameters and Agent Requirements settings used from the Runlist Item. The Automation Asset Parameters tab is the default view when you click the Default link. Click Agent Requirements to view the requirements settings. Custom: Indicates that the Parameters and Agent Requirements specified will override the Runlist level settings during execution. In view mode, click the Custom link to display the Parameters and Agent Requirements settings specified for the Runlist Item. The Automation Asset Parameters tab is the default view when you click the Custom link. Click Agent Requirements to view the requirements settings.

Tasks on the Runlist Details page

Perform these tasks on the **Runlist Details** page.

Edit	Click Edit to display the Runlist details page with existing settings of parameters, topology selected, and Runlist Items specified. You may edit these as required. See Add or Edit Runlist Items for details.
Remove	Click Remove to delete the Runlist.
	Only the owner and admin user can delete a Runlist.

	Click Remove and the Remove Runlist dialog displays the following message: The Runlist will be permanently removed and cannot be recovered. This action will not affect scheduled executions of the Runlist. Click Cancel to discard the delete operation or click Remove to delete the Runlist.
Run	Click Run to execute the Runlist. The Run the Runlist page displays. You can schedule the Runlist, select a topology, parameter file, specify the Agents requirements, add Runlist items (a sequence of automation assets), and run the Runlist.

Add or Edit Runlist Items

The **Add or Edit Runlist Items** describes the page that displays when you click **Add** (on the **Library** > [Runlists](#) page) to create a new Runlist.

To **Edit** a Runlist, click Runlist name on the [Runlists](#) page and when the [Runlist details page](#) displays, click **Edit** to modify an existing Runlist.

After completing the required actions, click **Save** on the top right, to create a new Runlist or update an existing Runlist with the specified settings or click **Cancel** to discard any additions you have made to the Runlist.

See [Runlist Requirements Precedence](#) to understand how Velocity determines the Agent Requirement for execution.

See [Precedence of parameters — Which parameter value is used during a run?](#)

The following describes each tab with relevant settings you add to the Runlist on the **Runlist details** page. The **Information** tab is the default view. Click **Parameters**, **Agent Requirements**, and **Runlist Items** tab to add relevant settings to your Runlist.

Information Tab: Create a Runlist

Name: Enter a unique name of the Runlists to be created in the repository.

The **Save** button becomes available when you enter a unique name. An error displays if you save a new Runlist with an existing Runlist name. Click **Save** to create a Runlist in the repository.

You may change the Runlist name when editing a Runlist.

Parameters tab: Specify Parameter settings for the Runlist.

Click **Parameters** tab to display the **Set Parameters** page.

The list of parameter files displays from the repositories to which you have been granted permission by Velocity Admin.

See [Manage SCM Repository Access](#) and [Manage Repository Permissions to User Groups](#) for the type of permissions granted by Admin User.

- Select a parameter file from the list that will be used for the Runlist. The selected parameter file displays the parameters and associated values. Additionally, you may include custom parameters and values to be used when executing the Runlist.

OR

- You may choose to add only custom parameters (instead of selecting a parameter file) and assign values to be used in the Runlist during execution.

You may add parameter type Secret in a Runlist definition. However, values may be entered only during execution of Runlists.

See [Parameter Types](#) for parameter attribute and types. (Refer to the Online Help)

When editing a Runlist, any previously selected parameter file displays. You may change your selection and/or edit as described below.

Click **Reset to default** to discard any changes you have made and restore the default settings.

For Automation Assets and iTest Parameter File

About parameters groups and nested parameters in iTest Parameter File

An iTest parameter file may include parameters and parameter groups with nested parameters and groups. You cannot assign values to a parameter group. Only the parameters with no children parameters can contain values. A parameter group may include parameters and nested parameter groups.

Script Asset files: See the document [Velocity Portfolio Script Manifest](#) file for details of how parameters are defined and handled during execution. The handling of nested parameters also applies to all Automation Tasks: (Mandatory, Triggered, Startup/Teardown reservation tasks).

Slashes are not supported when passing nested parameters.

- Velocity validates script manifest and treats slashes in manifest parameter names as an error, does not parse these as 'nested structures' to avoid inconsistencies and mixed variable declarations.
- Velocity Agent validates manifest and fails execution if slashes in manifest parameter names are encountered.

During Runlist execution, Velocity allows you to change some or all the parameter values to override the values in the selected **iTest Parameter File** and save the **Runlist**. Any changes you make will apply for the current execution and any subsequent executions.

Add custom parameters and values

You may add custom parameters when running an **Automation Asset**, which will be appended to the existing parameters in the **Script Asset** and **iTest Asset**.

About Array parameters

Velocity does not support array parameters. However, parameter array editing is not recommended, even though Velocity allows you to edit duplicate parameters which are defined in the Automation Asset.

Editing an array parameter element value in Velocity UI results in an additional array element during execution.

For example, when editing two parameters with the same name, param1 value1 and param1 value2, if you change the first parameter value from value1 to velocity_value in the Velocity UI,

param('param1') command would generate result as ['velocity_value', 'value1', 'value2'] during

execution instead of ['velocity_value', 'value2']

Add:	Click  Add to add new parameters. Define custom parameters: Name and Description: Default: param. Velocity adds a new parameter with default name as param and appends a number (e.g., param1, param2, and so on) for each subsequent parameter you add by clicking  Add. Enter a custom name as required and a description for each parameter. If the custom name entered is not unique, Velocity highlights the parameter with a red line. <table border="1"> <tr> <td data-bbox="493 1268 948 1457"> Type: Indicates the parameter type defined: Text, Boolean, Integer, Double, Custom, Masked </td><td data-bbox="948 1268 1419 1457"> Value: Modify or enter a value for the selected parameter type. </td></tr> <tr> <td data-bbox="493 1457 948 1879"> Text: Indicates the text type parameter. </td><td data-bbox="948 1457 1419 1879"> Enter the required text value either by manually entering a value or by defining a query value or defining resource list and port value. Click  in the Value field and the Property Query Editor dialog displays. See Property Query Editor for details. Click  in the Value field and the Resource List Editor dialog </td></tr> </table>	Type: Indicates the parameter type defined: Text, Boolean, Integer, Double, Custom, Masked	Value: Modify or enter a value for the selected parameter type.	Text: Indicates the text type parameter.	Enter the required text value either by manually entering a value or by defining a query value or defining resource list and port value. Click  in the Value field and the Property Query Editor dialog displays. See Property Query Editor for details. Click  in the Value field and the Resource List Editor dialog
Type: Indicates the parameter type defined: Text, Boolean, Integer, Double, Custom, Masked	Value: Modify or enter a value for the selected parameter type.				
Text: Indicates the text type parameter.	Enter the required text value either by manually entering a value or by defining a query value or defining resource list and port value. Click  in the Value field and the Property Query Editor dialog displays. See Property Query Editor for details. Click  in the Value field and the Resource List Editor dialog				

		displays. See Resource List Editor to construct the list of input values.
	Boolean: Indicates the Boolean type parameter set as True, False, or None from the Value dropdown list.	Select a value from the dropdown list.
	Integer: Indicates the integer type parameter.	Enter a valid integer value. Velocity validates to ensure that the value entered is an integer, if not, displays an error message: Integer value expected.
	Custom: Indicates a custom parameter type.	Note: The set of named value elements displayed in the dropdown will be the value defined for the custom parameter type.
	The name of the custom parameter type displays the name as defined in the Automation Asset. For example, the name City would appear as a parameter type in the dropdown list if you entered the custom parameter type name as City .	For example, if you add a parameter called Office-Location and select the parameter type City from the Type dropdown list, the three named value elements display in the dropdown list: San Jose, Calabasas, and Plano, as defined in the Automation Asset.
	Double: Indicates the double-digit value.	Enter a valid double-digit value. Velocity validates to ensure that the value entered is a double-digit value. If not, an error message displays: Double-digit expected.
	Masked: Indicates the encrypted parameters type.	The encrypted parameters display as ***** and are decrypted during execution. Enter the value as required.

	Secret: Indicates the parameter type where you cannot define value. The Secret parameter type displays masked value. During test execution, Velocity prompts you to enter the value of the parameter type Secret and discards the value when the execution completes.
Add Child (for parameters in the Automation Asset and iTest Parameter File).	You may also add custom parameters in the iTest Parameter File, and nested child parameters within parameter groups. See Define custom parameters above for defining parameters. Click  Add Child to add parameters within a parameter group. The  Add Child option displays only when you select a parameter group within a file or select a custom parameter you added. Select the parameter group name and click  Add Child to add additional parameters within the group. Default: param. Velocity adds a new child parameter with default name as param and appends a number (e.g., param1, param2, and so on) for each subsequent child parameter you add by clicking  Add Child. Selecting a parameter nested within a group and clicking  Add Child creates a parameter group nested within a parameter group. Script Asset supports a maximum of ten nested parameter levels. When you add more than 9 children to a parent parameter, the Add child option is not available anymore since only 10 nested levels are allowed. When a parameter name is not unique within the nested parameter group or is the cause of an error, Velocity highlights the duplicate parameter name in red and parameter causing an error in blue.
Parameter Value	You may manually enter a parameter value for each of the parameter added or click  to construct dynamic value from the Property Query Editor or

	click  Resource List Editor to construct the list of input values, which would then be passed to the corresponding Automation Action or Automation Asset. Each of these actions overwrites the parameter value. The parameter value used in automation execution is the value saved before execution. • Value updated manually. • Value updated using the Property Query Editor. • Value updated using the Resource List Editor.
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Reset to default values and delete parameters

Reset to default value (applies to iTest Parameter File and project Manifest file)	The  icon appears next to the modified parameter values. Click  to reset your changes to the original value to their defaults (from iTest Parameter File or from the project manifest file).
	The above reset action does not affect any other custom values you may have defined.
Delete (Script Asset, iTest Asset, and iTest parameter File)	The  icon appears only next to the parameters and values defined by you. Click  to delete the parameters and values you defined. Removing a parameter from the UI (clicking the Remove icon) deletes the parameter only from the UI. The parameter is still present in the parameter file and the manifest file and will be used in execution. See Precedence of parameters — Which parameter value is used during a run? for parameters used in test execution.

When scheduling an execution with an associated parameter file, Velocity displays the parameters from the selected file, and any parameters you included.

Each parameter value will be displayed (applying the default iTest parameter merging behavior) and Velocity will allow you to change values, as required.

See [Precedence of parameters — Which parameter value is used during a run?](#)

Agent Requirements: Displays the requirements specified for the Runlist.

On the **Agent Requirements** tab, specify the Agent capabilities required for execution. You may select one or more capabilities the agents must have, to be considered a candidate for execution. You may set Agent requirements when adding, editing, or just before the Runlist is queued or scheduled for execution. You may also specify dynamic value as a place holder for Agent capabilities requirement by typing in the value via the [Query dialog](#).

When editing a Runlist, any previously specified Agent requirements are displayed. You may delete your previous selection and add new requirements as described below.

If you entered a dynamic property query for agent requirement value, Velocity evaluates the query value and replaces it with the actual agent requirement value.

You may specify multiple Agent requirements to execute an Automation Asset.

Velocity tries to find an agent that matches the specified agent requirements. The Automation Asset will run on only one agent based on the agent's requirements specified, even if more than one agent matches your requirements.

- If multiple Agent attribute type (Key types) is selected, then the "AND" logic is used for Agent allocation.
- If multiple instances of a single key are selected, then the "OR" logic is used for Agent allocation.

Velocity does not set any limit on the number of Agent requirements you may add. However, for ease of management, it is recommended that you limit the number of Agent requirements to a maximum of 25 for a single execution.

Click **OK** to save the selected Agent requirements or click **Cancel** to discard any changes.

When the execution is queued:

- If no agent matching the requirements is available, then the execution waits in the queue until the Agent becomes available. That is, the execution does not begin if no agent matches the specified requirements.
- If none of the registered agents meet the requirements, the Runlist either terminates Runlist execution if any Runlist item fails or the Runlist Item will wait for an agent forever and prevent subsequent Runlist Items from executing.

Driver execution

When executing a driver, Velocity ensures access to these parameters: velocity token, velocity url, and velocity reservationId (when applicable).

Before queuing for any driver execution, Velocity validates to ensure that an agent that meets the requirements to run the driver script is online.

If an agent that meets the requirements to run the driver script...	Velocity performs the following action...
Is online	Queues driver execution
Is not online	Will <i>not</i> queue the driver execution and will immediately cancel the operation that depends on the result of the driver execution, reservation activation, device status check, discovery, etc.
	• For discovery and reservations failure, Velocity displays an error message. For all cases when driver execution cannot run (reservation activation, device status check, etc.) Velocity writes a log error to the log file. • If a reservation deactivation cannot run because there are no available agents, Velocity marks the reservation as failed and logs a message indicating that the reservations were failed due to lack of agents to run the deactivation.

Add Agent requirements

Click  Add new and select the Agent requirements to execute the Automation Asset.

- Select the agent's requirements, name and value from the available list to specify agent requirements.

It is mandatory that you specify both Agent Requirement name and value fields.

The Agent Requirements Keys and Values you enter are not case sensitive and are converted to Lower Case.

Ensure that you do not duplicate the Agent Requirements. If you duplicate requirements, Velocity displays a message saying that the Agent Requirement is not unique and doesn't allow you to save your selection until your requirements are unique.

The Agent requirements name and Value selection list provides all existing (known / registered) capabilities of the agents connected to Velocity. See also [Velocity Agents overview](#) for details about the Agent requirements and Agent pools.

Ensure that you use only **Velocity Agents** for executing Automation Assets in Velocity.

Name	The Name selection list provides the attribute of the current registered agents. For example, attribute: os.type, prod.arch, language. For Script Assets, language=bash or language=python is always present as a requirement, and you cannot remove or ignore this agent requirement. Enter any Name or select the Agent attribute required for execution from the list.
Value	The Value selection list provides the capability value of the current registered agents, that is, agents that are connected and online publish their capabilities. For example, value: ubuntu, win.32, x86, false, true, bash, python. Select the Agent capabilities value required for execution. You may also enter a requirements value even though they are not shown in list. This is because the agent did not publish the capabilities as it is not yet available or is offline. Hence, not shown in the dropdown list.

{/}	Click {/} and specify the dynamic value by using the "property query" mechanism. See the Query property topic.
	Click  next to the selected agent requirements to remove it from being considered a candidate for execution.
	The delete icon appears only next to the requirements specified by you when adding or editing a Runlist. That is, you may delete only the requirements specified by you. Velocity does not allow you to delete any inherited requirements.
Ignore Agent Requirement /Do not ignore Agent requirement	A toggle appears next to the Agent requirements that were inherited (defined in the test case in iTest), not specified in Velocity. Disable the requirements to indicate that they should be ignored and not considered a candidate for execution. That is, the agent requirements are flagged as ignored.

When appropriate agent requirements are specified, Velocity displays a message identifying the number of agents that satisfy the requirements, for example, **5 agents satisfy the requirements**.

See [Runlist Requirements Precedence](#) to understand how Velocity determines the Agent Requirement for execution.

Runlist Items tab: Configure Runlist Section to include topology and automation assets.

The **Runlist Items** tab allows you to configure multiple **Runlist sections**. Each section can include a topology, along with one or more Automation Assets required for execution. Velocity also provides the ability to specify the agents responsible for running each defined automation asset. Each Runlist Section may use the same topology while including either the same or a different set of automation assets.

Automation Assets determine whether a Runlist Section is saved.

- Runlist Sections without Automation Assets are not saved.
- Runlist Sections without topologies can be saved.
- Runlist Sections without both topologies and assets can also be saved.

When adding a new **Runlist** or editing an existing **Runlist**, the **Runlist Items** tab displays the option button **Add Runlist Section**. Click the button **Add Runlist Section** to include a topology, along with one or more Automation Assets required for execution.

Add Runlist Section

Click **Add Runlist Section** to create a new section named **Section 1**, which will be collapsed by default. Expand the section to access the action buttons and options that allow you to **select a topology**, **add new items**, **reset to default**, **edit section name**, and **remove section**.

The table below describes options and actions that you may perform on the **Runlist Section**.

Section 1	The panel allows you to specify the Runlist Items execution option and select a topology. Terminate Runlist section execution if any item fails Indicates whether the Runlist will stop or continue after a failed execution. By default, the option No is selected. No: Default Runlist behavior (waits for an item/asset to complete execution before executing the next item). Yes: terminate execution of the Runlist Section if any asset within the section fails. Select a topology: See Topology section option below.
Edit section name (✎)	Click Edit section name to rename the default section name.
Add new Assets (+)	Click Add new items to associate Automation Assets required for execution and specify the agents responsible for running each defined automation asset.

