Introduction

In the enterprise, employees increasingly find themselves communicating with numerous coworkers, clients, and partners in a variety of different ways - including e-mail, phone calls, and IMs. In addition, most enterprise applications need to look up and find people within their workflow. This means an address solution is an absolute necessity for any organization.

Likewise, Communication Server Providers not only need to provide address book functionality to their customers, but need to offer services to enable consumers to connect with other community members. Communications Service Providers may also need to offer contact centric, value-added, sticky services that not only retain customers, but can fend off over the top providers and potentially generate revenue.

The Oracle Communications Contacts Servers fulfills these needs for a wide variety of organizations - ranging from medium and large enterprises to even the largest Communication Service Providers. Designed with scalability in mind while adhering to open standards, this address book solution provides high performance with a low total cost of ownership.

By utilizing open standards like CardDAV, and an open RESTful API, the Contacts Server provides cross device and cross application access that is easy to setup with the flexibility to meet each organization’s individual needs.

This paper explores the capabilities, design, deployment features, and benefits of the Oracle Communications Contacts Server.

Oracle Communications Contacts Server Overview

What Is Oracle Communications Contacts Server?

The Oracle Communications Contacts Server is a standards-based Network Address Book that provides centralized storage and access of contacts for a large number of users.
The Oracle Communications Contacts Server is a component of the Oracle Communications Unified Communications Suite - a standards-based, integrated, infrastructure software platform that delivers industry-leading e-mail, calendaring, address book, and real-time collaboration functionality for service providers, hosted providers, and large organizations throughout the world.

OCUCS is enabling service providers worldwide to offer differentiated and innovative cloud services to consumers and businesses. Built to support carrier grade reliability and availability, the portfolio enables communications and cloud service providers to increase their addressable market, take ownership of communication experience and deliver differentiated services at a low total cost of ownership and increased margin.

Potential Use Cases

The Oracle Communications Contacts Server not only provides the address book functionality that one would expect, but provides the backbone for organizations to increase and expand functionality for their end-users. Such examples of an increased and expanded offering are:

- **Communications and Collaboration.** The Contacts Server provide the infrastructure to allow seamless integration of UCS contacts between e-mail, calendar and other apps - allowing users to easily initiate emails, meetings, conferences, chats, phone calls, or file sharing with their friends, family, or co-workers.
• **Enterprise Applications.** Contacts Server also provides the critical contacts infrastructure for any enterprise application that requires integration with contacts. Some examples are enterprise mobile apps for CRM, sales enablement, sales contract management, enterprise social networks, etc.

• **Backup, Sync, and Restore of Contacts.** Communications Service Providers’ customers often replace or update mobile devices. Contacts Server includes contacts transfer as an essential service thus providing the tools to enable contact sync, back, and restore.

• **Social Address Book.** The Oracle Communications Contacts Server could be used to build a Social Address Book Experience helping subscribers keep up with their social network feeds and updates. A Contact centric view of social networks can allow the user to get to up to speed on their close friends’ social activities – reducing the need for subscribers to comb through the clutter of their various social feeds.

• **Social Engagement Around Television.** Contacts Server provides the contacts infrastructure for social engagement around television programming, reality shows etc. Use cases like social recommendations/ reviews for TV programming could be enabled using contact server as a repository for subscriber social connections or contacts.

Capabilities and Functionality

Oracle Communications Contacts Server delivers the following capabilities:

• **Easy to use Contact organization and categorization.** The Contacts Server will support the organizational constructs that users expect, like groups and address books. It also supports the ability to search through contacts, making it easy for end users, other services, and devices to retrieve contact information quickly and easily. In addition, The Contacts Server will also support a Personal Contact Card (PCC). The PCC not only allows the storage of the end user's contact information, but is expandable to include other pertinent end user information.

• **Scalability and security** – Security and scalability are built into the architecture and design of the Contacts Server. It uses Secure Sockets Layer (SSL) encryption and Certificate Based authentication, and includes custom authentication and authorization support. The Contacts Server also allows organizations to leverage their existing Oracle knowledge by using
proven, scalable backends and middleware to run the server. This includes Glassfish as the application server and the choice of Oracle Database or MySQL as the contact's data store.

• **Administrative ease of use** - The Contacts Server provides the necessary command line tools to install, configure, and administer the server. These intuitive CLIs allow administrators to easily script and automate tasks associated with managing the Contacts Server. In addition, since Contacts Server is built upon database and web containers like OracleDB, MySQL, and GlassFish, the Contacts Server allows administrators to use the familiar and extensive monitoring and administrative capabilities of these established products.

