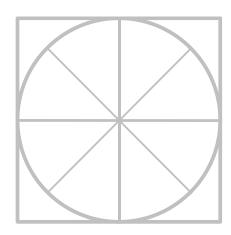
THE RADICATI GROUP, INC.

Messaging Platforms for Service Providers - Market Quadrant 2020 *



An Analysis of the Market for Messaging Platforms for Service Providers, Revealing Top Players, Trail Blazers, Specialists and Mature Players.

March 2020

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RADICATI MARKET QUADRANTS EXPLAINED

Radicati Market Quadrants are designed to illustrate how individual vendors fit within specific technology markets at any given point in time. All Radicati Market Quadrants are composed of four sections, as shown in the example quadrant (Figure 1).

- Top Players These are the current market leaders with products that offer, both breadth and depth of functionality, as well as possess a solid vision for the future. Top Players shape the market with their technology and strategic vision. Vendors don't become Top Players overnight. Most of the companies in this quadrant were first Specialists or Trail Blazers (some were both). As companies reach this stage, they must fight complacency and continue to innovate.
- 2. *Trail Blazers* These vendors offer advanced, best of breed technology, in some areas of their solutions, but don't necessarily have all the features and functionality that would position them as Top Players. Trail Blazers, however, have the potential for "disrupting" the market with new technology or new delivery models. In time, these vendors are most likely to grow into Top Players.
- 3. **Specialists** This group is made up of two types of companies:
 - a. Emerging players that are new to the industry and still have to develop some aspects of their solutions. These companies are still developing their strategy and technology.
 - b. Established vendors that offer very good solutions for their customer base, and have a loyal customer base that is totally satisfied with the functionality they are deploying.
- 4. *Mature Players* These vendors are large, established vendors that may offer strong features and functionality, but have slowed down innovation and are no longer considered "movers and shakers" in this market as they once were.
 - a. In some cases, this is by design. If a vendor has made a strategic decision to move in a new direction, they may choose to slow development on existing products.

- b. In other cases, a vendor may simply have become complacent and be outdeveloped by hungrier, more innovative Trail Blazers or Top Players.
- c. Companies in this stage will either find new life, reviving their R&D efforts and move back into the Top Players segment, or else they slowly fade away as legacy technology.

Figure 1, below, shows a sample Radicati Market Quadrant. As a vendor continues to develop its product solutions adding features and functionality, it will move vertically along the "y" functionality axis.

The horizontal "x" strategic vision axis reflects a vendor's understanding of the market and their strategic direction plans. It is common for vendors to move in the quadrant, as their products evolve and market needs change.

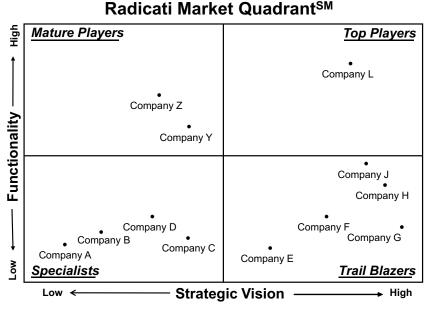


Figure 1: Sample Radicati Market Quadrant

INCLUSION CRITERIA

We include vendors based on the number of customer inquiries we receive throughout the year. We normally try to cap the number of vendors we include to about 10-12 vendors. Sometimes, however, in highly crowded markets we need to include a larger number of vendors.

MARKET SEGMENTATION – MESSAGING PLATFORMS FOR SERVICE PROVIDERS

This edition of Radicati Market Quadrants covers the **Messaging Platforms for Service Providers** segment of the Messaging Platforms market, which is defined as follows:

• Messaging Platforms for Service Providers – are highly scalable and reliable messaging platforms designed to meet the needs of demanding service provider environments, which can range from hundreds of thousands to millions of subscriber seats. Service providers deploying messaging platforms include: Internet Service Providers (ISPs), Telecommunication Providers (i.e. Telcos), Web Hosting Providers, Cloud Business Email Providers, and Application Service Providers (ASPs) and others. Vendors in this segment include: atmail, Axigen, HyperOffice, IceWarp, Microsoft, Open-Xchange, Rockliffe, Synacor (Zimbra), and Synchronoss Messaging.

Many vendors of messaging platforms develop solutions for both the on-premises enterprise market and for the Service Provider market. This market quadrant focuses only on the part of their business that deals with providing Messaging Platforms to Service Providers. Service Providers, in turn, offer messaging services to their subscribers typically bundled with a broad range of other services.

Messaging platforms have evolved well beyond email, to include real-time messaging (i.e. chat), voice and video conferencing, social network integration, document editing and management, and more. Messaging vendors that deliver platforms to Service Providers must meet continually growing demand for more advanced features and functionality to help providers offer attractive services to their subscribers.

The worldwide Messaging Platforms for Service Providers market will top \$2.5 billion in 2020, and will grow to over \$2.8 billion by year-end 2024. Figure 2, shows the revenue forecast for the Messaging Platforms for Service Providers market, from 2020 to 2024.

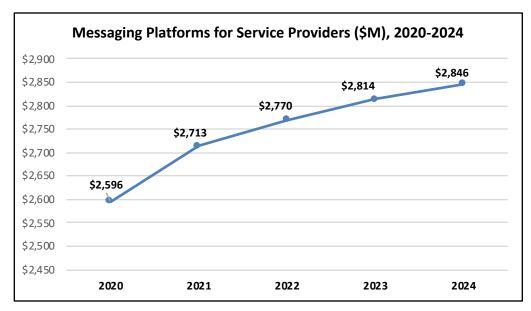


Figure 2: Messaging Platforms for Service Providers – Revenue Forecast (\$M), 2020-2024

Note: Throughout this report, the terms "Email" and "Messaging" are used interchangeably.

EVALUATION CRITERIA

Vendors are positioned in the quadrant according to two criteria: *Functionality* and *Strategic Vision*.

Functionality is assessed based on the breadth and depth of features of each vendor's solution. All features and functionality do not necessarily have to be the vendor's own original technology, but they should be integrated and available for deployment when the solution is purchased.

Strategic Vision refers to the vendor's strategic direction, which comprises: a thorough understanding of customer needs, ability to deliver through attractive pricing and channel models, solid customer support, and strong on-going innovation.

Vendors in the *Messaging Platforms for Service Providers* space are evaluated according to the following key features and capabilities:

- *Deployment options* is the solution available as an on-premises, cloud, hybrid or white label SaaS offering.
- Scalability service providers need to accommodate a growing number of user seats, while simultaneously maintaining low costs. As a result, vendors in this segment must offer highly scalable platforms that can maintain up to millions of user seats. Service providers should take into consideration the two primary components of scalability: scaling up and scaling out. Scaling up, or vertical scaling, is a platform's ability to maximize efficiency to house as many users as possible on a single server. Scaling out, or horizontal scaling, is a platform's ability to easily integrate additional servers with existing ones to increase the platform's capacity for more user seats.
- Reliability service providers must offer uninterrupted service to subscribers with minimal downtime. Messaging Platforms for Service Providers vendors must therefore offer platforms with robust high availability (HA) and disaster recovery (DR) features. All Messaging Platforms for Service Providers are expected to offer these as standard features to ensure that a service remains uninterrupted and, in the event of a system failure or update, experiences as little downtime as possible. Service providers also expect to quickly and easily access tools

that provide insight on the condition of their servers to avoid errors that may lead to system failures.

