

# Smartlogic™ Semaphore Cloud™ and the MarkLogic® Database Turn Information Assets into Actionable Intelligence on Microsoft Azure



CUSTOMER  
SmartLogic

INDUSTRY  
Software

CHALLENGES  
Data Integration,  
Economical  
and Efficient Platform,  
Volume and Variety of Data

FEATURES  
Cloud Flexibility,  
Enterprise-grade Security,  
Scalability,  
High Availability

CUSTOMER USE CASE  
Cloud, Analytics,  
Information Governance,  
Knowledge Management

BENEFITS  
Agile Infrastructure,  
Customer Satisfaction,  
Secure Platform

## Company Overview

Smartlogic's semantic platform Semaphore, enables organizations to automate knowledge-based tasks using AI and accelerate decision-making by revealing enterprise information that allows the business to take intelligent action. Semaphore's model-driven, rule-based semantic approach solves complex business problems that traditional technologies cannot. It integrates into and enhances the capabilities of existing technology to improve time to value for new opportunities.

Global organizations across all industries use Semaphore every day to enrich enterprise information with context and meaning. Semaphore extracts critical facts, entities and relationships to power workflows and advanced analytics, and it harmonizes different data types from disparate sources to create logical data repositories with a true semantic layer. Visit [www.smartlogic.com](http://www.smartlogic.com) for more information.

## Challenges

With a desire to support the knowledge management needs of a broader audience and to provide an efficient and economical platform for customers and partners, Smartlogic explored a number of cloud deployment options for the Semaphore platform. To be successful, it required a solution with full functionality and integration capabilities, enterprise-grade security, high availability and scalability all while keeping overall costs and environment management low.

Bringing together three leading technologies, Semaphore Cloud provides an efficient and economical platform for customers and partners to address security, scale and on-demand requirements.

## The Solution

Smartlogic created its world-class semantic platform, Semaphore Cloud—an on-demand, cloud-based subscription service running on Microsoft® Azure® and powered by the MarkLogic database—to provide a broad range of capabilities and capacities that allow customers to build models faster and improve findability, analytics and information governance.

Microsoft Azure provides a comprehensive set of cloud services that allow enterprises to build, deploy and manage their applications through a powerful network of data centers. Smartlogic leverages the Microsoft Azure platform for its tenancy management, security and flexible architecture to support their customers' business goals.



*“As consumerization forces enterprises to rethink the way they procure and manage IT services, organizations, business units and departments alike are turning to cloud-based, software-as-a-service offerings like Semaphore Cloud to address their business needs. The Semaphore Cloud platform brings together a set of best-of-breed technologies that improve speed to market for their customers.”*

— Jeremy Bentley, CEO Smartlogic

## Why MarkLogic?

MarkLogic’s industry-leading security features, such as high availability, advanced encryption and ACID level transactions, ensures customer data integrity and security requirements are met.

The integration with the MarkLogic database provides Semaphore Cloud with:

### Trusted and Reliable Transactions

Smartlogic cites MarkLogic’s ACID transactions as a key factor in building Semaphore Cloud. ACID properties (atomicity, consistency, isolation, and durability) ensure reads and writes are durably logged to disk, and strongly isolated from other transactions, which reduce or eliminate data corruption, stale reads, and inconsistent data. “Many NoSQL databases claim to have ACID compliance, but we found that only MarkLogic meets all the criteria,” Matthieu Jonglez, CTO, Smartlogic.

### Exceptional Security

Security is also very important to Smartlogic and MarkLogic is the most secure NoSQL database. MarkLogic’s Element Level Security, External Authentication, Redaction and Compartment Security coupled with Microsoft Azure, ensure individuals’ and an organization’s information is safe.

MarkLogic’s Element Level Security allows users to view data while hiding specific information from users based on their roles. External Authentication ensures users are who they say they are. Redaction removes sensitive information or replaces it with other values when exporting or sharing data. Lastly, Compartment Security allows organizations to apply complex rules to documents in order to secure users in accessing or creating documents versus just one rule.

### Affordable and Straightforward Scalability

Scalability and elasticity are critical for successful cloud deployments, and Smartlogic found that Semaphore Cloud provides both with ease. Customers running on Semaphore Cloud, which incorporates MarkLogic, can scale quickly, easily and at low cost, as well as scale down just as easily when demand is reduced.

### Enterprise-Ready Solution with High Availability

Capabilities such as automated failover, database replication and a shared nothing architecture provide redundancy for failover and high-performance scaling, the MarkLogic database is the only NoSQL database that is enterprise-ready.