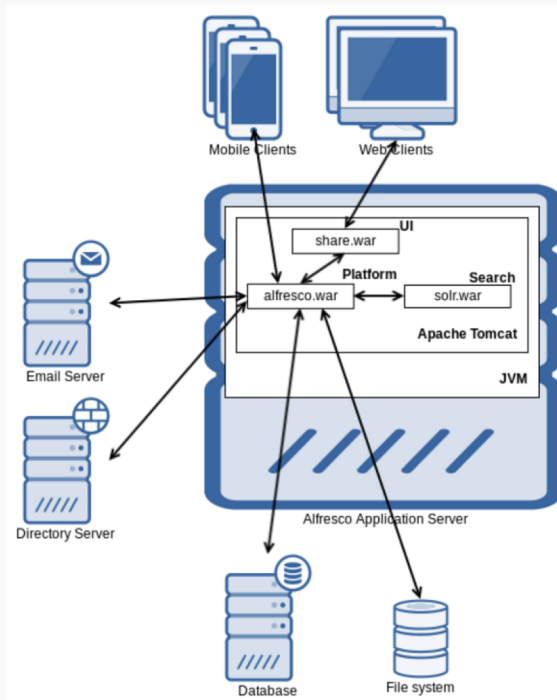# Products - Deployment Architecture & Tech Architecture Introduction

Product Deployment Architecture - Single Server

- Components:
  - UI
  - Repository/Platform
  - Search/Index
  - Application Server (e.g. Tomcat)
  - Database (RDBMS)
  - Filesystem
- Common Integrations:
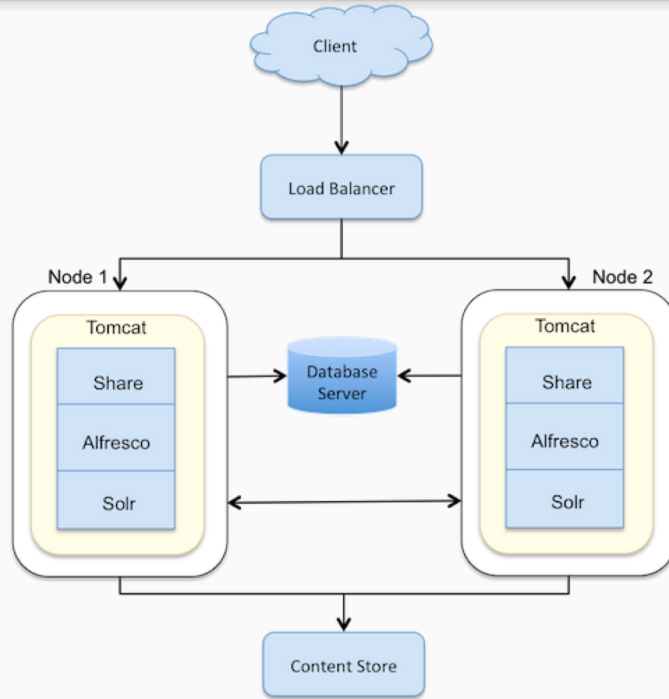 - Email Server
  - Directory Server

Product Deployment Architecture - Single Server - Pros & Cons

- Easy install:
  - All on one server
  - (single CPU)
- But…
  - Single point of failure (app server, content storage, database)
  - Limited performance

Product Deployment Architecture - Cluster (Enterprise Edition) - Redundancy
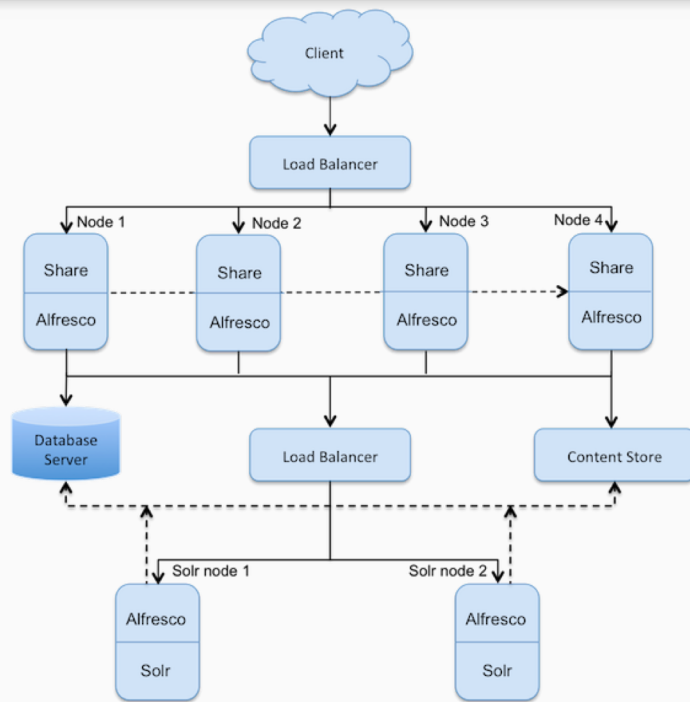
- Alfresco Enterprise Edition supports clustering the Alfresco Repository and Alfresco Share
- Alfresco is three separate applications
  - Alfresco
  - Share
  - Solr
- These can be on separate tiers