	See Runlist Assets: Include automation assets to be associated with the selected topology. section below.
Reset to default (↺)	Click Reset to default to discard any changes you have made and restore the default settings.
Remove section (🗑)	Click Remove section to display the Remove Section dialog with the following message and option buttons: The selected section will be permanently removed and cannot be recovered. Cancel: Click the button to discard the remove operation. Remove: Click the button to remove the entire section.

Topology: Add topology to be executed as part of the Runlist Section.

Add topology to be executed as part of the Runlist Section. Select a topology from the **Topology** dropdown list to be executed as part of the Runlist Section.

You may choose None, to indicate that the Runlist Section does not include any topology. In addition, you may choose the same topology in multiple Runlist Sections.

All topologies are listed or only the topologies created by you are listed depending on whether the Admin user has allowed access to topologies (see [Application Settings](#)).

- **If access is allowed:** You will see all the topologies in the Velocity instance.
- **If access is not allowed:** You will see only the topologies you created.

The **Filter on tags** checkbox displays within the drop-down list and is not selected (disabled) by default.

- When the checkbox is not selected, the dropdown list displays all the items from the list page.
- When the checkbox is selected, the dropdown list displays only the items filtered by tags.

When you close the dropdown list, the checkbox state is reset to default not selected (disabled).

Reset to default	Click Reset to default to discard any changes you have made and restore the default settings. See Precedence of topology — Which topology is used during a run?
Topology Preview	Displays the selected topology. The preview panel collapses in Edit mode.

	You may expand or collapse the Topology Preview, as required. Click the topology to view it on the Topology Editor canvas. You may reserve or edit the topology or share access to the topology as per your access permissions. See Topology Editor Overview.
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The topology selected in the Runlist Section takes precedence over the topology embedded within an Automation Asset.

Velocity automatically reserves the topology selected when executing the Runlist.

When editing a Runlist, any previously selected topology displays. You may change your selection.

Runlist Assets

Include automation assets to be associated with the selected topology in this section.

When a new Runlist is created, the Runlist Section displays the message **No items were found**, if no assets have been added.

Velocity supports execution of a maximum of 500 Runlist items.

Ensure each topology has one or more associated Runlist items. If you select a topology and do not add any automation assets, Velocity will not save the Runlist section.

Include Runlist Assets by clicking **Add New Assets (+)**. A list of Automation Assets displays from the repositories to which you have been granted permission by the Velocity Admin user.

See [Manage SCM Repository Access](#) and [Manage Repository Permissions to User Groups](#) for the type of permissions granted by Admin User.

The following details are displayed for each item in the Runlist, when you either add or edit a Runlist:

	Click and drag to indicate the sequential order in which the item should be executed (displays in Add and Edit modes).
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Checkbox	Displays in run, create, and edit modes. See Run Runlist details page .
	The functionality of the checkbox differs depending on the page. - On Edit and Create pages: Select the checkbox to remove items from the list. - On Runs a Runlist page: Select the checkbox to include items to be executed. By default, all runlist items are included for execution.
Name	Indicates the name of the Automation Asset
Location	Indicates the Automation Asset file path.
Settings	Indicates whether Default or Custom settings are used. Default Indicates that the parameters and Agent requirement settings are used from the Runlists for execution. In view mode, click the Default link to display the Parameters and Agent Requirements settings used from the Runlist Item. The Automation Asset Parameters tab is the default view when you click the Default link. Click Agent Requirements to view the requirements settings. Custom: Indicates that the Parameters and Agent Requirements specified will override the Runlist level settings during execution. In view mode, click the Custom link to display the Parameters and Agent Requirements settings specified for the Runlist Item. The Automation Asset Parameters tab is the default view when you click the Custom link. Click Agent Requirements to view the requirements settings. Create or Edit mode Click  to display the Parameters and Agent Requirement tabs with settings specified for the Runlist Item (automation asset selected). Parameters tab The Automation Asset Parameters tab is the default view when you click . Velocity displays the parameter file, parameters from the Runlist, and any parameters associated with the Automation Asset. You may select a different parameter file (.fftp or .ffpj) and /or add customer parameters. For Script Assets, the parameter file dropdown lists the parameter files .ffpj created via the Velocity UI and parameter files .ffpt.

See [Parameter Types](#) for parameter attribute and types.

See also [Precedence of parameters — Which parameter value is used during a run?](#)

- Select a parameter file from the list that will be used for the Automation Asset. The selected parameter file displays the parameters and associated values. Additionally, you may include more parameters to be used to execute the Runlist Item (Automation Asset).

OR

- You may choose to add only parameters (instead of selecting a parameter file) and assign values to be used in the Runlist Item during execution.

See [above](#) for a description of additional parameters and values.

Agent Requirements

The Agent Requirements tab displays the Agent Requirements specified at the Runlist level, Automation Asset (if specified in iTest or script manifest file) and allows you to specify any additional requirements at the Runlist Item level.

Velocity detects the type of automation asset selected for execution and displays the relevant requirement (language, pool, number of Agents and their names) as *read-only*. This ensures that the test execution is assigned only to an agent that supports the required language and pool.

You cannot remove or ignore the following reserved types of requirements when executing Automation Assets:

- pool with one of values: driver, startupteardown, triggered
- language with one of values: itest, bash, python, batch, powershell
- Number of agents that satisfy the requirements.
- Names of agents that satisfy the requirements.

- If agent requirements displayed are inherited from either the Runlist or the automation asset, you may disable the agent requirement to indicate that it should be ignored and not considered a candidate for execution. Velocity does not allow you to delete inherited agent requirements.
- If the agent requirement was added by you for the Runlist Item, Velocity allows you to delete only this requirement.

See [Add Agent requirements](#) above, for the details. See also [Runlist Requirements Precedence](#) to understand the requirements order of precedence during execution.

Tasks on the Runlist details page

Perform these tasks on the **Runlist Add or Edit** page.

Save	After adding the required information and settings for the Runlist on all the tabs, save the Runlist.
	If you select a topology and do not add any automation assets, Velocity will not save the Runlist section.
Cancel	Click to discard all the information added or modified.

Run Runlist details page

Velocity allows you to run a Runlist either immediately or at a scheduled time. When executing, you can use the defined parameters, Agent requirements, and Runlist Items with topology, and automation assets. Additionally, Velocity enables you to configure the level of detail included in the execution report.

Velocity supports execution of a maximum of 500 Runlist items.

To schedule a test to run, follow these steps.

Find the **Runlist** you wish to run on the [Runlists](#) page and then click ► (**Run Runlist**).

Alternatively, while viewing the [Runlists details page](#) or viewing the [Runlist Report](#) you may click **Run** to display the **Run Runlist details page** where you can schedule the Runlist to execute.

The **Run Runlist details page** displays four separate tabs: **Schedule**, **Set Parameters**, **Agent Requirements**, and **Runlist Items**. In addition, the **Runlist Items** tab displays the configured **Runlist Sections** with topology and associated parameters.

Follow these steps to set up the relevant information in each of these tabs.

Any changes made on the Run Runlist page are temporary and apply only to the current Runlist execution. They are not saved for future runs.

Schedule tab

The **Schedule** tab allows you set Runlist to execute immediately or at a scheduled time. The tab displays two sections, **Settings** and **Schedule** where you can specify these details.

Settings: Allows selection of the level of report details desired for the execution.

Detail Level: Select the level of detail to include in the execution report.

- **Default setting:** The displayed level depends on the **Default execution detail level** configured by the Velocity Admin ([Application Settings](#) > **Reports** tab).
- **Custom selection:** Choose the required detail level for the current execution. This setting applies only to the current run and does not affect future executions.

Click **Reset to default** to discard any changes you have made and restore the default settings.

- Nothing but the report-level details, including status and result.
- Include only error execution messages.
- Include only error execution messages and associated steps.
- Include all executions messages (and steps that have an error)
- Include all execution messages and steps.

Velocity generates the [Runlist Report](#) with details of the Runlist execution with the run statistics, parameter details, and the list of Runlist Items, each linking to individual automation asset execution report as per the details level selected.

Velocity includes all executed artifactLink steps and artifact links which correspond to the artifacts steps in the [Automation Assets Execution Report](#). During execution, if Velocity detects an invalid artifactLink syntax, the artifact step is included in the report, but there will be no corresponding artifact link in the **Artifacts** section of the report.

Execution issues related to artifactLink steps are not included in the report when the detail level option is **Nothing but the report-level details, including status and result**.

For example, if an artifactLink step produces an execution error because of an invalid link URI syntax is detected, the artifactLink step is included in the report, but the related execution issue is not included in the report. As artifactLink contains invalid URI, the artifact link is not included in the **Artifacts** section of the execution report.

To view execution issues related to the artifactLink step, select a different **Report Detail Level**. That is select **Include only error execution messages and associated steps** to see all the errors or **include all execution messages and steps** to see all execution issues.

Resolving artifact links

Schedule section: schedule to run the Runlist now or later. You may also schedule a one-time execution or recurring executions.

Run	Select to run Immediate or Later. a. For running now, select Immediate b. For a scheduled run, select Later and specify the starting time.
Start date	Mandatory if you selected Later. Select the date and time to start execution. The test executes on the date and time specified.
Repeat	Select Repeat to run the test on a repeating schedule and then select the recurring test execution interval: minutely, hourly, daily, weekly, or monthly. Minutely Select Minutely to schedule test execution that repeats in granularity of minutes. Specify the date, time, and the interval to repeat test execution. Example, run this test every 5 minutes. Repeat Every: Select to indicate the test execution interval. For example, every 5 minutes. Hourly Select Hourly to schedule a test execution that repeats as per the specified recurring interval starting from the specified date, time. Repeat Every: Select the test execution interval. For example, every 1 hour, every 3 hours, etc. Daily Select Daily to schedule test execution that repeats everyday starting from the specified date and time. Weekly Select Weekly to schedule a test execution that repeats every weekday as selected starting from the specified date and time. Select the weekday (s) on which the test is executed. For example, Monday, Wednesday, Friday. Monthly Select Monthly to schedule a test execution that repeats every month starting from the specified date, time and repeat as per the specified recurring interval. - Select to repeat test execution on a specific day of the month and the recurring interval, that is, every month or 3 months. For example, On: Day 24 of every 2 months OR - Select to repeat test execution on a specified week of the month, weekday of the month, and recurring interval, that is, every 3 months. For example, On the <i>second Sunday</i> of every 3 month (s).

End	Specify the test execution end, whether to end after a specified number of occurrences, on a specified date and time. After occurrences: Specify the number of times the test is scheduled to run before it stops. The default value is 10. On a specified date and time: Select the date and time on which the test should stop executing. Note: All the recurrence type (Minutely, Daily, Weekly, and Monthly) do not wait for previous execution to complete before starting the next execution.
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Parameters Tab

Displays the parameters selected when you added or edited the Runlist.

See [Parameters tab: Specify Parameter settings for the Runlist.](#)

Agent Requirements Tab

When executing the Runlist, Velocity displays the Agent Requirements selected when you added or edited the Runlist.

You may indicate whether the agent requirement should be ignored or used as a candidate for execution.

The following default agent information displays on the Agent Requirements tab:

- **pool:** driver
- **language:** (values as application) itest, bash, python, batch, powershell
- **Number of agents** that satisfy the requirements.
- **Names of agents** that satisfy the requirements.
- If agent requirements displayed are inherited from the Runlist, you are not allowed to delete the agent. However, you may disable it to indicate that the agent requirement is not a candidate for execution.
- If you added the agent requirements for this execution, Velocity allows you to only delete the selection (you cannot disable the requirement).

See [Agent Requirements: Displays the requirements specified for the Runlist.](#)

Runlist Items Tab

The **Runlist items** tab displays the configured **Runlist sections**. Each section may include a topology along with one or more Automation Assets associated with topology for execution. In addition, each of the automation assets defined for execution may specify additional parameters and agents responsible for running the automation asset.

Section name	Name of the Runlist Section. Default is Section 1, Section 2, and so on. The Runlist Sections are collapsed by default. Expand to view and modify the execution option, topology, and automation assets settings.
Terminate Runlist section execution if any item fails	Indicates whether the Runlist will stop or continue after a failed execution. Displays the value selected when you created or edited the Runlist. See Runlist Items tab: Configure Runlist Section to include topology and automation assets. No: Default Runlist behavior (waits for an item/asset to complete execution before executing the next item). Yes: terminate execution of the Runlist Section if any asset within the section fails.
Topology	The Topology section displays a collapsed preview panel of the topology, which is automatically set to Reserve when Runlist is executed, along with the list of associated automation assets.
	Display the selected topology. You may change your selection when executing the Runlist. Select a topology from the Topology dropdown list to be executed as part of the Runlist Section. All topologies are listed or only the topologies created by you are listed depending on whether the Admin user has allowed access to topologies (see Application Settings). • If access is allowed: You will see all the topologies in the Velocity instance. • If access is not allowed: You will see only the topologies you created. The Filter on tags checkbox displays within the drop-down list and is not selected (disabled) by default. • When the checkbox is not selected, the dropdown list displays all the items from the list page. • When the checkbox is selected, the dropdown list displays only the items filtered by tags.

	When you close the dropdown list, the checkbox state is reset to default not selected (disabled).
Auto reserve topology for execution	Auto reserve topology for execution is selected by default. You can clear the current selection and assign a specific reservation to each section. When selected, Velocity automatically reserves the selected topology for the Runlist. When not selected, a Reservation drop-down list displays with a list of topologies currently reserved. You may select the relevant reservation of the topology. If there are no upcoming reservations for this topology, Velocity displays a message informing as such.
	If Auto reserve topology for execution is not enabled for a section and no reservation is selected, an error message appears below the Reservation dropdown list.
	The Run button in the top-right corner is disabled until a valid reservation or Auto reserve topology for execution is selected.
	Automatically reserved topology for the runlist item ends when the runlist ends. If a second runlist uses the same reservation, the runlist execution may fail as the reservation may end while the second runlist is still running.
Topology Preview	It is recommended that you create a reservation with the topology required in the Runlist and then select the reserved topology when running the Runlist.
	See Topology Reservation handling during test execution for details.
Topology Preview	The preview panel is collapsed in Run mode.
	You may expand or collapse the Topology Preview, as required. Click the topology to view it on the Topology Editor canvas. You may reserve or edit the topology or share access to the topology as per your access permissions. See Topology Editor Overview.

Runlist Items: Automation Assets

Runlist Items included along with the details specified as custom or inherited when you added or edited the Runlist, if any.

The checkbox allows you to include or exclude a runlist item from execution (by default all runlist items are included for execution).

Checkbox	Displays in run, create, and edit modes. This option allows you to include or exclude a runlist item from execution. See also Add or Edit Runlist details page .
	The functionality of the checkbox differs depending on the page. - On Run a Runlist page: Select the checkbox to include items to be executed. By default, all runlist items are included for execution. - On Edit and Create pages: Select the checkbox to remove items from the list.
Name	Indicates the name of the Automation Asset. Click the checkbox next to Name, an individual runlist item, to include or exclude from execution.
	When you disable all runlist items, the Run button will be disabled (since there are not items to Run) .
	When you exclude a runlist item from execution, you will not be able to click the runlist item name nor edit the item as Edit icon will be hidden.
Location	Indicates the Automation Asset file path.
Settings	See Add or Edit Runlist Items > Settings for details about the Automation Assets that have been included to run sequentially in the Runlist.

Task on Run Runlist page

Run	Click Run to start execution.
	Users not in any User Groups (ungrouped users) cannot Run any runlist items as they are not granted permissions to interact with any repositories.

	See Manage SCM Repository Access and Manage Repository Permissions to User Groups for the type of permissions granted by Admin User.
Cancel	Click Cancel to discard the Runlist execution. Velocity discards any changes you made on the page (Runlist schedule, topology, parameters, Agent requirements, and Runlist Items) and displays the Runlist details page .

Run Runlist with parameter type Secret:

Velocity requires you to enter the values for secret parameter type defined at the Runlist level and the individual Runlist Items level (defined in the parameter file, script and any new parameter type Secret added).

Velocity prompts you to specify a value for the Secret parameter type when running a runlist and grays the **Run** button until all the values are provided.

