



ATTO ExpressSAS® 6Gb RAID Adapter Guarded Rebuild and Improved Media Scan

Notes and Procedures for Firmware v4.40/flash bundle 2016_09_30

For existing customers who upgrade from any previous release to 4.40 firmware, or later

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Introduction

Customers who have existing RAID groups created with older firmware may want to take advantage of the new features in the RAID Rebuild Performance released in firmware version 4.40. The new features include:

- Guarded rebuild operations
- Initialization, rebuild, and media scan priority algorithms
- Proactive media scan scheduling

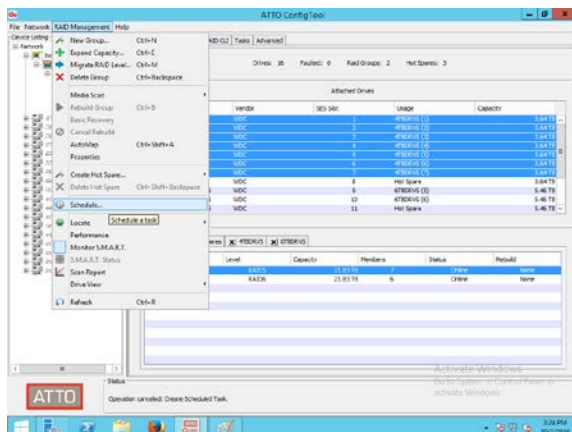
Improvements

- As drive capacity continues to grow, it is more probable for errors to occur. If an error occurs during a RAID Group rebuild, the RAID Group fails and is typically taken offline. Customers trust ATTO Technology's ExpressSAS® RAID adapters to protect their data and keep it online. We've made significant modifications to our rebuild algorithms, implementing a guarded rebuild feature that increases data availability while preventing silent data corruption. With this release, ATTO looks at bad sectors and degraded blocks more granularly. We quarantine suspect data while keeping the RAID group on line, providing greater up-time and higher reliability.
- 2Xs improvement in media scan performance. We're now able to achieve scan rates of up to 6.2GB/sec using 4Xs less I/O bandwidth, compared to previous versions. A media scan now consumes so little bandwidth that users can simultaneously run a scan in the background while supporting aggressive I/O application workloads. It's important for users to regularly run a media scan to ensure that their storage stays healthy, reliable and operating at peak performance. With this release, ATTO has made it easier than ever to keep your storage problem-free.

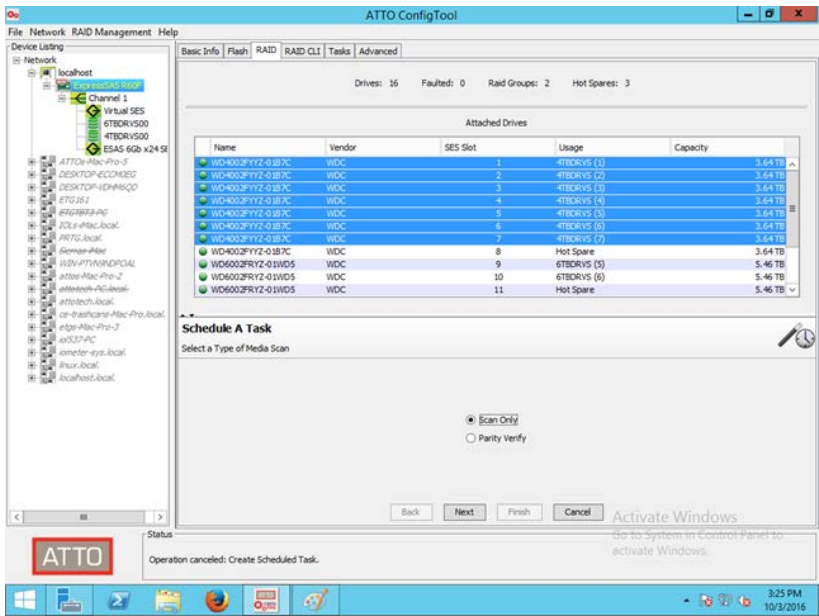
When a customer upgrades to Firmware version 4.40, existing RAID groups will automatically benefit from the guarded rebuild and new media scan priority algorithms by default – no changes are necessary. But if you want to take advantage of proactive media scan scheduling, you will have to set this up manually for each pre-existing RAID group. The following sections describe the procedure to enable, modify, or disable media scan using either the ConfigTool™ GUI, or the RAID Command Line Interface.

