

# The 4T Data Model®

## Powering StackState's Next-Gen Monitoring and AIOps platform

### An Introduction

StackState's capabilities are driven by its unique 4T Data Model®. Merging Topology, Telemetry, Tracing and Time are the way to model the configuration of what is going on in any IT system; large or small, based on microservices, containers, web services, monoliths, serverless, cloud or on-premise. It doesn't matter. StackState's 4T Data Model® delivers insight into the entire IT landscape by capturing every millisecond of change, from any source in real time to solve or prevent IT issues faster, with the right team.



### Topology

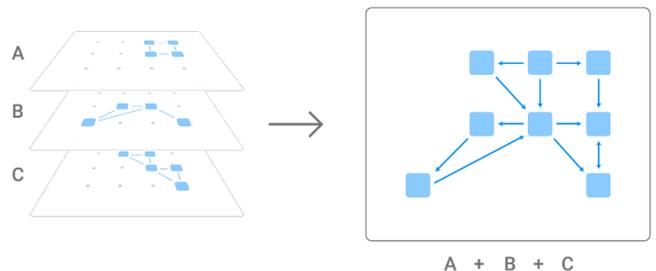
FULL STACK VISIBILITY. NO BLINDSPOTS.

For the data to be relevant and actionable, a context must be placed around the data ingested. That context is topology. Topologies in StackState are automatically updated by topology data coming from different sources. Topology data is sourced from different platforms that provision or deploy networks, virtual machines, containers and services or can be discovered via discovery agents.

Each of these sources defines one or multiple subgraphs of the stack's topology. These topological subgraphs are automatically merged and mapped to StackState's stack by the script engine.

### Key differentiators

- **Versioned Graph Database with Query Language:** Powering the StackState 4T data model®. With open API's and query language, giving access to all data in any format, structure, view or time.
- **Scalable and Highly Flexible Architecture:** Cloud native enterprise ready. Built on open-source technology such as Hadoop, Kafka and Elasticsearch. StackState is architected to be a web-scale system and is SaaS ready.
- **Streaming Technology:** StackState handles real-time data to compose a 100% accurate and up-to-date IT landscape. This data is then converted to a common language and fed to StackState's unique 4T Data Model®.
- **StackPacks:** Data is ingested in the 4T Data Model® through external integrations and StackState's own agent. StackPacks are a new standard for StackState data integrations, and can be installed with just a few clicks of your mouse via the StackState interface. Once a StackPack is installed, you will see data flowing into StackState.



## Telemetry

OPEN PLATFORM. CAPTURE ALL DATA.

StackState is able to ingest telemetry data (metrics, events and logs) from external IT systems such as monitoring, provisioning, deployment and configuration management tools or StackState's own agent. The telemetry is combined with the topology data to create a comprehensive picture of your IT environment and how it is functioning in real-time.

StackState relies on plugins to receive and convert the incoming data streams. Plugins can be implemented in easy to use scripting languages and support both a push as well as pull interaction model.



## Tracing

END-TO-END INSIGHT AT CODE LEVEL.

Tracing provides end-to-end insight in your entire IT landscape at code level. With an easy to understand and navigate overview centered around the topology. Tracing is also fully integrated with our unique time travel capabilities which captures all changes over time.

StackState Tracing capability supports all major languages and has full support for distributed traces. StackState Tracing even integrates cloud tracing technologies such as Amazon X-Ray and Azure Monitor.

## Time

SEE WHAT HAPPENED. BEFORE AND AFTER.

Problems in IT stacks can usually be traced back to changes. Having a change log of everything in your IT landscape is vital. To record these changes, we've built StackGraph, the worlds' only versioned graph database. StackGraph allows StackState to go back to any moment in time and to see exactly what your landscape looked like at that moment.

The web-based user-interface of StackState is equipped with a WebGL based rendering engine. Hardware accelerated graphics allow for visualizing massive topologies. The 3d visualization allows you to visualize not only the present topology, but also the past and future all in one glance.