Go to the Parameters tab and enter the secret value required for execution.	Parameters that require secret values are outlined (in red). For nested parameters, the top-level of the nested parameter will be outlined (in red) directing you to expand the outlined nested parameter and enter a secret value. The Run button becomes available only after you enter the required secret value on the Parameters tab. However, when you click Run, a message displays saying that not all secret parameters values are set. Check the Runlist items tab.
Go to the Runlist Items tab.	Runlist Items that require secret value are outlined (in red). Click Edit (✎) next to the outlined Runlist Item. On the Runlist Items > Parameters tab, Velocity highlights parameters to indicate when a secret value is required. Parameters that require secret values are outlined (in red). For nested parameters, the top-level of the nested parameter will be outlined (in red) directing you to expand the outlined nested parameter and enter a secret value.
Click Save .	The Save button is grayed until all the secret value for parameter type is entered.
Click Run after entering the required secret value to complete Runlist execution.	

See [Executions Report page](#) to view the runlist execution results.

Runlist Report

The **Runlist Report** page displays a report generated from the execution of an individual Runlist. Depending on your selections, the report includes the following tabs: **Information**, **Parameters**, and **Runlist Items**, which include topology and automation requirements.

The tabs displayed depend on the selections made during Runlist execution. Only the **Information** and **Runlist Items** tabs are displayed if no **Parameters** or **Agent Requirements** are specified. Additionally, if no topology is selected, the **Runlist Items** tab lists only the selected automation assets.

Information tab: Includes the Statistics section and the Agent Requirements

The **Information** tab is the default view, displaying the **Statistics** section, along with **Agent Requirements** (if selected during Runlist execution).

- The **Statistics** section displays the following details:

Label	Description
Runlist:	Name of the Runlist.
Description	Velocity includes a notification to inform you that some runlist items were excluded from execution. The following items were omitted from this runlist execution by request: Excluded runlist items (e.g., test.py, te.ffmpeg, etc.)
Runlist Location:	The path of the Runlist file.
Report Detail Level:	Indicates the level of report details selected.
Execution Started:	Indicates the date and time when the Runlist started execution.
Execution Ended:	Indicates the date and time when the Runlist completed execution.
Execution Duration:	The length of time the Runlist execution ran.

Execution Status:	Indicates the status of the Runlist execution: Completed,
Latest Update Time:	Indicates the date and time when the report was updated last.
Total Report Items:	Number of items in the Runlist, that is, the number of Automation Assets in the Runlist.
Passed:	Indicates the number of report items that showed result as passed execution.
Failed:	Indicates the number of report items that showed result as failed execution.
Indeterminate:	Indicates the number of report items that showed result as Indeterminate.

- The **Agent Requirement** section displays the requirements specified in the Runlist.

Parameters tab

Displays the Parameter settings (name of each parameter and its value) specified in the Runlist

See [Precedence of parameters — Which parameter value is used during a run?](#)

Runlist Items tab

Displays all the Runlist Sections and Assets included in the Runlist.

The **Runlist items** tab displays the configured **Runlist sections**. Each section may include a topology along with one or more Automation Assets associated with topology for execution. In addition, each of the automation assets defined for execution may specify additional parameters and agents responsible for running the automation asset.

Section name	Name of the Runlist Section. Default is Section 1, Section 2, and so on. The Runlist Sections are collapsed by default. Expand to view the configured execution option, topology, and automation assets.
Topology Preview	The Topology section displays a collapsed preview panel of the topology. You may expand or collapse the Topology Preview as needed. The preview panel does not appear if no topology is selected.

Runlist Items: Automation Assets

The Runlist section displays all included Assets, along with the following details for each Asset.

Name	Indicates the name of the Runlist Asset. After test execution, click the Asset name to view the execution report. See Automation Asset Execution Report .
Status	Indicates the execution status of the Runlist Item.
Agent	Indicates the name of the Agent that executed the Runlist Item.
Start Time	Indicates the date and time the Runlist Item started execution.
Duration	The length of time the Runlist Item
Run by	The name of the user who executed the Runlist.

Tip: A test report is available after an Automation Asset finishes running ([Automation Asset Execution Report](#)). To view status of a test while it is executing, see the [Active Executions](#) page.

Precedence of parameters — Which parameter value is used during a run?

Tests can take a parameter value from any one of several sources: From the default setting in the Runlist, Automation Asset (iTest Asset and Script Asset), from a parameter file, or a value that you set for the Runlist or the Runlist Item while configuring a run.

You may include/use parameter file (.ffpt and .ffpj) when running a Script Asset.

The system follows this order of precedence in determining the parameter value to use for a run:

Automation Assets	- By default, the parameter uses the default value in the Automation Asset (iTest Asset and Script Asset). (A blank value for an individual parameter means that the Automation Asset default is used.) - If you specify an iTest Parameter file, then the value from the file is used (not the iTest Asset default value). - If you specify a value by entering it in the parameter's text box, then that value is used (not the value from the iTest Parameter file or the iTest Asset default).
Runlists	If a parameter name specified for a Runlist item (Automation Asset) exists at the Runlist level, then the parameter specified for the Runlist item (Automation Asset) takes precedence.

iTest Parameter File in a Runlist

The iTest Parameter file specified for an individual Runlist iTest Asset Item overrides the iTest Parameter file specified for the Runlist (i.e., Runlist iTest Asset Item > Runlist). For example:

Runlist Item	Runlist	iTest Parameter File Sent to Agent	iTest Parameter File Used In Execution
paramFile1	paramFile2	paramFile1	paramFile1
	paramFile2	paramFile2	paramFile2

Parameter Value

The following shows the parameter precedence of values specified in Runlist Item, Runlist, Automation Asset, and the iTest Parameter file.

- For **iTest Assets**: Runlist iTest Asset Item value > Runlist parameter value > Runlist iTest Parameter File value > iTest Asset Parameter value.
- For **Script Assets**: Runlist Script Asset Item value > Runlist parameter value > Script Asset Parameter.

Runlist Item	Runlist	Automation Asset	Parameter Sent to Agent	Parameter Used In Execution
param1=A	param1=B	param1=C	param1=A	param1=A
	param1=B	param1=C	param1=B	param1=B
		param1=C		param1=C

If the iTest Parameter file to be used by the agent is paramFile1 (as described in the rules for the [Parameter Files](#)) and that iTest Parameter file defines param1=D, then the value shown in the example below applies.

Runlist Item	Runlist	iTest Parameter file	Automation Asset	Parameter File Sent to Agent	iTest Parameter File Used In Execution
param1=A	param1=B	param1=D	param1=C	param1=A	param1=A
	param1=B	param1=D	param1=C	param1=B	param1=B
		param1=D	param1=C		param1=D

Notes:

Parameter file will not be merged for Script Assets (non-iTest Assets)
If parameter file is JSON format, it will not be merged for iTest Assets

Summary of parameter precedence

Values from parameter files will override values from the manifest file and Values from UI override the values in the parameter file .

- If a parameter does not exist in the parameter file but exists in the manifest file, the manifest file parameter is used.
- if you have the same parameter in the parameter file and delete that parameter, the parameter from the manifest file is used.

Parameter input	UI parameter	File parameter	Manifest file	Parameter used in Execution
Parameter only in the UI	Yes	No	No	UI parameter
Parameter only in the file	No	Yes	No	File parameter
Parameter only in the Manifest	No	No	Yes	Manifest parameter
Parameter in the UI and File	Yes	Yes	No	UI parameter
Parameter in the UI and Manifest	Yes	No	Yes	UI parameter
Parameter in the File and Manifest	No	Yes	Yes	File parameter
Parameter in UI, File, and Manifest	Yes	Yes	Yes	UI parameter

Removing a parameter from the UI (clicking the Remove icon) deletes the parameter only from the UI. The parameter is still present in the parameter file and the manifest file and will be used in execution as described in the table above.

Runlist Requirements Precedence

Runlists can take a requirements value from any one of several sources: From the default setting in the Runlist, Automation Asset, or the Runlist Items while configuring a run.

The order of precedence is determined as follows: **Runlist Item > Runlist > Automation Asset**

- Agent Requirements specified at the Runlist level are added to any requirements defined within a Test Case.
- Any specific name and value pair marked as ignored at the Runlist level will be removed from the available set of requirements.
- Requirements specified at the Runlist Item level are added to the available set of requirements. Any specific name and value pair marked as ignored at the Runlist Item level will be removed from the available set of requirements.

The system follows this order of precedence in determining the Agent requirements used to execute Runlist:

Runlist Item	Runlist	Automation Asset	Results for Agent matching	Comment
Lab=SJ2	Lab=SJ1	Lab=SJ3	Lab=SJ3 Lab=SJ2 Lab=SJ1	Agent can be either one of the three available: Lab=SJ3 Lab=SJ2 Lab=SJ1
Ignore Lab=SJ3	Lab=SJ1	Lab=SJ3	Lab=SJ1	Agent available is Lab=SJ1. Runlist Item specified requirements take precedence and ignores Lab=SJ3
		Lab=SJ3	Lab=SJ3	Agent available is Lab=SJ3 and no requirements specified at the Runlist or Runlist Items level
Lab=SJ1	Ignore Lab=SJ3 Lab=SJ2	Lab=SJ3	Lab=SJ1, Lab=SJ2	Runlist ignore Lab=SJ3 Runlist specified requirements takes precedence over Automation Asset specified requirements.
Lab=SJ2	Lab=SJ1	Lab=SJ3	Lab=SJ3	Runlist Item ignores Runlist specified Lab=SJ1

Runlist Item	Runlist	Automation Asset	Results for Agent matching	Comment
Ignore Lab= SJ1			Lab=SJ2	
Color=Blue	OS=Windows	STC.Version=3.4.5	Color=Blue OS=Windows STC.Version=3.4.5	When multiple Agent attribute type (Key types) is selected, then the "AND" logic is used for Agent allocation.

Precedence of topology — Which topology is used during a run?

Tests can take a topology from any one of several sources: From the default setting in the Automation Assets, or the topology you set while scheduling a test to run.

The system follows this order of precedence in determining the topology to use for a run:

Automation Asset	- By default, the Automation Asset uses the associated topology (A blank value means that no topology is reserved or used.) - If you select a topology, then the selected topology is reserved or used (not the Automation Asset default).
-------------------------	---

Topology Reservation handling during test execution

Velocity executes an Automation Asset in the context of an active reservation. The [Schedule and Run Automation Asset](#) and [Run Runlist details page](#) page allows you to select a topology to associate with the test to be run.

Velocity manages Topology reservations as follows based on your selection.

Reservation selection	Test execution managed by Velocity
When Auto-reserve topology for execution is selected	This is the default selection when executing an Automation Asset from the Reservations > Automation tab for an active reservation topology and cannot be changed. Selected by default and when test is executed Velocity performs as below. - Sets reservation for the default duration of 30 minutes. - Releases reservation when execution is complete. - Attempts to extend the reservation time in increments of 10 minutes, if execution is still in progress when the specified reservation duration is about to expire. If for any reason, reservation cannot be extended, the execution will be aborted. Automatically reserved topology for the runlist or the runlist item ends when the runlist ends. If a second runlist uses the same reservation, the runlist execution may fail as the reservation may end while the second runlist is still running.

Manually schedule a reservation (Now or Schedule for later date/time)	• Execute the selected reservation. • Release the reservation at the end of execution. • Attempt to extend the reservation time by increments of 10 minutes if execution is still in progress when the specified reservation duration is about to expire. If for any reason, reservation cannot be extended, the execution will be aborted.
--	---

Reservation logic is applied when the test is run whether you choose to execute a test **Immediately** or **Later**. The reservation *must* be active when the test runs, or it will fail. Since tests are placed in a queue and only executed when resources are available, it may not be easy to predict exactly when a given test will run. For example, a test selected to run **Immediately** may not run if the execution resources are not available.

Interactive Workflow (SLC) Session Logs

- Download SLC session captures as a log file from a reservation
- Share troubleshooting records with other team and technology partners

Topology Editor—Launch Sessions

Velocity allows you to launch sessions defined for resources in an active (reserved) topology. See ([Topology Editor—Sessions](#) for information about defining sessions on resources in a topology), interact with resources in reservation topology to automate them.

When you open an active reservation topology that belongs to you or to which you have read/write access, you may open an SSH and/or Telnet connection to one or more resources and interact with raw commands or QuickCalls. Velocity also allows you to edit an active reservation topology, define a new SSH and/or Telnet and interact with raw commands or QuickCalls.

Velocity supports only SSH and Telnet terminal sessions.

Launch an interactive session as follows.

- Reserve topology, see [Schedule a reservation](#).
- Launch previously defined sessions, see [Launch Session](#) below
- Define session profiles as described in [Topology Editor—Sessions](#) and then [launch the newly defined session](#).

Launch a session

When the Topology canvas displays a reserved topology, selecting a resource display option.

Select a resource (concrete, abstract, or virtual resource) on your topology canvas, click the **Sessions** button. The content menu displays all existing session profiles.

Click  (Start Session) next to the session that you wish to launch. Velocity opens a SSH or Telnet terminal interface to the selected resource.

The Start Session button is enabled only when a resource is in **Active** state. For **Deferred** and **Queued** resources, the Run Session button is hidden. See [Resource Queuing](#).

Adding session to an active reservation topology

- Define session profiles as described in [Topology Editor—Sessions](#).
- Reserve topology, see [Schedule a reservation](#).

The session window is a floating window which you may move within the topology canvas. You may re-size the window by dragging the handle at bottom right of the window. All active

sessions are displayed as tabs on the top of the session windows, and you may select an active session and interact as required. You may also disconnect from any active session, as required either by issuing a close command, closing a session tab or closing the session window.

You may run raw terminal commands from the prompt or run iTest QuickCalls during active sessions.

A list of QuickCalls display (if defined). You may select a QuickCall with parameters and execute it. Output for all commands appears on the terminal. All captured command information (command name, duration, parameters, result and response) appears on the History pane on the right.

Multiple instances of the same session

In addition to running all defined sessions for the selected resource, you may run multiple instances of the same session. All active sessions are displayed as tabs on the top of the session windows, and you may select an active session and interact as required.

The example below shows multiple instances of the same session with which you may interact. All active sessions are displayed as tabs on the top of the session windows and display the Session title as entered in the **Session Editor** > [Session Title](#). Each active session tab displays session title as: [resource name]:[session name][session id]. The selected active session displays the window size as a prefix to the session title [resource name]:[session name][session id] — [window size].

The window below shows the executed raw commands with response, and the history panel with command name, result, response, and duration.

The items on the **History** pane are displayed in chronological order. When a new item is added, the content auto-scrolls to the end (if you do not change the scroll position).

Click the **Download** button on the current session **History** pane and select Text or JSON and pick a location to save the file, The default name is **captureHistory.type** (txt or json), and you may rename file as required. See example of the download files below.

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Multiple instances of the same session with which you may interact

PC1:SSH_QC11 — 74x31

check_license_cons... ?

license_type*
ITESTRUNTIME

license_server_path
/opt/spirent/apt-flexlm-serve

local
yes

Run QuickCall

List of QuickCalls you may select and run

```
[spirent@dutlinux8 ~]$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:56:3F:01:BC
          inet addr:10.220.72.22  Bcast:10.220.72.255  Mask:255.255.255.0
          inet6 addr: fd53:5043:5000:dc48:250:56ff:fe3f:1bc/64 Scope:Globa
1
          inet6 addr: fe80::250:56ff:fe3f:1bc/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:60294679 errors:0 dropped:0 overruns:0 frame:0
          TX packets:2848633 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:4104329487 (3.8 GiB)  TX bytes:276459007 (263.6 MiB)
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:14562 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14562 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1231400 (1.1 MiB)  TX bytes:1231400 (1.1 MiB)

[spirent@dutlinux8 ~]$ ls
core.2341  Desktop  Documents  Downloads  file.dat  GNUstep  itars  itest-
python-tests  Library  Music  Pictures  Public  QA  readme_eclipse.html  r
eadme.txt  syslog.py  syslog.pyc  Templates  velocity-agent  Vi
deos  youlogfile.log
[spirent@dutlinux8 ~]$ cd /opt/spirent/apt-flexlm-server/
-bash: cd: /opt/spirent/apt-flexlm-server/: Permission denied
[spirent@dutlinux8 ~]$ ./lmutil lmetat -a | grep ITESTRUNTIME
-bash: ./lmutil: No such file or directory
[spirent@dutlinux8 ~]$
```

Download

JSON

Text

open

ls -latr

Response:
total 10489472
-rw-r--r-- 1 spirent spirent
124 Jul 18 2013 .bashrc
-rw-r--r-- 1 spirent spirent
176 Jul 18 2013 .bash_profile
-rw-r--r-- 1 spirent spirent
18 Jul 18 2013 .bash_logout
drwx----- 3 spirent spirent
Aug 6 Mar 7 2017 .dhuc

ifconfig 00:00:00.004

Response:
eth0 Link encap:Ethernet HWaddr
00:50:56:3F:01:BC
 inet addr:10.220.72.22
 Bcast:10.220.72.255
 Mask:255.255.255.0
 inet6 addr:
fd53:5043:5000:dc48:250:56ff:fe3f:1bc
/64 Scope:Global
 inet6 addr:

ls 00:00:00.003

Text: The downloaded text file includes each session log in and the commands used.