- *Centralized Management* is the solution and all its components administered through an easy to use, single pane of glass.
- *Multi-Tenancy* Multi-tenancy allows service providers to manage a large number of subscribers on a single server. This greatly cuts costs by allowing service providers to utilize less servers, while simultaneously maintaining a larger number of subscriber seats on a single server. Multi-tenancy also allows service providers to avoid costly hardware overhead, as well as reduces risks associated with maintaining a greater number of servers. Lower Total Cost of Ownership (TCO) enables service providers to offer services to customers at a lower price.
- Mobile Device Access Mobile devices are widely used by both business and consumer
 users. Service providers need to offer subscribers full access to all services from their mobile
 devices. In addition, increased mobile device usage has led users to expect a consistent
 messaging experience across their devices, which means vendors must offer fully optimized
 and touch-capable mobile interfaces for the latest smartphone and tablet devices.
- **Social Networking Integration** Communication via social networks has become increasingly popular among business and consumer users. As a result, vendors must offer rich integration with popular social networks, such as Facebook, Twitter, LinkedIn, and others, directly from the Messaging Platform's interface. This in turn allows subscribers to quickly access their contacts on a range of social networks from a centralized interface.
- *Unified Communications (UC)* Service providers must keep pace with their subscribers' ever-growing demand for more functionality. Both business and consumer users now utilize alternative communication channels in addition to email, such as IM and video chat. The instantaneous nature of these forms of communication has shaped the way that users expect to communicate today, which has resulted in messaging platforms offering a full suite of UC functionality, which includes voice and video functionality, such as VoIP, video conferencing, click-to-call, and more.
- *Instant Messaging (IM)* Many Messaging Platforms for Service Providers offer an IM client as part of their package, or as an optional solution that can be integrated with the

platform. Like many other advanced features in messaging platforms, these IM solutions can typically be accessed directly from a centralized user interface.

- Additional Monetization Opportunities Messaging Platforms for Service Providers offer service provider customers the opportunity to gain additional revenues from their subscribers, which is typically achieved via open APIs. With open APIs, service providers can create and integrate their own premium services that extend the platform's functionality. In addition, a Messaging Platform may also allow service providers to utilize advertisement space on its interface for additional revenue.
- Subscriber Features Service providers must keep pace with the ever-growing demand for more features by offering a wide range of advanced features that go beyond basic email services. These features may include:
 - Additional Storage
 - o Email Security (Anti-Virus and Spam Filtering Protection)
 - o Email Archiving and Compliance
 - Groupware (Shared Calendaring, Shared Contacts, and other Personal Productivity Tools)
 - Voice and Video Chat

In addition, for all vendors we consider the following aspects:

- Pricing what is the pricing model for their solution, is it easy to understand and allows
 customers to budget properly for the solution, as well as is it in line with the level of
 functionality being offered, and does it represent a "good value".
- *Customer Support* is customer support adequate and in line with customer needs and response requirements.
- Professional Services does the vendor provide the right level of professional services for planning, design and deployment, either through their own internal teams, or through partners.

<u>Note</u>: On occasion, we may place a vendor in the Top Player or Trail Blazer category even if they are missing one or more features listed above, if we feel that some other aspect(s) of their solution is particularly unique and innovative.

MARKET QUADRANT - MESSAGING PLATFORMS FOR SERVICE PROVIDERS

Radicati Market QuadrantSM Mature Players Top Players High Synchronoss • Open-Xchange • Zimbra • **Functionality** Rockliffe • IceWarp • HyperOffice • atmail • Axigen • Microsoft • Specialists Trail Blazers Low

Figure 3: Messaging Platforms for Service Providers Market Quadrant, 2020*

Strategic Vision -

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KEY MARKET QUADRANT HIGHLIGHTS

- The **Top Players** in the market are *Synchronoss Messaging, Open-Xchange*, and *Synacor (Zimbra)*.
- There are no **Trail Blazers** in this market at this time.
- The Specialists quadrant includes Rockliffe, IceWarp, HyperOffice, atmail, Axigen, and Microsoft.
- There are no **Mature Players** in this market at this time.

MESSAGING PLATFORMS FOR SERVICE PROVIDERS - VENDOR ANALYSIS

TOP PLAYERS

SYNCHRONOSS MESSAGING

200 Crossing Boulevard, 8th Floor Bridgewater, NJ 08807 www.synchronoss.com

Synchronoss is a provider of white label messaging, cloud, digital solutions and IoT products and platforms. Synchronoss is publicly traded.

SOLUTIONS

Synchronoss' **Messaging** portfolio is organized around two key product lines: Core Messaging, which includes Security & Identity, and Advanced Messaging, which includes multi-channel communications. The portfolio includes email, voice, video, real-time communications, personal cloud computing, unlimited storage, security, encryption, and anti-abuse capabilities. Synchronoss products can be deployed on-premises, in a hybrid environment, or in the Cloud.

The Synchronoss Messaging platform comprises the following elements:

- Messaging Platform –Email Suite
 is an open, scalable, configurable messaging solution, which delivers high availability and geographic redundancy via a distributed object storage architecture. Reduced storage TCO is achieved through the utilization of commodity hardware. Key features include:
 - Stateless Message Store (sMSS) any message store instance can serve any user, delivering 99.999% availability and resilience.
 - Network Message Store is a distributed object store enabling flexible storage of data including email, sms, mms, voicemail, video, real time communications and chat history. Object based software technology allows storage nodes to be added on the fly.
 - o *Plug and Play Voicemail service* is a carrier grade, IP-based voicemail solution that seamlessly integrates with Mx9 architecture.
 - Virtually Unlimited Messaging provides meta-data caching, decoupling access performance from mailbox size.
 - Business Gateway and Open API's enables integration of new services by making it easier to integrate the platform with partner solutions, operator solutions and 3rd party value-added services.
 - Personal Cloud integration allows users to manage mailbox content along with their cloud account.
- Advanced Messaging Platform enables enhanced communications, cross platform interoperability and conversational commerce creating new monetization streams for service providers. It is a multi-channel platform which offers centralized identity management, integrated payment capabilities; back office, service integration and management; accessibility to external (OTT, partner) and internal channels. It also supports Application to Person (A2P) and Person to Application (P2A) communications, such as bot creation/management, campaign management, one-to-one direct chat, as well as third party and carrier services extensibility.
- User Experience provides a lightweight web-based messaging and communication set of applications with universal access via desktop, smartphones and connected devices. It offers

integration with other email services (e.g. Gmail) in the interface, contacts, calendaring and task management, conversational mail views, integrated voice and video calling, voicemail, SMS, MMS, chat, social media activity and message categorization between inbox, social and bulk commercial. It integrates with the Synchronoss Personal Cloud allowing users to easily move mailbox content to their cloud. It also supports touch based experiences on mobile and connected devices thru web and native Email Clients for iOS and Android.

