# Issue Tracking System

## Modernization to Azure Kubernetes Service & Azure DBaaS

**Corent**

*JTrac is an open-source and highly customizable issue-tracking web-application that provides customizable workflow, field-level permissions, e-mail integration, file attachments, detailed history view, and more. These capabilities convinced Corent to select JTrac for a hybrid modernization to Azure Kubernetes Service (AKS) & Azure DBaaS.*

### Challenges:

◉ Need to define a modernization topology that is suitable for Container & PaaS services.

◉ Identifying workload components of the application and its dependent resources that can be migrated to Azure Kubernetes Service & Azure DBaaS.

◉ Need to find Container & PaaS options available on Microsoft Azure for the application workloads.

◉ Need to perform a hybrid migration of JTrac to AKS & Azure DBaaS on Microsoft Azure.

◉ Need to ensure that different Cloud services are configured as required by the application for proper functioning.

*Under Corent's OpenSaaS Initiative™, several open-source applications were converted into SaaS. Few applications were selected for modernization migration to Microsoft Azure with AKS & Azure DBaaS and JTrac was the first to be selected for this hybrid migration to Container & PaaS services.*

### Solutions:

◉ MaaS scanned the application workloads and identified the easiest route to containerize and modernize the application on Microsoft Azure.

◉ MaaS Scanner identified the application's workload components and its associated resources through MaaS Deep Scan.

◉ MaaS analyzed the application workloads and generated advisories listing appropriate AKS & Azure DBaaS services available.

◉ MaaS effortlessly migrated the application server to AKS and database server to Azure DBaaS without any data loss.

◉ Using MaaS, configurations required for integrating Container & PaaS services and making JTrac operational were performed automatically.
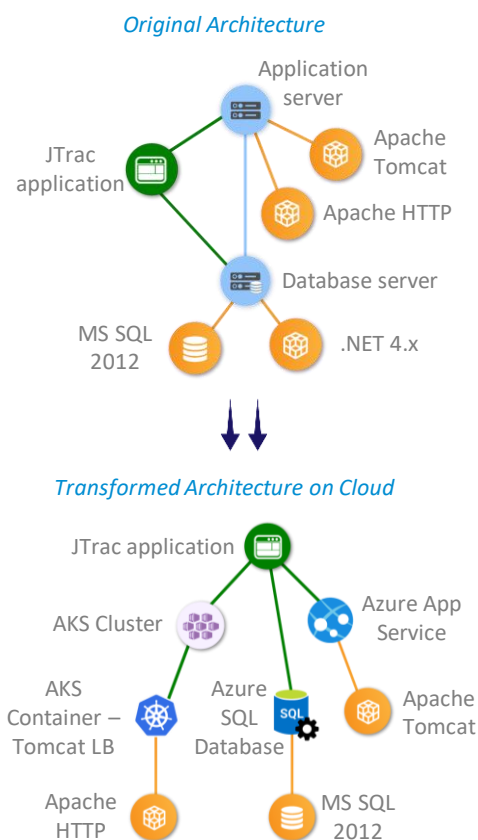
### Benefits:

✓ Re-architecting to modern Cloud PaaS and Serverless technologies.

✓ Workload containerization adhering to Docker container standards.

✓ Hybrid Cloud deployment model with Container & PaaS.

✓ Automated container configuration on Microsoft Azure.

### Result:

JTrac was analyzed by MaaS for hybrid modernization migration and suitable Microsoft Azure resources were identified. MaaS seamlessly migrated the application in double quick time to AKS & Azure DBaaS on Microsoft Azure. This hybrid modernization of JTrac enabled Microsoft Azure customers to access a less expensive issue tracking system.

**JTrac**

*MaaS assessed the JTrac application for a hybrid modernization of its workloads to AKS & Azure DBaaS services and migrated effortlessly to Microsoft Azure in a short span of time.*

### Architecture Diagram:

*Original Architecture*



Application server — JTrac application — Apache Tomcat — Apache HTTP — Database server — MS SQL 2012 — .NET 4.x

*Transformed Architecture on Cloud*



JTrac application — AKS Cluster — Azure App Service — AKS Container – Tomcat LB — Azure SQL Database — Apache Tomcat — Apache HTTP — MS SQL 2012

This application was developed using Java platform with 2-tier architecture and hosted on Apache Tomcat web server with MySQL as database server.

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