[See example Text file](#)

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```
open
Last login: Thu Nov  6 20:59:57 2025 from vel-[REDACTED].spirenteng.com

ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:56:3F:01:BC
          inet addr:10.220.72.22  Bcast:10.220.72.255  Mask:255.255.255.0
          inet6 addr: fd53:5043:5000:dc48:250:56ff:fe3f:1bc/64  Scope:Global
          inet6 addr: fe80::250:56ff:fe3f:1bc/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:60303055 errors:0 dropped:0 overruns:0 frame:0
          TX packets:2849842 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:4104910734 (3.8 GiB)  TX bytes:276535740 (263.7 MiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128  Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:14562 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14562 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1231400 (1.1 MiB)  TX bytes:1231400 (1.1 MiB)

ls
core.2341 Desktop Documents Downloads file.dat GNUstep itars itest-python-tests Library Music Pictures
Public QA readme_eclipse.html readme.txt syslog.py syslog.py syslog.py Templates velocity-agent Videos
youlo-file log
```

JSON: The downloaded JSON file is an array of session and steps ordered by start time.

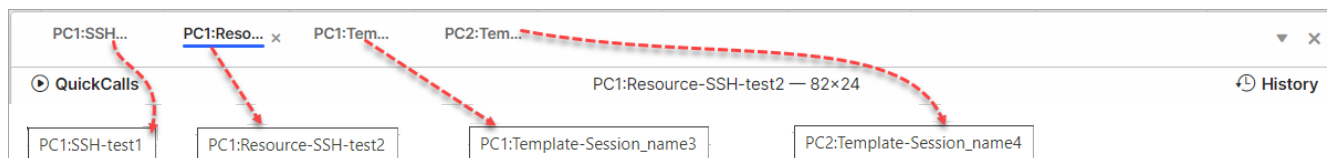
See [Example JSON file](#).

```
[
  {
    "sessionId": "sid_2c5d6ec1-24be-45eb-b589-5ed7ff9eb7373",
    "steps": [
      {
        "id": "b1c53928-1992-41cc-b467-bf6133ee5452",
        "action": "open",
        "parameters": [ ],
        "duration": 0.018,
        "body": "Last login: Thu Nov  6 20:59:57 2025 from vel-[REDACTED].spirenteng.com",
        "result": "SUCCESS",
        "failed": false,
        "issues": [ ],
        "markAsFailed": false
      },
      {
        "id": "fac04a90-2c5f-492b-b3f2-a7df650072ed",
        "action": "ifconfig",
        "parameters": [ ],
        "duration": 0.005,
        "body": "eth0      Link encap:Ethernet  HWaddr 00:50:56:3F:01:BC  \n                inet addr:10.220.72.22\n                Bcast:10.220.72.255  Mask:255.255.255.0\n                inet6 addr: fd53:5043:5000:dc48:250:56ff:fe3f:1bc/64\n                Scope:Global\n                inet6 addr: fe80::250:56ff:fe3f:1bc/64  Scope:Link\n                UP BROADCAST RUNNING\n                MULTICAST  MTU:1500  Metric:1\n                RX packets:60303055 errors:0 dropped:0 overruns:0 frame:0\n                TX packets:2849842 errors:0 dropped:0 overruns:0 carrier:0\n                collisions:0 txqueuelen:1000\n                RX bytes:4104910734 (3.8 GiB)  TX bytes:276535740 (263.7 MiB)\n                Link encap:Local Loopback  \n                inet addr:127.0.0.1  Mask:255.0.0.0\n                inet6 addr: ::1/128  Scope:Host\n                UP LOOPBACK RUNNING\n                MTU:16436  Metric:1\n                RX packets:14562 errors:0 dropped:0 overruns:0 frame:0\n                TX packets:14562\n                errors:0 dropped:0 overruns:0 carrier:0\n                collisions:0 txqueuelen:0\n                RX bytes:1231400 (1.1\n                MiB)  TX bytes:1231400 (1.1 MiB)\n",
        "result": "SUCCESS",
        "failed": false,
        "issues": [ ],
        "markAsFailed": false
      },
      {
        "id": "12690e26-2b61-4729-a830-89911e57c20b",
        "action": "ls",

```

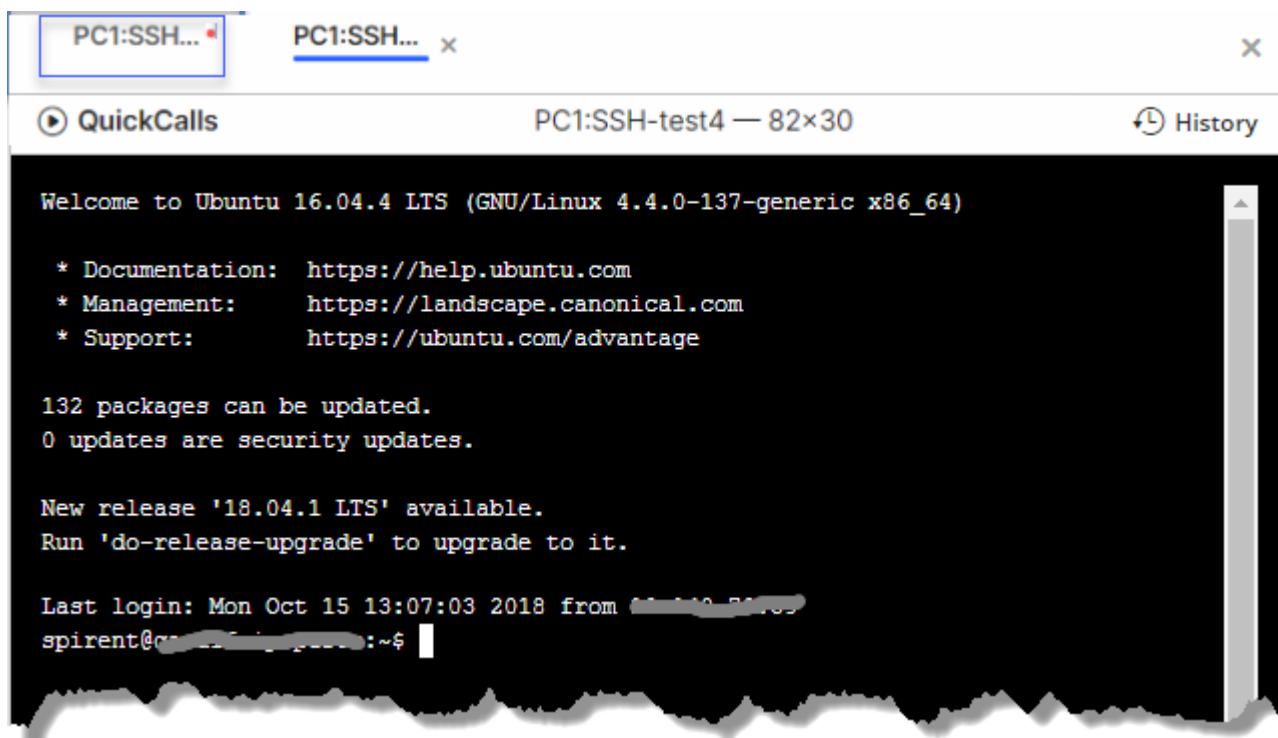
Multiple sessions for a selected resource

The example below shows sessions run for the selected resource. All active sessions are displayed as tabs on the top of the session windows and display the Session title as entered in the **Session Editor > Session Title**. The Session Title format displays as: [resource name]:[session name][session id]. The selected active session displays the window size as a prefix to the session title.



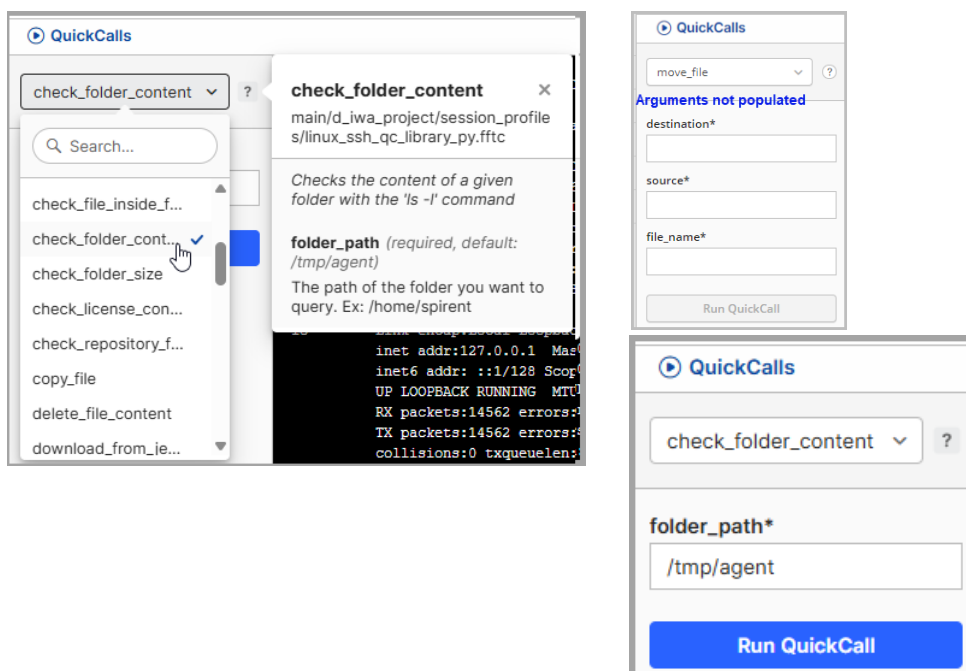
Terminal content

When new terminal content is written to a non-active terminal tab, a **red dot** will appear on that tab, indicating there is new output to review. For example, when a user starts an extended ping from a terminal and switches to another tab, a **red dot** soon appears on the previous tab indicating new terminal output has been written.



Using QuickCall commands

Click QuickCall and the left pane opens with a list of QuickCalls sorted alphabetically. If you click on the question mark, Velocity displays a description of each QuickCall, the arguments available for each QuickCall and their description.



When running a **QuickCall** that requires arguments, the default argument values are auto populated and the **Run QuickCall** button is disabled until all required arguments (marked with *) are filled.

Select a QuickCall with parameters and execute it. The QuickCall commands invoked and responses received from each command display on the terminal (real-time) and assist you to determine whether the command(s) worked as required.

The command with captured info (command name, duration, parameters, result and response) also displays on the History panel.

The example below shows the executed QuickCalls with response, and the history panel with QuickCall commands, steps, result, response, and duration.

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The screenshot displays the Velocity Core interface with a terminal window showing the execution of the `check_folder_content` QuickCall command. The interface includes a sidebar on the left with a search bar and a list of QuickCalls. The main terminal area shows the command output, including system information and file details. On the right, a 'Raw commands' panel shows the command arguments and the response. A blue arrow points to the 'Download' button in the 'Raw commands' panel, with the text 'Click to download Text or JSON file'.

QuickCalls

check_folder_content ?

folder_path*

/tmp/agent

Run QuickCall

QuickCall command with default arguments.
* indicates the mandatory arguments

Last login: Thu Nov 6 20:33:02 2025 from vel-stefan.itest-pv.lwd.spirenteng.com

```
[spirent@dutlinux8 ~]$ ls
core.2341 Desktop Documents Downloads file.dat GNUstep itars itest-
python-tests Library Music Pictures Public QA readme_eclipse.html r
eadme.txt syslog.py syslog.pyc Templates velocity-agent Vi
deos youlogfile.log
[spirent@dutlinux8 ~]$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:56:3F:01:BC
          inet addr:10.220.72.22  Bcast:10.220.72.255  Mask:255.255.255.0
          inet6 addr: fd53:5043:5000:dc48:250:56ff:fe3f:1bc/64 Scope:Globa
1
          inet6 addr: fe80::250:56ff:fe3f:1bc/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:60291482 errors:0 dropped:0 overruns:0 frame:0
          TX packets:2848509 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:4104087989 (3.8 GiB)  TX bytes:276436460 (263.6 MiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:14562 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14562 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1231400 (1.1 MiB)  TX bytes:1231400 (1.1 MiB)

[spirent@dutlinux8 ~]$ cd /tmp/agent
-bash: cd: /tmp/agent: No such file or directory
[spirent@dutlinux8 ~]$ du -sBM
```

Raw commands

Download

open 00:00:00.000

ls 00:00:00.000

ifconfig 00:00:00.004

check_folder_size 3 00:00:00.369

QuickCall command

Arguments: folder_path = /tmp/agent, block_size = MB

Response: 12828

1 COMMENT Initialize variables 00:00:00.001

2 COMMENT Issue commands 00:00:00.001

3 COMMENT Return result 00:00:00.001

check_folder_content 2 00:00:00.307

QuickCall command

Arguments: folder_path = /tmp/agent

Response: total 10489308

```
-rw-r--r-- 1 spirent spirent
4595712 May 31 2018 core.2341
drwxr-xr-x 2 spirent spirent
4096 Mar 7 2017 Desktop
drwxr-xr-x 2 spirent spirent
```

Velocity distinguishes between the QuickCall commands, responses, and nested commands and responses. See [Reservations: Capture tab](#).

Reservations: Capture tab

The **Capture** tab is populated only if the Admin user has enabled the capture collector service on your Velocity Instance.

On the **Schedule** menu, click **Reservations**. The **Reservation** details page displays a list of scheduled or past reservations. You may search for a particular reservation and/or select filters to limit the number of reservations displayed. See [Reservation details](#) page.

- Find the reservation you wish to view, a current or past reservations that you own or one for which you have read access.
- Open the selected reservation. The reservation opens and displays the **Information** tab.
- Open the **Capture** tab to view a list of interactive session(s) started during the reservation, including all the commands and responses captured during those sessions.

Tip: You can apply filters so that only particular items appear in the list. Use the filters below on the left of the page to limit the relevant details that appear in the list.

Filters

The options on the left of the **Reservations > Reservation Instance > Capture** page allow you to filter the displayed sessions based on your specific criteria.

The search filters and criteria available depend on the page on which you perform search.

Reservations > Reservation Instance > Capture	User: List of users who have captured sessions (not all Velocity users) during the reservation. Resource: List of resources on which interactive session was executed. Session Type: Indicates the type of session performed: SSH, Telnet
---	--

When you select any filtering option, **Reset All Filters** display to indicate that filtering is applied, and you may clear this filtering. Click **Reset All Filters** to clear the filters set and return to the default display.

The **Reservations > Reservation Instance > Capture** page displays the following details:

Sessions Action	This is a list of all the sessions that were run while the reservation was active. Each item in the list indicates the session name, the session type, the name of the resource on which the session was run, and the user who started the session. Collapsed within each item are the actions performed during that session.
Step #	Indicates the step number.

Action	Lists all the actions performed during the terminal session interaction. You may expand or collapse to view the command response. When collapsed, the action command displays the Action name (e.g., command), Command name (e.g., ifconfig) and Result (only when not SUCCESS).
Start Time	Indicates the time when the action command was issued.
Duration	Indicates the length of time taken to complete the action command (e.g., 00:00:00.014 as shown in the example illustration above).
Download All Download	Download All: Click to download all sessions captured as JSON or Text and pick a location to save the file, The downloaded file contains all sessions captured in the reservation. The default name is Reservation Capture History [reservationId] (txt or json), and you may rename file as required. Text: The downloaded text file includes each session prefixed by: ===== Session: <session ID> ===== , and a blank line to separate the sessions. See example Text file.