Set up Media Scan via ConfigTool GUI

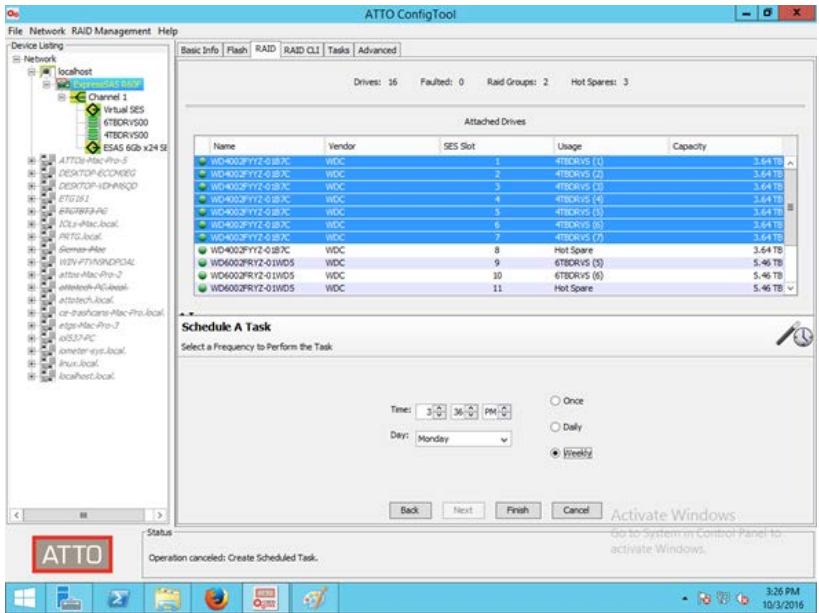
- 1.) Highlight the RAID group that you want to set up a media scan for, then click the "RAID Management" menu options, then click "Schedule."



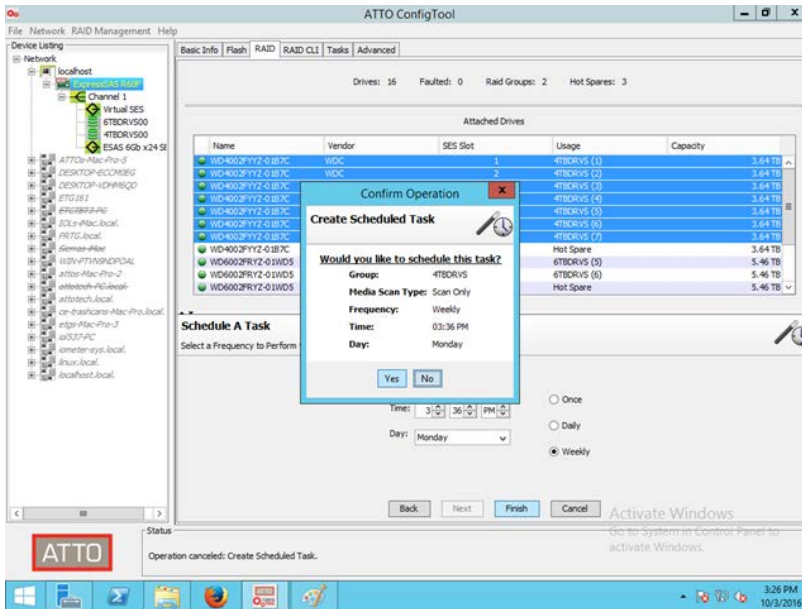
2.) Select the "Scan Only" option.



3.) Set the preferred time to run a media scan and set the frequency. A frequency of weekly is recommended.

