Vrealize orchestrator user guide

Morpheus Docs Integration vRealize Orchestrator (vRO), provided for Morpheus, allows users to easily initiate existing workflows that may already exist in vRealize Orchestrator. The user can not only initiate these workflows, but also easily chain to the workflows, not being in the ER, and handle both the output and input parameters of the workflow. Setting up vRO integration includes some steps that vary depending on the authentication model used. When using OAUTH, the customer ID must be collected first. You can find this by looking at the file on the actual VRA server using SSH. On vRA, start the following command: grep-i cafe_cli/etc/vcac/solution-users.properties sed-e's/cafe_cli//Second, you'll need a username, password and API URL. The API URL typically works in port 8283. An example of an API URL might look like this: Don't forget to fill out a customer's token as a domain ID or tenant, such as vsphere.local, with a username administrator@vsphere.local. Note From time to time this may vary depending on how the authentication and role-playing assignments for the user have been configured for vRO. vRA auth uses vRA identity Bearer tokens for API consumption. The only real difference in field requirements when using this authentication mode is that the customer ID is no longer needed. One of the first things Morpheus does when it's tied to vRO integration is to synchronize all available workflows by category. These workflows become available as you create Morpheus's new automation challenge. Morpheus allows the user to match these vRO workflows into a task engine. The task engine allows users to develop workflows that chain tasks in order or work at different stages of a training request. For more information on the tasks, please read the automation documentation. Creating a task for VRO is easy. First, go to the automation and create a new challenge. Choose the type of task vRealize Orchestrator Workflow. There will be a drop that allows you to first choose the active vRO integration that you would like to use. The workflow list is then available. Note the next part where things can get a little tricky. Body parameter (expected in JSON format) can be a little difficult to track. One way is to use a Chrome network inspector when you start a sample workflow from a vRO HTML5 client and capture the JSON option. The other is to request the API yourself and look at samples from the history of historical launches. the payload for SSH/Run SSH Command Workflow will look like this: settings: name: hostNameOrIP, type: string, value: line: value: value: port, type: number, value: number: value: 22 , name: cmd, type: string, value: line: value: Echo echo The question is: name: coding, type: string, value: line: value: Name: username, type: string, value: string: value: myuser - th, Name: passwordAuthentication, type: boolean, value: Name: password, type: string, value: line: value: password - th, name: path, type: line, value: /application-server/conf/vco_key - name: passphrase, type: string, value: line: value: value: - Note that all Morphea variables can be entered into the body. In the example above, we're introducing a copy name to the sample team with a instance.name% of the sample. Adding this task to the workflow allows you to refer to the result parameters in subsequent tasks called throughout the workflow. For example, the type of local script task can refer to the text of the ssh output above, typing the following results.vro score map: results.vro.:results.vro.find.it.name and 'outputText'?. Value?. String?. There are very powerful options for chain results and injectable variables relevant to the instance that was provided, or even custom input from the workflow. Please refer to the rest of the automation documentation for examples. copyright © 2020, Morpheus Data Revision 53f893d1. Welcome to VMware vRealize ™ orchestrator ™ documentation. Learn how you can use vRealize Orchestrator's workflows to achieve step-by-step process automation and more flexibility in automated server and work tasks in VMware and third-party applications. Search or use the navigation menu on the left to view the documentation for your vRealize Orchestrator release. All vRealize Orchestrator documentation is also available in PDF format, which you can access by clicking on the PDF download icon when you're reading the page or browsing the search result. Using vRealize Orchestrator documentation, we want you to know that we appreciate inclusion in VMware. To strengthen this principle within our client, partner and internal community, we have removed the non-embracing language from our documentation. To learn more about vRealize Orchestrator, see these topics. Links to the latest version, but you can choose a version in the content table or on a separate topic. To learn more about what vRealize Orchestrator does and how it can help automate your IT tasks, visit the vRealize Orchestrator product page. For practical introduction to vRealize Orchestrator, try a practical laboratory. To download the plugin, go to the