```
===== Session: sid_cad4da17-345b-41ad-aceb-6e3d9b7d95121 =====
```

```
open
```

```
Last login: Mon Jul 28 13:58:25 2025 from 10.249.242.201
```

```
ping localhost -c 5
```

```
PING localhost (127.0.0.1) 56(84) bytes of data.
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=1 ttl=64 time=0.080 ms
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=2 ttl=64 time=0.068 ms
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=3 ttl=64 time=0.082 ms
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=4 ttl=64 time=0.062 ms
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=5 ttl=64 time=0.146 ms
```

```
--- localhost ping statistics ---
```

```
5 packets transmitted, 5 received, 0% packet loss, time 4104ms
```

```
rtt min/avg/max/mdev = 0.062/0.087/0.146/0.030 ms
```

```
close
```

```
===== Session: sid_1d341807-abc3-4430-9d30-a5f7e118cd6c2 =====
```

```
open
```

```
Last login: Tue Oct 21 11:27:36 2025 from 10.220.72.162
```

```
close
```

```
===== Session: sid_0eff798f-ed98-4d38-9c00-1bf24cb0f9a03 =====
```

```
open
```

```
Last login: Tue Oct 21 11:29:45 2025 from 10.220.72.162
```

```
ping localhost -c 1
```

```
PING localhost (127.0.0.1) 56(84) bytes of data.
```

```
64 bytes from localhost (127.0.0.1): icmp_seq=1 ttl=64 time=0.083 ms
```

JSON: The downloaded JSON file is an array of session buckets ordered by Start Time.

[See Example JSON file.](#)