- Real Time Communications Synchronoss Rich Communications Suite delivers real time communications capabilities including integrated messaging, enriched calling, and content sharing on both the desktop and mobile device. It can be integrated with the Synchronoss Messaging Platform to provide centralized storage and access to contacts, messaging and content sent and received.
- **Virus & Spam Defense** provides comprehensive email anti-abuse threat detection with policy engine, traffic management and content screening capabilities.
- **Crypto Mail** delivers email security and privacy by ensuring secure end-to-end delivery of an email message without the ability of 'man in the middle attacks'. Senders are provided with the ability to encrypt and sign a message to ensure the content is secure. Senders are also provided with visibility as to who opened what message ensuring proof of delivery.
- Synchronoss Personal Cloud is a white label solution that allows users to transfer content between devices, backup content from any device and share content with other users. It enables access to photos, videos, documents, contacts, and messages enabling users to sync, share, create and manage content. Access to the Personal Cloud from the Synchronoss Messaging Platform is enabled for sending and receiving content in email as well as allowing email users to view and share their online content stored in the Personal Cloud solution.
- Synchronoss Insights Platform can be integrated with the Synchronoss Messaging Platform to help Service Providers monetize their investment in messaging by providing insight and specific contextual information on users, interests, social networks, and content discussed.

In addition, Synchronoss Messaging offers a broad range of services encompassing three main areas:

- o *Global Customer Support* provides standard 24x7 product support as well as value added services like health checks, monitoring, and platform readiness.
- Professional Services provides expertise to design, deploy, install, and integrate custom solutions.
- Cloud Services Team delivers a fully supported and managed service for the Synchronoss Messaging Platform, which helps service providers minimize upfront investments in infrastructure and support, as well as scale to meet peak demand.

STRENGTHS

- The Synchronoss Messaging Platform is available as software, and can be deployed on premises, in a hosted datacenter, or in the cloud.
- The Synchronoss Messaging Platform is a highly scalable, configurable, open messaging environment that is easy to integrate with service provider environments.
- The Synchronoss Messaging Platform utilizes a stateless message store and directory, delivering limitless message store capabilities with high performance and at a low cost.
- The Synchronoss network message store enables integration of email, voicemail, SMS and MMS, and chat history from a single platform.
- User Experience features include conversational mail views, aggregated external email, voicemail, social media activity, real-time communications (chat, voice, video), synchronized contacts from social networks and external accounts, inline attachment previews, file sharing, shared calendars, personal cloud and more.
- User Experiences provide support for multiple mobility options, IMAP IDLE, iCal, CalDAV, CardDAV, native mobile Client and mobile web for smartphone and tablet devices.
- User Experience also includes native iOS and Android mobile applications with optimized operations for the main user actions, where most actions are accessible with a single swipe and select.

- The Virus & Spam and Crypto Mail solutions provide comprehensive email anti-abuse threat detection, as well as secure end-to-end delivery of email via encryption.
- Monetization capabilities are provided out of the box through integration with the Synchronoss Analytics Platforms, as well as support for leading demand-side platforms (DSPs) like Yahoo, and Google to deliver targeted advertisements.

WEAKNESSES

- Synchronoss Messaging Suite is targeted at Service Providers with +250K subscribers. The company's focus has historically not been on smaller or regional providers.
- The Synchronoss Messaging Suite does not offer a built-in archiving solution for service providers. Service provider customers can work with Synchronoss Services to integrate third party archiving solutions.
- The Synchronoss Messaging Suite lacks document editing and collaboration features, which other messaging platform providers are starting to add.

OPEN-XCHANGE

530 Lytton Avenue 2nd Floor Palo Alto, CA 94301 www.open-xchange.com

Founded in 2005, Open-Xchange offers web-based communication, collaboration, and office productivity software to service providers and enterprise customers. Open-Xchange is a provider of open source cloud software for ISPs, telcos and cable companies.

SOLUTIONS

OX App Suite is a web-based email, collaboration and office productivity platform that is built on an open-source framework. The platform supports open-standards, such as POP, IMAP, SMTP for messaging, iCal for calendaring, vCard for contacts, and LDAP for directory services. Open-Xchange also supports collaboration features, such as groupware, document and calendar

sharing, and social network integration. Open-standards and accessible APIs allow OX App Suite to be integrated into any cloud or hosted infrastructure.

OX App Suite can be deployed on-premises or as a hosted service through OX as a Service (OX Cloud & OX Managed). OX App Suite is built on HTML5 and the latest JavaScript technologies, delivering interoperability across platforms and devices. It provides a seamless experience on desktop, mobile, and tablet clients that is extensible and lightweight.

OX App Suite is based on a modular design, which allows service providers to add components as they see fit. The platform comprises the following functionality:

- **OX Portal** is a user configurable widget-based portal that lets a user integrate a variety of social media such as Twitter, Xing, Tumblr, etc. and display the latest activity in other apps. It is also fully configurable and extendable by the provider, letting them add their own functionality, advertising and upsell capabilities.
- **OX Mail** is a fully featured webmail client built on the latest Web 2.0 technologies. The browser-based interface integrates other email services, such as Gmail, directly into the interface, and supports calendaring and task management, as well as publication of contact lists. OX Mail also syncs email to mobile devices via native clients for iOS and Android.
- OX Drive utilizes a WebDAV and integrated API into the webmail and PIM feature sets to provide support for document sharing, secure permission handling and document versioning. OX Drive supports picture, music, videos, as well as previews of files from within the browser. OX Drive also provides uploading and synchronization (including photo stream) to and from mobile devices via native clients. Native clients are available for Apple iOS, Apple macOS, Android and Windows. Central storage of documents prevents duplicated work and reduces the amount of email traffic, as users can send a URL link to recipients, rather than large email attachments. It provides sharing capabilities for teams or individuals by integrating email, appointments, contacts, text editing and file management with advanced information management and document sharing tools.
- OX Documents is a comprehensive cloud-based office productivity suite, including OX Text, OX Spreadsheet and OX Presentation, that lets users work directly on documents, spreadsheets and presentations in the browser on any device. OX Documents also includes OX Presenter, which allows presentations to be broadcast over the web, and OX Document

Viewer, which enables the viewing of documents, stored on OX Drive, in the browser, without prior download. OX Documents integrates with cloud storage to enable collaboration and editing by multiple users, across documents, as well as the ability to work with most existing file formats without damaging formatting.

- **OX Guard** is a full encryption and security system for emails and files. It provides simple single click encryption, and comes with features such as key management for advanced users, email signing, password reset and access timeouts. The latest version offers PGP (Pretty Good Privacy) based encryption and can be used by external non App Suite users.
- OX Protect is a network-based security solution that allows ISPs to provide security and parental control as a value-added service to their subscribers. OX Protect integrates with a provider's network and protects subscribers' devices against malware, phishing and other harmful online content. It has very low hardware requirements for ISPs, and users require no additional hardware or software. OX Protect can also be used to send real-time notifications of important security and blocking events to end-users. OX Protect comes with easy to configure apps.
- OX Mail Apps Open-Xchange provides native Apps for an optimized email experience with OX App Suite on iOS and Android smartphones.
- **Dovecot Pro** Open-Xchange can offer a complete solution including the email back-end providing POP 3 and IMAP 4 access. Dovecot Pro comes with professional support & services, object storage support and lightweight email archiving & backup features.
- Power DNS enables Open-Xchange to create a next generation secure email platform, designed to rely on core DNS technologies, such as DNSSEC and DANE, for encryption key discovery and exchange and deliver parental control and malware filtering services. Power DNS is also the basis for OX Protect, an easy to use network-based security solution aimed at consumers and SMB's.
- OX Display, OX Upsell & OX Engage are three monetization applications which are bundled together and supported by a dedicated Monetization team. OX Engage is an email-marketing campaign tool based on patented IMAP injection technology which guarantees inbox delivery.