Common cluster implementation with shared database and content store (filesystem)

Product Deployment Architecture - Cluster (Enterprise Edition) - High Throughput

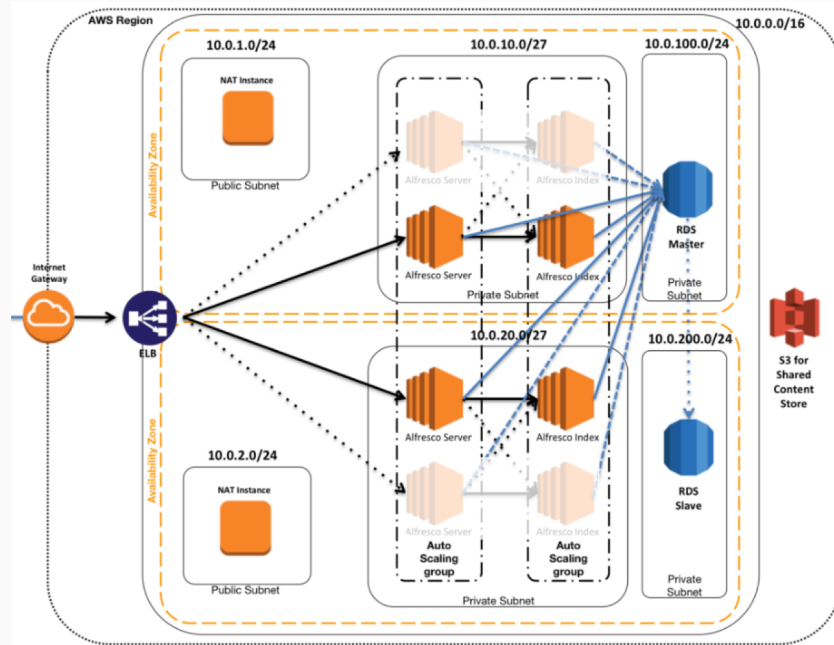- Alfresco Enterprise Edition supports clustering the Alfresco Index Server

High throughput cluster implementation using separate search tier and with shared database and content store (filesystem)

Product Deployment Architecture - Cluster - Pros & Cons

- Supports redundancy and high throughput
- But…
  - Single point of failure in database layer
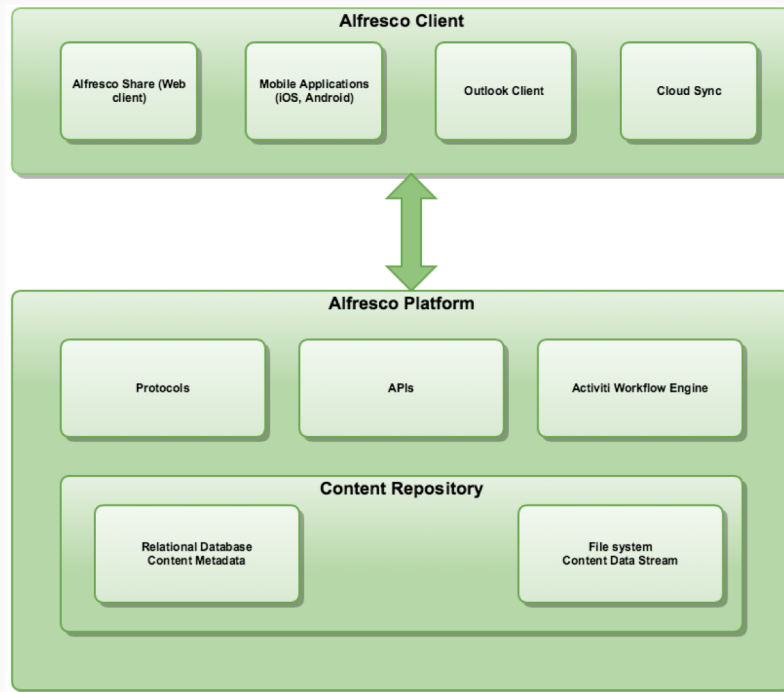 - Single point of failure in filesystem layer