```
{
  "sessionId": "sid_cad4da17-345b-41ad-aceb-6e3d9b7d95121",
  "steps": [
    {
      "id": "e0312d64-4475-4896-966c-adf8e839a959",
      "action": "open",
      "parameters": [],
      "duration": 0.423,
      "body": "Last login: Mon Jul 28 13:58:25 2025 from 10.249.242.201",
      "result": "SUCCESS",
      "failed": false,
      "issues": [],
      "markAsFailed": false
    },
    {
      "id": "a463dc1a-6230-4cfc-b469-d0b953c38212",
      "action": "close",
      "parameters": [],
      "duration": 0,
      "body": "",
      "result": "SUCCESS",
      "failed": false,
      "issues": [],
      "markAsFailed": false
    }
  ]
},
{
  "sessionId": "sid_1d341807-abc3-4430-9d30-a5f7e118cd6c2",
  "steps": [
    {
      "id": "cc940e58-a01f-457b-8fb0-9bc4eae01892",
      "action": "open",
      "parameters": [],
      "duration": 0.159,
      "body": "Last login: Tue Oct 21 11:27:36 2025 from 10.220.72.162",
      "result": "SUCCESS",
      "failed": false,
      "issues": [],
      "markAsFailed": false
    }
  ]
}
```

pl:1

Download: Click to download a specific session as **JSON** or **Text** and pick a location to save the file, The default name is **sessionName.type** (txt or json), and you may rename file as required. The **sessionName** is the inherited session name or Topology Sessions name defined for the resource.

See also an [Example of Multiple sessions captured](#).

In addition to the above details, these details display on the right of the **Capture** tab.

Owned by	Indicates the name of the reservation owner.
Created time and by	Indicates time of reservation creation and the name of user who created the reservation.

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Modified time and by	Indicates time of reservation was modified and the name of user who modified the reservation.
----------------------	---

See the examples of the session and action commands displayed on the Capture tab.

Session Actions

Download All ▼

Download all sessions captured as JSON or Text file

Step #	Action	Start Time	Duration
	Session Name: PC1:SSH_QC2_1 Session Type: SSH Resource: PC1 User: spirent		
			Number of Steps captured when interacting with the session 7
			Download ▼ JSON Text
1	Action: open	Today 08:07 A...	00:00:00.085
2	Action: command Command: ifconfig	Today 08:07 A...	00:00:00.030
	Response		
	<pre>docker0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500 inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255 ether 02:42:c3:39:aa:dc txqueuelen 0 (Ethernet) RX packets 0 bytes 0 (0.0 B) RX errors 0 dropped 0 overruns 0 frame 0 TX packets 0 bytes 0 (0.0 B) TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0 ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500 inet 10.220.72.23 netmask 255.255.255.0 broadcast 10.220.72.255 inet6 fd53:5043:5000:dc48:250:56ff:fe3f:11b prefixlen 64 scopeid 0x0<global></pre>		
3	Action: qc_wo_arg	Today 08:07 A...	00:00:00.685
	Response		
	<pre>ac aflorescu andrei.grama Android bogdan.raicu bstoica ceva data derby.log Desktop Documents Downloads itars iTest iTest_24.4_workspace iTest_9.3_workspace iTest_9.4_workspace iTest_9.5_workspace jarResources licensing-proxy-server.run linux- 4.4 Music new.txt node_modules p2 Pictures programs Public QA readme_eclipse.html slave.jar snap spirent-apt-flexlm-server_9.5.0-10_amd64.deb spirent-velocity-agent-config startJenkinsSlave.sh STC_Velocity telnet Templates testConfig thinclient_drives Videos workspace</pre>		
3.1	Action: command Command: ls	Today 08:07 A...	00:00:00.227
	Response		
	<pre>ac aflorescu andrei.grama Android bogdan.raicu bstoica ceva data derby.log Desktop Documents Downloads itars iTest iTest_24.4_workspace iTest_9.3_workspace iTest_9.4_workspace iTest_9.5_workspace jarResources licensing-proxy-server.run linux-4.4 Music new.txt node_modules p2 Pictures programs Public QA readme_eclipse.html slave.jar snap spirent-apt-flexlm-server_9.5.0-10_amd64.deb spirent- velocity-agent-config startJenkinsSlave.sh STC_Velocity telnet Templates testConfig thinclient_drives Videos workspace</pre>		
3.2	Action: command Command: cd /home/spirent/	Today 08:07 A...	00:00:00.109
3.3	Action: command Command: ls	Today 08:07 A...	00:00:00.118
3.4	Action: return Command: [command_output]	Today 08:07 A...	00:00:00.009
4	Action: qc_ping Command: (ip='8.8.8.8';c='3')	Today 08:08 ...	00:00:02.176
5	Action: qc_w_arg Command: (path='/home/spirent/')	Today 08:08 ...	00:00:00.387
6	Action: command Command: ls	Today 08:09 ...	00:00:00.009
7	Action: close	Today 08:29 A...	00:00:00.000

Example of Multiple sessions captured

Session Actions					Download All	
Step #	Action		Start Time	Duration		
▼ Session Name: PC1:SSH1_1 Session Type: SSH Resource: PC1 User: spirent		👁			3	Download
1	▶ Action: open	👁	Oct 21, 01:27 ...	00:00:00.423		
2	▶ Action: command Command: ping localhost -c 5	👁	Oct 21, 01:27 ...	00:00:04.122		
3	Action: close	👁	Oct 21, 01:28 ...	00:00:00.000		
▶ Session Name: PC1:SSH1_2 Session Type: SSH Resource: PC1 User: spirent		👁			2	Download
▶ Session Name: PC1:SSH1_3 Session Type: SSH Resource: PC1 User: spirent		👁			Download	
▼ Session Name: PC1:SSH1_4 Session Type: SSH Resource: PC1 User: spirent		👁			3	Download
1	▶ Action: open	👁	Oct 21, 01:33 ...	00:00:00.163		
2	▶ Action: command Command: ping localhost -c 10	👁	Oct 21, 01:42 ...	00:00:09.206		
3	Action: close	👁	Oct 21, 01:43 ...	00:00:00.000		

Admin and user Configured Token Lifetime

- **Admin user:** Defines the system-wide maximum token validity period, setting the upper limit applied when generating tokens.
- **Velocity user:** Selects a custom token validity duration, which is then used to generate a token for API authentication.

Application Settings

Configure application settings (Admin only)

On the main toolbar, click  and then **Application Settings** to configure Velocity features. Click the tabs and configure parameters as described below.

After you complete the configuration tasks, Click **OK** to save your configurations or click **Cancel** to discard your changes.

Reservations

Reports

Disk Management

Administration

Specify settings to track user activity, user idle time, auto-logout time, enforce auto-logout, and admin credentials for system tasks.

Track user activity	Select to allow Velocity to record user activity in two states: "Active" or "Idle". Default: Not selected
Users are defined as "Idle" after N minutes of inactivity	Define the duration of inactivity after which, Velocity classifies and reports user to be in idle state. If a user is inactive for the specified time duration, they will be classified as Idle. Default: 15 minutes
	The value entered here cannot be greater than the value in the field Idle time until user auto-logout (minutes) .

	A user is considered idle, when no actions are performed on the UI (e.g., navigating to another page, refreshing a page, clicking on links, scheduling reservations, etc.), or via the API. This setting is used only for display purposes on Users page in the Activity column
Idle time until user auto-logout (minutes)	Define the duration of inactivity (classified as idle) after which, Velocity will automatically log the user out. If a user is inactive (idle) for the specified duration, then they will be logged out of Velocity and license reclaimed. For example, if you have set the Idle time until user auto-logout (minutes) as 20 minutes, then Velocity will automatically log the user out and reclaim the license 20 minutes after the user's last action. The value entered here must be greater than the value in the field Users is defined as "Idle" after N minutes of inactivity. Default: 120 minutes Minimum value: 10 minutes Users are logged out successfully after the set timeout period only if the Velocity tab (browser) is closed during the idle time. This relates to the Velocity Server Standard licensing (Consumption based), where licenses are not checked out when users log into Velocity and hence, log out actions are not required or performed
Enforce user auto-logout even if licenses are available	Select to indicate that Velocity should log out users inactive (idle) for more than the specified timeout period (above) and then restore license to the license pool.
Maximum Access Token duration (days):* 7	Allows admin users to set the maximum duration for which an access token remains valid. This setting specifies the maximum length of time an access token can remain valid.

	• Minimum value: 7 days, Default • Maximum value: 365 The value specified in this setting is used to generate an access token and determine the upper limit of the token's validity period.
Admin login for system tasks:	Velocity will generate a token for Admin User Id and then pass it to mandatory startup (when the reservation starts) and teardown (before reservation completes) Automation Assets during execution, for validation and identification of the admin user If no Admin is selected, a message displays saying Admin not selected. Click the text box and select the Admin user from the list.
	The Admin User Id selected is used for generating a token and sent to mandatory startup and teardown Automation Assets during execution, for validation and identification of the admin user.
	Your selection of Admin User ID will be reset after you upgrade to a newer version of Velocity. You or the Admin User, whose Admin User ID is used for token generation, is required to log into Velocity and set the Admin User ID.
Actions repository:	Velocity provides a security restriction that allows you (Admin user) to set the repository with resource-specific automation assets to display during active reservation. Select a repository to specify where the Automation Actions are defined. Velocity searches the specified repository and displays the relevant Automation Actions during active reservation.
	Only one of these options may be selected.
	Options: All, main, and other SCM based repositories in your Velocity instance. See Velocity Actions: Resource Automation from an active topology reservation.

	If the selected SCM repository is removed from Velocity (via the Source Control Management page) a confirmation dialog displays as saying that the repository will be permanently removed and cannot be recovered, and if used as an Actions repository deleting the repository will also remove automation actions associated with resources (see Velocity Actions: Resource Automation from an active topology reservation).

[Work Orders](#)[Terminals](#)[Topology Editor](#)

Manage your User Profile

This topic describes about managing your user profile, setting up your preferences of default display and various notifications (email, reports, etc.).

In the title bar of any Velocity page, click the  icon to view these available options:

My user profile	Allows you to view your current profile settings (see below).
Save as Home Page	Allows you to define your preferred home page, that is, the page that you would like to see when you log into Velocity or when you click VELOCITY on the top left of the page. To Save as Home Page: • Navigate to a Velocity page of your choice. • Click the  icon and then select Save as Home Page. For example, navigate to Library > Topologies, set filter to list "SJC-L3" and then select Save as Home Page. Velocity saves the topologies page with your filtered list as your new home page and displays this on your next login. The new home page you save is also displayed when you click VELOCITY on the top left of the page.
About Velocity	Displays Velocity version and copyright statement.

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Logout	Logs you out of Velocity and releases your license.
--------	---

View your current profile settings

The Information tab displays your user profile information. You may click **Edit** to change your profile settings as required and then click **Save**.

Name	Displays your username (Not editable)
Email (for Email notifications)	Enter the email address. All notifications you opted to receive via email are sent to the address you enter here.
Access	Indicates the access privilege granted: User, Admin, Super Admin. Note: You cannot change your own user role. Only Admin users can change this access.
Time zone	Specify your time zone. Select your time zone or select to Set automatically, in which case Velocity detects and sets the time zone automatically.
Description	Optional. Enter text that describes the user account for other users.
Terminal application:	Select to indicate your preference for using external applications to open the management console URL instead of the Web UI. • Always external: Select to indicate the use of external application to open management console URLs. When selected, the resource management console URL specified by the Admin user opens in system default application for working with terminal connections (for example, PuTTY). • Web for SSH and Telnet: When selected, a Web console link to the resource management console opens. Default: Web for SSH and Telnet
Daily reservation quota	The label displays only when viewing non-admin user profile and the globally set daily reservation quota value does not display. . Any value displayed indicates the explicitly set individual user reservation quota limit. (Does not display when viewing Admin user profile) Only the Admin user may set daily reservation quota for any non-admin user.

Notifications:	
System messages: Internal and by email Internal only	Select to receive system messages. • Internal and by email: When selected, the report is sent as both Velocity system message and an email message. You can access system messages by clicking Messages in the main navigation bar and receive system messages as email messages to the address you entered above. • Internal only: When selected the report is sent only as Velocity system message. You can access system messages by clicking Messages in the main navigation bar.
My reservation invitations:	Select to cause Velocity to send you an email invitation when you submit a reservation request. The message provides the name and time of the reservation and includes an iCalendar (.ics) attachment. In addition, you can invite other people to participate during the reservation (for example, to start a test, monitor equipment, or disconnect a resource during a test). See Schedule a reservation. You must specify an e-mail address to use this option.
Daily Report	Available only for Admin users. Select to receive a daily report that identifies inventory resources that are not connected or expected to be available.
Authentication Token	
Token duration (days)	Set the maximum duration for which an access token generated by you remains valid. Default: 7 (days) The minimum value is 1 and the maximum value is as defined by the Admin user in Application Settings > Administration.
Generate Token	Click the Generate token button. The value specified in the Token duration is used to generate an access token and determine the upper limit of the token's validity period. Velocity generates an authentication token, which you may view and copy. You may then use the copied token to authenticate your API requests.

Show Token (🕒): Click icon to show or hide the token details.

Copy to Clipboard (📋): Click icon to copy the token to clipboard and use it to authenticate your API requests.

Velocity displays the token expiration date and time, and a warning message about protecting your token.

[illegible]

Multivalued Resource Properties

- Set multiple values to a resource property from a list of valid choices from a drop-down display
- Expanded inventory tracking capability, enhanced abstraction functionality

Property Type: Multi-Select Drop-Down

Some deployments need properties that can include multiple selectable values, such as lists of supported standards or installed licenses. To handle these cases, Velocity provides a Multi Drop-down List property type, which lets you define a list of values that can be selected for a property.

You may define a **Multi Drop-down List** property in Templates, which are inherited by the Resources and Ports that use those templates. When a Resource or Port includes this property type, it appears on the Topology canvas, where you can view the multiple selected values.

Velocity also supports import and export of multi-selected values through CSV files, making it easy to manage, share, and replicate configuration data across deployments.

The following lists the topics where the property type is defined for your reference.

Templates	See Templates: Create a template > Properties tab .
Resources	See Add a resource
Ports	See Add and configure a port
Topology	See Create Physical Topology (section Left pane of Topology Editor: Properties and Ports)
Import/Export CSV	See Import resources from an existing database and Export Resources

Templates: Create a Template

A template is the common set of properties and [tags](#) that is used as the starting point for creating a new resource.

When you specify a template while defining a resource, the resource inherits several property settings from the template (even before you begin to configure the property settings for the new resource). The template provides many default settings for the new resource, and then you modify settings as needed (e.g., resource name or IP address).

Velocity provides several useful templates. If you need additional template designs, you have the options to:

- Define custom templates as described below in [Create a custom template](#) section.
- Import templates and resources from other Velocity implementations, as described in: [Maintenance task: Import a copy of the Velocity inventory from another instance of Velocity](#).

Nested Template

Velocity allows you to include templates within another template referred to as Nested Templates. That is, a structure where templates are stored under another template to form a hierarchy is referred to as Nested Templates.

Nested template defines the type of resources that are allowed to be nested within another resource.

Resources added based on the Nested templates create Nested Resources, which organizes and represents relationship between resources.

Nested Abstract resources in addition to organizing and representing relationship between resources, allows you to specify conditions for nested abstract resources.

Create a custom template

Use either of the following methods:

- Click **Inventory > Templates**. On the **Templates** page, click **Add Template**. On the **Select a template to inherit from** dialog box, specify a parent template and then click **Continue**.
- Click **Inventory > Resources**. On the **Resources** page, click **Add**. On the **Select a template to inherit from** dialog box, click **Add new template**.

Notes: If you specify a template to inherit, then the new template inherits all properties from the selected template.

If you do not specify a template to inherit, then you must define all properties for the new template.

A new Template page includes the [Information tab](#), Properties tab, Driver Agent Requirements tab, Appearance tab, and Snapshot tab. Specify default values that should be used whenever someone adds a resource based on the template and click **Save** to save the template definitions. After a new resource is defined, the user can change any of the default settings as needed.

Information tab

Properties tab

Click the **Properties** tab and add properties to the template.

Orchestration template: See [Template: Add Properties for Orchestration Templates](#)

Network Element template: Properties are organized into groups. By default, the **Network Element** template includes these property groups:

System Identification:	Identify the network elements: IP Address, Hostname, Make, Model, Serial Number, Guacamole server address, Console server. Console server: Read only. Displays the Console server address specified on the Information tab.
System Location:	Identifies the physical location of the network element: Facility, Room, and Floor Position.
Credentials:	Identifies the credentials required to access the network element: username and password. For example, the defined Credentials property group with username and password properties allow faster implementation of Interactive Workflow Automation .

If you wish to create a custom element template from the default **Network Element** template, then the custom **Network Element** will inherit default properties. You may add more properties and edit default values as required. See [Add New Properties Group](#) below.

Network Port template: Properties are organized into groups. By default, the **Network Port** template includes these property groups: port type, port speed, and port number.

portNumber:	Indicates the system port number. Example: Port_1.1.1.
Port Type:	Identifies port type, for example, Ethernet, Fast Ethernet, etc.

Port Speed :	Identifies the port speed in Mbps, 10, 1000, and so on.
---------------------	---

If you wish to create custom port template from the **Network port** template, then the custom **Network Port** will inherit default properties, and you may add more properties as required. See [Add New Properties Group](#) below.

Add New Properties Group

Click **Add New Group** and enter a **Group name**. The property group appears. Click the group name to open the group.

Click **Add New Property** to configure the following attributes.

Name	Enter the name for the property element you wish to add.
Description	Optional. Enter text that describes the property to make its usage clear to coworkers.
Type	Default: Text box. Select to indicate the property value type for this element. These are the options available: Text box, Integer, Decimal, Yes/No, Unique, Text area, File upload, Password, Drop-down list, Multi Drop-down list, Hyperlink.
Presence	Default: Optional. Select to indicate whether property element value is optional or mandatory. Options are: Required, Optional
	Unique type allows you to specify the property type as either mandatory or optional and the default value is not available for property type Unique.
Reservation Argument	Default: No. Select to indicate whether property element value is passed to the orchestrated drivers to influence orchestration resource creation and termination. Options are: Yes, No

	Default value is not mandatory when the option is Yes.
Value	Available for Text box, Integer, and Decimal. Enter the value that should be displayed for the property element.
Property Values	For Drop-down list, Multi Drop-down list, and enumerated types, add individual values that are appropriate for the property. For example: blue, yellow, green, red
Default value	Specify the default value that should be used for the property whenever someone adds a resource based on the template. After a new resource is defined, you can change any of the default settings as needed. • Text area and Password: Enter the default value for these property value types . Select default value for the property value types Yes/No, Unique, File upload, Drop-down list, and Hyperlink. • Yes/No: Select options Yes or No from the selection list. • File upload: Click File Upload, navigate to the location of the file and click Open to select file. Velocity does not support the property type File upload type for drivers. The value specified for the File upload property is never passed to the driver. • Drop-down list: Select a value from the list. The list depends on the value you entered in the Property Values above. • Multi Drop-down list: Select Multi Drop-down List to enable multiple selection. The list depends on the value you entered in the Property Values above. Use the Multi Drop-down list option if the property is required to support multiple values. For example, a list of supported standards or installed licenses. Velocity provides the Multi Drop-down List property type to enable multiple selection. • Hyperlink: Provides a way for you to create a hyperlink for the resources which would link to the record, for example in your management system. Define the text to be displayed in the UI and URL for the hyperlink as shown below.

	○ Link title (mandatory). Enter a relevant title. This value cannot be blank. Enter at least 1 character in length. ○ Type or paste the URL (mandatory). Enter a string in the following format: scheme://hostname:port. Example: http://spirent.com, ftp://192.168.0.1. Default Link title specified for the Template ensures that the text of the hyperlink is consistent across all resources that would or inherit properties from this template and the default URL allows you to link to a specific default page. You may edit or override these default values at the Resource level.
--	---

To quickly add a property that is similar to an existing property, click **Duplicate** and then change settings as needed.

Click **Remove** to delete a template property. Removing a property from a template does not remove the property from its inherited templates.

