Atlassian Migration Playbook

Prescriptive guidance for Jira migrations to Jira Data Center on AWS

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Contacts

Atlassian Contacts

Name	Role/Title	Contact (Email/Phone)
Sean Muranjan	Practice Development Lead	smuranjan@atlassian.com
Nick Gianos	Director, Product Partnerships	ngianos@atlassian.com

AWS Contacts

Name	Role/Title	Contact (Email/Phone)
Jacob Cokely	ISV Migration Manager	jccokely@amazon.com
Dan Taoka	Partner Solutions Architect	dantao@amazon.com

Summary

Jira is the #1 software development tool used by more than 35,000 teams and can be hosted on-premises, in a colocation, or on a public cloud. Jira software helps plan and organize tasks, workflows, and reports to help agile teams function more efficiently.

Customers are migrating their Jira workloads to Amazon Web Services (AWS) to improve reliability, simplify scalability, increase flexibility, decrease costs, and decrease infrastructure management. The Atlassian Jira Data Center and AWS service integration continues to evolve with recent announcements of Amazon CloudFront and Amazon Aurora support. This allows customers to further improve performance and lower costs.

Atlassian and AWS have also worked in conjunction to provide AWS Quick Starts (deployment accelerators) that are based on AWS best practices for security and high availability. Customers have the ability to deploy Jira Data Center and the underlying AWS infrastructure in a simple manner to a variety of environments, including production.

This playbook is designed to provide prescriptive, repeatable, and comprehensive guidelines for the migration of Jira in a non-AWS environment into Jira Data Center on AWS. Migrations can include any combination of the following –
   a. Migrating Jira to AWS
   b. Migrating Database Type – Utlizing AWS Services like Amazon Aurora or Amazon RDS
   c. Migrating from Jira Server to Jira Data Center
Given the above scenarios, Atlassian best practice is to perform the migrations in the following order to preserve functionality and allow for thorough testing at each step–
   1. Rehost (lift and shift) Jira from source into AWS
   2. Migrate database type
   3. Migrate from Jira instance to Jira Data Center

Playbook Overview

Workload	Source Workload	▪ Jira Data Center or Jira Server
	Source Environment	▪ Varies by customer ▪ On-premises, colocation, non-AWS environment
	Destination Workload	Jira Data Center – [Enterprise release](#)
	Destination Environment	Customer Account on AWS Solution Partner Account on AWS – MSP
Migration	Migration Strategy ([6Rs](#))	Rehost – Lift and Shift Replatform – Lift, Tinker, and Shift
	Is this an upgrade in workload version?	A migration can be used to upgrade to the latest version. This [plugin](#) can be used to plan the migration Additional upgrade information can be found [here](#) An upgrade matrix can be found [here](#)
	Migration Duration	The migration duration will be dependent on the size and complexity of the on-prem Jira instance. Some of the factors that drive the duration are the number of Users, Projects, and Issues in Jira.
	Quick Start link to provision workload infrastructure on AWS	[Jira Data Center and Atlassian Standard Infrastructure (ASI)](#)
Cost	Cost of Running ISV workload on AWS	Link to the ISV workload [cost calculation](#)
Assumptions & Prerequisites	System Limitations (min/max requirements)	[Installation requirements](#)
	Licensing / Operating Model (Target AWS Account)	[BYOL](#)

	Migration Tooling	[Native backup/restore](#) [Troubleshooting plugin](#) [Configuration Manager for Jira (3rd party)](#) [Project Configurator for Jira (3rd party)](#)
	AWS Services Used	- Amazon Aurora - Amazon CloudFront - Amazon EC2 - Amazon EBS - Amazon ELB - Amazon EFS - Amazon RDS - Application Load Balancer (ALB)
	Benchmarks	[Jira performance testing tools](#)
Compliance	Security Compliance Requirements	Security requirements will be set by the end customer, but Atlassian provides a link to configure Jira for [Security Best Practices](#) [Security Overview and Advisories](#) [GDPR guidelines](#)
	Other [Compliance Certifications](#)	N/A
	AWS Well Architected Review Completed?	N/A

Cost and Licenses

AWS Costs

The link to a [template](#) that can be used, which is based on the architecture deployed using the AWS Quick Start, to start the Simple Monthly Calculator

[Jira – Small](#) = ~$943/month

[Jira – Medium](#) = ~$1877/month

[Jira – Large](#) = ~$10378/month

[Jira – Xlarge](#) = ~$18976/month

[Public Atlassian site](#) - getsupport.atlassian.com = ~$10k/month

[Public Atlassian site](#) - jira.atlassian.com = ~$5.6k/month

Licensing

[Information on Atlassian Data Center licensing](#)