Product Deployment Architecture - Cluster (Enterprise Edition) - High Throughput, Redundancy, Fail-over

- Alfresco Enterprise Edition supports quick and easy deployments to AWS via CloudFormation template
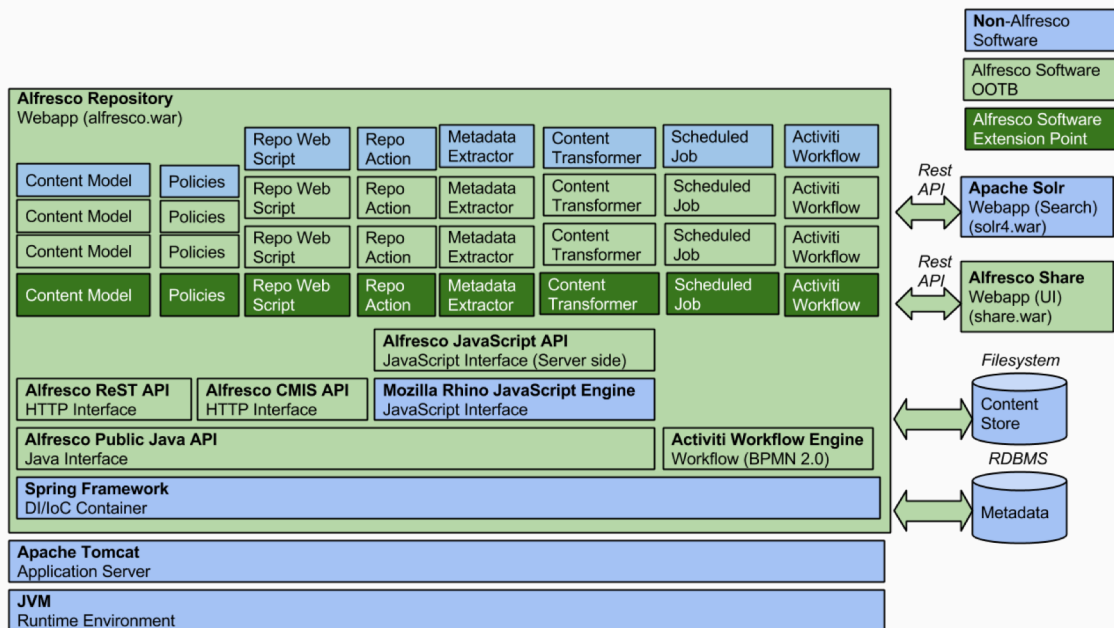
Product Technical Architecture - Overview