Unique property type

You may either create a new property group or a new property in an existing property group and then create a property type called **Unique** to keep track of your inventory. For example, create a new property group called **Unique-Serial-Number**, add a new property called **Serial-ID** with property type **Unique**, and presence as **Required** and add another new property call **Serial-Tag** with property type **Unique**, and presence as **Optional** as shown below.

▼ Unique-Serial-Number ②		
Name	Type	Default Value
Serial-ID*	Unique	
Serial-Tag	Unique	

Velocity validates to ensure that the value of Unique property type is distinct (not repeated) between resources created based on a particular template. If the unique property is not distinct between resources based on a particular template, validation fails, and an error message displays.

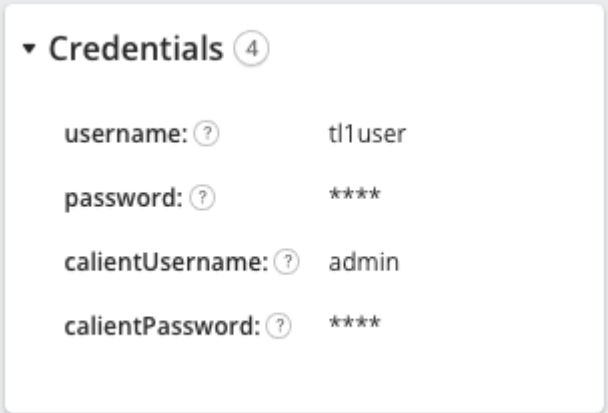
Velocity does not validate the value of Unique property type between resources based on different templates or between different nested levels of templates or resources.

Adding a new unique property to a template with many existing resources

- Select an existing template, click Edit
- Add a new **Unique Property** type and select **Presence** = Optional.
- If you select **Presence** = Required to a template with many existing resources, an error displays. This is because resources based on this template have no value.
- Save the template.
 - Edit each resource based on the edited template and provide unique values for each resource.
 - Edit template and then change **Presence** = Required for the **Unique Property** type.

Default Properties

For example, the default properties of the L1 Switches include system identification, location information, and credentials property groups. When creating templates for specific L1 Switch templates, for example, MRV switch and Calient switch, it is important that you edit the Credential property group and define username and password values as required. The Calient Switch requires a second set of credentials as shown below.

	• username and password: Create a username called tl1user and a password. The username tl1user and password is used to establish a SSH connection to the Calient Switch. • CalientUser name and calientPassword: Create a username called admin and a password The username admin and password authenticate the credentials to provide elevated privileges to
---	---

	make or break cross connect.
--	------------------------------

See Example Property Groups definitions for [Orchestrated Resource](#) (AWS Cloud Service, AWS Instance, K8s Cluster, K8s Service).

See also [Velocity Portfolio Resource Driver Reference Guide](#) for details about the Layer 1 Switch drivers provided with Velocity.

Property Groups for Console Access Management

Driver Agent Requirements tab

Appearance tab

Snapshot Tab

Click **Cancel** to discard any information added or modified or click **Save** the information to the template.

After you create a template, you may add Port Group and Ports to the custom template you create.

- Clicking **Inventory > Templates** to display the **Templates** page
- Select the required Template from the list and then click [Add Ports](#) and/or [Add Port Groups](#) as required.

This saves the additional steps of adding physical ports when creating an inventory item. You may only edit port properties from the “[Edit port](#)” dialog.

You may also create a custom template for Network Ports and add Port Group and Port based on this.

To specify which inbound and outbound ports are allowed to connect to each other, add a new port property called **batch** to switch port template as described in [Restricting Ports that map to each other](#).

Add a Resource

Before creating a resource, consider that you may want to organize your lab's resources into folders (for example, **DUTs**, **Hosts**, **Infrastructure**, **Servers**, and so on). To add a folder: On the **Resources** link, click and then enter a name for the folder.

Define and configure a resource: Click **Inventory > Resources**, move to the appropriate folder and then click **Add**.

When you add a resource, you first specify the template that the newly defined resource should have as default settings. The resource inherits several property settings from the template before you begin to configure the property settings for the new resource. The template provides many default settings for the new resource, and then you modify particular settings as needed (like resource name or IP address).

Select the template and click **Continue**. (Alternatively, click **Add a new template**. See [Templates: Create a template](#).)

A **New Resources** page displays and includes these tabs: [Information](#), [Properties](#), [Driver Agent Requirements](#), [Permissions](#), [Appearance](#), and [Snapshot](#) (if feature license is enabled). The [Resource Groups](#) tab displays if the user creating the resource is a **Resource Group Admin** (see [Managing user access to resources: Groups and Permissions](#)). Specify default values that should be used for the resource, define the properties, and permissions. When defining a new resource, the user can change any of the default settings inherited from the parent template as needed, except for the Utilization (i.e., whether the resources are shared or for exclusive use).

You have the options to import templates and resources from the other Velocity instances or to define custom templates. See [How to populate the Velocity inventory of resources and ports](#) for details.

Notes:

- A template inherits the **Reservation Type** from the template on which it is based by default. However, you can change the inherited template's **Reservation Type** anytime.
- Modifying a template also modifies and updates all the templates that inherit it, even if you have previously overridden the **Reservation Type** of a template.

Information Properties

Click the **Properties** tab to display the properties defined in the Template on which the Resource is based.

These rules apply viewing, creating, and editing Resource.

Viewing a Resource	The Properties tab displays the properties defined in the template. You cannot change any data when viewing. The hyperlink properties (if defined in the Template properties), renders a link, when clicked displays the relevant page in a new window. Only for resources based on Orchestrated templates Reservation Argument: Displays a check mark in the column next to the resource property element with a value defined by the Admin user (in the template).
Creating a Resource	The Properties tab displays the properties as defined in the template. See Templates: Create a template > Properties tab. Specify values for the properties defined for the resource. For example, System identification, Location Information, Credentials (e.g., Read-Only, Read-Write, Admin, etc.), Links (Link Text (e.g., Spirent), Unique property type, URL (http://spirent.com) defined for a resource), etc. The System Identification (IP Address) and Credentials (username, password) will be used by the driver to connect to the resource. The Read-Only Credentials, Read-Write Credentials, and Admin Credentials will be used to allow user access level permissions. Console server: Read only. Displays the Console server address specified on the Information tab. See Console server on the Information tab. When you try to connect to a resource using an external console server, if the license is not available or cannot be checked out for some reason, the following error message displays: You are not allowed to access this connection because the license is missing or no longer available. Please check with your system administrator. Depending on the template configuration defined by the Admin user, a drop-down list property may be available that allows selection of multiple values from a predefined list. For example, a property called Multiple Licenses allows you to select multiple licenses available in your deployment, LicA, LicB, LicC. Unique property type: Enter a unique value.

	Velocity validates to ensure that the value of Unique property type is distinct (not repeated) between resources created based on the same template. If the unique property is not distinct between resources based on the same template, validation fails, and an error message displays. The link title and URL provide a link to a specific default page.
	Drivers use IP addresses to discover resources. Hence a valid IP Address is required for displaying the resource online/offline status.
	Only for resources based on Orchestrated templates Reservation Argument: Displays a check mark in the column next to the resource property element with a value defined by the Admin user (in the template). You may edit or override this value which will be passed to the orchestration drivers to influence their initialization and termination driver calls.
Editing a Resource	The Properties tab displays the properties and values as defined in the template on which the resources are based. You may edit or override these default values, except Credentials (e.g., Read-Only, Read-Write, Admin, etc.).

Driver Agent Requirements

Resource Groups

Permissions

Appearance tab

Snapshot tab

Click Save.

Add and Configure a Port

While viewing a resource, the **Resource > Port** page allows you to add ports under two sections:

- **Ungrouped:** Under **Ungrouped**, add ports that are not grouped
- **Named groups:** For named groups, Velocity provides a mechanism to add a Port Group (via **Add New Group**) and then add ports or subgroups within the named group (see the topic [Add a Port Group](#)).

Follow these instructions to add Ports.

All ports are based on the Network Port template, or a child of Network Port template.

Velocity does not allow you to add ports to a resource that is reserved for exclusive use.

Velocity does not allow you to add ports to a resource that is reserved for exclusive use. If you attempt to add ports to a resource reserved for exclusive use, the **Add** button will not be available on the **Resources > Ports** tab.

To add ports, click **Add Ports** and then specify the following property settings:

Information tab	
Port Count	Select Port Count as Single port or Multiple ports
For Multiple Port:	Port name prefix: Specify the text that should be the initial part of the name for each port in the group.
	Starting Index: Specify the number of the first port in the group. The name of each port in the group is the Port naming prefix followed by the index of the port.
	Number of ports: Specify the number ports in the group.
For Single port:	Name: The port Name is a practical working name for the port — Velocity uses the portNumber property to identify a port, while users might use the Name property. For your convenience, Velocity sets the default value of the portNumber property to the value that you specify for Name —

	the two values are typically the same. To edit the portNumber value, edit the port after creating it. You must use the manufacturer's port naming standard for the resource (for example, 1.1.1, 1.2.5, and so on). Use port names to <i>tag</i> ports that are members of groups: Logical — for example, 10GB ports Physical — for example, card 6 Other — your naming scheme See Tags: Match Automation Assets, Parameters and Topologies.
Port Name	(Mandatory) Enter a unique name to identify the port
For both Single and Multiple Port counts:	
Template	Specify the template of settings to use when creating the port.
Group	If the port should be a member of a port group, select the group. Only existing port groups appear in the list — see Add a Port Group.
Description	Note: You can only edit port properties from this “Edit port” dialog. You cannot edit port properties from the template Properties tab. Optional. Enter text that describes the port to make its usage clear to coworkers. The Ports template contains the following optional properties: -- port type (Ethernet, Fast Ethernet, and so on) -- port speed (in Mbps) -- portNumber (manufacturer's port name)
Properties: tab System Identification	

The Port Properties available depend on the properties and values you set up in the Port template. See **Templates: Create a template** > [Properties tab](#).

Port Type	Specify the physical type of the port, for example, Ethernet
Port Speed	Specify the port speed in Mbps

Depending on the template configuration defined by the Admin user, a drop-down list property may be available that allows selection of multiple values from a predefined list. For example, for a property Multi-Speed, you may select multiple port speeds, such as 10 Mbps and 1000 Mbps.

Create Physical Topology

Create a Concrete topology with resources listed in the **Palette** option **Resources** (concrete resources from your inventory).

- Click **Palette > Resources** to display the concrete resources available in your inventory.

The L1, L2 switches and Patch Panels are not listed under the resources tab as these resources are used to resolve links and cannot be used in a logical topology.

- Drag and drop a single resource from the **Palette** option **Resources** on to the Topology Editor canvas.

You may also select multiple resources, from the **Palette** option and then drag and drop the selected resources on to the Topology Editor canvas. You may resize the dimension of the resource as required.

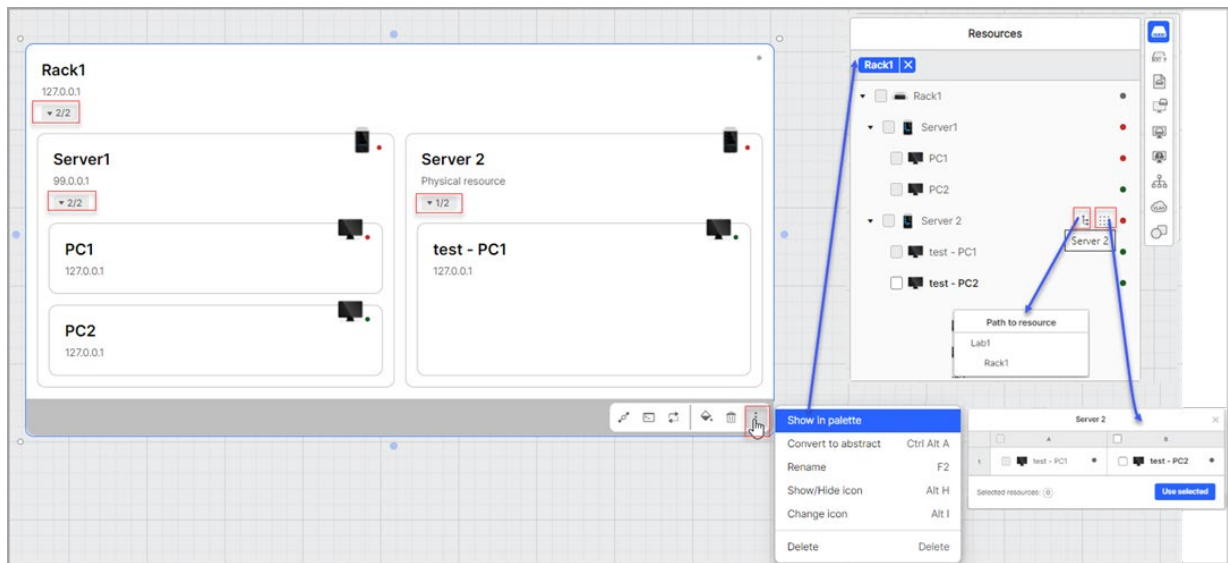
Nested structures

You may select required resources from a nested structure and drag and drop them on to the topology canvas. Dragging top-level Nested resources adds all the nested resources to the topology.

The nested group of resources on the canvas displays in a single or multiple columns as specified in the coordinates ([Resources > Nested Resources](#) tab). The parent resource shows a counter showing how many of its nested resources are used in the topology (dropped on the canvas). The User can define the coordinates in the inventory for physical and abstract resources (and can change them in the inventory) and those coordinates will be used in the topology.

You may resize only the outermost element of the nested elements. Topology Editor auto-sizes all nested elements to fit. You may also only minimize the outermost nested element which collapses all contents of that nested set into the outermost container with its default dimensions.

Creating nested abstract structure in the topology does not allow for setting of coordinates. Default coordinates will be used for such nested abstract structures.



For example, Nested resource Rack 1 placed on the canvas has 2 of the 2 nested resources Server 1 and Server 2 on the canvas, Server 1 has both its nested resources placed on the canvas (PC1 and PC2), and Server 2 have 1 of 2 nested resource (test-PC1) on the canvas. You use this counter as a button to collapse/expand nested resources. You may also view the resource on the canvas on the palette to include additional resources.

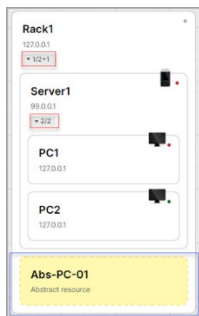
If required, edit the topology resource name and notice that the name of the actual resource name (from the Inventory) is displayed on the top and the new name of the topology resource is displayed at the bottom of the resource icon. The inventory name and the new topology resource names are also reflected on the left pane.

Changing resource name on the **Inventory > Resource** page automatically updates the Concrete Resource name on the topology (name above the icon).

You cannot modify the nested structure of concrete resources, as they are defined in your inventory.

When editing existing topology, you may make changes to nested structure(s), and the Topology Editor will be updated to reflect the changed nested structure. You may remove element(s) from nested structures displayed on the canvas,

Add abstract resources to physical nested structure



Velocity allows you to add abstract resources to a physical nested structure. For example, when you add abstract resource **Abs-PC-01** to Nested structure **Rack1** and change parent resource of **Abs-PC-01** as **Rack 1**, Velocity combines **Abs-PC-01** and the physical nested structure **Rack1** to a common nested structure.

Velocity displays the number of concrete and abstract resources in the counter (▼ 1/2+1) to indicate that number of abstract resources added.

- You may remove nested resources from a nested structure. If you select the top-level resource, Velocity splits the nested structure to individual resources.
- Connect resources as required.** When you draw a connection between two resources, The [Connection Editor](#) displays. Modify port connections as required. See also [Topology: Connection Dialog](#) for editing and modifying connections for details.

Left pane on the Topology Editor

Select a resource on the Topology Editor canvas and these left pane displays these tabs: Properties, Ports, Sessions, Resolving time.

Properties	Ports
Sharing: Provides options depending on the resource type to define utilization whether the topology resource is reserved as Shared, reserved as Exclusive, or Inherits the reservation type from template. See Topology Editor: Set Reservation Resource Utilization Type. Resolving time: Provides two options: Immediate: Default. Select to indicate that the resource must be resolved as soon as the reservation is active. Deferred: Indicates that resource activation is to be deferred until you manually activate the resource.	Displays available concrete and abstract ports. You may Add ports (click +), Edit port name, View port properties and Remove port, as required. The Port Properties lists portNumber, Port Type, and Port Speed. When a port defines a property with multi drop-down property type, an additional property name is displayed with multiple values. For example, Multi Port Speed with values of 100, 1000. See Add and Configure a Port See also Connection Type and Arguments in Topologies. You may manage Port connectivity. See Manage Port

See Deferred resources. System Identification This section displays only if the resource defines a property with multi drop-down property type. The example below shows the property name defined, Installed License with three values configured, LicA, LicB, and LicC. See Add a Resource Installed License LicA,LicB,LicC For Nested Resources, an additional section labeled Parents displays a direct parent and all ancestor resource names (ordered from top-level to direct parent). - Names of direct parent and all ancestor resources are listed, whether you have access to them or not. The Parent section does not display resources not nested. - If the Parent Resource from the list of direct parent and all ancestor resources are present on the Topology canvas, the parent resource name will be a link If the Parent Resource from the list of direct parent and all ancestor resources are not present on the Topology canvas, the parent resource name displays as text (without link). - When you click on the parent link, the parent resource is selected, and view is centered on that resource. Properties: Defined for the Resource in the Properties tab.	Connectivity and Manage Link Conditions.
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Read only. Displays the concrete resource IP address, Host name, hyperlink properties, and any other properties information as defined in your inventory. Tags: Displays all defined Topology Tags. You may click  to add or remove tags to the topology. See also Edit Tags. Reservations: Displays a list of active and scheduled reservations which are using the topology on the canvas. Clicking on the active or scheduled reservation name navigates to the Reservations > Topology page by default.	
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[More about Palette > Resources](#)

Import resources from an existing database

To simplify your task of adding each resource to the inventory, Velocity can import the definitions of resources from your current database of resources. In addition, Velocity also allows you to import inventory from one instance of Velocity to another.

Import CSV file	Use Import CSV File to import your existing resources from your current database of resources. See Import a CSV file .
	Import CSV file uses name to identify resources and imports only resources. Hence, import will be a success only if Velocity already contains the relevant templates and drivers.
	Velocity recommends that the user who imports and exports CSV files have access to the entire inventory.
Import from ZIP	Use Import from Zip to import the inventory zip file that was exported from another Velocity instance. Import inventory from a zip file .
	Import from ZIP uses driver IDs for importing inventories from a ZIP file used by Export to ZIP file for exporting zip files.
Import Nmap Report	Use Import Nmap Report to import the definitions of resources in your lab network that have been “discovered” by software. See Import resources that are auto-discovered .

Import resource definitions from a CSV file

Use your current database software to save the resource definitions in a .CSV file. Then use Velocity's import function to read and parse the CSV file. Velocity applies appropriate templates to each resource in the file and then creates a resource for each resource definition and each of its ports directly in the Velocity inventory.

If a resource includes a driver, then Velocity runs the driver's **getPorts** method to import the resource ports. (The **getPorts** method returns name, status, and container (slot or card) information for ports on the resource.)

The CSV import uses the **name** column to identify resources and **parent resource** column to identify reference to parent resources. Hence, the import will succeed only if Velocity already contains the relevant templates, the nesting structure (where applicable), and drivers.

Using the database manager software, save the resource definitions in a CSV formatted file that includes the following field names. (The field names have the same meanings as the settings for Velocity resources.)

- Each row in the file represents an entry for one resource and associated port.
- If an entry is missing a required setting, then the default value is taken from the template associated with the resource. If the template does not include a default value, then the resource is not imported, and Velocity sends you a system message about the skipped resource.

Keyword attributes definitions

name, ipAddress, hostName	If no name is specified for a resource, then the value specified for the hostName property is used. If no hostName is specified, then the value of the ipAddress property is used.
description	Relevant description of the resource
tags	The entry can be multiple space-separated values.
template	If a template value is specified for a resource or port, then the specified template is used, that is, a value in the row overrides the resource or port template chosen in the "Import From CSV File" dialog. If no template is specified, then the template specified in the Import From CSV dialog (described in the following steps) is used.
driver	If a driver's value is specified for a resource, then the specified driver from the Velocity inventory is used. If no driver is specified, then the driver specified in the template associated with the resource is used.
is status polling enabled	Indicates whether the status check is enabled or disabled with values TRUE or FALSE. Velocity displays the status of individual resources in the inventory report—unknown, offline or online, depending on whether the Status check is enabled or disabled.
someProperties	In addition to keyword attributes, the CSV file may contain any number of property attributes that provide the corresponding property values for the resource. If a property is not defined in

	the template associated with the resource, then the property is skipped for the resource. Property names in the CSV file are <u>not</u> case-sensitive.
parent	Indicates port information. The value in the cell is the name of a parent resource. If a row from CSV file has a cell that is not empty corresponding to the parent column, then it is treated as a port.
port group	Indicates the Port Group. In a CSV file, the values in the column called port group are considered for ports. If the value is not specified or the column does not exist in the CSV file, then the port is treated as not grouped. You may specify nested port group with a forward slash('/'). In the example below, "PG-01/PG-02/PG-03" indicates that the port belongs to port group "PG-03" which is nested into port group "PG-02" which is nested into port group "PG-01". A Slash (/) sign in port group names is not supported.
	If the port is part of a port group, the field is populated. Otherwise, it's empty