Following on from the beta release of OX COI Messenger in 2019, Open-Xchange plans to release iOS and Android messaging apps (based on the newly defined Chat over IMAP (COI) standard) in 2020, with OX App Suite integration to follow.

STRENGTHS

- OX App Suite is a highly scalable platform, with a proven track record, capable of scaling to millions of users.
- OX App Suite can be deployed on-premises or as a hosted service.
- OX App Suite utilizes open-standards and API's, which can easily integrate into existing
 environments, allowing service providers to integrate individual modules that best fit their
 customization needs.
- OX App Suite offers rich communication and collaboration functionality, including contacts, file, and calendar sharing, as well as integrated team task management features.
- OX App Suite offers OX Documents, a cloud-based productivity suite that integrates with cloud storage to allow users to create, store and collaborate on files in the cloud.
- OX App Suite provides file synchronization and sharing via native clients as an integral part of OX Drive.
- Open-Xchange provides a customer retention and upsell strategy to service providers for high-level features, such as collaboration, which allows them to easily roll out value-added services, helping generate incremental revenue and significantly reducing churn.
- OX App Suite is highly customizable, on both the module level, as well as back-end and web front-end integration where it can be tailored to meet specific service provider requirements.
- Through the addition of PowerDNS, Open-Xchange provides a foundation for secure messaging services and enables network-based security products like OX Protect which provides parental controls and malware filtering.

WEAKNESSES

- OX App Suite can only be deployed on Linux platforms.
- OX App Suite does not currently provide unified communication functionality or integrate with third party unified communication solutions. However, the vendor has IMAP based chat functionality and full integration into the OX App Suite on its roadmap.
- OX App Suite supports access for iOS and Android mobile devices, but no longer offers its OX Business Mobility Connector which supported access via Microsoft Exchange ActiveSync (EAS).
- Open-Xchange is a strong player in EMEA, however, it lacks visibility in North America. The vendor is working to address this.

SYNACOR (ZIMBRA)

40 La Riviere Drive Suite 300 Buffalo, NY 14202 www.zimbra.com

Synacor is a cloud-based software and services company. In 2015, Synacor acquired Zimbra, a developer of Open Source collaboration software that includes email, calendaring, contacts, tasks, file sharing, messaging and videoconferencing. Synacor is publicly traded.

SOLUTIONS

Synacor's email and collaboration portfolio includes:

• **Zimbra Collaboration** is a full collaboration platform comprising email, contacts, calendar, file sharing, tasks, real-time messaging and videoconferencing. It is built on top of popular Open Source projects such as Postfix, Jetty, Nginx and many others. Zimbra users can access their email via any web browser, using Windows, Mac and Linux clients, and through iOS,

Windows mobile and Android devices. Zimbra also supports a native connection for Microsoft Outlook users with two solutions: a connector for Outlook for Windows and EWS for Outlook for MAC. Zimbra Collaboration can be deployed on-premises, in the cloud or as a hybrid service. It is also offered as a Hosted Service by the Zimbra Business Solution Provider Network and as a Managed Service run by Synacor.

Zimbra can be deployed on a Linux server environment, on the Windows Server 2016 environment using containers, and on any major public or private cloud. The platform supports POP, IMAP, CalDAV, CardDAV and SMTP for messaging, as well as LDAP for directory services. Zimbra relies on Postfix for its MTA functionality, which comes bundled with Zimbra Collaboration. The platform is interoperable with Microsoft Exchange, Microsoft Active Directory (AD) and various desktop clients and browsers. Zimbra Collaboration 8.8.15 and Zimbra Collaboration 9 are the latest versions of the platform. It includes technology from ClamAV and SpamAssassin for robust anti-malware features and S/MIME for email signing and encryption.

- **Zimlets** are downloadable applications for third-party business and social integration. Zimlets allow customers to download and integrate new features to customize the web client experience and extend its functionality. Zimbra also provides integration with Cisco or Mitel for enterprise-level unified communication platforms.
- Zimbra Web Client delivers email, calendaring, contacts, tasks, file sharing, real-time
 messaging and videoconferencing in a single, web-based interface. Zimbra Collaboration
 also includes connectors for Microsoft Outlook to synchronize email, contacts and calendars.
 In addition, Zimbra provides mobile device synchronization with Exchange ActiveSync and
 CardDAV/CalDAV enabled devices, such as Apple iOS and Google Android.
- Zimbra Network Edition includes Hierarchical Storage Management (HSM), Delegated Administration, Mobile, Backup & Restore, Zimbra Connect (enterprise-level real-time messaging and videoconferencing, including file and screen sharing and corporate messaging), Zimbra Archiving and Discovery (for email archiving and compliance), Zimbra Drive (fully integrated file sharing services) and Zimbra Docs (for collaborative editing of text documents, spreadsheets and presentations). Additionally, customers can integrate Zimbra with their existing Nextcloud/ownCloud deployments.
- **Zimbra X Cloud Email** the newest Zimbra product, is a fully redesigned version of

Zimbra that relies on a React-based UI and a cloud ready, cloud agnostic, containerized core architecture. Zimbra X Cloud Email is designed to deliver email, calendaring, contacts, tasks, file sharing and real-time messaging on a highly available, scalable and stateless architecture. This helps reduce support costs associated with downtime and system outages, while continuous delivery provides automatic software updates. The containerized structure of Zimbra X Cloud Email includes automated orchestration that reduces overall computer time on the cloud, dramatically reducing costs. The React-based application offers a new look and feel, is fully responsive and runs on mobile devices, desktops, and all leading browsers, it also includes custom integrations with apps such as Slack, Dropbox, and Zoom. Zimbra X Cloud Email supports the same APIs used for Zimlet development, making development of Zimlets faster and easier than in prior versions of Zimbra. Zimbra X Cloud Email will also have a Desktop app (which allows users to install Zimbra on a computer for local storage and offline use) and a Mobile app. Zimbra X Cloud Email is available via the Software as a Service (SaaS) model.

• Zimbra 9 – like Zimbra X Cloud Email, Zimbra 9 has the same responsive, React-based UI and integrations with Slack, Dropbox, Zoom, and others. Zimbra 9 runs on the Zimbra 8 backend. The Zimbra 9 UI does not include all of the features of Zimbra 8. For instance, Zimbra 9 does not include Briefcase, but it includes Zimbra Docs and Zimbra Drive.

Zimbra maintains its open source code on GitHub, increasing interaction, exchange of ideas and development by the open source community.

STRENGTHS

- Zimbra Collaboration is an easy to deploy, fully featured platform that appeals to small and mid-size service providers, enterprises and government agencies looking for a scalable email, messaging and collaboration platform.
- Zimbra Collaboration can be deployed on-premises, in public and private clouds such as AWS, OCI, GCP or Azure, as a hybrid solution, as a hosted service through the Zimbra Business Solution Provider Network, or as a Managed Service run by Synacor.
- Zimbra's solutions provide users with control of the physical location of where their collaboration information resides. This helps meet the data sovereignty requirements of government agencies and highly regulated industries, such as financial, academic and

healthcare organizations.

