Overcoming Challenges Moving Data and Analytics Products to Production

As organizations learn to build processes around data management and analytics, the development and use of data and analytics becomes more widespread and effective. The software development and IT communities are already accustomed to such a development: DevOps grew out of the availability of agile (hardware) infrastructure. The DevOps set of processes and tools that are used collaboratively by software development teams and IT operations has streamlined the deployment process of complex software systems. Similarly, as we look at what is required for the productionalization of a true data-driven product, we realize that cross-functional teams of data professionals, ranging from data engineers and software developers to data scientists, IT operations and business leaders, must work collaboratively and unify around a set of best practices and tools for "Data OPerationS" or DataOps. Where DevOps allows organizations to modernize their approach to software development and deployment, DataOps establishes a modern framework for development and deployment of data-driven products. Those forward-leaning organizations that are embracing DataOps processes and tools confidently describe their use of data and analytics within a cohesive and coherent enterprise-wide strategy.

Data-driven products can no longer be built on monolithic, traditional data architectural models, as these architectures fail to manage the new data paradigm of nearly unlimited amount of high-variety and high-velocity data. Instead, a modern data architecture is needed to meet new data requirements that demand flexibility and adaptability in the architecture to aggregate, process and analyze cross-silo data coming from an increasing number of sources. A modern data architecture can meet the rapidly-evolving, often unpredictable changes in data and requirements that organizations face and that data-driven products require. With adoption of DataOps processes and tools, organizations can effectively leverage the agile infrastructure available in a modern data architecture to maximize the value potential of their key corporate asset, their data.

The Composable DataOps Platform enables organizations to overcome challenges from moving data and analytics products to production and deliver true data-driven products. Originally built on technology from MIT and the Department of Defense, the Composable platform excels at being deployed across global enterprises that need to continuously adapt as data requirements, organizational circumstances and technologies evolve. Today, the Composable platform is the leading intelligent DataOps platform that serves as a single coherent ecosystem for DataOps professionals, with a complete portfolio of composable capabilities for data orchestration, automation and analytics.

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Composable Analytics, Inc. builds software that enables enterprises to rapidly adopt a modern data strategy and robustly manage unlimited amounts of data. For more information, visit composable.ai

The Composable platform reduces the technology burden often associated with leveraging big data and streamlines key areas of productionalization of a data-driven product. These include features around:

- Data Catalog: Knowing what data is available and how it can add value to the organization.
- Data Lineage: Knowing where, when and how data is moved and consumed not just within the data warehouse or data lake, but across all downstream business functions, and the wider enterprise.
- Data Quality: Enforcing policies and processes around data acquisition, transmission, consumption and disposition using automation, while reporting on key metrics through real-time analysis.
- Meta Data: Providing end-to-end visibility, audit and traceability on all kinds of metadata while maximizing analytics performance.
- Ingestion: Accommodating a vast variety of Big Data, in various formats, structures and attributes, from a variety of sources, and yet enable efficient processing, query speed and precision.
- Analytics: Synthesizing and mastering the available data and provisioning actionable insights when and as required.
- Data Security: Establishing policy based security and access controls for end-to-end data audit, authentication and protection.

Which of the following best describes your firm's use of data and analytics?

"The effective use of data and analytics is currently **very limited** because we **lack** either the **data, technology, and analytical skill**"

"There are **some areas of effective use of data and analytical activity in certain business areas, but these are uncoordinated and piecemeal.**"

"**We routinely use data and analytics very successfully, within a cohesive and coherent enterprise-wide strategy.**"

composable

Intelligent DataOps

Overcoming Challenges Moving Data and Analytics Products to Production

As the leading intelligent DataOps platform available, Composable is equipped with these unique capabilities:

Real-Time Data Flows

Real-time data access, transmission, and analysis allows organizations to achieve faster time-to-value and apply insights as they are available. Timely decision, to the order of seconds or minutes can make or break revenue streams in many industry verticals including retail, finance, and security, among others. The challenge to achieve this goal intensifies exponentially as the architecture ingests billions of data points at scale. Various architectural patterns may be required for data streaming or batch processing use cases. Composable provides mechanisms for achieving real-time visibility and control of data flows in action.

Analytics-as-a-Service

The idea behind being a data-driven business organization is that insightful information must support key business decisions. This is only possible if insights, in complete and concise form, are available and accessible to the appropriate personnel with minimal efforts and in a timely manner. Modern data architectures are adopted in part to support and streamline these self-service capabilities by incorporating the right set of analytics tools that deliver reports from across the wide pool of data and sources. Composable provides a coherent and cohesive ecosystem for self-service, just-in-time analytics, while enforcing organizational policies and standards of governance and control without limiting or slowing down user access to data and insights.

