

Lifebit Launches Cloud-Native Bash Engine, Eliminating the Need for Nextflow and Democratizing Population-Scale Analyses

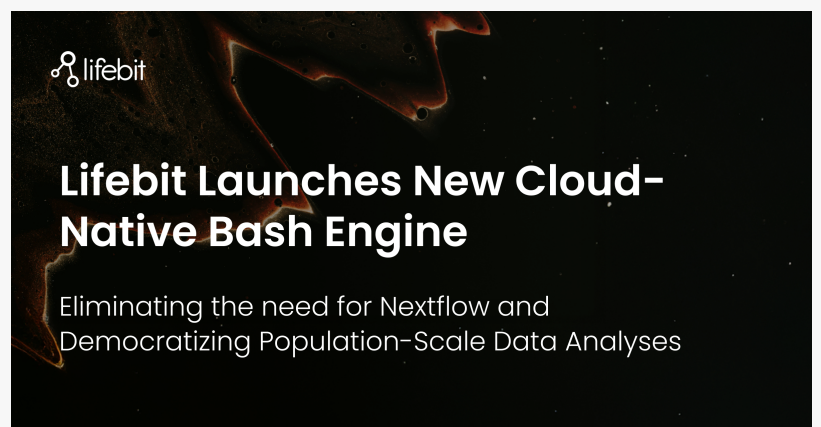
Run Bash scripts at population scale, without Nextflow, containers, or DevOps. Lifebit simplifies cloud-native bioinformatics for every researcher.

NEW YORK, NY, UNITED STATES, December 2, 2025 /EINPresswire.com/ -- Lifebit today announced the release of its latest innovation: a breakthrough cloud-native execution system that allows researchers to [run Bash scripts at population scale](#) — without learning complex workflow management languages (ie. Nextflow, Cromwell/WDL etc.), containerisation, workflow engineering, or DevOps. This first-of-its-kind capability delivers HPC-like simplicity combined with the scalability and robustness of AWS Batch, fundamentally transforming how teams run large-scale analyses in the cloud.

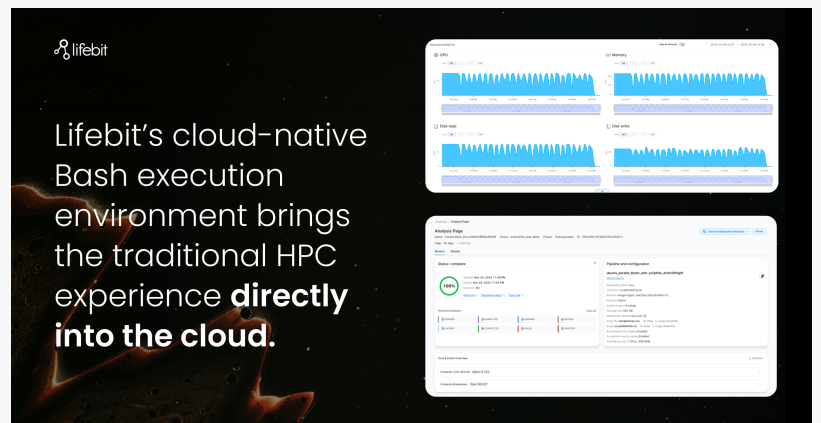
For years, research and data science teams have relied on [Bash as their primary interface for data analysis](#). Yet when scaling analyses across

thousands of datasets or moving into cloud environments, they have been forced to adopt complex workflow managers, such as Nextflow and Cromwell/WDL, that, while powerful, require specialist knowledge and introduce steep learning curves.

Lifebit's new solution addresses this industry-wide challenge by allowing users to run Bash exactly as they always have, while the platform seamlessly manages cloud orchestration, data



Lifebit launches a new cloud-native Bash execution engine to democratize scalable data analyses



Visual interface of Lifebit's new Bash execution system with live resource monitoring and analysis pipeline view

parallelization, governance, reproducibility, and collaboration in the background. This empowers the 90%+ of technical users who already know Bash, rather than limiting advanced analyses to the small minority familiar with workflow engines like Nextflow or Cromwell/WDL.

“Researchers should be able to focus on their science, not waste time with steep learning curves or mastering new workflow management skills, like Nextflow” said Maria Dunford, CEO of Lifebit. “Our new [cloud-native Bash execution](#) experience preserves the simplicity scientists love, while delivering the power and elasticity of population-scale compute. This is a major step forward in democratising cloud analyses and making them accessible, fast, compliant, and truly collaborative for every research team and user.”

About the Solution

Lifebit’s cloud-native Bash execution environment brings the traditional HPC experience directly into the cloud, without requiring users to rewrite code or adopt new workflow languages.

Key capabilities include:

- HPC-Simple, Cloud-Ready Execution: Effortless scaling of Bash scripts using AWS Batch, with no workflow management (ie. Nextflow, Cromwell/WDL etc.) knowledge required.
- Array Jobs for High-Throughput Workloads: Instantly parallelise scripts across thousands of array inputs to accelerate batch processing.
- Intuitive Researcher Interface: Upload scripts, define parameters, and launch analyses via UI or CLI.
- One-Click Interactive Sessions: Pivot directly from outputs to Jupyter, VSCode, or RStudio environments.
- Collaborative, Compliant Workspaces: Teams share tools without accessing underlying containers, ensuring IP and governance protection.
- Transparent Resource Usage: Real-time CPU, memory and cost tracking for optimised compute management.

This solution gives all researchers, not just workflow engineers, the ability to run fully reproducible, robust, population-scale analyses with zero infrastructure or technical overhead.

Download the full whitepaper: <https://lifebit.ai/white-papers/cloud-scale-bash-analyses/>

About Lifebit

Lifebit is the global leader in federated, secure, and compliant health data intelligence platforms

and trusted research solutions. We help governments, health systems, and biopharma organisations unify, govern, and unlock biomedical data for real-world research, clinical impact, and life-saving discovery.

The Lifebit Platform Solutions are trusted by leading government and enterprise institutions including the NIH, Genomics England, and CanPath, among others, securely managing over 275 million patient records across 30+ countries.

With operations across the U.S., Canada, UK, Singapore, Japan, and Australia, Lifebit powers national precision medicine programmes and enterprise data infrastructures worldwide.

Learn more: <https://lifebit.ai>

Nate Raine

Lifebit

nate@lifebit.ai

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