parent resource	Indicates the parent resource name under which the current resource (in the 'name' column) is nested. If the value is not specified or the column does not exist in the CSV file, then the resource is treated as not nested.
reservation time	Indicates whether the resources can be resolved immediately or deferred until activated. Reservation Time is imported (or exported) to CSV as column name reservation time column with values Immediate and Deferred. • If the reservation time column is not present in the imported file or is present and contains an invalid value, the resource Reservation Time defaults to the value set in the resource template. • If the template does not have the Reservation Time set, then the imported Reservation Time defaults to Immediate.

custom reservation time	Indicates the Reservation Time property state with values false or true. false: Indicates that the resource Reservation time is inherited from the Template and the value has not been modified for the resource. true: Indicates that the resource Reservation time has been modified and contains a custom value. The Reservation Time property state is imported from column name custom reservation time. If the custom reservation time column is not present or contains an invalid value in the imported CSV file, the value defaults to false. See also Inheritance of Reservation Time in Template and Resources.
cost	Indicates the Admin user defined cost in the template or for the resource to calculate effective cost used to determine resource selection during resolving process. See Resource Costing: Admin Defined Cost.
Coordinates	Coordinates are used to represent levels of nesting in a chassis/linecard port group hierarchy and are mapped using the nomenclature of cell row. Velocity allows you to set the row/column position of each nested element so the Topology Editor can place each nested element within its parent using an easy grid-like coordinate system. The coordinates for child resources use Excel notation (A1, A2, B1, etc.). See Add a Nested Resource.
MultipleValue	MultipleValue (custom property name) is used to specify the resource properties that need to support multiple values, such as a list of supported standards or installed licenses. See Templates: Create a template > Properties tab > Add New Properties Group.
PortSpeeds	PortSpeeds (custom property name) is used to specify the port properties that need to support multiple values, for example multiple port speeds.

The CSV import uses **name** column to identify resources and **parent resource** column to identify parent resources. Hence, the import will succeed only if Velocity already contains the relevant templates, the nesting structure (where applicable), and drivers.

The following validation occurs when importing a CSV file:

- If your Velocity Inventory contains resources which you are trying to import via CSV:

Velocity will check the template definition for the resources in the **name** and **parent resource** columns in the CSV.

Based on the template definition (in Velocity), if the resource specified in (CSV) the **name** column can be nested under the resource in the **parent resource** column, then the resource **name** and the **parent resource** references will be imported.

Based on the template definition (in Velocity), if the resource specified in (CSV) the **name** column cannot be nested under the resource in the **parent resource** column, then the resources in the **name** column will be imported without the **parent resource** reference and an error message will be generated.

In addition, if you do not have access to the parent resource. Velocity will not add nested resources to the parent resource and will send you an error message.

- If your filtered list of resources contains nested resources and does not contain host resources:

Exporting this list (CSV file) will contain 'parent resource' reference and does not contain 'parent resource'.

If you then import this file without the 'parent resource' but with reference on 'parent resource', Velocity will look for 'parent resource' from existing resources and nest as referenced (if the template structure exists). If not found, imports resources without the parent resource and sends a message saying that the reference was ignored.

For example:

Velocity has two resources: Rack 1 , Server 1.1.1, and PC 1.1.1, Server 1.1.1 is nested within Rack 1, and PC 1.1.1 is nested within Server 1.1.1.

Filter on Nested Resources and export as CSV. The exported CSV file will contain resources (name column) and parent resource reference (parent resource column).

Import this CSV file to another Velocity instance.

Velocity imports resources, and if the new Velocity instance includes the template structure that allows nesting (Lab < Rack < Server < PC), the resources will be nested. If any of the resources or the template structure does not exist in Velocity, the parent reference will be ignored, but the resource will be imported.

See [Export using CSV File dialog](#) to understand filtered display.

Velocity Core

Version 25.4.0 – System Release Summary (Rev A)

Resources imported into Velocity

The example below shows how to specify resources, ports, port groups, and related details in a CSV file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	name	descriptio	template	driver	tags	parent	port group	out of ser	out of ser	console ui	status	parent res	nesting te	coordinate	reservatic	custom re	vlan id	setM	Port Mode	Port Spee	Port Type
2	aaa		Hub	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
3	Cisco Switch 13		Cisco Swit	Cisco Driver 8.7.0				FALSE		TRUE					IMMEDIAT	FALSE	200+				
4	conn - pc 1		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
5	conn - pc 2		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
6	conn - pc 3		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
7	Lab1		Lab	Ping Driver 2.0.0				FALSE		TRUE		Location-C	Lab	A1	IMMEDIAT	FALSE					
8	Lab2		Lab					FALSE		FALSE		Location-C	Lab	B1	IMMEDIAT	FALSE					
9	Lab3		Lab					FALSE		TRUE					IMMEDIAT	FALSE					
10	Location-01		Location	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
11	PC1		PC-Test	Python_driver_online				FALSE		TRUE		Server1	PC-Test	A1	IMMEDIAT	FALSE					
12	PC2		PC-Test	Ping Driver 2.0.0				FALSE		TRUE		Server1	PC-Test	A2	IMMEDIAT	FALSE					
13	Rack1	sdfsdfsd	Rack					FALSE		TRUE		Lab1	Rack	A1	IMMEDIAT	FALSE					
14	Rack 2		Rack	Ping Driver 2.0.0				FALSE		TRUE		Lab2	Rack	A1	IMMEDIAT	FALSE					
15	Rack 31		Rack	Ping Driver 2.0.0				FALSE		TRUE		Lab3	Rack	A1	IMMEDIAT	FALSE					
16	Rack 32		Rack	Ping Driver 2.0.0				FALSE		TRUE		Lab3	Rack	A2	IMMEDIAT	FALSE					
17	RACK-01		Rack	Ping Driver 2.0.0				FALSE		TRUE		Lab1	Rack	A3	IMMEDIAT	FALSE					
18	SalutEdi_IntraSiPeTc		PC-Test					FALSE		TRUE					IMMEDIAT	FALSE					
19	Server1		Server	Ping Driver 2.0.0				FALSE		TRUE		Rack1	Server	A1	IMMEDIAT	FALSE					
20	Server 2		Server	Ping Driver 2.0.0				FALSE		TRUE		Rack1	Server	A2	IMMEDIAT	FALSE					
21	Server2		Server	Ping Driver 2.0.0				FALSE		TRUE		Rack 31	Server	A1	IMMEDIAT	FALSE					
22	Server 311		Server	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
23	Server 312		Server	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
24	Server 313		Server	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
25	Server 314		Server	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
26	test - PC1		PC-Test	Ping Driver 2.0.0				FALSE		TRUE		Server 2	PC-Test	A1	IMMEDIAT	FALSE					
27	test - PC2		PC-Test	Ping Driver 2.0.0				FALSE		TRUE		Server 2	PC-Test	B1	IMMEDIAT	FALSE					
28	test - PC3		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
29	test - PC4		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
30	test - PC5		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
31	test - PC6		PC-Test	Ping Driver 2.0.0				FALSE		TRUE					IMMEDIAT	FALSE					
32	test - PP1		Patch Panel					FALSE		TRUE					IMMEDIAT	FALSE					

Example below shows Multiple values specified for a resource and its ports with the relevant details in a CSV file.

A	B	C	D	E	F	G	H		AM	AN	AO	AP	AQ	AR	AS
1	name	descriptio	template	driver	tags	parent	port group	out of serv	MultipleValue	Port Mode	Port Speed	Port Speed-Multi	Port Speeds	Port Type	Priv
2	Device1		Parent_Temp					FALSE							
3	New port		Network Port			Device1					1000			Ethernet	
4	Device2		Parent_Temp					FALSE							
5	New port		Network Port			Device2					1000			Ethernet	
6	Parent_temp		Parent_Temp					FALSE							
7	PC1	PC	Ping Driver 24.3.0					FALSE							
8	New port		Network Port			PC1					1000			Ethernet	
9	PC-Multi-Select		Test-PC-M	Ping Driver 24.3.0				FALSE	LicA,LicB,LicC						
10	New port		Network Port Multi Select			PC-Multi-Select					1000		1,000,100	Ethernet	
11	Test-Port1		Network Port Multi Select			PC-Multi-Select					1000		1,000,100	Ethernet	
12	Test-Port2		Test-Network Port			PC-Multi-Select					1000	1000		Ethernet	
13	PC_Console_Server_f	PC_Conso	Ping Driver 24.3.0					FALSE							
14	Resource_SSH1		Temp_with_session					FALSE							
15	New port		Network Port			Resource_SSH1					1000			Ethernet	
16															

Notes:

If an entry is missing a required setting, then the default value is taken from the template associated with the resource.

If the template does not include a default value, then the resource is not imported.

If a file includes a field name that is not a keyword or property label in the template for a resource, then field is ignored for the resource.

Import CSV

Imports From CSV	In Velocity, click Inventory > Resources. On the Resources page, click the Import menu and select Click Import From CSV. On the Import From CSV dialog box, select a resource Template and Port Template, click Choose File, navigate to the CSV file that you generated from the database, and then click Import. When an import is completed, a system message is sent containing the corresponding import results. Skipped resources and the reason for the skip are noted.
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Export Resources

To simplify your task of backing up each inventory of resources, templates, and drivers, Velocity can export the current definitions of resources to .CSV file or a ZIP file. This helps replicate the inventory in another instance of Velocity by importing the resulting exported or backed up zip file into the other instance of Velocity. See also [Import resources from an existing database](#).

Export to CSV file	Use Export to CSV file to edit the exported file and add your inventory to the file as per the CSV file definition. See CSV File Definition below.
	Export to CSV file uses name to identify resources and exports only resources. Hence, Import from CSV will be a success only if Velocity already contains the relevant templates and drivers.
	Velocity recommends that the user who imports and exports CSV files have access to the entire inventory.
Export to ZIP file	Use Export to ZIP file to export inventory from one Velocity instance to another.
	Export to ZIP files uses driver IDs for exporting inventories into a ZIP file and hence, Import from ZIP uses IDs for importing zip files.

Both Admin user and non-admin users may perform an **Export**. Non-admin users can only export resources to which they have permission to view.

Export using CSV File dialog

In Velocity, click **Inventory > Resources**. On the **Resources** page, click the **Export** drop-down menu and select **Export to CSV file** or **Export to Zip file**.

Export to CSV file	Export to CSV file dialog displays and presents you with options to export: • Resources only (selected by default) • Resources and ports. If the resource page displays a filtered list as per your search criteria, you may select to export all the resources or only the filtered resources: • Use Current Filter (selected by default) • Export current filter with nested resources • Export all
	If a no filter is applied on the Resources page, the Filter options are not displayed.
	Select your option and click Export. When the Save as dialog opens, navigate to your required location and save the .CSV file.
	See below for the format of the exported .CSV file.
Export to Zip file	Select option, navigate to your location, and save the file.
	The zip file includes an XML resource definition file (e.g., inventory.xml) and various .bin files. It is not recommended to edit these files. Contact Spirent support for assistance).

Exported resource definitions CSV file

Using the database manager software, you may view the exported resource definitions in a CSV formatted file. The exported CSV file contains the resource property specified in Velocity. (The field names have the same meanings as the settings for Velocity resources.) Each row in the file represents an entry for one resource and associated port.

The example below shows how resources, ports, port groups, nested resources, and related details are specified in a CSV file exported from Velocity. See [Keyword attributes definitions](#) for details. The table also shows examples of data exported depending on your export criteria and filter settings.

Export: Resources and Ports and/or Filter: Export All

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	name	descriptio	template	driver	tags	parent	port group	out of ser	out of ser	console ui	status	parent res	nesting	te coordinat	reservatio	custom re	vlan id set	Port Mode	Port Speed	Port Type	
2	aaa		Hub	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
3	Cisco Switch 13		Cisco Swit	Cisco Driver 8.7.0				FALSE			TRUE				IMMEDIAT	FALSE	200+				
4	conn - pc 1		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
5	conn - pc 2		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
6	conn - pc 3		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
7	Lab1		Lab	Ping Driver 2.0.0				FALSE			TRUE	Location-C Lab		A1	IMMEDIAT	FALSE					
8	Lab2		Lab					FALSE			FALSE	Location-C Lab		B1	IMMEDIAT	FALSE					
9	Lab3		Lab					FALSE			TRUE				IMMEDIAT	FALSE					
10	Location-01		Location	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
11	PC1		PC-Test	Python_driver_online				FALSE			TRUE	Server1	PC-Test	A1	IMMEDIAT	FALSE					
12	PC2		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server1	PC-Test	A2	IMMEDIAT	FALSE					
13	Rack1	sdfsdf	Rack					FALSE			TRUE	Lab1	Rack	A1	IMMEDIAT	FALSE					
14	Rack 2		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab2	Rack	A1	IMMEDIAT	FALSE					
15	Rack 31		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab3	Rack	A1	IMMEDIAT	FALSE					
16	Rack 32		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab3	Rack	A2	IMMEDIAT	FALSE					
17	RACK-01		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab1	Rack	A3	IMMEDIAT	FALSE					
18	SalutEdi_IntraSiPeTc		PC-Test					FALSE			TRUE				IMMEDIAT	FALSE					
19	Server1		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack1	Server	A1	IMMEDIAT	FALSE					
20	Server 2		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack1	Server	A2	IMMEDIAT	FALSE					
21	Server2		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack 31	Server	A1	IMMEDIAT	FALSE					
22	Server 311		Server	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
23	Server 312		Server	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
24	Server 313		Server	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
25	Server 314		Server	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
26	test - PC1		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server 2	PC-Test	A1	IMMEDIAT	FALSE					
27	test - PC2		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server 2	PC-Test	B1	IMMEDIAT	FALSE					
28	test - PC3		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
29	test - PC4		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
30	test - PC5		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
31	test - PC6		PC-Test	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIAT	FALSE					
32	test - PP1		Patch Panel					FALSE			TRUE				IMMEDIAT	FALSE					

Export: Resources and Ports and/or Filter: Export All. Example: Multiple values of a resource and its ports.

	A	B	C	D	E	F	G	H		AM	AN	AO	AP	AQ	AR	AS
	name	descriptio	template	driver	tags	parent	port group	out of ser	out of ser	console ui	status	parent res	nesting	te coordinat	reservatio	custom re
1	Device1		Parent_Temp					FALSE								
2	New port		Network Port			Device1										
3	Device2		Parent_Temp					FALSE								
4	New port		Network Port			Device2										
5	Parent_temp		Parent_Temp					FALSE								
6	PC1		PC	Ping Driver 24.3.0				FALSE								
7	New port		Network Port			PC1										
8	PC-Multi-Select		Test-PC-M	Ping Driver 24.3.0				FALSE								
9	New port		Network Port Multi Select			PC-Multi-Select										
10	Test-Port1		Network Port Multi Select			PC-Multi-Select										
11	Test-Port2		Test-Network Port			PC-Multi-Select										
12	PC_Console_Server_f		PC_Conso	Ping Driver 24.3.0				FALSE								
13	Resource_SSH1		Temp_with_session					FALSE								
14	New port		Network Port			Resource_SSH1										
15																
16																

Export: Resources and Ports; Filter: Export current filter with nested resources

The filtered list contains nested resources and does not contain host resource; the CSV file contains parent resource reference and does not contain host resource.

Velocity Core

Version 25.4.0 – System Release Summary (Rev A)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	name	description	template	driver	tags	parent	port group	out of ser	out of ser	console ui	status	parent resource	nesting tem	coordinates	reservation
2	Lab1		Lab	Ping Driver 2.0.0				FALSE			TRUE	Location-01	Lab	A1	IMMEDIATE
3	Lab2		Lab					FALSE			FALSE	Location-01	Lab	B1	IMMEDIATE
4	Lab3		Lab					FALSE			TRUE				IMMEDIATE
5	Location-01		Location	Ping Driver 2.0.0				FALSE			TRUE				IMMEDIATE
6	PC1		PC-Test	Python_driver_online				FALSE			TRUE	Server1	PC-Test	A1	IMMEDIATE
7	PC2		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server1	PC-Test	A2	IMMEDIATE
8	Rack1	Test	Rack					FALSE			TRUE	Lab1	Rack	A1	IMMEDIATE
9	Rack 2		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab2	Rack	A1	IMMEDIATE
10	Rack 31		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab3	Rack	A1	IMMEDIATE
11	Rack 32		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab3	Rack	A2	IMMEDIATE
12	RACK-01		Rack	Ping Driver 2.0.0				FALSE			TRUE	Lab1	Rack	A3	IMMEDIATE
13	Server1		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack1	Server	A1	IMMEDIATE
14	Server 2		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack1	Server	A2	IMMEDIATE
15	Server2		Server	Ping Driver 2.0.0				FALSE			TRUE	Rack 31	Server	A1	IMMEDIATE
16	test - PC1		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server 2	PC-Test	A1	IMMEDIATE
17	test - PC2		PC-Test	Ping Driver 2.0.0				FALSE			TRUE	Server 2	PC-Test	B1	IMMEDIATE
18	Test-ST-01		Storage	Ping Driver 2.0.0				FALSE			TRUE	Lab1	Storage	A4	IMMEDIATE
19	Test-ST-02		Storage	Ping Driver 2.0.0				FALSE			TRUE	Lab1	Storage	B2	IMMEDIATE

Export: Ephemeral resources. Velocity allows you to export ephemeral resources while they exist in inventory. See also [Orchestration: Ephemeral Resources](#)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	name	description	template	driver	tags	parent	port group	out of ser	out of ser	console ui	status	parent resource	reservation
2	Conf		Conf	Dummy Conf				FALSE			TRUE		IMMEDIATE
3	K8s Cluster		K8s Cluster					FALSE			FALSE		IMMEDIATE
4	K8s Node 1	qa-k8s-worker1	K8s Node					FALSE			TRUE		IMMEDIATE
5	K8s Node 2	qa-k8s-worker2	K8s Node					FALSE			TRUE		IMMEDIATE
6	L1_1		MRV Switch	Dummy L1				FALSE			TRUE		IMMEDIATE
7	L1_2		MRV Switch	Dummy L1				FALSE			TRUE		IMMEDIATE
8	L2 demo		Cisco Switch Demo	L2 dummy driver				FALSE			TRUE		IMMEDIATE
9	L2_Orch1		Cisco Switch	Dummy L2				FALSE			TRUE		IMMEDIATE
10	L2_Orch2		Cisco Switch	Dummy L2				FALSE			TRUE		IMMEDIATE
11	L2_Simple1		Cisco Switch	Dummy L2				FALSE			TRUE		IMMEDIATE
12	L2_Simple2		Cisco Switch	Dummy L2				FALSE			TRUE		IMMEDIATE
13	PC1		PC	Ping Driver 2.0.0				FALSE			TRUE		IMMEDIATE
14	PC1 (copy)		PC	Ping Driver 2.0.0				FALSE			TRUE		IMMEDIATE
15	PP1		Patch Panel					FALSE			TRUE		IMMEDIATE
16	Resource Host 1		Template Host	Orchestration dummy driver				FALSE			TRUE		IMMEDIATE
17	Resource Host 2		Template Host	Orchestration dummy driver				FALSE			TRUE		IMMEDIATE
18	Resource Host 3		Template Host	Orchestration dummy driver				FALSE			TRUE		IMMEDIATE
19	Resource Nested 1		Template Nested	Orchestration dummy driver				FALSE			TRUE	Resource Host 1	IMMEDIATE
20	Resource nested nested 1		Template Nested	Orchestration dummy driver				FALSE			TRUE	Resource Nested 1	IMMEDIATE
21	S2-Nested (2)_JUXAFI8I		Template Nested	Orchestration dummy driver				FALSE			TRUE	S2-S2-S2 (2)_SJMPMTOU	IMMEDIATE
22	S2-Nested1_HP8ZEJFF		Template Nested	Orchestration dummy driver				FALSE			TRUE	S2-S2-S2 (2)_SJMPMTOU	IMMEDIATE
23	S2-Nested2_ZBHF8U1R		Template Nested	Orchestration dummy driver				FALSE			TRUE	S2-S2-S2 (2)_SJMPMTOU	IMMEDIATE
24	S2-S2-S2 (2)_SJMPMTOU		Template Host	Orchestration dummy driver				FALSE			TRUE		IMMEDIATE

Telescent Driver

- Layer 1 switch driver for the Telescent NTM G5
- Create high scale Layer 1 switch matrices with Telescent G5 and seamlessly automate its cross-connects in Velocity Core

Telescent Driver is the driver for Telescent Layer 1 switches included with Velocity, which supports both simplex and duplex connectivity. The driver package contains the manifest file and a single test case.

The driver implements the configurable Layer 1 interface and supports the following properties.

- **ipAddress**: IP address of the switch host. If present it is used to connect to the switch
- **Hostname**: Host name of the switch host. If there is no IP address host name is used. If neither is present the driver cannot connect and errors out.
- **username**: Username to login switch
- **password**: Password to login switch
- **Rest Port**: the switch port that listens for REST session. Default 8443
- **Mode**: Defines switch port modeling, Simplex or Duplex. Default is SIMPLEX.
 - **Duplex Mode** models both fibers as one port, using both fibers for each connection.
 - **Simplex Mode** models each fiber as a separate port, using a single fiber for each connection.
- **Full Disconnect**: Options are Yes or No. Default is Yes
 - **Yes**: All connections are unallocated when disconnected.
 - **No**: Unlocks ports and keeps the allocated connections.

Documentation

To access the latest Velocity Portfolio documentation, follow these steps:

1. Log into the Spirent Customer Service Center website (<http://support.spirent.com>) using the email address and password assigned to you by Spirent.
2. Select your product from the **Product** drop-down menu. This displays the product page.
3. Click on the **Documentation** link in the Related Content section. This displays the documentation hub page for your selected product.
4. Click on the document links to access the desired PDFs.
5. Click the link below to access the Velocity Documentation Hub page and scroll down to locate the desired document.

Velocity Core Deployment Guide	https://support.spirent.com/csc30/s/article/Velocity-Doc-Hub
Velocity Core System Release Summary	
Velocity Core User Guides	
Velocity Core API Reference (includes the latest APIs and a list of deprecated APIs).	
Velocity Core API Version Difference Comparison documents (including the APIs added and modified in each release)	
Velocity Core Resource Driver Reference	
Velocity Core Abstract Resource Conditions Language Reference Guide	
Velocity Portfolio Script examples bundle	
Velocity Virtual Testbed Orchestration Example Instructions and Hello World! Test Script	
Velocity Portfolio License Server Installation Guide	
Velocity Core Agent User Guide	
Velocity Core Datastore Deployment Guide	

Note: The **Velocity Core > Related Resources** section on the Spirent Customer Service Center downloads page (<https://support.spirent.com/>) includes Velocity Drivers provided for those who would like to update their drivers to the latest versions supplied by Spirent.

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The Spirent Knowledge Base (<http://support.spirent.com>) is designed to serve your technical information needs. The Knowledge Base gives you access to tens of thousands of documents that help answer your network analysis and measurement questions. New content is added daily by Spirent's communications and networking experts. Sign in with your user ID and password to gain access to additional content that is available only to customers – user manuals, Help files, release notes, Tech Bulletins, and more. When you sign in, you can also use the Knowledge Base to download software and firmware, and to manage your SRs.

Information about Spirent Communications and its products and services can be found on the main company website at <http://www.spirent.com>.

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