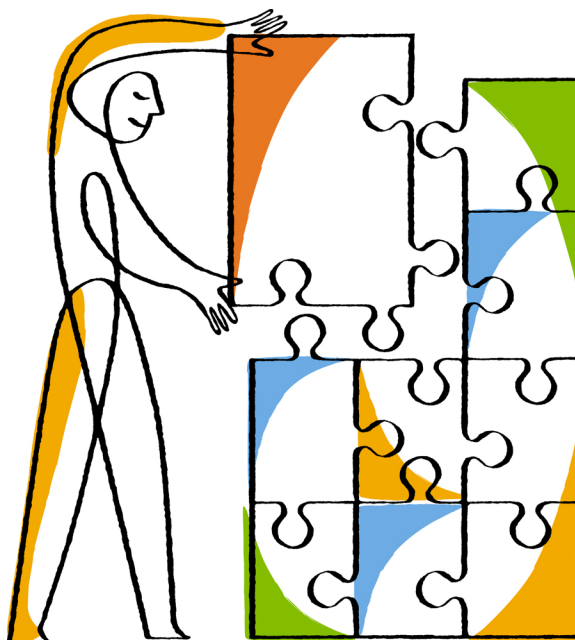




Release Candidate Documentation - Contents Subject To Change

OnCommand® Workflow Automation 2.2 RC1

Release Notes



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OnCommand Workflow Automation 2.2 RC1 Release Notes

OnCommand Workflow Automation (WFA) 2.2 RC1 includes new features, enhancements, and quality improvements. The release notes describe the new features, enhancements, limitations, and fixed and known issues since the previous release of WFA.

Overview of OnCommand Workflow Automation

OnCommand Workflow Automation (WFA) is a software solution that helps to automate storage management tasks, such as provisioning, migration, decommissioning, and cloning storage. You can use WFA to build workflows to complete tasks specified by your processes. WFA supports both clustered Data ONTAP and Data ONTAP operating in 7-Mode.

A workflow is a repetitive and procedural task that consists of sequential steps, including the following types of tasks:

- Provisioning, migrating, or decommissioning storage for databases or file systems
- Setting up a new virtualization environment, including storage switches and datastores
- Setting up storage for an application as part of an end-to-end orchestration process

Storage architects can define workflows to follow best practices and meet organizational requirements, such as the following:

- Using required naming conventions
- Setting unique options for storage objects
- Selecting resources
- Integrating internal configuration management database (CMDB) and ticketing applications

WFA features

WFA includes the following features:

- Designer portal to build workflows
The designer portal includes several building blocks, such as commands, templates, finders, filters, and functions, that are used to create workflows. The designer enables workflows to include advanced capabilities such as automated resource selection, row repetition (looping), and approval points.
- Execution portal to execute workflows, verify status of workflow execution, and access logs
- Administration portal for tasks such as setting up WFA, connecting to data sources, and configuring user credentials
- Web services interfaces to invoke workflows from external portals and data center orchestration software

System requirements for OnCommand Workflow Automation

You must ensure that the designated virtual machine (VM) or the physical host server meets the minimum requirements to install and run OnCommand Workflow Automation (WFA).

The minimum requirements are listed in the following table:

Component	Minimum requirement
Operating system	Microsoft Windows Server 2003 R2 EE (SP2)
RAM	4 GB
Free disk space	20 GB
CPU	2.27 gigahertz (GHz) or faster, 2 core, 64-bit (x64)

For more detailed and updated information, see the Interoperability Matrix.

Related information

[Interoperability Matrix: support.netapp.com/matrix](http://support.netapp.com/matrix)

New features and enhancements

OnCommand Workflow Automation (WFA) 2.2 RC1 includes new features and enhancements, such as new sample workflows and support for additional data sources. You must also be aware of the changes in WFA.

New features and enhancements

Support for Data ONTAP	You can manage storage systems running Data ONTAP 8.2.1.
Support for additional data sources	You can add OnCommand Unified Manager 6.1 as a data source. Note: Although OnCommand Unified Manager 6.1 is a supported data source, it is currently not available for download.
New sample workflows	The following is the list of new sample workflows that support data protection functions on clustered Data ONTAP: • Protect volume with SnapMirror • Abort SnapMirror • Quiesce SnapMirror • Create a Cron Schedule • Create SnapMirror policy and rules • Protect volume with SnapVault • Transfer SnapMirror • Break SnapMirror • Remove SnapMirror • Resume SnapMirror • Resync SnapMirror • Reverse Resync SnapMirror • Modify SnapMirror
Perl support	When you install WFA, ActivePerl 5.16.3 and the required Perl components of the NetApp Manageability SDK 5.2.1 are installed and configured along with WFA to support Perl commands.
Versioning of entities	WFA entities, such as commands and workflows, are versioned. You can use the version numbers to manage changes to the WFA entities.
Data exchange between commands in a workflow	The following PowerShell cmdlets and Perl functions are included in WFA to enable exchange of information between commands: • PowerShell cmdlets:

- Add-WfaWorkflowParameter
- Get-WfaWorkflowParameter
- Perl functions:
 - addWfaWorkflowParameter
 - getWfaWorkflowParameter

You can use the WFA PowerShell cmdlets or Perl functions to exchange information, which is obtained during workflow execution, between commands.