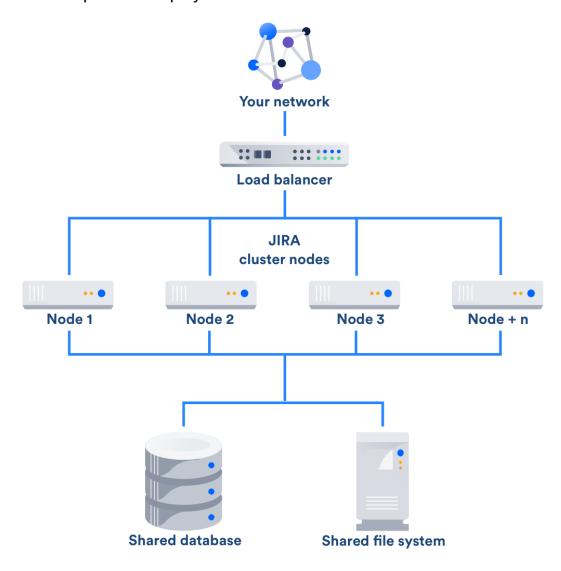[Evaluation licenses are available for testing Jira Data Center](#)

Assumptions and Prerequisites

The customer needs to have the following –
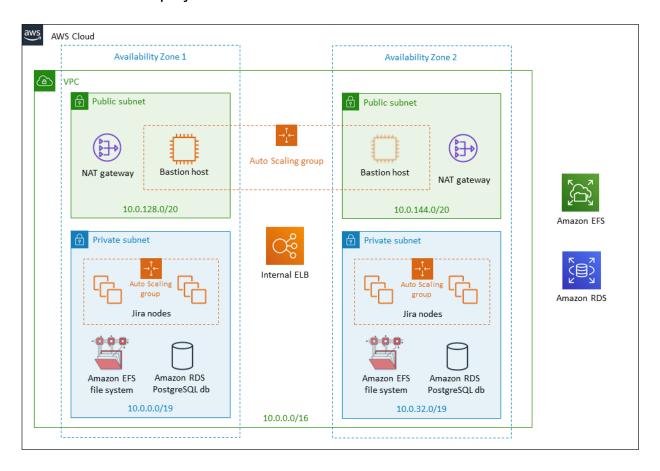
1. Access to a licensed Jira Data Center environment
2. Have permissions to manage and deploy infrastructure into an active AWS account
3. Have a plan for user authentication (Is connectivity to AD required?)
4. VPC that is set up to corporate standard
5. Understanding of the minimum-security standards
6. Understanding of the minimum compliance standards

Architecture

Traditional On-premises deployment

Your network

Load balancer

JIRA cluster nodes

Node 1   Node 2   Node 3   Node + n

Shared database   **Shared file system**

AWS Production Deployment

Migration Methodology (Epics)

Epic: People & Skills and Their Activities/Responsibilities

- Determine roles and responsibilities for migration
    - Jira Admin
    - QA testers
    - Cloud Engineer
    - Network admin
    - Migration Owner

Epic: Discovery & Assessment

- Create inventory and compatibility of [assets and add-ons](#)
- Create gap analysis between source and destination Jira versions
- Create list of Jira links to other applications
- Determine data migration strategy (i.e. will same database type be used, does all data need to be migrated)
- Verify admin rights and roles within systems
- Determine need for connectivity to current data center
- Environment documentation activities
- Determine the EC2 instances that will be used based off of the sizing guidelines set in the following pages
    - [Infrastructure Recommendations for Enterprise Jira Instances on AWS](#)
    - [Jira Data Center Size Profiles](#)
- Determine if [consolidation of instances](#) needs to take place
- The following page outlines [Atlassian's Data Center Migration Plan](#)

Epic: Security & Compliance Related Activities

- Determine security and compliance requirements
- Determine backup and recovery requirements
- Determine AWS account and VPC structure
- Determine logging requirements
- The following pages may be beneficial
    - [Jira Server Best Practices](#)
    - [Atlassian Security Overview and Advisories](#)
    - [Atlassian GDPR](#)
- AWS Security Information can be found in the [AWS Well-Architected Framework](#)

Epic: New Environment Setup Activities

- Define AWS account and VPC structure
    - [AWS Control Tower](#) can be used to provision a secure multi-account AWS environment

or

- ▪ Customer/Partner best practices can be utilized to provision Jira environment
- Define AWS service requirements (Amazon EC2, Amazon RDS, Amazon EBS, Amazon EFS, Amazon Aurora, Amazon Cloudfront)

Epic: Networking Activities

- Infrastructure as Code activities
  - ▪ Determine if [AWS Quick Start for Jira and Atlassian Standard Infrastructure](#) can be utilized
  - ▪ If Quicks Start is not used, CloudFormation or Terraform should be utilized to ensure security and compliance requirements are met
  - ▪ Considerations need to be made if this is a public facing site
- Add Certificates to the load balancer

Epic: Data Migration Activities

- [Export/Import using Atlassian tools](#)
- Migrate add-ons (Jira applications added from Atlassian Marketplace), by installing existing add-ons in new environment.

Epic: Testing or QA Activities

- [Jira database integrity checker plugin](#)

Epic: Cutover Activities

- Current on-prem production version of Jira will continue to run in parallel with new version of Jira on AWS
- Once new environment is signed off on, Route53 or customer DNS can be updated to point to the new Jira environment

Automation and Tooling

Atlassian provided tools

- Native backup/restore

- Configuration Manager for Jira (3rd party)

- Project Configurator for Jira (3rd party)

- Troubleshooting plugin

Public Customer References

Customer	Description of Public Reference Story	Link to Public Reference Story