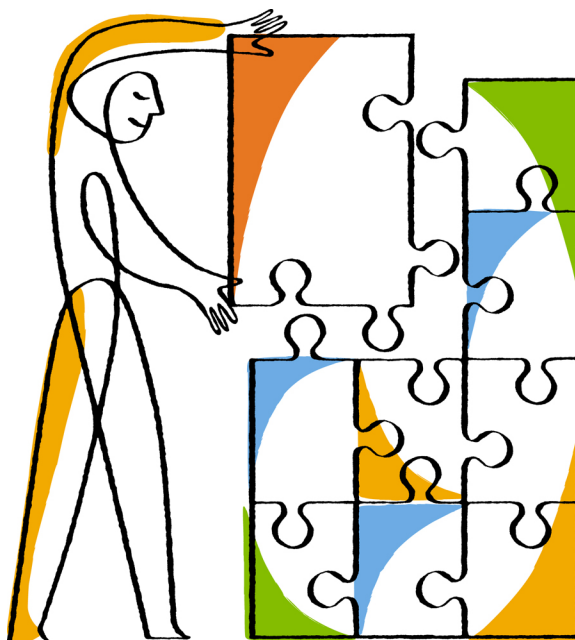




OnCommand® Workflow Automation 2.0.1

Release Notes



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OnCommand Workflow Automation 2.0.1 Release Notes

OnCommand Workflow Automation (WFA) 2.0.1 includes quality improvements and enhancements. The enhancements include new content and support for the current data source versions. This release does not include platform enhancements. The release notes describe the 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 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.

A workflow, defined as a repetitive and procedural task that consists of sequential steps, can include 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 to build workflows
The designer 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, looping, and approval points.
- Execution portal to execute workflows, check status of workflow execution, and access logs
- Administration portal for tasks such as setting up WFA, connecting to data sources, and configuring credentials and users
- 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 recommended requirements to install and run OnCommand Workflow Automation (WFA).

The recommended requirements are listed in the following table:

Component	Recommended
Operating system	Supported 64-bit Microsoft Windows
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 NetApp Interoperability Matrix Tool (IMT) at support.netapp.com/NOW/products/interoperability.

Enhancements

OnCommand Workflow Automation (WFA) 2.0.1 includes several enhancements, such as new sample workflows, support for additional data sources, and new cacheable content.

New sample workflows

The following two new workflows are included:

- Create and configure NAS Vserver
- Create and configure SAN Vserver

New commands

Several new commands are added, including the following:

- Setup CIFS Service
- Setup NFS Service
- Setup FCP Service
- Setup iSCSI Service
- Modify Vserver
- Delegate Vserver Administration
- Create FCP Logical Interface
- Clone CM Volume
- Setup LDAP service
- Unmap CM LUN
- Unmap LUN
- Remove vFiler

Support for additional data sources

The following data sources are supported:

- OnCommand Unified Manager 5.2
- VMware vCenter Server 5.0 and 5.1

Cache enhancements

- New cacheable content to storage and cm_storage schemes, including the following:
 - SnapVault relationships (only for 7-Mode data source types)
 - Read-only, read-write, and root hosts of an NFS export (only for 7-Mode data source types)
 - Disk information, including disk type, disk speed, and aggregate association
- Performance metrics of the following are cached at the aggregate level for selecting the most suitable aggregates during resource selection:
 - Volume latency
 - Disk user read latency

- Disk user write latency
- Average disk utilization (only for 7-Mode data source types)

Note: The performance metrics are not cached at the disk level or the volume level.

Fixed issues

Some known issues are fixed in OnCommand Workflow Automation (WFA) 2.0.1.

HashTable and XmlDocument PowerShell data type in commands are not supported

You cannot use the HashTable and XmlDocument parameters as a PowerShell data type in commands because they are not supported in WFA.

Capacity values are displayed in MB rather than in GB when previewing a workflow

If you use the capacity data type in a command parameter, the capacity values are displayed in MB rather than in GB when previewing a workflow.

Cannot apply a reservation when you are selecting SQL queries for user inputs

You cannot apply a reservation when you are selecting SQL queries for user inputs.

CIFS cannot be configured with the Create and Configure CM Vserver command

CIFS setup fails when creating a Vserver with the Create and Configure CM Vserver command.

Cannot view the scheduled time when a workflow has been rescheduled at an approval point

If you reschedule the execution of a workflow at an approval point, the Scheduled For column of the workflow in the Execution Status window is empty and does not show the scheduled time.

Cannot delete a user-created workflow, which shows a “No finder found for id: xx” error message during deletion

You cannot delete a user-created workflow when user-created finders are cloned in the workflow, and the following error message is displayed: No finder found for id: xx.

Encrypt the SMTP User Password parameter in the Send Email command

If you use the Send Email command in a workflow, the SMTP User Password is visible in the Details tab of the Monitoring window when executing or previewing the workflow.