Selective export of WFA content

You can select multiple WFA content that you have created and export them as a single .dar file. For example, when you are in the Workflows window, you can select the required workflows you have created and export them.

Active Directory configuration on Storage Virtual Machines

You can create and delete Active Directory (AD) accounts in Storage Virtual Machines (SVMs, formerly known as Vservers) that do not include a CIFS server. The following commands are available for configuring AD in SVMs:

- Setup Active Directory account
- Delete Active Directory account

Product change

The sample template “CM Snapshot - six months weekly backup”, which was available in previous versions of WFA, is removed. If you have used the template in your workflows, WFA automatically copies the values from the template to the workflows when you restore a backup or import the workflows.

Terminology change

Vserver is now called Storage Virtual Machine (SVM)

Starting from clustered Data ONTAP 8.2.1, Storage Virtual Machine (SVM) is the new descriptive name for Vserver. In the documentation, the term SVM refers to Vserver.

Fixed issues

OnCommand Workflow Automation (WFA) 2.2 RC1 provides quality improvements, including bug fixes.

The `wfa_ocsetup.sh` script file provided with WFA 2.1 is not usable

When you run the script file, a bad interpreter error message is displayed. The `wfa_ocsetup.sh` script file's EOF is corrupted, making it unusable. You cannot use this script to create a new database user on machines running OnCommand Unified Manager 5.x releases on Linux.

This issue does not occur on machines running OnCommand Unified Manager 6.x or later because OnCommand Unified Manager 6.x and later releases use a different method for creating the database user.

For more information, see Bug ID 767104 in Bugs Online.

Related information

[Bugs Online: support.netapp.com/NOW/cgi-bin/bol](http://support.netapp.com/NOW/cgi-bin/bol)

ErrorAction Stop parameter does not work in a few commands

In a few certified commands, the “-ErrorAction Stop” parameter is used in the Invoke-Expression cmdlet to stop the execution of the command in case of an error. However, using the cmdlet does not stop the execution of the command even when the cmdlet specified through the expression fails.

For more information, see Bug ID 743954 in Bugs Online.

Related information

[Bugs Online: support.netapp.com/NOW/cgi-bin/bol](http://support.netapp.com/NOW/cgi-bin/bol)

getReturnParameters WS API call returns a fault message

If you do not specify at least one entry in the “parameter” child element, the `getReturnParameters` WS API call returns a fault message.

Known issues

Some unexpected and potentially undesired behaviors are known to affect functionality in this release of WFA. You can take actions to work around some of these behaviors.

Cache acquisition fails for 7-Mode data sources

Issue	Cache acquisition for OnCommand Unified Manager 5.x data sources supporting objects in Data ONTAP operating in 7-Mode fails with the following error message: SQL Anywhere Error -121: Permission denied: you do not have permission to select from "backupPrimaryDirs".
Cause	The read-only user account created by the ocsetup file cannot access the required data.
Corrective action	Re-create the read-only user account by running the latest ocsetup file on the OnCommand Unified Manager server. You can download the required ocsetup file from the following locations: • (Windows version) http://WFA_Server_IP/download/wfa_ocsetup.exe • (Linux version) http://WFA_Server_IP/download/wfa_ocsetup.sh

VMware vCenter data sources missing from restoration of WFA backups earlier than 2.0.1 release

Issue	The VMware vCenter data sources you had configured are missing after you restore a WFA backup earlier than WFA 2.0.1.
Cause	The vCenter data sources are not restored because the SQL and Oracle data provider types for the VC scheme are replaced with a new script-based data provider type from WFA 2.0.1.
Corrective action	Add the VMware vCenter data sources again as new data sources.

LDAP authentication does not work in Perl

Issue	Workflow Automation (WFA) enables LDAP-based authentication between the WFA service and a target array. When using Perl, the LDAP authentication does not work.
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Cause	This option is only available for PowerShell-based commands.
Corrective action	When using Perl, specify the array credentials using the Match option of either Exact or Pattern .

