Aeron Data Retention Regulator

Control disk usage in Aeron Cluster and Aeron Archive environments

The Data Retention Regulator is a software utility designed to manage and regulate the lifespan of data within Aeron Cluster and Aeron Archive environments. It is available to Aeron Premium subscribers. Its primary function is to enable disk space management by controlling how long data is retained.

How it works

The tool works by listing recordings in the archive and applying a Data Retention Policy to determine the extent of data retention for each recording. This policy can be a simple, single-action policy or a composite of multiple policies forming a comprehensive strategy. The tool includes built-in policies for Aeron Cluster and Cluster Standby nodes that understand node recovery plans and ensure data necessary for recovery is retained.

The regulator then applies the instructions to the recording, which may involve detaching segments, deleting segments, or purging the entire recording. If the policy doesn't apply to the recording, the regulator will keep it as is. If it fails to process a recording, for example, due to an active replay, the tool will continue to process other recordings and, when rerun, re-attempt any failed steps.

Policy examples

+ **RetainEnoughDataForRecovery Policy:** Keeps a specified number of snapshots and associated logs for node recovery.
+ **RetainLengthPolicy:** Ensures a minimum amount of data (e.g., 10 GB) is kept per recording.
+ **MatchingStreamsPolicy:** Applies retention rules to recordings matching certain channel URIs or stream IDs.
+ **MatchingLogRecordingPolicy:** Targets the Consensus Module's log recording for retention or deletion.
+ **RetainMaxOfPolicy:** Combines multiple policies to retain the maximum data dictated by any of the policies.
+ **DeleteRecordingsAfterPeriodPolicy:** Deletes recordings that have been stopped for a specified period.
+ **DeleteSegmentsAfterPeriodPolicy:** Removes old segment files not modified within a set timeframe.
+ **CascadePolicy:** Applies a sequence of policies, executing the first one that covers the recording.

Key features

+ **Command-line interface (CLI):** Operate the tool via the command line for quick and direct management.
+ **Programmatic access:** Integrate the tool within your codebase for automated data retention control.
+ **Flexible retention policies:** Customize how data is retained with policies that can be tailored to specific needs.
+ **Backup strategy:** Before purging, the tool can back up segment files according to a defined strategy.

Usage scenarios

- **Recovery preparedness:** Keep essential snapshots and logs for system recovery.
- **Data compliance:** Retain data according to regulatory requirements or internal policies.
- **Disk space management:** Automatically purge old or unnecessary data to free up disk space.
- **Selective retention:** Retain critical data while purging non-essential information based on custom rules.

Get in touch for instructions on how to access the tool.

By Adaptive

Adaptive builds & operates bespoke trading technology solutions across asset classes for financial services firms wanting to own their tech stack to differentiate and compete in the long-term. Central to Adaptive's offering is Aeron, the global standard for high-throughput, low-latency and fault-tolerant trading systems - the open-source technology supported and sponsored by Adaptive.

AERON GITHUB COMMUNITY

AERON DOCUMENTATION

aeron.io / info@aeron.io / weareadaptive.com