

From Metrics Tsunami to Actionable Insights: Simplifying Database Troubleshooting

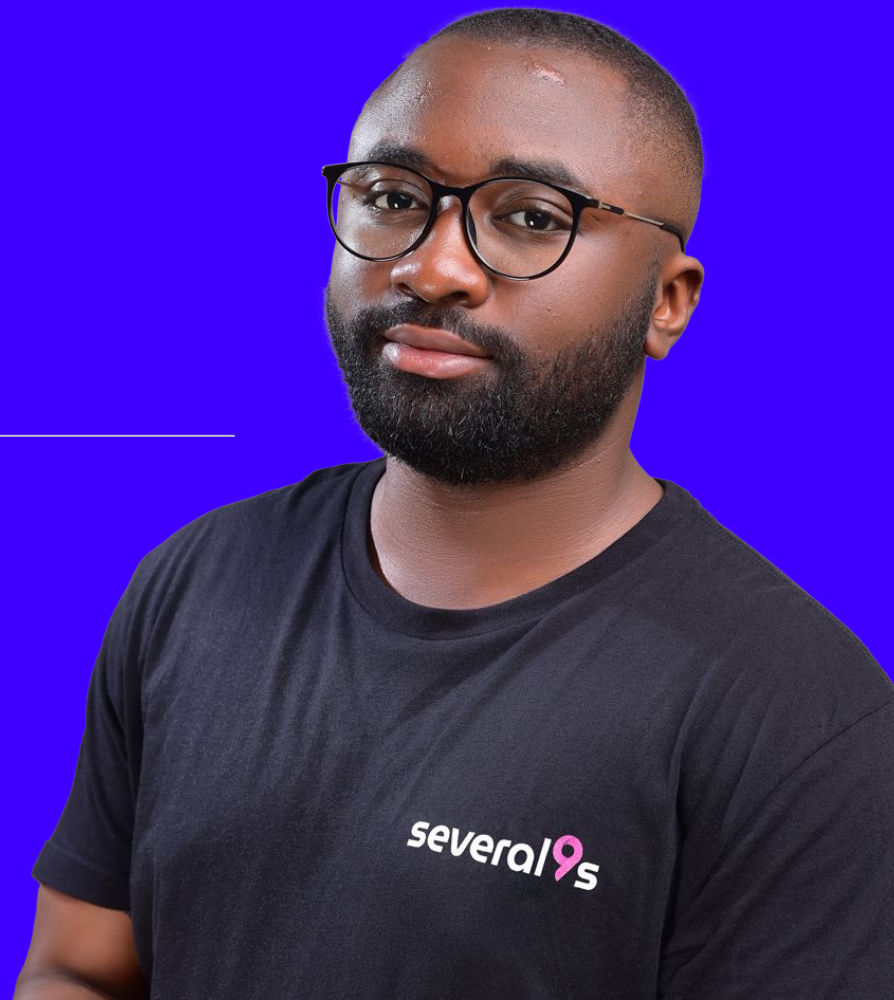


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Divine Odazie

- Technology Evangelist at Severalnines
- Certified Kubernetes Application Developer (CKAD)
- Certified AWS Solutions Architect
- Excited to speak at Conf42 Observability!



- 1. The Developer's Dilemma**
- 2. Limitations of Legacy Database Monitoring**
- 3. Simplifying Database Troubleshooting with ClusterControl**
- 4. Who uses ClusterControl for Observability?**

Is this you?

- Drowning in database metrics.
- Overwhelmed, not empowered.
- Navigating multiple tools for database observability.





Limitations of Legacy Database Monitoring

- **Graph overload:** Complex visualizations cause cognitive overload, reducing developer productivity.
- **Limited DB support:** Multiple tools needed for diverse database environments.
- **Visibility without action:** You see the problem, but can't fix it from the tool, leading to delayed resolution.

Tired of legacy limitations holding you back?
Let's see how **ClusterControl** can help!