Editing command parameters of a workflow makes the workflow unusable

If you edit the command parameters of a workflow from the workflow editor window, the workflow becomes unusable, and you cannot open, edit, delete, or export the workflow.

Remove the restriction for allowed characters in user name

You cannot use certain characters such as the hyphen (-) and the backslash (\) in the user name for WFA credentials.

Loop iterations are limited to 100

You cannot use more than 100 iterations of a loop in a workflow.

Performance cache acquisition fails showing an error message

The acquisition of performance data by WFA fails and shows the following error message:
Exception calling "InvokeElem" with "1" argument(s): "host-list-info-iter-next: Iterator cannot be obtained.

OnCommand Unified Manager credentials test should use ZAPI API instead of SSH

WFA uses SSH for testing the OnCommand Unified Manager credentials. Instead, WFA should use ZAPI API for testing the credentials.

SSL certificate expires soon

The SSL certificate provided with WFA 2.0 expires on July 16, 2013.

SnapMirror relationship returns multiple values

A workflow that breaks and resynchronizes a SnapMirror relationship might find multiple source and destination pairs. If multiple source and destination pairs are found, the correct SnapMirror relationships are not established.

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 data sources supporting the Data ONTAP 7-Mode objects 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 on 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 in 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	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 PoSH-based commands.
- Corrective action** When using Perl, the array credentials must be specified using the **Match** option of either `Exact` or `Pattern`.

Cannot use a backslash (\) in user inputs

- Issue** If you include a backslash (\) in the user inputs section, previewing and executing the workflow fails.
- Corrective action** Use two backslashes instead of one in the user inputs section—for example, `domain\\username`.

Playground database cannot be accessed by wfa user

- Issue** The WFA database user (wfa) has read-only access permissions for all data schemas and all access privileges for the playground database schema. However, the WFA database user cannot connect to the playground database even when using localhost on the host machine.
- Cause** The read-only user account created by the `ocsetup` file cannot access the required data.
- Corrective action** Enable remote access to the WFA database and access WFA using the IP address of the host machine instead of using localhost. For instructions about enabling remote access, see the *OnCommand Workflow Automation Installation and Setup Guide*.

Restrictions and limitations

OnCommand Workflow Automation (WFA) 2.0.1 includes some limitations that you should be aware of before installing and configuring WFA.

- You must not include constants or variable names such as *var*, *int*, *object*, and *string* when creating WFA workflows.
- When you are executing workflows, if you modify the width of the columns in the drop-down list of the user inputs section, the change to the column width is not saved for the next workflow execution.
- You must not combine filters that include parameters with the same name in a finder.
If you use filters in a finder that include parameters with the same name, the values obtained are the same even if their parameter labels are different.
You should not combine the following filters in a finder:
 - volume by name suffix in a specific aggregate
 - volume in vfiler by name
 - volume by name prefix in a specific aggregate
 - volume by name prefix in a specific vfiler
 - volume in array by name pattern
- You must not add a dictionary entry with dependencies to the Dictionary entries to disable the data acquisition for box in the Other tab of the WFA Configuration dialog box.
If you add a dictionary entry with dependencies, the data acquisition fails.
- You must not use references to objects in the incremental naming functionality when using the incremental naming functionality in the loop (repeat row) of a workflow.
If you combine references to objects and incremental naming functionality with a loop, the workflow fails.
- 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 should not use the WFA SOAP API for web services.
The following SOAP API methods for WFA are deprecated:
 - `executeWorkflow`
 - `getCommandArguments`
 - `scheduleWorkflow`
- In some rare cases, a few workflows might take more than 20 seconds to start executing or opening when editing the workflow.

Documentation changes

There are corrections or changes to the documentation provided with OnCommand Workflow Automation 2.0.1.

OnCommand Workflow Automation Help is currently out-of-date

The WFA Help is currently out-of-date due to changes made to WFA.

The following description for Disable acquisition for Dictionary Entries in the Other tab of the WFA Configuration dialog box should be included in the Help:

Disable acquisition for Dictionary Entries Specifies the dictionary entries that are disabled from acquiring data. A few of the dictionary entries are disabled by default to avoid excessive amount of data filling up the WFA database. Acquisition for the following dictionary entries are disabled by default:

- storage.snapshot
- storage.cifs_share_acl
- storage.user_quota

If you want to acquire data for a dictionary entry, you can delete the required dictionary entry from the box. You might also add a comma-separated list of dictionary entries to stop acquiring data specific to those dictionary entries.

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 Community page provides additional learning resources, including the following:

WFA Web services primer	Describes the SOAP API provided by WFA and the methods to use them.
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.

You can access the WFA Community page at https://communities.netapp.com/community/products_and_solutions/storage_management_software/workflow-automation.

Tool references

NetApp Interoperability Matrix Tool (IMT)	Lists supported combinations of hardware components and software versions.
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You can access IMT at support.netapp.com/NOW/products/interoperability.

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