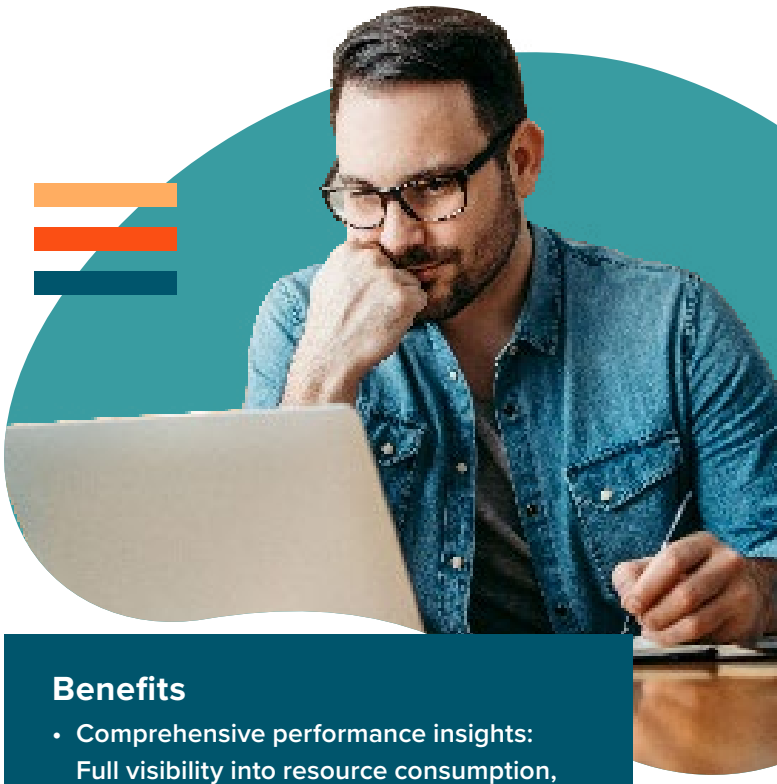
Foglight® for PostgreSQL with Performance Investigator

Optimize PostgreSQL performance with advanced workload analysis



Foglight is designed for enterprise DBAs managing multiple databases within high-transaction, performance-sensitive environments. Foglight for PostgreSQL with Performance Investigator offers a robust solution for optimizing the performance and efficiency of PostgreSQL databases in demanding settings. Designed to handle heavy workloads, complex queries and large-scale database estates, Foglight provides deep visibility and advanced analytics into query performance, resource utilization, and wait events ensuring that DBAs can proactively manage database performance, identify hidden bottlenecks, and maintain operational efficiency. Even your most complex systems will run smoothly and efficiently.

Identifying blind spots in PostgreSQL performance

Even skilled DBAs, who are well-equipped to manage PostgreSQL, can run into unknown challenges in areas they don't always see. Foglight for PostgreSQL with Performance Investigator is designed to help uncover those blind spots that typically go unnoticed but have a significant impact on performance and efficiency. These include:

Query performance issues

Inefficient and resource-intensive queries can degrade performance, and manually identifying these across complex systems can be time-consuming. The Foglight Query Insights feature identifies the most inefficient and resource-consuming queries, allowing DBAs to concentrate their optimization efforts where they have the greatest impact.

Benefits

- **Comprehensive performance insights: Full visibility into resource consumption, wait events and lock contention to ensure PostgreSQL databases run optimally.**
- **Intuitive workload analysis: Drill down into resource consumption across multiple dimensions such as databases, users and queries to identify and quickly resolve performance bottlenecks.**
- **Wait event analysis: Analyze and reduce wait events impacting query execution to improve query response times.**
- **Blocking chains analysis: Proactively resolve blocking issues with our contextual alarms and detailed wait-event analysis.**
- **Query Insights: Identify top resource-consuming queries and prioritize them for optimization based on their impact on performance.**
- **Agentless monitoring: Monitor hundreds of PostgreSQL instances with minimal performance impact through low-overhead, agentless data collection.**

Resource utilization problems

Without dedicated monitoring, high resource consumption, memory or CPU issues often go undetected, leading to performance bottlenecks. Multidimensional workload analysis in Foglight for PostgreSQL offers deep insights into resource usage, enabling more effective resource allocation and cost efficiency.

Locking and concurrency issues

Blocking situations can significantly slow down operations, causing delays and impacting user experience. Lock and wait analysis in Foglight for PostgreSQL proactively alerts users to locking issues, so DBAs can resolve them before they affect the system.

Beyond standard optimization: Unlock deeper insights

Unlike typical performance tools, Foglight for PostgreSQL with Performance Investigator provides a complete view of your PostgreSQL environment. It collects and organizes data so you can easily look at it from different angles—such as by user, query or resource use—allowing you to quickly spot and fix issues. This gives you a more comprehensive understanding of what's impacting performance, helping you address the root causes and improve efficiency across the board.

OpenTelemetry integration

Leverage OpenTelemetry to export performance data from Foglight for use with external analytics and reporting tools, enhancing visibility into database performance across your organization.

Challenge	The Foglight Solution	Your Benefit
Complex query and resource management	• Provides deep insights into resource consumption and performance across databases	• Simplifies the process of identifying and resolving bottlenecks, improving efficiency and performance
Break-fix: Isolating performance issues faster	• Offers multidimensional analysis for deep insights into performance	• Facilitates faster identification and resolution of performance problems, reducing MTTR
Identifying resource-intensive queries	• Displays top queries, users and databases by performance metrics	• Improves performance by focusing optimization efforts on high-impact area
Addressing query delays and locking issues	• Proactively alerts users to blocking issues	• Avoids service interruptions and reduces application delays

Features

Query Insights

Optimizing inefficient and resource-intensive queries is one of the most effective ways to improve resource allocation and cost-efficiency. Query Insights enables users to identify queries causing significant performance issues and prioritize them accordingly by ranking and sorting queries by their impact, calculated based on the percentage of statement workload in comparison to the total instance workload. The filtering feature in Query Insights is also essential for analysis and helps pinpoint queries based on additional criteria.

Lock and wait analysis

Database blocking can cause considerable application delays, especially in situations that need to be addressed manually. By proactively alerting you to blocking lock issues, Foglight enables you to take preventive action and avoid service interruptions or slowdowns that impact users. When lock timeouts exceed a predefined threshold, Foglight immediately notifies you with an alarm containing helpful details and advice.

Multidimensional workload analysis

The multidimensional analysis in Foglight allows you to "slice and dice" workload data from multiple perspectives. For example, you can drill into the list of databases to find the database with the most load, and then drill into that database to view the top users or see SQL statements for individual users. Each user session can be individually investigated, even in cases where the username is masked by connection pooling.

Navigating the unknown: The DBA's safety net

DBAs are highly capable of managing PostgreSQL, but it's often the unknown variables, those "sometimes it's slow" or hidden resource drains, that present the greatest challenges. Foglight for PostgreSQL with Performance Investigator acts as a safety net, offering comprehensive visibility into areas that aren't immediately obvious. It collects data continuously and provides detailed insights into resource consumption, locking issues and query performance, allowing DBAs to operate with confidence even in the most complex PostgreSQL environments.

By addressing these blind spots and providing actionable insights, Foglight enables DBAs to maintain optimal performance, minimize disruptions and ensure smooth database operations across the board.

Foglight for PostgreSQL with Performance Investigator slashed query response times by 47% for a major financial institution's top 10 most demanding queries. By leveraging powerful multidimensional workload analysis and query insights, the tool helped boost system performance and enhance customer satisfaction.

About Quest Software

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