



Manage SolidFire eSDS storage

Element Software

amitha
March 16, 2021

Table of Contents

- Manage SolidFire eSDS storage 1
- Use Element APIs on SolidFire eSDS clusters 1
- Find more information 3

Manage SolidFire eSDS storage

After you install SolidFire eSDS on your storage clusters, you can use the Element UI, Element APIs, or the NetApp Element Plug-in for vCenter Server (VCP) to manage your storage clusters.

Here are the links to the content for various storage management tasks:

- [Use basic options in the Element software UI](#)
- [Work with user accounts](#)
- [Work with volumes](#)

You can also find information about applying a QoS policy to volumes [here](#).

- [Work with virtual volumes](#)
- [Work with volume access groups and initiators](#)
- [Work with snapshots](#)
- [Get started with external key management *NEW!*](#)
- [Set up external key management *NEW!*](#)
- [Perform remote replication between clusters](#)
- [Back up and restore volumes](#)
- [Manage storage using Element APIs](#)
- [Troubleshoot your system](#)
- [NetApp Element Plug-in for vCenter Server overview](#)

You can navigate to specific tasks from the [overview page](#).

Use Element APIs on SolidFire eSDS clusters

- ***NEW!* Software encryption at rest enhancements:** Element 12.3 introduces enhancements for the software encryption at rest feature, which is enabled by default when you create a SolidFire Enterprise SDS storage cluster. This feature encrypts all data stored on the SSDs in the storage nodes and causes only a very small (~2%) performance impact on client IO.

The following are Element API methods related to software encryption at rest (see the [Element API documentation](#) for details about each method):

- `CreateCluster`
- `DisableEncryptionAtRest`
- `EnableEncryptionAtRest`
- `GetSoftwareEncryptionAtRestInfo`
- `RekeySoftwareEncryptionAtRestMasterKey`
- ***NEW!* Ability to define a maximum number of snapshots to retain:** Element 12.3 introduces enhancements to the snapshot retention feature. The following APIs have been modified to support this

enhancement (see the [Element API documentation](#) for details about each method):

- `CreateVolume`
- `ModifyVolume`
- `CreateSnapshot`
- `CreateSchedule`
- `ModifyGroupSnapshot`
- `ModifySchedule`
- `ModifySnapshot`
- `CreateGroupSnapshot`
- **NEW! Get information about Element software patches:** Element 12.3 introduces the `GetPatchInfo` method, which enables you to get information about Element software patches installed on a storage node. See the [Element API documentation](#) for details.
- **NEW! List statistics for each network interface on a node:** Element 12.3 introduces the `ListNetworkInterfaceStats` method, which enables you to list statistics, such as the number of dropped packets and various types of errors for each network interface on a node. This API method is intended for use on individual nodes; user ID and password authentication is required for access to individual nodes. However, you can use this method on the cluster if the parameter `force` is given the value `true` in the method call. When the parameter is used on the cluster, network statistics for all interfaces are listed. See the [Element API documentation](#) for details.
- **APIs introduced and updated in Element 12.2 to support SolidFire eSDS:** Several new APIs were introduced in Element 12.2 that you can use on SolidFire eSDS clusters.

Here is a list of new APIs in Element 12.2:

- `GetLicenseKey`
- `SetLicenseKey`
- `EnableMaintenanceMode`
- `DisableMaintenanceMode`

The following 12.2 APIs have been updated to support SolidFire eSDS clusters:

- `AddNodes`
- `CreateCluster`



New parameters, `OrderNumber`, `SerialNumber`, and `enableSoftwareEncryptionAtRest` have been added to the `CreateCluster` method in Element software 12.2. You should specify these parameters while using this API method for creating a cluster after you install SolidFire eSDS.

- **Element 12.2 APIs not supported on SolidFire eSDS clusters:** Here is a list of Element 12.2 APIs that are not supported on SolidFire eSDS clusters:
- `ListClusterInterfacePreferences`
- `ListNodeStats`

- `DisableSsh`
- `DisableClusterSsh`
- `EnableClusterSsh`
- `EnableSsh`
- `GetIpmiConfig`
- `GetIpmiInfo`
- `GetSshInfo`
- `ListNetworkInterfaces`
- `ResetNode`
- `RestartNetworking`
- `ResetNetworkConfig`
- `SetConfig`
- `SetNetworkConfig`
- `DisableBmcColdReset`
- `EnableBmcColdReset`
- `SetNtpInfo`
- `TestAddressAvailability`

Find more information

- [NetApp SolidFire Resources Page](#)
- [Documentation for earlier versions of NetApp SolidFire and Element products](#)

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.