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# On the Radar: Fugue offers infrastructure deployment and automation for the cloud

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# Summary

## Catalyst

The challenge with the cloud is that it is not a single platform or technology, so the nirvana of true workload portability to execute in the lowest cost, highest security, or lowest latency environment does not exist. Fugue has produced a solution that provides the ability to build, enforce, and retire cloud infrastructure automatically and continuously. Ovum believes the ability to perform these capabilities is a core requirement of managing the cloud, and the Fugue solution can provide this at scale, which is typically the missing aspect of many other approaches to cloud orchestration and automation.

## Key messages

- Fugue enables AWS services to be orchestrated and automated efficiently by coordinating the complex API requests that the infrastructure exposes for the purpose of management and control.
- Fugue enables the entire cloud infrastructure to be modeled in Ludwig, a declarative language that can be used to test deployments and updates.
- Fugue constantly monitors the compliance of any cloud by comparing what it discovers with the declared model and correcting configuration drift by restoring the cloud to its known good state.

## Ovum view

The majority of the current solutions in cloud management and automation represent the embodiment of the definition of “madness”: doing the same thing repeatedly and expecting the outcome to be different. The cloud must be treated like any other operating system, with tasks managed in the same way. The problem is that many vendors are trying to manage the cloud by operating at a higher overlay level, which often means quickly running in to complexity and incompatibility problems. These issues are exactly the same as those discovered in attempts to develop cross platform management tools in the physical world when trying to create an abstract higher-layer management overlay.

# Recommendations for enterprises

## Why put Fugue on your radar?

The challenge with management and automation in the cloud is to make sure that the complexities and sheer volume of APIs can be managed and orchestrated. Fugue can be described as a cloud operating system, but Ovum prefers to describe it as a CMDB for APIs, where by using a declarative language the entire infrastructure can be codified. This model-based approach enables the cloud to be automated, with the operating layer making calls to the relevant applications or programs to perform the desired task(s). For developers, the ability to write applications that are designed for the cloud environment (not dedicated to a server or VM that requires management) makes the applications scale with ease because the API calls to the cloud infrastructure automatically adjust the

 

resources to match the current need. Without this ability, the cloud management must be ceded to a higher layer where monitoring and feedback loops are used to control resource allocation.

# Highlights

The approach taken by Fugue is to allow the cloud infrastructure to be treated as code. This concept is required if developers are to generate applications that can exploit the cloud's capabilities and deliver on the promise of immutable infrastructure (infrastructure that is replaced not maintained).

## Background

Established in 2013 and backed by venture capitalist New Enterprise Associates, The Maryland Venture Fund, and Core Capital, it has so far raised $34m in funding. It is based in Frederick, Maryland, with employees also operating from locations including Silicon Valley, New Zealand, Tokyo, and New York. Fugue has eight patents granted and 16 pending.

## Current position

The Fugue solution consists of two main components: Fugue Compositions and Fugue Conductor. These are the core components of the Fugue solution that currently only operates on AWS, but because it coordinates APIs, the technology can expand to other cloud providers relatively easily. Fugue works with today's toolchains and cloud services, such as CI/CD systems, serverless computing, and containers.

### Fugue Compositions

Fugue Compositions are created using Ludwig, a declarative language featuring a type system that enables code validation and supports the ability to produce meaningful errors. Another key advantage of Ludwig is that it supports commenting for collaboration and documentation generation. The cloud infrastructure is modeled in a human-readable form and uses shared library modules to hold templates that can be selected and reused in any model. The models are fully version-controlled so that change control is tracked. One of the big advantages of this is that developers can perform "dry runs" to test concepts or designs.

### Fugue Conductor

The Fugue Conductor runs as a VM in the AWS environment and acts as a kernel for orchestrating the actions across the different APIs. It continually monitors the cloud infrastructure and compares what it discovers to the model built in the Composition. Where Fugue detects a variance, it makes the needed changes to enforce the policies declared in the model, returning the cloud to compliance. This automation eliminates configuration drift and saves employee time in performing maintenance operations. Fugue embodies the notion that the cloud should be a resource that is consumed and disposed of as needs dictate. The other main benefit is that it represents a single version of the truth in terms of what the cloud infrastructure is and how policies should be applied.

 

# Data sheet

## Key facts

**Table 1: Data sheet: Fugue**

| | | | |
|---|---|---|---|
| **Product name** | Fugue | **Product classification** | Cloud infrastructure automation |
| **Version number** | 1.0 | **Release date** | August 2016 |
| **Industries covered** | All | **Geographies covered** | All |
| **Relevant company sizes** | All | **Licensing options** | Annual subscription |
| **URL** | www.fugue.co | **Routes to market** | Mixed |
| **Company headquarters** | Frederick, MD | **Number of employees** | 55+ |

Source: Ovum

# Appendix

## On the Radar

On the Radar is a series of research notes about vendors bringing innovative ideas, products, or business models to their markets. Although On the Radar vendors may not be ready for prime time, they bear watching for their potential impact on markets and could be suitable for certain enterprise and public sector IT organizations.

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## Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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