- Zimbra Collaboration Server supports document management via Zimbra Drive or via integration with Nextcloud/ownCloud. This allows users to upload documents, save attachments and share files with other users, all within the Zimbra interface.
- Zimbra X Cloud Email offers a highly available, stateless containerized architecture, which is designed to reduce support costs (decreasing downtime and system outages) and helps lower overall cloud compute time.
- Zimlets and APIs allow customers to download and integrate new features to customize the Zimbra experience and extend its functionality.
- Zimbra Collaboration mobile functionality supports ActiveSync and CardDAV/CalDAV for device synchronization.
- All Zimbra Network Edition functionality is packaged together for easy installation.
- Synacor Professional Services offers turnkey support for migration, customization and cloud delivery.

WEAKNESSES

- Zimbra is an open-source solution that includes many open-source components for key functionality such as Postfix for its message transfer agent, ClamAV and SpamAssassin for anti-malware and many others. While these open-source components are well known, they don't always deliver best-in-class functionality.
- Social networking integration is only available through third party Zimlets.
- Zimbra does not offer unified communications natively but through partner integrations (i.e. Cisco and Mitel).
- Customers looking for stateless, high-availability functionality will need to upgrade to the Zimbra X Cloud Email platform.

SPECIALISTS

ROCKLIFFE SYSTEMS

1901 S Bascom Ave. Suite 1190 Campbell, CA 95008 www.rockliffe.com

Founded in 1995, Rockliffe develops email and mobile communication software for service providers and SMBs.

SOLUTIONS

MailSite is Rockliffe's Microsoft Windows-based platform that includes POP, IMAP and SMTP access for email, and LDAP for directory services. MailSite comes in four different packages: SE for Small Enterprise, LE for Large Enterprise, SP-s for Service Provider (single server), and SP-c for Service Provider (cluster).

MailSite SP uses an SQL server cluster for configuration and subscriber database, which offers full billing and provisioning system integration. This allows service providers to scale across multiple clustered application servers and offers the option to add additional servers any time in order to meet increased capacity requirements. MailSite SP is targeted at tier 2 and tier 3 service providers, and can be easily deployed in environments of very different sizes, ranging from 500 mailboxes to as many as 2 million mailboxes.

MailSite SP offers full support for Microsoft Exchange ActiveSync, allowing subscribers to synchronize their data over-the-air from all popular mobile devices, including: iPhone, Android, Windows Phone and more. Subscribers can access, edit, and share information from their phone while keeping their computers automatically up-to-date with the latest changes.

For mobility, MailSite offers Microsoft Exchange ActiveSync (EAS) and its own AstraSync mobile app. Optional security features include email content filtering and anti-virus powered by ClamAV, and anti-spam powered by Mailshell. MailSite also includes the **MailSite ExpressPro** webmail client, which delivers shared calendaring, contact management, folder drag and drop capabilities, and administrative features built into the user interface. Rockliffe provides an optional XMPP Instant Messaging server that can be integrated with MailSite.

Rockliffe also offers an enterprise Instant Messaging product called **AstraChat**, which includes VoIP and provides support for iOS, Android, macOS, Linux and Windows.

STRENGTHS

- Rockliffe's MailSite platform relies on a highly scalable, clustering architecture design which can scale to accommodate a couple of million users on a single cluster.
- MailSite offers high quality support for mobile devices, thanks to its strong Exchange ActiveSync (EAS) expertise.
- Rockliffe has deep XMPP expertise, and offers AstraChat, an enterprise-grade IM solution which includes VoIP and support for iOS, Android, macOS, Linux and Windows.

WEAKNESSES

- MailSite is only compatible with Windows operating systems. However, Linux support is on the vendor's roadmap.
- MailSite lacks social networking features or integration with social networks.
- Rockliffe lacks features for document collaboration and productivity, which are becoming commonplace in many messaging platforms.
- In the service provider market, Rockliffe is most suitable for Tier 2 and Tier 3 providers.

ICEWARP

6225 Brandon Ave. Suite 310 Springfield, VA 22150 www.icewarp.com

Founded in 1999, IceWarp delivers messaging, collaboration, unified communications, security, and mobility solutions to enterprise and service provider customers.

SOLUTIONS

The company's core product is **IceWarp Suite**, an all-in-one messaging, storage and collaboration platform, available both as a service or on-premises software. IceWarp Suite offers an integration of email and shared calendar with group chat, private chat (Instant Messaging), VoIP, groupware and online document editing. IceWarp also includes fully integrated online meeting support and improved desktop sharing, allowing remote teams to connect instantly.

The on-premises version is compatible with Microsoft Windows, as well as RedHat Enterprise Linux. The cloud version offers 99.99% availability, online storage space, and is available as a white-label solution.

End-users have multiple ways to connect to IceWarp. On the desktop, end-users can access their email, contacts, calendars and files through Microsoft Outlook using an Outlook plugin, or using the IceWarp Desktop Client, which is specifically designed for the IceWarp Server. To add to the capability to create, edit and synchronize files in all common Office formats there is the IceWarp Desktop Office, which works even offline, by synchronizing users' files to all their devices. On the web, end-users can access the same data and productivity apps from the IceWarp WebClient, a webmail application that offers a desktop-like experience, and besides the unified messaging features, provides online storage and document editing tools. Email, Instant Messaging and user data synchronization is fully supported on all mobile devices.

IceWarp **TeamChat** is available online, or as a desktop as well as mobile app. Each version allows users to have conversations with multiple groups of people at once in public and private channels, plan meetings, conference calls, access files and edit documents collaboratively. IceWarp users can send email messages to any TeamChat room they participate in, because of

full integration of Email and TeamChat. In TeamChat rooms users can collaborate on emails and work in the same way as with a standard email message (e.g. reply, reply all, forward, etc.). Since version 12.2, IceWarp TeamChat mobile app is also available for iOS and Android allowing users to collaborate with their team from anywhere.

In terms of archiving, IceWarp has basic archiving tools built-in, and partners with other software providers to offer a more robust solution for customers that require enhanced archiving features to meet compliance requirements.

IceWarp's security features include multiple anti-spam technologies, including SpamAssassin and real time content-agnostic antispam services powered by Cyren RDP (Recurrent Pattern Detection). Kaspersky Anti-Virus is used to protect against email-borne malware and malicious attachments. IceWarp uses two-factor authorization to add a second layer of security to users' accounts. IceWarp Authenticator adds a time-limited security step to prevent stealing of user credentials and account hijacking.

STRENGTHS

- IceWarp Suite is available as a cloud, SaaS service and on-premises solution, where it supports both Microsoft Windows and RedHat environments.
- IceWarp Suite supports a comprehensive list of integrated and fully customizable service
 packages, which include email, calendar, group chat, private instant messaging, groupware,
 document collaboration, editing and productivity, VoIP/SIP and online meetings. All
 modules are present in the original installation and can be activated by additional license
 keys when needed.
- IceWarp includes TeamChat, a tool for real-time messaging and collaboration that allows users to collaborate on emails and is closely integrated with all other apps through the same interface. TeamChat is also available as a mobile app for IceWarp version 12.2 and later.
- IceWarp Desktop Suite provides a rich set of tools for end-user productivity.
- IceWarp is easy to install and administer. IceWarp verison 12.2 and above include transparent billing, through the Administration console and allows administrators to add or delete users, or switch between user plans as needed. This option is available only in the

cloud version.

