

Takeover and Giveback of NetApp Storage Controllers

Version 0.4

About NetApp

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Preface

This document provides guidelines and best practices for takeover and giveback of NetApp storage controllers in the Thomson Reuters environment

Audience

The primary audience for this document is NetApp Professional Services Engineers for Thomson Reuters and Thomson Reuters Storage Administrators.

Non-Disclosure Requirements

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Information About this Document

All information about this document including version history, review and approval, typographical conventions, references, and a glossary of terms can be found in the final chapter of this document.

# Introduction

This document provides guidelines and best practices for takeover and giveback of NetApp storage controllers in the Thomson Reuters environment. This document is also intended to minimize disruption of takeover and givebacks.

The general philosophy of this document is, “Trust, then verify.” By following the procedures outlined, the person issuing the takeover or giveback commands will be certain of the state of the NetApp storage controller cluster.

Note: It is important to remember that the takeover and giveback commands are only available in a clustered pair of NetApp storage controllers. The takeover and giveback commands are not applicable to a single standalone storage controller.

## Assumptions

Following are a number of important assumptions made:

* The commands are run from the NetApp storage controller system console.
* The operator is familiar with connecting to a NetApp storage controller system console and possesses the correct equipment to successfully complete these tasks.
* The operator is familiar with this document and has run these commands on a healthy system in order to be familiar with the expected output of the commands.
* The operator is in possession of a valid Thomson Reuters (TR) IM or CR number before beginning this work.
* The operator has alerted the Thomson Reuters Master Console [what is their current name?] before beginning the takeover or giveback task.
* The operator knows how to open a support session with the NetApp NGS/CSC in the event of unexpected results.

# Takeover and giveback

The procedures for takeover assume that both sides of the NetApp storage cluster are in a known operating state. The listed steps validate that the cluster can be put through the takeover and giveback steps successfully.

In addition to voluntary takeovers, in the event of a serious system issue, one of the partners in a NetApp storage cluster may initiate takeover procedures. In addition to working with the NetApp support center, follow the validation steps.

Before performing a giveback, perform the same health validation checks. The goal before performing a giveback is that the health of the NetApp storage cluster must not be negatively impacted. It is critical to perform the status checks after performing a giveback.

## Health validation steps

It is important to keep in mind that the following checks are non-disruptive to the NetApp storage cluster. There are a number of different areas that need to be checked, with a number of sub-tasks in each.

Note: “FILER>” is the prompt and not part of the command. It is different on each NetApp storage controller.

A cut and paste directly from this document might not work as expected, as Microsoft Word may use unusual characters for dashes.

1. Check that the disks are MP-HA.

FILER> storage show disk -p

1. Check that all aggregates are online with a normal status.

FILER> aggr status

1. Check that all volumes are online with a normal status.

FILER> vol status

1. Check that all vFilers are online with normal status.

FILER> vfiler status -r

1. Network Connectivity
2. Default gateways for vfiler0, VSIPs and ipspaces are set.
3. FILER> ipspace list (gets a list of all ipspaces)
4. FILER> vfiler status
5. FILER> vfiler run XXXXXX netstat –nr (replace XXXXXX with the vsip vfiler name)
6. Validate connectivity from each of the VSIP vfilers.
7. FILER> vfiler run <vsip\_vfiler> ping <default\_gateway>
8. A final item that only needs to be checked before a giveback.
9. Check on the status of disk scrubs.

FILER> aggr scrub status

1. Stop any disk scrubs running in an aggregate

FILER> aggr scrub stop <aggrname>

1. Check a shelf option

FILER> options shelf.auto.mode.wait

1. Fix if not zero

FILER> options shelf.auto.mode.wait 0

# Getting additional assistance

It is useful to plan the takeover or giveback before performing it. This gives you the opportunity to get your procedure reviewed by others. Due to time constraints and dealing with unexpected outages, it might not always be possible.

Regardless of the availability of time for planning, there are a number of resources who can assist you.

* Other team members
* Members of NetApp’s on-site team
* NetApp’s NGS/CSC team
* Local area Field Service Engineer (FSE)

FSEs must be contacted through NetApp. The FSE will be scheduled onsite as appropriate by either the NetApp onsite team, or NetApp’s NGS/CSC. The others can be engaged directly.

A general rule of thumb for whom to engage is as follows:

* For planned non-emergency events, start with the NetApp onsite team. They can answer questions about your procedures and determine if bringing in additional NetApp resources would be appropriate.
* For unplanned emergencies, such as a NetApp storage controller automatic takeover, start by opening a case with the NetApp NGS/CSC. They are likely to contact a member of the local NetApp onsite team; however, the NetApp NGS/CSC is available all the time, and they track events. The NetApp NGS/CSC can also dispatch the local FSE and parts as necessary to ensure that the NetApp storage cluster is fully operational as quickly as possible.