Composability to Handle Variability

Composability is a system design principle that can lead to a truly evolutionary architecture that can support information agility. A composable architecture is essentially implemented through the use of small, modular components that each perform a specific function or service, communicates with other components through a well-defined contract, and can be inter-connected in various configurations. Information agility is just one benefit of utilizing the composability principle for DataOps. Another equally, or perhaps more, important benefit to the DataOps community is that a composable architecture can rapidly operationalizing a "stand-alone" advanced data science model by integrating the model within a full, enterprise-grade data engineering pipeline that encompasses data orchestration, automation and analytics. Composable, through its fundamental architectural design, provides maintainable data-driven capabilities for the enterprise that are robust and reliable.

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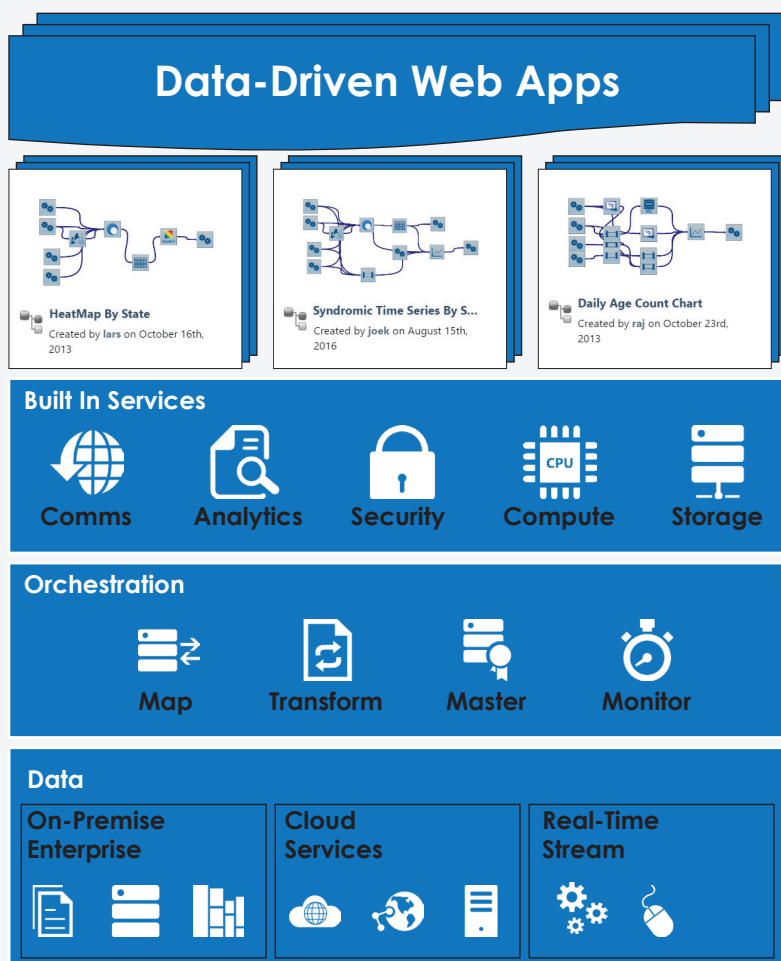
Composable Analytics, Inc. builds software that enables enterprises to rapidly adopt a modern data strategy and robustly manage unlimited amounts of data. Composable DataOps Platform, a full-stack analytics platform with built-in services for data orchestration, automation and analytics, accelerates data engineering, preparation and analysis. Built with a composable architecture that enables abstraction and integration of any software or analytical approach, Composable serves as an end-to-end data operations ecosystem for business users that want to architect data intelligence solutions that leverage disparate data sources, live feeds, and event data regardless of the amount, format or structure of the data.

CONTINUOUS ANALYTICS

DATA OPERATIONS MIDDLEWARE

LOW-CODE INTEGRATION

END-TO-END DATA OPERATIONS PLATFORM

Data orchestration, automation and analytics

Data-Driven Web Apps

HeatMap By State
Created by **lars** on October 16th, 2013

Syndromic Time Series By S...
Created by **joek** on August 15th, 2016

Daily Age Count Chart
Created by **raj** on October 23rd, 2013

Built In Services

Comms Analytics Security Compute Storage

Orchestration

Map Transform Master Monitor

Data

On-Premise Enterprise

Cloud Services

Real-Time Stream

Gartner®
COOL VENDOR

Through a unified approach to data, regardless of the source, format or structure, Composable serves as a full-stack data synthesis platform built to generate insights and support the decision-making process.

KEY FEATURES
- Flow-based programming
- Web-based designer
- Multi-faceted data formats and sources
- Robust code-language support
- Community integration
- Dashboards
- Web service authoring
- Low-code Web App development

Collect Data
Gather data from traditional and non-traditional sources

Integrate Data
Combine data and make available for just-in-time analytics

Build Models
Build production-grade data science models

Find Insights
Deliver reporting, dashboards and Web Apps designed to provide insights

Measure Results
Monitor KPIs that align with strategic priorities

BUILD REAL-TIME MACHINE-LEARNING PIPELINES AND DATA-INTENSIVE APPLICATIONS USING INTUITIVE DATA-FLOW TECHNOLOGY