WEAKNESSES

- Although IceWarp offers a RedHat version, the platform is only a port of the Microsoft Windows version and is not open source. While security concerns, along with Windows compatibility considerations are the main reasons for IceWarp's approach, it may disappoint Linux enthusiasts who typically expect an open-source implementation.
- IceWarp Suite does not currently include social networking integration. However, version 12.3 and above of the platform will enable integrations with third parties' services based on user's preferences.
- In the service provider market, IceWarp is most suitable for Tier 2 and Tier 3 providers.

HyperOffice

1201 Seven Locks Road, #360 Rockville, MD, USA 20854

Founded in 2004, HyperOffice offers a range of cloud-based solutions for messaging, social collaboration, real time communication, unified communications and mobile technologies.

SOLUTIONS

For service providers, HyperOffice offers a range of private label messaging, collaboration and mobility technologies. HyperOffice's backend MTA is based on Postfix and the Apache James Messaging Server. Its solutions are available for deployment on the service provider's infrastructure or as a white label SaaS solution.

HyperOffice Atlas is an end-to-end suite of email and collaboration tools integrated in a single cloud solution. Atlas includes the following capabilities:

Business Email – email service and tools that allow businesses to set up email
 (@yourcompany.com) accessible on any web browser, mobile or desktop client. Atlas offers

a rich web client built on HTML5 standards with enterprise features like drag and drop uploads, aliases, advanced spam filtering, and more. Users also have the ability to access email through any IMAP client, or leverage push email to access mail through the native email client of any popular mobile device. Email is fully integrated with extended collaboration features like the ability to save email attachments directly in the cloud, send email to email lists organized in the address books etc. Advanced features include archiving.

- Online Contact Management allows managing of company contacts in unlimited contact lists with features like searching, sorting and filtering.
- Online Calendars supports managing personal and group online calendar schedules through features like color coding, overlays, reminders, conflict management, resource management, meeting invites, mobile sync and more.
- Online Document Management supports storing and organization of documents in the cloud with advanced collaboration capabilities like permissions, version control, comments and audit trails.
- Online Project Management allows team to organize efforts by creating projects, assigning tasks, setting milestones, managing dependencies, and getting a visual overview with Gantt charts.
- *Intranet Publisher* is a drag and drop publisher used to create rich landing pages for teams and departments which may be used to contextually display static information, dynamic collaborative information and tools.
- Enterprise Social Networking offers enterprise social networking features like profiles, activity streams, social conversations and more.
- Instant Messaging offers real time communication and presence.
- Online Web Forms and Database supports streamlined data collection with web forms, allows to organize data in customizable views and tables, and provides data analysis tools. It also allows creation of simple workflows to automate everyday business processes like lead tracking, order processing, support ticketing and others.

HyperOffice also offers a number of complementary solutions which include:

- uShare.to a range of communication and engagement products focused on web and mobile communication technologies.
- **uShare.to CX** allows businesses to facilitate customer interaction from first contact to sale, by layering communication capabilities like audio, video and chat on top of existing customer touch points and processes.
- uShare.to Teams allows teams to instantly get together in persistent workspaces on any
 device, to communicate via their channel of choice video, audio, chat and mobile
 messaging.

HyperOffice is also developing a next-generation workflow automation software solution, called **WorkMap.ai**, which will combine spreadsheet-style capabilities for data management, a process engine, and artificial intelligence capabilities.

STRENGTHS

- HyperOffice offers flexible deployment models for service providers, where Atlas may be deployed from HyperOffice's cloud or any third-party server infrastructure.
- HyperOffice is a white label solution, where service providers can create and promote packages under their own brand.
- HyperOffice offers a robust Service Provider Console, with rich capabilities which allow service providers to easily administer their user base.
- HyperOffice Atlas's features are deeply integrated with numerous touch points to deliver a seamless experience to end users. Examples include are the ability to convert emails to tasks, save mail attachments directly to the cloud, and more.
- Atlas's design is based on open APIs including its own UI. This allows third parties to easily create deep integrations, as well as create their own UI.
- HyperOffice continues to invest in new, innovative capabilities (e.g. such as the upcoming WorkMap.ai workflow automation solution) which add value to its platform solution.

WEAKNESSES

- HyperOffice has low market visibility and brand awareness.
- In the service provider market, HyperOffice is most suitable for Tier 2 and Tier 3 providers.
- HyperOffice does not offer document editing natively, but through integration with a third party solution.
- HyperOffice does not offer unified communications natively, but through integration with a third party solution.

ATMAIL

3 / 253 David Low Way Peregian Beach QLD 4573 Australia www.atmail.com

atmail, founded in 1998, develops email solutions for service providers (including Telcos, ISPs, Hosting Providers, and Registrars) and OEM partners. atmail has offices in Australia, the United States, the United Kingdom, Europe, and Southeast Asia. The company is privately owned.

SOLUTIONS

atmail develops white-labelled webmail and email server technologies, including native email applications for mobile devices and collaboration tools for calendaring. atmail suite is a JMAP client, and atmail mail server supports IMAP, POP and SMTP. atmail supports synchronization across multiple devices through open standards (JMAP, IMAP, DAV). atmail software is available as a cloud hosted service (whitelabel SaaS) with both public (multitenant) and private (dedicated) cloud options available. atmail software can also be deployed on-premises.

• **atmail suite** – allows complete end-to-end white labelling (per domain) for service providers, atmail suite comprises version 8 of atmail's device-responsive, webmail interface

(email, contacts, calendars, tasks and storage), a JMAP proxy server, a DAV server and native apps for mobile devices. atmail suite offers a modular design which allows for ease of extensibility. The webmail UI is a single page app (built in React.js) and the modular design supports scaling the front end and JMAP Proxy server (built in Golang) independently, in concert with load balancers. atmail suite supports multiple 3rd-party accounts for email and file storage (i.e. Gmail, Outlook, Yahoo!, IMAP, Dropbox, Google Drive and Microsoft OneDrive). The webmail interface is fully localized in multiple languages. atmail suite provides flexible service configuration and monetization opportunities through its full Class of Service model and associated APIs. The Class of Service model supports the configuration and delivery of services and features at global, domain, profile and/or individual user level(s).

- atmail mail server is an integration of open source software, combining Dovecot, Exim, ClamAV and Rspamd into a commercial mail stack. It includes default automation playbooks and configurations for each of these components. atmail also offers optional premium antispam solutions. atmail mail server provides a highly modular and scalable solution for large scale installations. It includes a web admin UI and a granular and configurable Role Based Access Control (RBAC) permissions model for delegation of administration across the IT team, with enhanced features to empower first level support. atmail mail server leverages an automation engine to ease configuration and deployment of core email services on demand, including IMAP, SMTP, antivirus and antispam. atmail mail server supports 1-click auto-configuration for iOS, Outlook, Thunderbird and RFC 6186 compliant clients. atmail mail server also includes ManageSieve and monitoring services. The platform is compatible with Linux operating systems and can run in private and public virtual environments.
- Premium Protection atmail offers premium antispam, malware attack detection, and timeof-click protection through partners, to protect customers from threats in near real time.
 Features include improved speed and accuracy in comparison to traditional signature update
 models, immediate identification of compromised accounts, increased IP blacklist
 prevention, and real-time outbreak detection based on the monitoring of more than 1.6 billion
 active email accounts.
- Monitoring atmail's monitoring dashboard provides hosted and on-premises customers
 with insights into their email platform, including, among other data points, numbers of
 inbound and outbound email that are accepted and rejected (including anti-abuse data),
 metrics around email usage and service quality metrics, including platform timing

information (mail delivery, authentication, application response etc) and outbound IP performance reports from major providers.