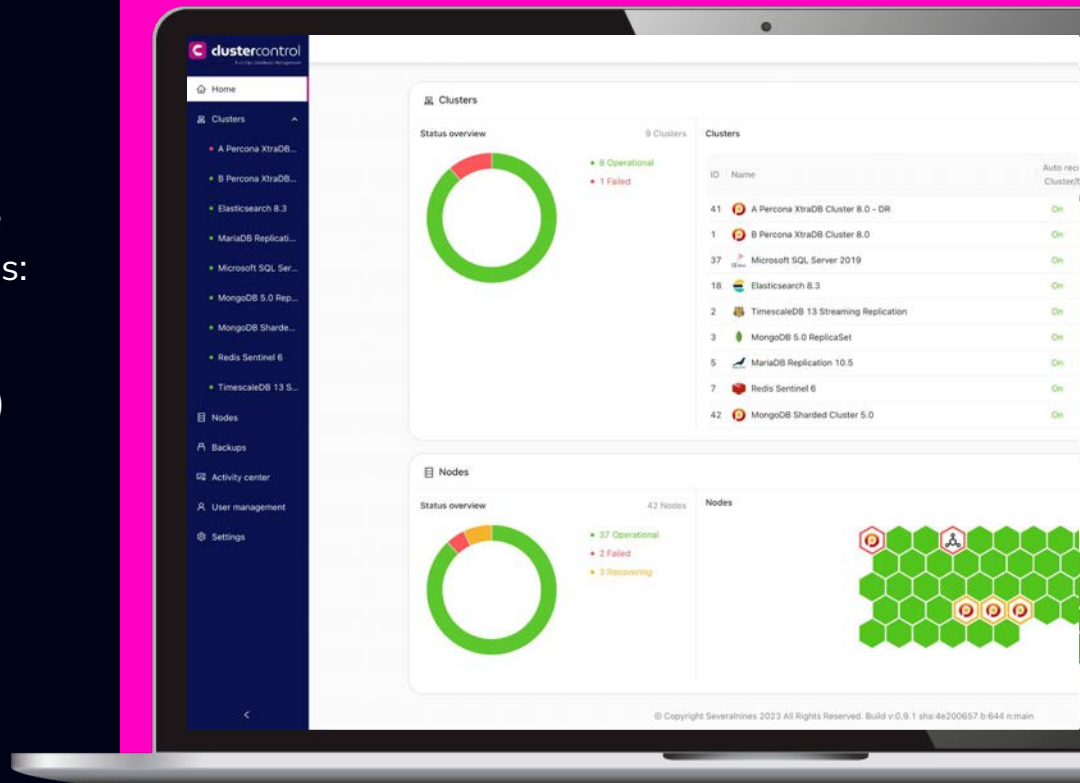
3

Simplifying Database Troubleshooting with ClusterControl

Introducing ClusterControl

ClusterControl empowers you to standardize the full-lifecycle operations of your databases:

- Self-hosted
- Offers community version (free forever)
- Supports most open-source and proprietary databases
- Centralizes monitoring & management across environments
- Supports various tooling
 - Terraform, Ansible, Puppet, etc.