VMware Marketplace listing for the plugin on: Click on the Try link to download: Notice that the Try link does not mean download the trial - it's a process, regardless of your intentions to use. The download is placed outside, so confirm the direction by clicking Continue. This will automatically download the .vmoapp file: To install a plug-in in vRealize Orchestrator 7.x log into the vRO control center. Go to the vRO copy control address (http:// :8281) and click Start Control Center: Login and Click Control Plug-Ins: Click on the view button: Go to the .vmoapp file for clean plugin storage: Click Download: Take EULA and click Install: plugin will be downloaded to vRO - features will be available as soon as When the plug-in is successfully installed, workflows will appear in the inventory. Pure Storage Plugin for vRealize Orchestrator offers a significant number of workflows by default to provide simple orchestration of VMware and Pure Storage operations. A clean description of the Folder FlashArray Connection Connection workflow workflow description for the authentication of FlashArray or Cloud Block Store targets FlashArray Host Management Workflows to create or manage FlashArray or Cloud Block Store hosts and host groups of FlashArray workflow management for FlashArray or Cloud Block Store array of administrative tasks. FlashArray Protection Group Management Workflows to create, modify, or destroy the FlashArray protection group or Cloud Block Store. FlashArray Pod Management worksflows for FlashArray or Cloud Block Store group protection of creation, modification or destruction. FlashArray Protocol Ultimate WorkFlows Control for FlashArray or Cloud Block Store pod creation, modification or destruction. FlashArray REST API Api Workflows to run custom REST API operations on FlashArray or Cloud Block Store. For functions that are not yet integrated (or pulling specific metrics) these workflows can be used. FlashArray Snapshot Management Workflows to create, modify, or destroy FlashArray or Cloud Block Store. FlashArray Virtual Volume Workflows focus on FlashArray Virtual Volumes. Configuration, management, replication failure, storage policies, and more. FlashArray Tom Group workflow management for FlashArray or Cloud Block Store volume group creation, modification or destruction. FlashArray volume management workflows to create, modify, or destroy FlashArray or Cloud Block Store volumes. FlashBlade WorkFlow Control Connections to authenticate FlashBlade targets FlashBlade REST API Workflows to run custom REST API operations against the FlashBlade platform. For features that are not yet integrated (or pulling metrics) these workflows can be used. Pure1 Meta WorkFlows for Authenticated Pure1 Organizations. Tags, intelligent provisions, array of zlt;/vro'gt; and more. VMware ESXi and FlashArray Workflows, which include workflows from other sections integrated with the relevant VMware operations for the integrated VMware and Pure Storage environment organization. One of the most common tasks in vRealize Orchestrator is to start a workflow. Create, customize, modify, or delete the resource as the workflow where it starts. Workflows are combinations of scripts, built-in features called actions, logic, and more. Pure Storage's workflows are fully listed under the Pure Storage folder in the workflow bar. Which is the default tab shown when you log in to vRealize Orchestrator. To start a workflow, define the workflow in the hierarchy, click on it with the right button, and select the Start workflow: Workflows often require the selection of input data that ranges from workflow to workflow. Some workflows require that some or all of their input be filled out before you can complete the master. An important advantage of the workflows provided by Pure Storage Plugin for vRealize Orchestrator is that inputs are actively checked upon input to make sure they are valid options. Most of the Pure Storage workflows that create the resource will require FlashArray connectivity - this choice tells vRO what FlashArray they need to create. If you're changing an existing resource, this input is usually not required - as FlashArray can be derived from the original resource selection. 1) Click to select FlashArray 2) Find the desired FlashArray 3 connection) Send it to the Recording workflow can also be radio buttons, drops, or string boxes (or more). Box lines are usually checked to make sure the line follows the desired parameters (such as FlashArray naming conventions). Really not valid - When you complete the master, click Send. If the send button is not active, you missed or incorrectly entered the login. When you start the workflow, it will create a workflow that is running under the workflow element. If he works he will have a green play triangle next to him. If it is completed, it will have a green check. If he fails, he will have a red X. If he needs additional input he will have a person badge next to him. You can click on the workflow to find out more about the instance. The Variables tab has information about any variables introduced, calculated, or generated (ins, outs, or attributes). The logs tab will show information about the launch - all levels of logs are stored to see the different levels use drop down. The workflows that come Pure Storage Plugin for vRealize Orchestrator is not edited by end users - this is done to make workflows easier to maintain. If you want to make changes, you have two options: as an example of the second option, let's look at the workflow to create a volume. I may want to enforce the convention on naming new new Names. To do this, first copy the workflow: Create a new folder if you don't have a client's workflow first: 1) Create a new folder 2) Give it a name 3) Check the location Then rename (if desired) the workflow and choose a location. 