- **atmail obj.store()** is an S3-compatible object storage plugin for Dovecot open source. It features deduplication support, compression support, cache support for bandwidth optimization and flexible administration choices.
- **atmail cloud** is a subscription-based service hosted by atmail, which combines atmail suite and mail server. It allows customers to leverage best of breed technologies while simplifying email management. atmail cloud offers a choice of GDPR-compliant data centers (in the US, EU and APAC) and includes spam management and threat mitigation, through technology partnerships. atmail cloud has dynamic storage and scaling (allocated as required). atmail offers 24x7, follow-the-sun, in-house support.

atmail also offers the following add-ons:

- **atmail DAV server** which offers a CalDAV and CardDAV implementation for third party device synchronization and sharing. It is included as an optional download for both atmail suite and atmail mail server.
- **atmail ActiveSync** is an optional add-on for customers wanting Microsoft Exchange ActiveSync support.
- **atmail Advertising** is an optional add-on for customers who wish to monetize their installation through ad serving via the login page and webmail interface (i.e. desktop and mobile).

STRENGTHS

- atmail suite provides a device-responsive, high performance, intuitive user interface that is fully localized to support translation to multiple languages.
- atmail suite offers a complete, user-friendly, white label experience, which customers can self-manage through the web admin user interface. atmail is a multitenant solution, supporting unlimited domains with different branding, and unlimited themes, per domain.

- atmail mail server offers high availability and redundancy. It is based on key open standards, including JMAP, IMAP, POP, SMTP, WebDAV, CardDAV and CalDAV.
- atmail suite provides mobility and supports realtime synchronization across multiple devices using JMAP or Exchange ActiveSync.
- atmail offers an iOS application which supports multiple accounts and a unified inbox.
- atmail is easy to install and manage. atmail also provides fully documented APIs and a plugin framework for easy customization and extension.
- Through a customizable UI and plugin support, atmail offers the ability to monetize email through in-application advertising, third party revenue streams, and advanced email services.
- atmail offers account migration services for email, contact, calendar, tasks and file storage data for small, medium, large and extra-large installations.

WEAKNESSES

- atmail lacks market visibility, the company is working to address this.
- atmail is a pure-play email, contacts, calendars, tasks and file storage solution. The company has chosen not to include any document collaboration functionality.
- atmail does not currently offer an IM solution.
- atmail does not currently offer social networking integration.
- atmail does not currently offer a unified communications solution.

AXIGEN MESSAGING

29 Academiei Str., second floor 010012 Bucharest 1 Romania www.axigen.com

Axigen Messaging, founded in 2004, develops and distributes messaging and collaboration platform aimed at the needs of enterprise customers, SMBs, Managed Service Providers (MSP), and Service Providers.

SOLUTIONS

Axigen Messaging is a premium mail server solution with groupware functions built for SMBs, Managed Service Providers (MSP), and Service Providers that serve the SMB market. The platform is compatible with multiple flavors of Linux, as well as Microsoft Windows 10 and Server. Docker and Kubernetes based deployments are also available. The Axigen mailbox server works with email clients such as Microsoft Outlook, Thunderbird, or eM Client. Axigen also includes a WebMail interface, which creates a desktop-like experience on any Internetenabled device. Axigen leverages proprietary Axigen SmartProcessing and UltraStorage technologies to ensure fast, reliable, and highly configurable email message processing and storage. Advanced malware protection through integration with additional security technologies from Cyren, Kaspersky, and Bitdefender is available as premium add-ons.

Axigen Messaging offers several product editions to meet different customer needs:

- Service Provider edition a multi-tenant, highly scalable, fully integrated, multi-platform offering, which delivers an all-in-one email, calendaring, and collaboration solution. It is localized in 31 languages (including right-to-left writing mode). Axigen offers flexible licensing options, which allow service providers to choose from a variety of licensing plans including SaaS, yearly, and perpetual options.
- Managed Service Providers (MSP) edition a messaging platform aimed at the needs of MSPs. It comprises collaborative functions (e.g. shared folders, calendars, tasks, contacts, public folders, and more), a desktop-like webmail client with extensive branding options, and features to improve automation and efficiency for the system administrators. Axigen creates opportunities for the MSPs to deliver Email Hosting and Security, Backup, Business

Continuity, and Disaster Recovery (BCDR) services on-premises, as well as in private or public cloud deployments.

• **Business Messaging edition** – aimed at the needs of small and medium size businesses; focuses on delivering a easy to use user experience for end-users and system administrators.

All Axigen features are complemented by Axigen Awesome Tech Support, which offers 24/7 availability.

STRENGTHS

- Axigen offers a robust fully integrated email, calendaring and collaboration platform, that can be set up quickly and is straightforward to maintain.
- Axigen is a highly configurable platform, which can be easily integrated with third party billing and provisioning systems through APIs. Axigen offers granular configuration parameters which enable Service Providers to easily model their Email Hosting offering to their requirements.
- Axigen offers full support for most popular email clients (e.g. Microsoft Outlook, Thunderbird, eM Client, macOS, iOS, and iPadOS native email).
- Axigen offers strong security features in partnership with a number of leading email security vendors.
- Axigen's platform has the ability to scale both at the software product level, as well as in terms of its underlying hardware infrastructure.
- Axigen is competitively priced for Service Providers and MSPs.
- Axigen WebMail is a web-based user interface which delivers many desktop-client-like features, is easily brandable, and is localized in 31 languages.
- Axigen can be deployed either in classical bare-metal or virtual machine modes as well as in a containerized mode on top of Docker or Kubernetes.

WEAKNESSES

- Axigen is only available as an on-premises solution.
- Axigen does not offer document collaboration functionality. However, the company offers basic collaboration through a Notes WebMail module which is compatible with iOS notes.
- Axigen's IM integration in WebMail requires third party products (e.g. OpenFire, ejabberd, OpenLDAP).
- Axigen currently does not offer social networking integration.
- Axigen currently does not offer a unified communications solution.

MICROSOFT

1 Microsoft Way Redmond, WA 98052-6399 www.microsoft.com

Founded in 1975, Microsoft delivers products and services to businesses and consumers through an extensive product portfolio that includes solutions for office productivity, messaging, collaboration, and more.

SOLUTIONS

Microsoft Exchange Server is Microsoft's flagship messaging and collaboration platform aimed at on-premises enterprise deployments, as well as service providers offering Hosted Exchange services. Service providers offering Hosted Exchange, typically target business users ranging from SMBs to large enterprises.

Microsoft Exchange Server offers email, scheduling, and tools for custom collaboration and messaging service applications. It includes the Microsoft Outlook desktop client, as well as the Outlook on the web (formerly Outlook Web App or OWA) webmail client. For mobile device

access, Microsoft Exchange Server includes Microsoft Exchange ActiveSync (EAS). Microsoft Exchange Server is updated through Cumulative Updates (CUs), which are released approximately every three months, and may include bug fixes, product refinements, and selected new features which are already available in Office 365.