Observability with clustercontrol

Holistic
dashboards

Performance
monitoring

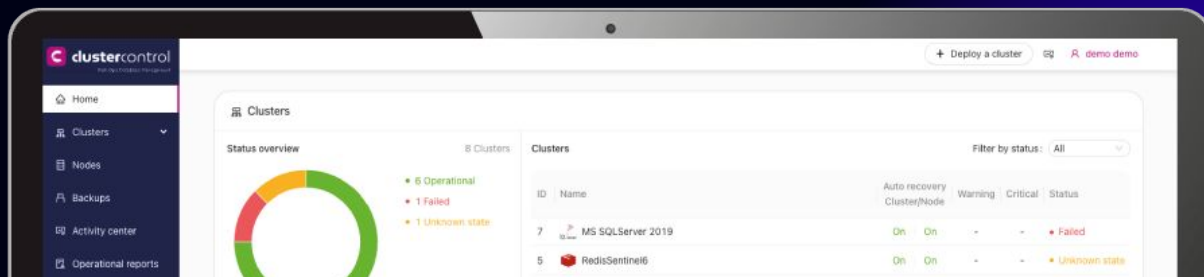
Operational
reports

Fault
detection

Query
monitoring

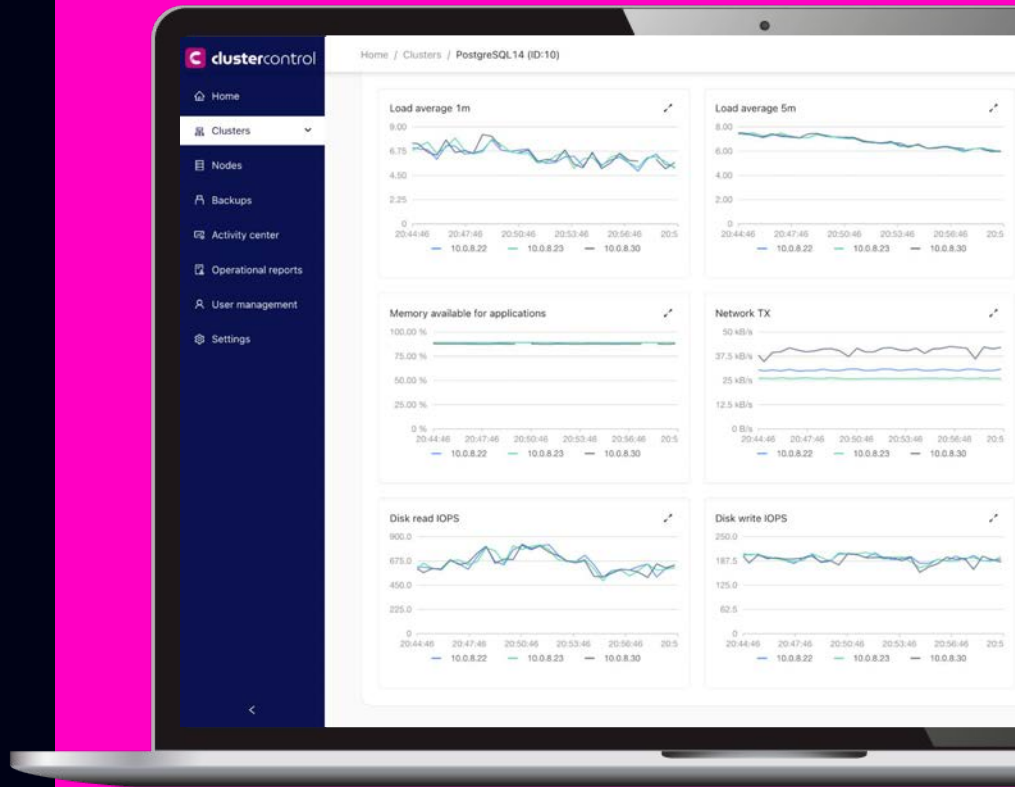
Load balancer
monitoring

Activity
center



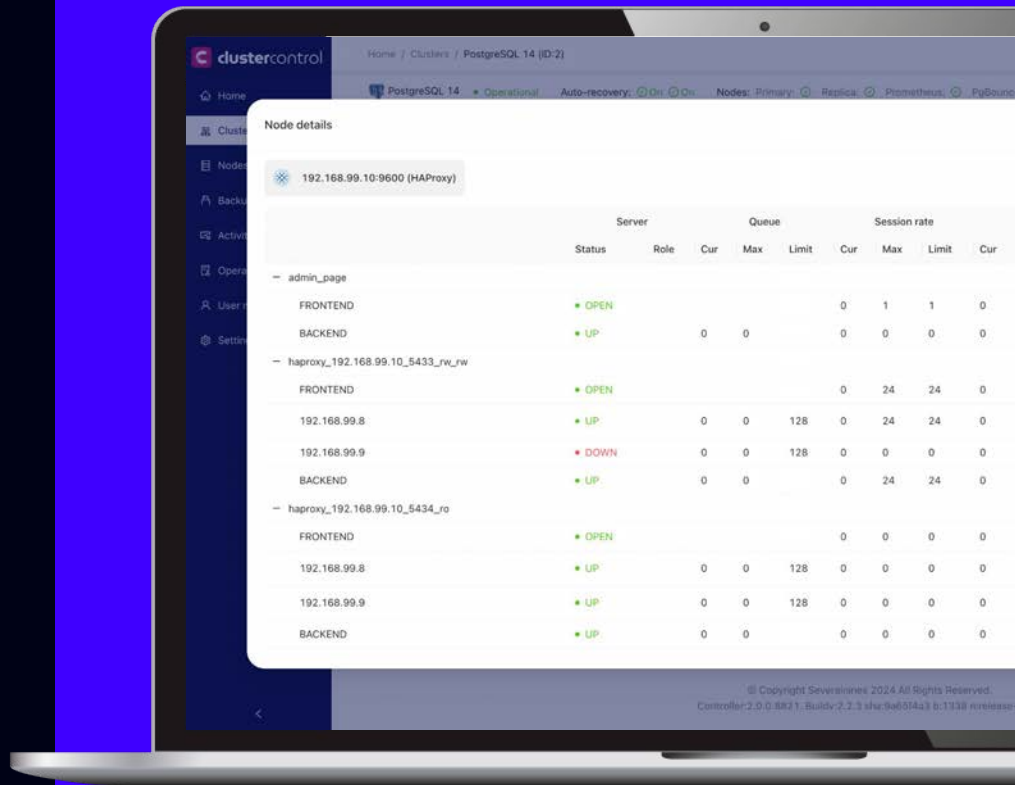
Holistic dashboards

- Full cluster overview
- Database-specific dashboards
