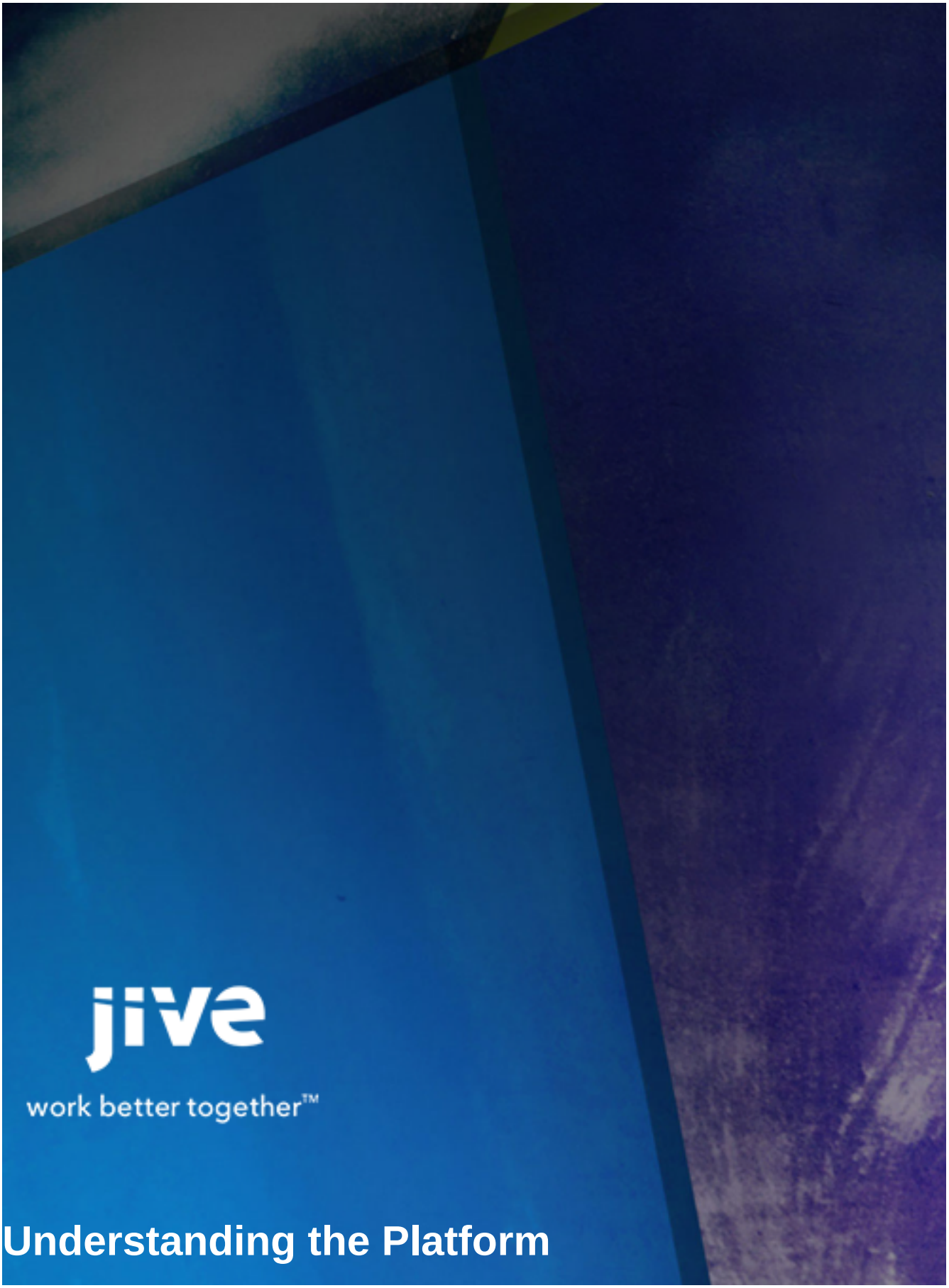

Understanding the Platform

Contents

Understanding the Platform

Learn about the components of the platform and how they work together.

Platform Architecture

There are several components of a Jive platform.

The web application layer requires at least two servers. Here's an illustration of the platform (click the image to enlarge it):

Services Layer

Between the web application nodes and the database nodes are a number of services that are critical to Jive.

Caching Service

The caching service provides object caching for the web application nodes, dramatically reducing the load on the database nodes. Use "cache" when starting or enabling this service in the Jive command-line interface (CLI). For more information about how caching works in a high-availability system, be sure to read Configuring the Cache Servers for High-Availability.

Activity Engine Service

The Activity Engine nodes provide specialized functionality for attention streams, recommendations, and the personalized Inbox. Use "eae"when starting or enabling this service in the Jive CLI.

Search Service

The search nodes offload a significant amount of overhead from the web application nodes, providing personalized, contextual search results for content. Use "search" when starting or enabling this service in the Jive CLI.