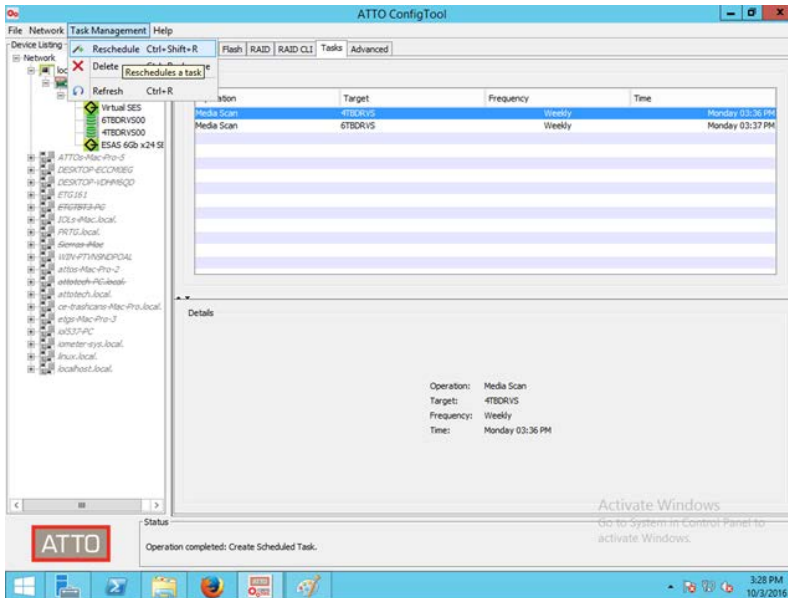


4.) Click “Yes” to confirm the media scan settings.



Modify a Media Scan in ConfigTool GUI

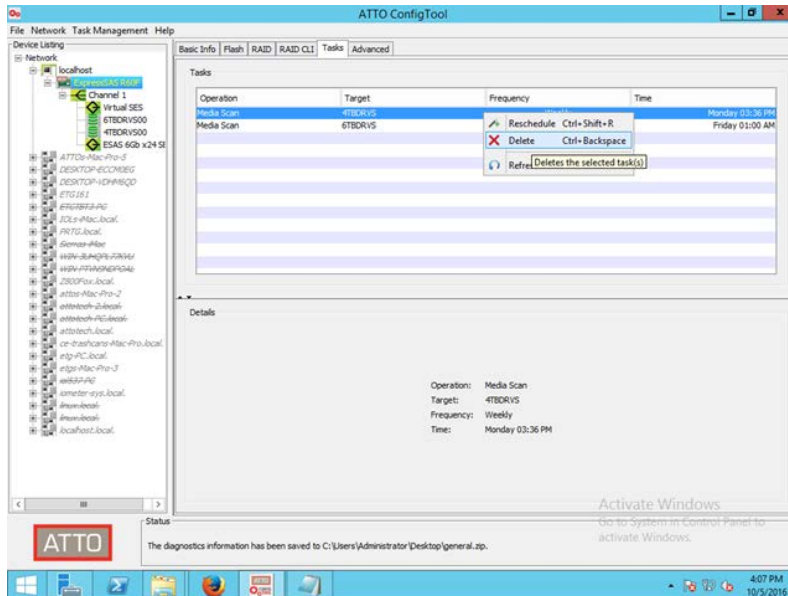
1.) Select the “Tasks” tab, then highlight the task that you want to modify, then click the “Task Management” menu bar option, then click “Reschedule.”



2.) Change the date, time, or frequency then save your changes.

Delete a Scheduled Task in ConfigTool GUI

- 1.) Select the "Tasks" tab, then highlight the task that you want to delete. Select the "Task Management" menu bar option, then click "Delete."



Set up Media Scan via CLI

- 1.) Use "RGMediaScan" CLI command to set up media scan schedule, then save the configuration.

Syntax:

RGMediaScan [GroupName] <verify | verify fix | legacy> <[HH:MM] <day of week> <daily | weekly>>

For example:

**rgmediascan myraidgroup 01:00 Saturday weekly
saveconfiguration**

- 2.) Use "DisplayScheduledTasks" command to confirm media scan schedule. For example
- 3.) To change the scheduled task date, time, and frequency, you must first delete the original task, then create a new task using the new date, time, and/or frequency

Delete a Scheduled task via CLI

- 1.) Determine ID of the scheduled task that you want to delete using "DisplayScheduledTasks" command. For example:
`displayscheduledtasks`

```

;Id  Event Type      Recur Day of Week  Time  Group Name      Verify Fix
;-----
0    RGMediaScan     Yes   Monday           15:36 4TBDRVS        No    N/A
1    RGMediaScan     Yes   Monday           15:37 6TBDRVS        No    N/A

```

- 2.) Using the "Id" from step 1 and the "DeleteScheduledTasks" command, delete the task. For example, using Id # 1 from above, the command would look like this.

```
deletescheduledtasks 1
```

- 3.) Save the configuration using "saveconfiguration" command.
- 4.) Confirm task was deleted with "DisplayScheduledTasks" command.

Using atraidcli tool to execute RAID CLI commands

If you do not use ConfigTool, you can use "atraidcli" to execute the RAID CLI commands explained above. For example, to set up a media scan using atraidcli in Windows, the command may look like the following:

```
atraidcli.exe -x "rgmediascan myraidgroup 01:00 Saturday weekly"
atraidcli.exe -x "saveconfiguration"
```