 - Track SELECT, INSERT, UPDATE, and DELETE statements.
 - Active and idle sessions, etc.
- Server-level metrics
 - Load average
 - Disk IOPS
 - Network
 - Uptime, etc.



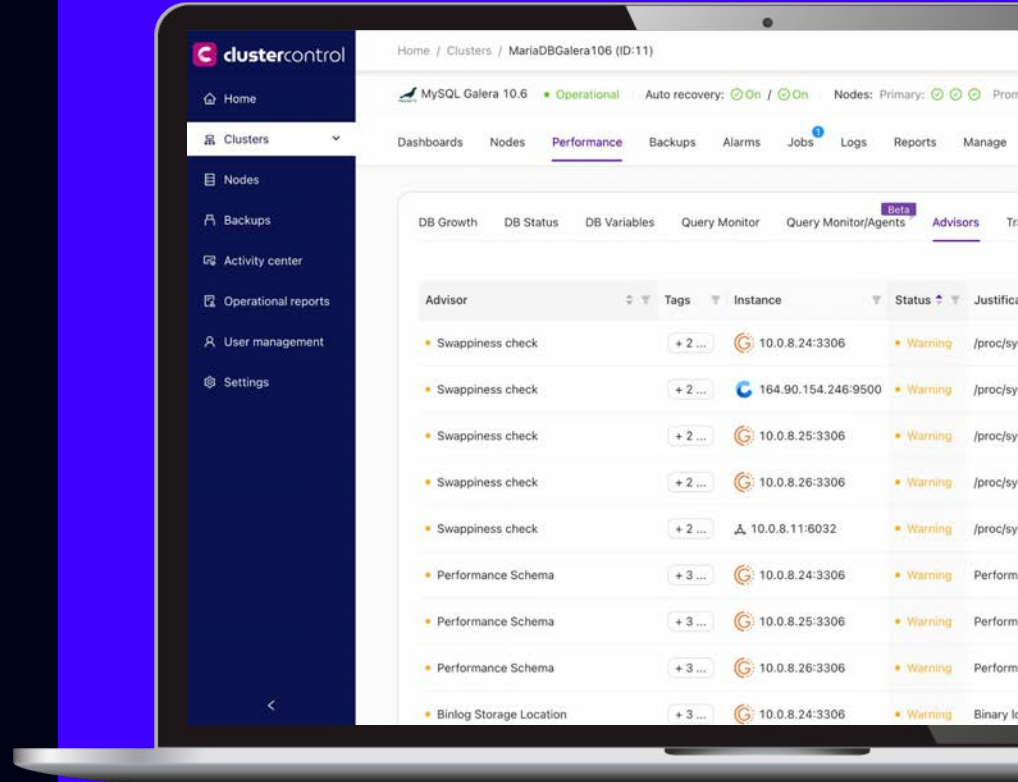
Load balancer monitoring

- Traffic distribution
- Response time
- Health checks
- Throughputs
- Connection utilization
- Latency
- LB resource utilization
- Alerting
- Error rate tracking