Microsoft Exchange Server 2019 – is the latest version of Exchange Server (released in October 2018). It requires Windows Server 2019, and is meant to be used along an ecosystem of 2019 solutions which comprise SharePoint 2019, Office 2019, and more. It discontinues the Unified Messaging functionality, as Microsoft prefers that organizations rely on Teams/Skype for Business for their unified communication needs.

Exchange Server 2019 offers the following enhancements over previous versions:

- Security Microsoft recommends running Exchange Server 2019 onto Windows Server 2019
 Server Core (the streamlined installation of the Windows Server OS which only includes
 components to perform server roles and run applications). Exchange Server 2019 also uses
 TLS 1.2 out of the box and removes legacy algorithms.
- Performance Exchange Server 2019 supports up to 256 GB of memory and 48 CPU cores (compared to Exchange Server 2016 which supported 24 CPU cores and 192GB of memory). Exchange Server 2019 now relies on Bing search technology which allows the indexing of larger files, simpler management and better search performance. The changes to the search architecture also deliver faster and more reliable failover between servers. Improvements to the database engine enable better performance and take advantage of the latest storage hardware (including larger disks and SSDs). The information store process also optimizes memory usage through dynamic memory cache allocation.
- *Clients* improvements have been made to the Calendar functionality, folder permission management and email address internationalization (where email addresses containing non-English characters are routed and delivered natively).

Microsoft Exchange Server 2016 – is still the most widely deployed version of Exchange Server. Microsoft Exchange Server 2016 offers the following features:

• *High Availability & Disaster Rec*overy – Microsoft Exchange Server offers managed availability, which monitors internal activity to prevent failures, and resorts to automatic

fallback procedures in case of a system failure. Microsoft Exchange Server includes a Managed Store for greater resiliency, and supports multiple databases per disk for system efficiency. Automated repair improvements, such as database divergence detection, improve Microsoft Exchange Server 2016's high availability.

- Anti-Malware built-in security features scan outgoing and incoming messages, automatically deleting messages that contain malware. These on-premises anti-malware features can be used in conjunction with cloud-based, Exchange Online Protection (EOP), for layered protection. These features can also be completely replaced with third-party solutions.
- Archiving and Data Loss Prevention (DLP) Microsoft Exchange Server includes native archiving and DLP features. The DLP features analyze the content of messages, detect any messages that violate DLP policies, and allow administrators to set custom DLP policies.
- Collaboration Microsoft Exchange Server 2016 offers a new approach to attachments meant to simplify document sharing and eliminate version control issues. It allows users to attach documents as links to SharePoint 2016 or OneDrive for Business instead of a traditional attachment, which helps ease co-authoring and version control.
- Outlook web experience offers an optimized interface for tablet and smartphone devices.
 Outlook on the web also supports offline access for a wide range of browsers. Microsoft Exchange Server 2016 offers updates to Outlook on the web, with features such as: Sweep, Pin, Undo, inline reply, a new single-line inbox view, improved HTML rendering, themes, emojis, and more.
- Search Outlook 2016 is optimized to use the Microsoft Exchange Server 2016 back end to help find information faster, as well as offer search suggestions, people suggestions, search refiners, and the ability to search for calendar events.
- Extensibility an expanded add-in model for Outlook desktop and Outlook on the web makes it easier for developers to build features into the Outlook experience.
- *eDiscovery* Microsoft Exchange Server 2016 supports faster, more scalable eDiscovery workloads, as well as the ability to search, hold and export content from public folders.

STRENGTHS

- Microsoft Exchange Server offers High Availability and Disaster Recovery functionality.
 Managed availability provides constant internal activity to prevent failure, as well as automatic fallback procedures during a system failure.
- Microsoft continues to enhance Outlook on the web by offering an optimized interface for both tablet and smartphone devices, including touch functionality, which creates a more streamlined experience for users across all mobile devices.
- Microsoft has simplified Exchange Server's roles based architecture to ease deployment, management and improve coexistence with earlier versions of Exchange.
- Microsoft Exchange Server includes Microsoft Outlook on the web and Microsoft Exchange ActiveSync for mobile device access, allowing users to easily access email and collaboration features from virtually anywhere.
- Microsoft Exchange Server comes with native archiving and compliance features, rich
 collaboration features, integration with Teams/Skype for Business, SharePoint Server, and a
 variety of other Microsoft features aimed at the needs of business users.

WEAKNESSES

- Due to its cost and complexity, Microsoft Exchange Server, as a hosting platform, is best suited for business service providers, who can charge a premium for their services rather than consumer-oriented service providers, who are typically competing with free services.
- Microsoft Exchange Server has generally had difficulty meeting the scalability needs of larger Tier 1 service providers.
- Microsoft Exchange Server performs best in a Microsoft Windows environment. The macOS and Linux communities are not receiving the same level of attention from Microsoft.
- Microsoft Exchange Server 2019, while offering some improvements and streamlining over Exchange Server 2016, does not add sufficiently new features and functionality to motivate most providers to move. Most providers will adopt Exchange Server 2019 only as part of

moving their infrastructure to Windows Server 2019.

Microsoft Exchange Server is aimed at business hosting providers, however, Microsoft's
own Office 365 service competes directly with its hosting partners creating market confusion
and placing pricing pressures on its hosting partners. As a result many hosting providers are
choosing to resell Office 365, and are de-emphasizing their own offerings based on the
Hosted Exchange platform.

THE RADICATI GROUP, INC. http://www.radicati.com

The Radicati Group, Inc. is a leading Market Research Firm specializing in emerging IT technologies. The company provides detailed market size, installed base and forecast information on a worldwide basis, as well as detailed country breakouts, in all areas of:

- Email
- Security
- Instant Messaging
- Unified Communications
- Identity Management
- Web Technologies

The company assists vendors to define their strategic product and business direction. It also assists corporate organizations in selecting the right products and technologies to support their business needs.

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Currently Released:

Title	Released	Price*
Email Statistics Report, 2020-2024	Mar. 2020	\$3,000.00
Instant Messaging Statistics Report, 2020-2024	Feb. 2020	\$3,000.00
Social Networking Statistics Report, 2020-2024	Jan. 2020	\$3,000.00
Mobile Statistics Report, 2020-2024	Jan. 2020	\$3,000.00
Endpoint Security Market, 2019-2023	Nov. 2019	\$3,000.00
Secure Email Gateway Market, 2019-2023	Nov. 2019	\$3,000.00
Cloud Access Security Broker (CASB) Market, 2019-2023	Nov. 2019	\$3,000.00
Enterprise DLP Market, 2019-2023	Nov. 2019	\$3,000.00
Microsoft SharePoint Market Analysis, 2019-2023	Apr. 2019	\$3,000.00
Email Market, 2019-20223	Apr. 2019	\$3,000.00
Office 365, Exchange Server and Outlook Market Analysis, 2019-2023	Apr. 2019	\$3,000.00
Cloud Business Email Market, 2019-2023	Mar. 2019	\$3,000.00
Corporate Web Security Market, 2019-2023	Mar. 2019	\$3,000.00

^{*} Discounted by \$500 if purchased by credit card.

Upcoming Publications:

Title	To Be Released	Price*
Information Archiving Market, 2020-2024	Mar. 2020	\$3,000.00
Advanced Threat Protection Market, 2020-2024	Mar. 2020	\$3,000.00
Unified Endpoint Management Market, 2020-2024	Mar. 2020	\$3,000.00

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