- Layered architecture
- Components/Services
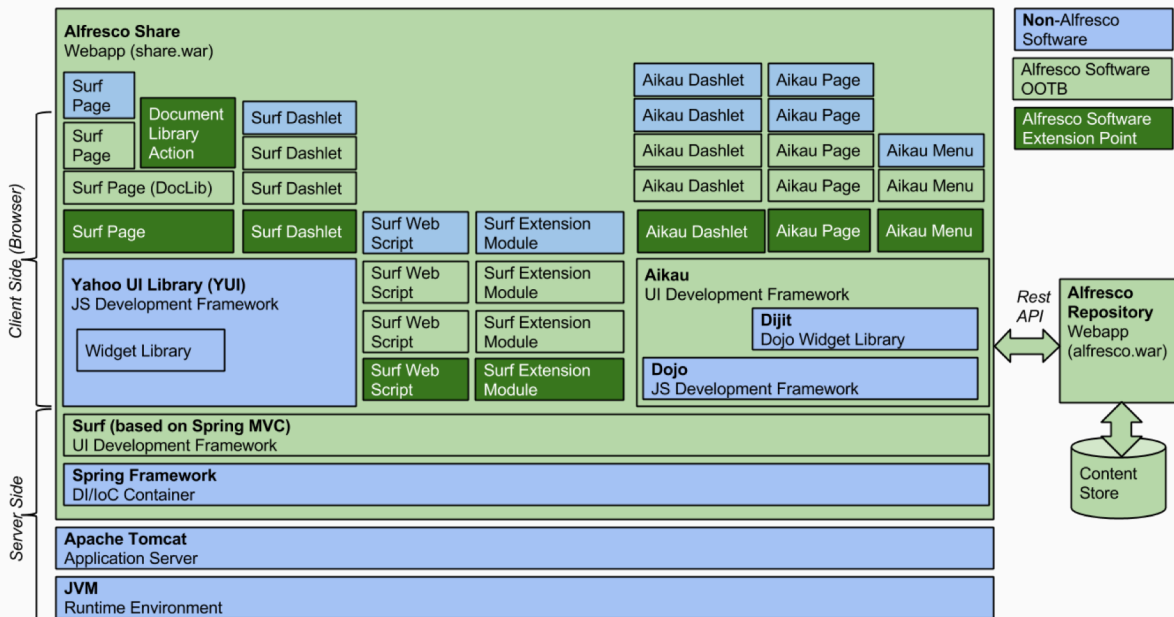- Spring based
- Java based

Product Technical Architecture - Repository

- Layered architecture
- Extension Points
- Components/Services
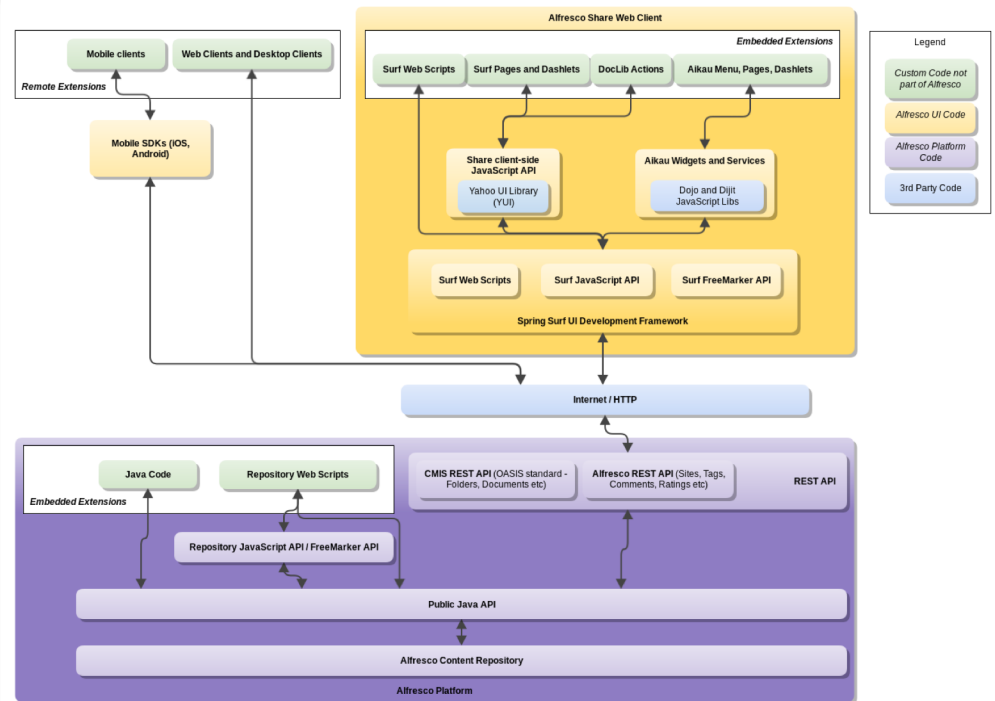- Spring based
- Java based

Product Technical Architecture - Share UI

- Layered architecture
- Extension Points
- Uses both Yahoo UI Library (YUI) and Aikau
- Spring based
- Java based

Product Technical Architecture - APIs

- Remote REST APIs
- Embedded Java APIs

Product Technical Architecture - Protocols (in addition to HTTP)

- Lots of interfaces are available to talk to Alfresco
- Not just the Web UI