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ontrary to popular opinion, email is not only still relevant—it's growing. Email was born from humble and obscure laboratory beginnings in the 70s, spent its adolescence as a cool and cutting edge status symbol in the 80s and early 90s, and grew in its prime to be the beating heart of personal and digital communications toward the turn of the last century. Middle age saw email weather difficulties, its reputation diminished as it became a lightning rod for digital overload. As it approaches its golden anniversary in 2021 and despite the scars of an active life, email is as relevant as ever, and ready for its renaissance.

For email to stay relevant for the next fifty years, email providers need to step up and close a yawning innovation gap. Today's demanding consumer expects more from their email providers: enterprise-strength privacy and security, cutting-edge functionality, all delivered via elegant, seamlessly integrated tools, anywhere, anytime.

Could the collaborative approach of open source development reinvigorate email offerings and inject new life into the ecosystem of email and communications tools? Could a massive opportunity to engage—and monetize—consumers be hiding in plain sight?

At Synacor, we believe in email's future and are on a mission to enable its renaissance.

A core building block of our information age, email represents an essential communications infrastructure for billions of users worldwide. Email has weathered successive waves of technology disruption to stand as a foundational pillar of technology for individuals, businesses, and governments.

Email is an intensely personal, private, and essential communications tool yet it is also one that has developed something of a sour reputation; email is seen by some as an embodiment of—and scapegoat for—the frenzied chaos of modern communication. Email is as relevant as ever, with an expected three billion users worldwide by 2020. Despite growing up with a plethora of communication tool options, younger generations still use email and expect it to persist as a core component of the communications landscape of the future.

Significant innovations in personal communication tools have largely bypassed email, instead gravitating to upstart collaboration and messaging tools. Email has not been left behind entirely—witness the rise of the cloud facilitating the revolution in mobile email. However, the basic contours of email infrastructure have evolved little since Google introduced Gmail in 2004. The ultimate potential of email has yet to be realized, with dominant email providers largely unable or unwilling to effectively leverage major trends that have transformed the landscape of communications infrastructure. Email providers have disappointed in recent years, ceding the innovation initiative. Email service providers therefore need to reinvigorate their offerings from the ground up to deliver value to their customers.

Reimagining email from the ground up is necessary to leverage critical trends in internet computing, such as the explosive growth of APIs and the rise of the cloud. Working to provide consistent, private, and secure user experiences via email also means taking a firm stand on behalf of consumers by seeking to curtail irresponsible email marketing. Consumers want to engage with brands via email, but that acceptance is based on an unspoken agreement—that they are receiving only the messages they want, when, where, and how they want them—as well as an implied threat that they'll reject options from those who abuse that trust. An intelligent approach to marketing is vital for any communications medium, but especially for email, given the required trust between users and service providers.

To achieve this vision, Zimbra has embarked on a massive effort to make email open and extensible, reducing cost, harnessing the power of the community to enhance security and drive innovation. This open approach to email and collaboration tools celebrates the diversity of third-party options, paving the way for a powerful yet intuitively simple communications platform.

Consumers, business, and governments are demanding more from their email providers: state-of-the-art, enterprise-level technology, endlessly extensible functionality, 24/7 operational reliability, all at significantly lower total cost of ownership relative to proprietary options. It's time for the community of email and collaboration tool service providers to step up and drive the next wave of innovation. This paper offers a roadmap for a renaissance in email and collaboration tools that seeks to unify the most enduring technologies of the internet era with the latest waves of innovation.



Reports of email's demise are greatly exaggerated, and sharply contradicted by global email usage statistics. Email has indeed yielded share of the ever-growing online communication pie to collaboration and messaging tools. However, email is often scapegoated by association with digital overload, a linkage that was formed when email was the epicenter of all digital communications. Those first generations of email systems could not possibly have anticipated the evolution and explosion of human connections that has transformed our lives and

our world. The rise of messaging and collaboration tools successfully stepped in to innovate, helping to build a communications matrix that reflected the newly evolving diversity of ways people communicate in the digital era.