Access to a newly created scheme is restricted

Issue	Access to a newly created scheme is restricted before data acquisition for that scheme occurs.
Cause	When a new Workflow Automation (WFA) scheme is created, an entry for the scheme table is created in the WFA scheme table; however, the scheme table is created only when the data acquisition for that scheme occurs.
Corrective action	Initiate data acquisition for the data source that is using the scheme. You can access the scheme after a successful data acquisition.

An unclear error message is displayed when testing a credential or executing a workflow

Issue	After you have restored a Workflow Automation (WFA) backup, WFA displays an unclear error message when you test a credential or execute a workflow that uses the credential, and the connection fails.
Cause	You have used a wrong database key to restore the WFA backup.
Corrective action	Use the correct database key to restore the WFA backup. For more information about obtaining the database key, see the <i>OnCommand Workflow Automation Installation and Setup Guide</i> .

Workflows are not aborted when an object is not found for no-op commands

Issue	A workflow might not abort if it is set to abort when an object is not found for a no-op command.
Corrective action	Specify filters or finder for each object in a separate command detail option for the no-op command instead of specifying all the objects in a single command detail option.

Connection to the WFA server through HTTPS might take longer than through HTTP

Issue	The Workflow Automation (WFA) portal might take a longer time to open when accessed through an HTTPS connection than when accessed through an HTTP connection.
Corrective action	Configure the WFA server to use an HTTPS port other than the default port 443 for the connection.

Unintended commands are selected when commands are reordered in a workflow

Issue	When you reorder a command in a workflow that includes several commands, the command is selected appropriately until the command is moved to the end of the visible part of the list. However, some other command is selected when the command you want to reorder moves to the end of the visible part of the list. If you click the Up or Down button, the newly selected command is moved instead of the command that you want to move.
Corrective action	When the command you are reordering moves to the end of the visible part of the list, use the scrollbar and reselect the command you want to reorder, and then use the Up or Down button to reorder the command.

404 error message displayed when accessing REST mount points from the REST documentation

Issue	The REST mount points display a 404 error message when you access them from the REST documentation.
Cause	The REST documentation uses a different path from the API space. • The REST API space is available at the following location: <code>http://<i>WFA_Server_IP</i>/rest</code> • The REST documentation is available at the following location: <code>http://<i>WFA_Server_IP</i>/rest/docs</code> <i>WFA_Server_IP</i> is the IP address of your WFA server.
Corrective action	Remove <code>/docs</code> from the mount point path.

For more information, see Bug ID 784952 in Bugs Online.

Related information

[Bugs Online: support.netapp.com/NOW/cgi-bin/bol](http://support.netapp.com/NOW/cgi-bin/bol)

Unexpected Error 2191 displayed while configuring filter parameter values within a workflow

Issue	The following error message is shown when you are configuring parameter values for a filter that is used in a workflow: Unexpected error occurred, please refresh the browser. Error: Uncaught Error: 2191, SecurityError, Error #2191.
Cause	This issue might occur in some old versions of Flash Player.
Corrective action	Upgrade your Flash Player to the latest version.

Functions referred from the Return Parameters tab are not exported with the workflows

Issue	If you have created custom workflows and included functions in the value of return parameters, exporting the custom workflows does not export the functions associated with the workflows.
Corrective action	Export the required functions separately and import them or you can write the functions again in the imported workflows.

For more information, see Bug ID 740209 in Bugs Online.

Related information

[Bugs Online: support.netapp.com/NOW/cgi-bin/bol](http://support.netapp.com/NOW/cgi-bin/bol)

Restrictions and limitations

OnCommand Workflow Automation (WFA) 2.2 RC1 includes some limitations that you should be aware of before installing and configuring WFA.

- You must not use an LDAP user name from a hierarchical structure of multiple domains for authentication or notification.
WFA does not support a hierarchical structure of Active Directory domains.
- You can use only Microsoft Active Directory LDAP server for LDAP authentication.
However, Microsoft Active Directory Lightweight Directory Services (AD LDS) is not supported.
- A few of the workflows might take more than 20 seconds to start executing or opening when editing the workflow.

Related documentation for OnCommand Workflow Automation

There are additional documents and tools to help you learn how to perform more advanced configuration of your OnCommand Workflow Automation (WFA) server.

Other references

The WFA space within the OnCommand community provides additional learning resources, including the following:

WFA Web services primer for REST API

Describes the REST API provided by WFA and the methods to use them.

Custom dictionary entries and custom cache tables use cases and upgrade procedure

Describes how to upgrade the cache tables used in WFA versions earlier than 2.0.

Tool references

Interoperability Matrix Tool (IMT) Lists supported combinations of hardware components and software versions.

Related information

[Workflow Automation space within the OnCommand community: netapp.com/oncommand_community](https://netapp.com/oncommand_community)

[Interoperability Matrix: support.netapp.com/matrix](https://support.netapp.com/matrix)

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