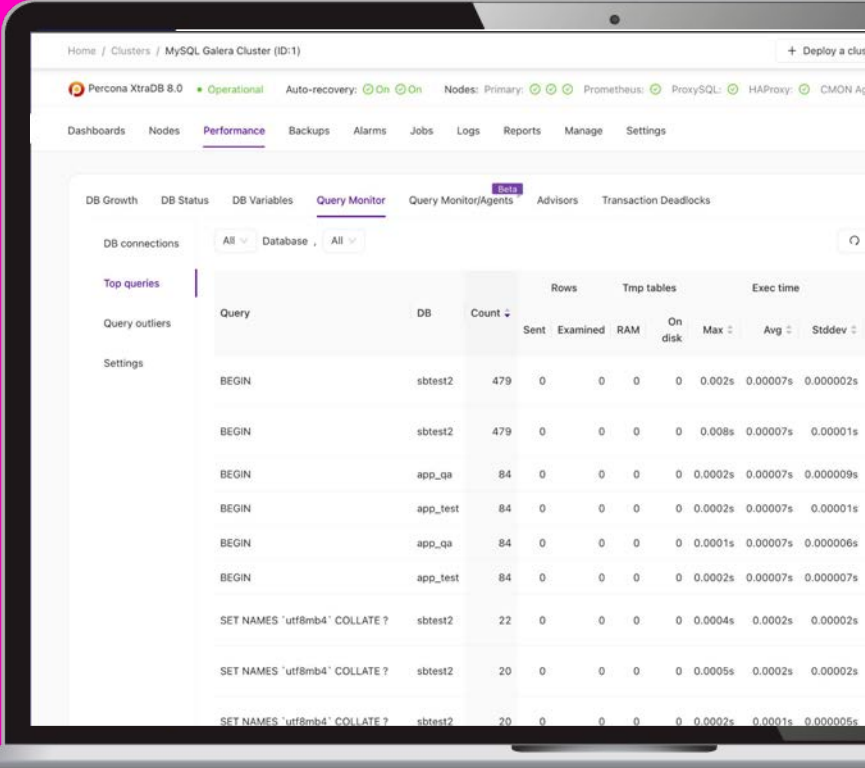
Performance Monitoring

- **Advisors** – advice containing status and justification
- **DB growth** – daily summary of your database and table growth.
- **DB variables** – detailed information about the database configurations.
- **Transaction deadlocks** – Lists out long-running transactions and deadlocks
- **Query monitoring**



Query Monitoring

- **Top queries** – ordered by Occurrence or Execution Time, to show the most common or slowest queries respectively
- **Query outliers** – queries that take a longer time than normal
- **DB connections** – current database connections and processes.
- **Monitoring agents** – install on all DB nodes