1) Rename 2) Select folder 3) Send clone Workflow will be copied into folder with new name. Now you can press the right button and edit the workflow. On h 1) Click on presentation 2) Change check regex 3) Updated description. Click Save and Close. The next time it is launched, it will be required (in this case) that the volume name starts with Volume-. Real Disabled If you create customized workflows, it's important to back them up either by backing up the vRO device itself, or by exporting workflows and storing them in a secure location. Full instructions for how to create custom workflows in vRealize Orchestrator are beyond the scope of this document. But at least we can make a few recommendations to make this process easier. High-level tip: use the plug-in! There are many built-in features besides just workflows that can save you a lot of time. Take advantage of it. To create a new workflow, click the folder you want and select New Workflow Give it a name: Advice #1: Reuse your default workflows The first suggestion is to view existing workflows - whether they can do whatever you need to do. If they do, just use them directly. If they are close, clone them and make changes (as described above). If they reach the part completely, but you want to link them to something else, you can add workflows to the workflow: Find the workflow under all the workflows and drag it to the right place: It will ask you to help import inputs/exits - you should almost always do so by clicking the customization button that appears. Set up input, conclusions, and attributes as needed. As a rule, everything is fine by default. Click Promote. It should be noted that when the workflow is imported, the input check is not imported with it. You will need to re-create it (if desired) or copy it from the original and insert input into the new workflow. Tips #2: Reuse actions If no workflow achieves what you need (or usually does too much) before writing your own code - use built-in actions in the plugin. The plug-in reuses many of the default features, called vRO actions, for many plug-ins. These actions are available to you as well. As a workflow editor, you can go on to all the actions and find those under the com.purestorage folders. These are actions that with a plug-in. Actions can be selected and involved in the workflow in the same way as workflows. Typically, actions do one thing: create something, get something, convert something, etc. Combining actions together can often achieve the most desirable workflows with minimal customization. To learn more about the action, select the vRO Design view and click on the action. Total tab tab show high-level information, and the Script tab will show the details (what it takes, that it returns, and the code it uses). Action Action Generics Details Drag and Drop Action As Needed. Tips #3: Use the inventory of the facility! Whenever possible, don't ask for volume names or use strings (unless you need to name something) - ask that the input be the type of Pure Storage object. When stated, the input must be PS:Volume - this will automatically provide the user with a menu to select PS:Volume. So they can be guided to choose the right thing - and you don't need to write more code to make sure it's valid. 1) Entering PS:Volume 2) The user is forced to choose a valid volume 3) The user is guided to make a valid choice of tips #4: Use only the REST API processes if you have no other choice. The vRealize Orchestrator's clean storage plug-in offers multiple workflows to run custom REST operations against FlashArray, Cloud Block Store or FlashBlade: FlashArray or Cloud Block Store FlashBlade This should only be used if the feature you want to use (or the metrics you need) has no workflow, action or Javascript Library. The plug-in, in addition to workflows and actions, comes with customized Javascript libraries. Each object has methods that can be launched from that object after entering: And each type of object also has a manager who can be used to perform additional tasks for that object: Many manager operations require a REST session that can be extracted from the FlashArray connection facility or the object itself with The GetSession method () For examples of their use, refer to the code as part of related activities. Actions. hpe oneview for vmware vrealize orchestrator user guide