Note: In an HA configuration, you'd also need two Ingress Replicator nodes for the Ingress Replicator service. Use "ingress-replicator" when starting or enabling this service in the Jive CLI. For more on this, see Required Nodes for an On-Premise HA Search Service.

Document Conversion Service

The document conversion service enables rich previews and collaboration around Microsoft Office and PDF documents without having to open up a desktop client. Use "docconverter" when starting or enabling this service in the Jive CLI.

Storage Service

The storage layer dramatically reduces the amount of load on the database nodes.

For an illustration of a basic deployment, see Jive Enterprise Architecture.

Understanding Jive Search

Jive Search is made up of People search and Content/Places search. As of Jive 6.0, Content/Places search is available as a Cloud service, but if you are deploying Jive as an on-premise installation, you have the option to connect your instance to the Jive Cloud Search service or to install your own copy of the On-Premise search alternative.

Content and Places Search

The Content and Places search infrastructure is a separate service from Jive Core, so other parts of Jive can communicate with it over a precisely defined application interface. This separation makes it possible to have multiple compatible implementations of the Search service and enables Jive to make improvements to the Cloud Search Service in a way that is completely transparent. Also see Configuring Content Search.

People Search

The infrastructure that supports People or User search is embedded inside the Jive Core application, which is similar to how all search worked in previous versions of Jive. However, the relevance algorithms in People search have been improved to ensure that matches on a name field are higher than matches in other profile elements. Also see Configuring User Search.

About Cloud Search

The Jive Cloud Search service enhances Jive search with infinite scale, continuous improvements and the advanced social context provided by Jive Find. Jive Cloud search is available whether you have an on-premise installation or are using the Jive Public Cloud.

If you are installing Jive as an on-premise solution and you want to use Jive's Cloud Search instead of the On-Premise Search, you should file a Support case so we can whitelist your IP addresses to allow you through the firewall. The Cloud Search Service is served from Jive data centers in Phoenix, Arizona and Amsterdam, The Netherlands.

The Cloud Search Service rigorously follows best practices for data separation. All data is written, stored and accessed with a tenant-ID unique to the owner of the data and no access to data for a given tenant-ID is permitted unless a client also presents a secret key for verification in accordance with OAuth. All communication is over HTTPS. For more on security of Public Cloud services, see Security of Public Cloud Communities.

Note: The comments here apply to Places and Content search only. The People search index is embedded in each Jive web app node.

Cloud Search provides the following benefits:

Infinite scale	By leveraging a cloud-based Big Data infrastructure, the search service can scale to any level while providing full redundancy.
Continuous improvement	Because search is deployed as a separate service, it can be improved at any time without disrupting other Jive functionality. Just as with familiar web search tools, the relevance of Jive search results simply gets better over time.
Jive Find	Using patent-pending technology for incorporating dynamic data in search rankings, Jive's search service incorporates social information for improved search relevance. See below for more information.

What is Jive Find?

Jive Find provides improved search relevance by incorporating social information into search. Search rankings are tailored for individuals based on dynamic signals derived from activity within Jive. As users use Jive, data is generated about activity such as views, creates, responses, and likes. These activities are processed in the Jive Recommender service and summarized into a form that can be used by Jive Search to enhance the relevance of search results. When a user searches for content or places, items that are considered "close" to the user (based on the activities performed by the user or other individuals connected to the user) are given a boost in the search rankings. This personalizes search results for each user.

The details of how user activity translates into levels of boost will change over time as the system is optimized.

About On-Premise Search

The Jive On-Premise search service is available for Jive On-Premise installations if you don't want to use Jive Cloud search.

If you are installing Jive as an on-premise solution, and you want to use Jive's On-Premise search instead of Jive Cloud search, then you'll need to install Search on its own node as outlined in the Installation section of the documentation. On-Premise search is an alternate option for those whose environment or policies prevent them from using Jive Cloud search.

On-Premise search does not incorporate social data in search rankings and is not undergoing the constant improvements that Jive Cloud search sees.

How On-Premise Search Works

As of Jive 6.0, the application includes a search service for Content/Places that reduces the amount of disk I/O, memory, and storage on each of the individual web application nodes.

The Search service is composed of several sub-services:

- Ingress

- Indexer
- Search
- Rebuild
- Manage
- Service Directory

The Ingress Service receives creates, modifies, and moves activities from the web application and delivers them to the Indexer Service. The Search Service interacts with the Indexer Service to handle search requests from the web app. The Rebuild Service allows a second index to be built while the Indexer and Search Service continue to handle ingress and search requests. The Manage Service allows the web application to manage the Search Service and Indexer. The Service Directory Service allows configuration of what host and port pairs will be used for all of the other services. (This is a key feature in supporting an HA deployment of search).

On-prem Search