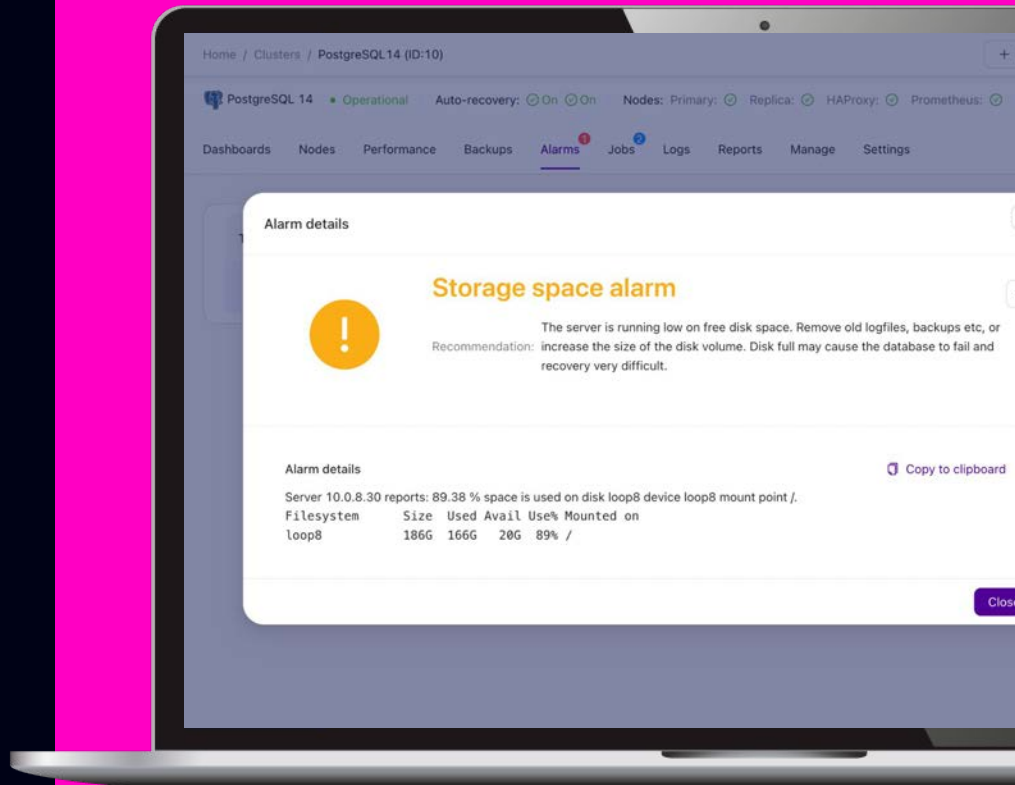


The screenshot displays the 'Query Monitor' section of the Percona XtraDB 8.0 monitoring tool. The interface shows a table of top queries with columns for Query, DB, Count, Rows Sent, Rows Examined, Tmp tables RAM, On disk, Max execution time, Avg execution time, and Stddev execution time. The top query is 'BEGIN' on the 'sbtest2' database, which has been executed 479 times. Other queries include 'BEGIN' on 'app_qa' and 'app_test' databases, and 'SET NAMES 'utf8mb4' COLLATE ?' on 'sbtest2'.

Query	DB	Count	Rows			Tmp tables	Exec time		
			Sent	Examined	RAM		On disk	Max	Avg
BEGIN	sbtest2	479	0	0	0	0	0.0002s	0.00007s	0.000002s
BEGIN	sbtest2	479	0	0	0	0	0.0008s	0.00007s	0.00001s
BEGIN	app_qa	84	0	0	0	0	0.0002s	0.00007s	0.000009s
BEGIN	app_test	84	0	0	0	0	0.0002s	0.00007s	0.00001s
BEGIN	app_qa	84	0	0	0	0	0.0001s	0.00007s	0.000006s
BEGIN	app_test	84	0	0	0	0	0.0002s	0.00007s	0.000007s
SET NAMES 'utf8mb4' COLLATE ?	sbtest2	22	0	0	0	0	0.0004s	0.0002s	0.00002s
SET NAMES 'utf8mb4' COLLATE ?	sbtest2	20	0	0	0	0	0.0005s	0.0002s	0.00002s
SET NAMES 'utf8mb4' COLLATE ?	sbtest2	20	0	0	0	0	0.0002s	0.0001s	0.000005s

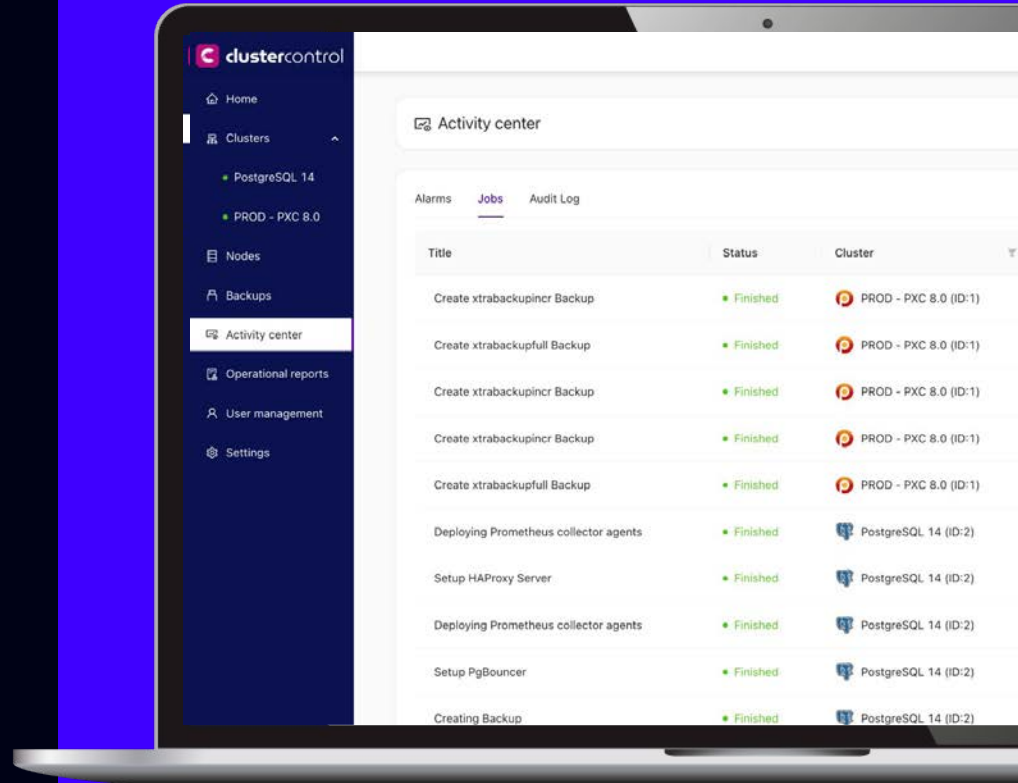
Fault detection and response

- Real time detection
- Action recommendations
- Analysis
- Recovery
 - Auto failover
 - Self-healing
 - Manual intervention
 - Scaling



