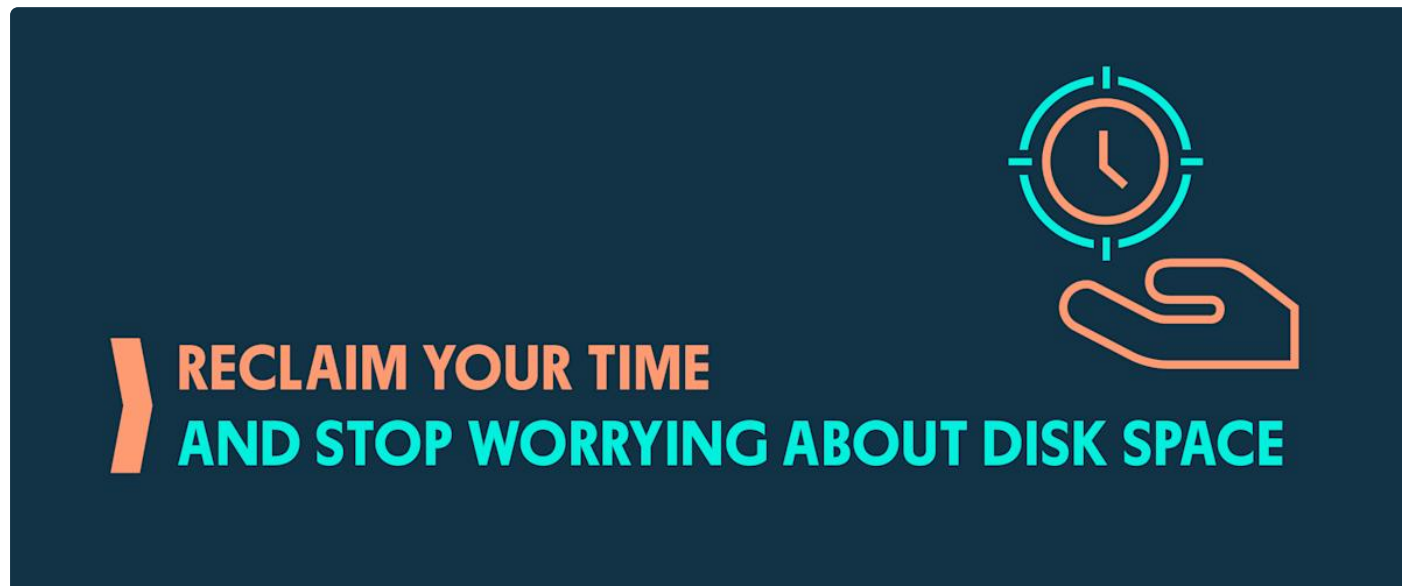


Reclaim Your Time and Stop Worrying About Disk Space

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Index management is an essential part of running Elasticsearch and at the same time one of the most underestimated operational challenges. As data grows, indices must be rotated, optimized, backed up, and eventually removed. When these tasks are handled manually, they quickly turn into repetitive, time-consuming work that scales poorly with increasing data volumes.

Search Guard **Automated Index Management (AIM)** is designed to eliminate this operational burden. By automating the entire index lifecycle through clearly defined policies, AIM ensures that indices are managed consistently, efficiently, and securely - without constant manual intervention.

The Operational Reality of Manual Index Management

In many Elasticsearch environments, index management evolves organically: scripts are added, cron jobs are introduced, and manual checks become routine. Over time, this leads to fragile setups that require continuous attention.

Common challenges include:

- indices growing too large and impacting performance
- disk space filling up unexpectedly
- inconsistent retention rules across index patterns
- backups being delayed or forgotten
- operational tasks competing with more strategic work

Without automation, maintaining a stable and predictable cluster becomes increasingly difficult as data volumes grow.

Automated Index Management with Search Guard

Search Guard Automated Index Management addresses these challenges by managing indices throughout their entire lifecycle, from creation to deletion, based on policies defined by the user.

Once a policy is in place, AIM continuously evaluates indices and executes the required actions automatically. This removes the need for ongoing manual oversight while ensuring that operational rules are applied consistently across the cluster.

Core Capabilities of Search Guard AIM

Policy-Based Index Lifecycle Management

AIM uses policies to define how indices should be handled over time. These policies control retention, optimization, and cleanup processes and are applied automatically to matching indices.

This approach ensures predictable behavior and significantly reduces the risk of configuration drift or human error.

Automatic Index Rollover

To prevent indices from growing beyond manageable limits, AIM supports automatic rollover based on:

- index size
- document count
- index age
- index count

When a rollover condition is met, AIM creates a new index and continues indexing without manual intervention. This helps maintain stable performance and avoids operational disruptions caused by oversized or excessive indices.

Index Shrinking for Efficient Resource Usage

As indices age, they are typically accessed less frequently. AIM can automatically shrink older indices, reducing the number of shards and optimizing resource usage.

This allows clusters to handle historical data more efficiently without affecting the performance of actively written indices.

Automated Snapshots and Backups

Reliable backups are a critical operational requirement. AIM allows snapshots to be scheduled automatically based on defined policies.

Snapshots can be executed during low-load periods, ensuring data protection without manual execution or operational overhead.

Index Replication Management

AIM can manage index replication, ensuring that data is properly distributed across the cluster. This supports high availability and fault tolerance by maintaining the desired number of replicas according to defined policies.

Node Selection for Task Execution

Automated index management tasks can be assigned to specific nodes. This allows workloads to be distributed efficiently across the cluster and prevents management operations from interfering with critical query or indexing workloads.

Security Integration

AIM is fully integrated with Search Guard's security features. All automated actions are executed in compliance with existing access control policies, ensuring that index management operations respect role-based permissions and security constraints.

Time-Based Scheduling

All AIM actions can be scheduled using cron expressions. This enables administrators to control exactly when operations such as rollovers, shrinking, or snapshots are executed - for example during maintenance windows or low-traffic periods.

Operational Benefits

By automating index lifecycle operations, Search Guard AIM provides clear operational advantages:

- reduced manual effort for routine index tasks
- consistent performance through controlled index sizes
- predictable disk usage via automated retention policies
- improved reliability through scheduled snapshots
- scalable operations as data volumes grow

Instead of reacting to operational issues, teams can rely on predefined rules that continuously keep the cluster in a healthy and manageable state.

Conclusion

Index management does not have to be a constant operational concern. With Search Guard Automated Index Management, index lifecycle tasks are handled automatically, consistently, and securely.

By replacing manual processes with policy-driven automation, AIM helps maintain performance, control storage usage, and reduce operational complexity allowing teams to focus on building and operating reliable search solutions instead of managing indices. If you want to learn more about **AIM**, check out our [documentation!](#)

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