• **Integration with Corporate Address Book** – The Contacts Server also provides integration with corporate address books, which is critical for allowing Enterprise employees to communicate with people and various enterprise apps. In addition, employees and end users are allowed to share address books, thus enhancing connections among coworkers.

**Built for Service Providers and the Extended Enterprise**

**Standards-Based Interoperability**

Address book access supports CardDAV - the industry wide, WebDAV based address book protocol that is an IETF proposed standard. CardDAV allows native contact support within iPads, iPhones and the latest Blackberry devices. Additionally, with already available third party apps, CardDAV supports Android and Windows Phone devices. In other words, all major mobile devices are CardDAV accessible.

Contact information can also be imported from vCard 3.0, vCard 4.0, LDIF, and .csv files, and exported to vCard 3.0, vCard 4.0, and .csv files. This allows for easy transfers to and from various clients, devices, and services. Also, contacts are returned in the vCard format from both the RESTful API and the CardDAV protocol.

**Architected for High Performance, Scalability, and Availability**

The Oracle Communications Contacts Server architecture ensures excellent performance and scalability. By being built upon proven and reliable components such as the Oracle Glassfish Server and MySQL or OracleDB database servers, the Contacts Server provides the extensibility, flexibility, horizontal scalability, vertical scalability, and robustness that organizations require.
The Contacts server, in addition, is able to leverage the high availability capabilities of the Application Server and standard tools for database backup and restore.

Simply put, the Contacts Server satisfies the needs for a large scale address book solution.

Secure Access, Secure Communication

The Oracle Communications Contacts Server protects users and organizations against eavesdropping, malicious attacks, and unsanctioned usage.

Security at the base level is provided through authentication. The Oracle Communications Contacts Server uses LDAP authentication by default, but the authentication and authorization service is pluggable.

In addition to rejecting unwanted users through authentication, there is also a need for data confidentiality. The Oracle Communications Contacts ensures this through by supporting all data transfer through SSL/TLS.

The Contact Server provides another layer of security - access control entries. Access control entries prevent authenticated users from accessing other users’ address book entries.

The Contacts Server also prevents denial of service attacks by blocking certain rogue clients from inundating the server with bogus requests.

Additionally, being built upon proven, secure platforms such as GlassFish, MySQL, or OracleDB, the Contacts Server provides extensive out of the box security.

Easy, Flexible Client Access and APIs

Accessing address book information is easy. Since the Contacts Server supports CardDAV, standard based access is readily available.

The Contacts Server also allows for an improved customer experience by providing a simple RESTful APIs for rich client integration with the Contacts Server. Through RESTful APIs, customers and application developers can easily and flexibly integrate contacts into in other products and services they are building.

Revenue Opportunity
For Communication Service Providers, offering new and valued added-services is key to improving customer satisfaction and increasing revenue. For instance, device backup is increasingly becoming a revenue generating service, with address book backup and restore being a key component. The Contacts Servers provides this ability right out of the box.

The Contacts Server’s extensibility in turn allows CSPs to expand their services to include address book functionality. For example, premium services could be created that could incorporate communication with friends during live television events, or could allow the addition of friends’ social feeds to a CSPs’ landing page.

More generally, CSPs’ customers would be more willing subscribe to a wide variety of services if communication was easy and straight-forward. The Contacts Server could allow the address book to be the central point to a highly connected communication platform, enabling users to easily initiate voice, video, e-mail, text, and more from a single contact entry.

Meets the needs for CSPs and Enterprises

For an address book solution to meet the needs of service providers and the extended enterprise—internal employees, partners, and customers—the address book solution must provide the following:

- Interoperability with other address book or contact solutions
- Scalability
- Secure access and secure communication
- An extensible and accessible platform

The Oracle Communications Contacts Server meets and exceeds these requirements.

Conclusion

Enterprises need to allow users to easily communicate with one another and provide contact integration within their enterprise applications. Communications Service Providers need to provide address books to their subscribers along with contact backup for their devices and contact-centric sticky services. The Oracle Communications Contacts Server is a scalable, secure, and robust solution that can provide the backbone for such services for both CSPs and Enterprises – thus making it an exciting component of the Oracle Communications Unified Communications Suite.