Activity Center

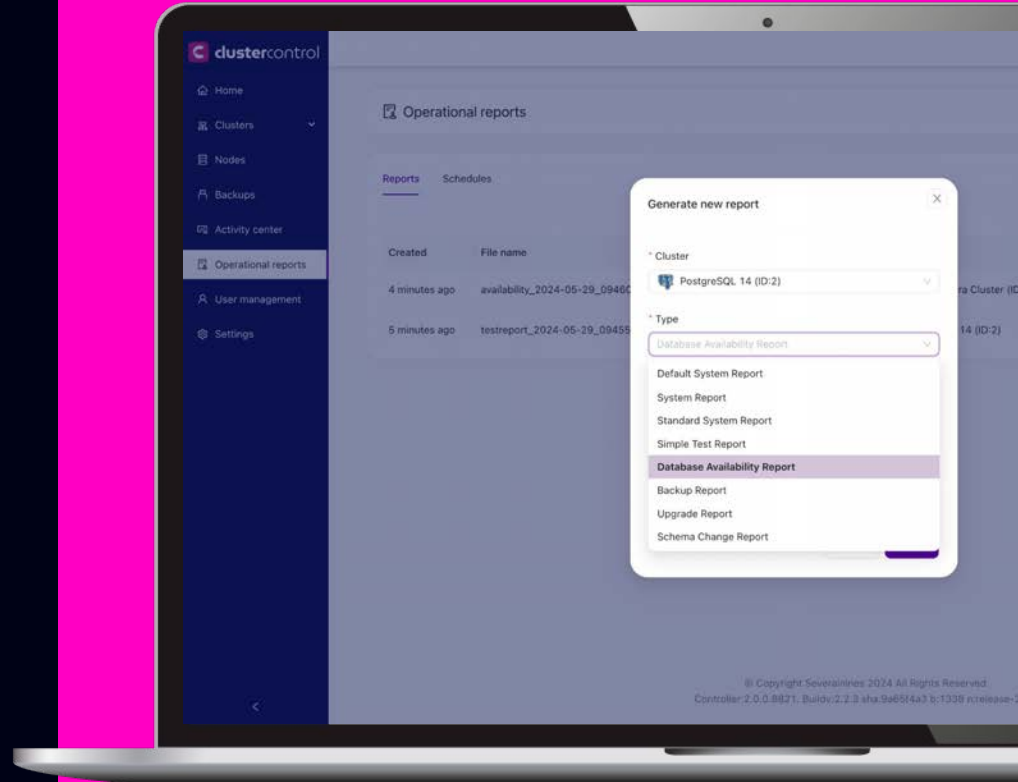
- **Logs** – Database related logs.
- **Alarms** – problems that could affect or degrade the database cluster.
- **Notifications** – using native and webhook integrations.
- **Jobs** – actions that have been initiated and performed in a cluster



Operational reports

Reports on specific database-focused concerns:

- System report
- Database availability report
- Backup report
- Schema change report
- Daily system report
- Database growth report
- Upgrade report
- Capacity report
- Incident report
- Error report



LIVE DEMO

Running
ClusterControl...

4

Who uses **ClusterControl** for Observability?

Trusted by...



WESTPAY

NHS



...and **200+** other Organizations.

WESTPAY

Challenge

While growing in the market, monitoring and adapting systems performance was a great challenge for Westpay. They spent lots of hours manually tweaking systems to make them work.

Outcome

“ClusterControl provides the means for ensuring the highest possible uptime as well as running best possible performance at all times.”

Thomas Nilsson, CTO at Westpay

Read the Case Study:





Challenge

Managing, monitoring, and scaling databases were just taking far too much time for HolidayPirates and they needed a one-stop database automation solution.

Outcome

“We are now always notified about the status of our database and able to take corrective and preventive actions instantaneously to ensure high uptime.”

Abdalaziz Mohamed, Senior DevOps Engineer at HolidayPirates

Read the Case Study:



THANK YOU!



Tech Evangelist
Divine Odazie

✕ @_Odazie



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