Email may reflect a battered reputation but it is as relevant as ever—a daily fixture in the lives of literally billions of people, and a logical center of gravity for the next wave of innovation in communication tools. Email could face a bright future, and prove the skeptics wrong.

THE PREFERRED METHOD OF COMMUNICATION FROM BUSINESSES

Email is the primary way business, governments, and organizations communicate with their constituents. More so than social media, messaging, or phone, email is also the preferred method for individuals to receive communication from businesses.

Email marketing is as relevant as ever, with users expressing a strong preference (72% of all email users) that brands interact with them through email. 82% of respondents in a 2014 Harris Interactive survey were willing to receive more emails from brands, provided that those messages were deemed to be relevant to their interests.

82%
of all email users are willing to receive more emails

¹Adestra. "2016 Consumer Adoption & Usage Study." http://content.adestra.com/hubfs/2016_Reports_and_eGuides/2016_Consumer_Adoption_and_Usage_Study.pdf.

² "Personalization Sees Payoffs in Marketing Emails." eMarketer, January 28, 2014.

https://www.emarketer.com/Article/Personalization-Sees-Payoffs-Marketing-Emails/1010563

YOUNGER GENERATIONS ACCEPT EMAIL

A 2016 Litmus study confirms that those email obituaries were premature: Millennials were the most bullish on email's future of any age-based demographic, with over 72% of those aged 25-34 supporting the belief that email will still be around in ten years.³

Rather than eschew email, younger users appear to have adopted email on their own terms. The proliferation of

access points spawned by the mobile revolution is leading to more sophisticated email consumption patterns: Younger generations use their smartphone to preview and sort email, and their laptop or desktop to read and reply. 81% of Millennials sort through email on their mobile devices before reading them on their desktop, while only 44% of baby boomers use this approach.⁴



72%

of millennials believe that email will still be around in ten years



INTERNATIONAL GROWTH, REGULATORY EVOLUTION

The Radicati Group's 2016 Annual Email Report estimated the number of worldwide email users at 2.67 billion, with annual growth of 3% projecting to cross the three billion user threshold by 2020. By year-end 2020, nearly half of the global adult population will have an email account.⁵ That scale of active and potential email users is simply staggering: an internet identity is an integral component of a modern lifestyle to which literally billions of people aspire. Email's persistence as a keystone of communications infrastructure is inextricably linked to its global accessibility and ease-of-use.

Recently enacted international regulations around the use of email have forced companies to adapt their systems and procedures, posing immediate opportunities to innovate and deliver value around email. Canada's 2014 Anti-Spam Legislation (CASL)⁶ and the European Union's 2016 General Data Protection Regulation (GDPR)⁷ each

seek to improve privacy and data security of individuals through restrictions on the acquisition, maintenance, and use of personally identifying data. Adherence to the nutsand-bolts of these new regulations requires changes in digital communication and data retention systems for any business in a EU country.

The impact of these new data regulations extends far beyond physical jurisdictions: U.S.-based businesses transacting business in Canada or EU countries either B2B or B2C will also need to adapt. Anyone doing business internationally will need to adhere to a patchwork of regulatory schemes and evolving definitions, terms, and conditions regarding the communication and maintenance of private data. Opportunities abound for providers of email services who can deploy applications with an architecture sufficiently flexible to navigate diverse regulatory environments.

³ Lewkowicz, Kayla. "Surprise! Millennials Love Email Just As Much As Everybody Else." Litmus. April 27, 2016. https://litmus.com/blog/surprise-millennials-love-email-just-as-much-as-everybody-else.

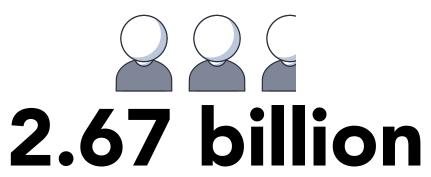
Adestra. "2016 Consumer Adoption & Usage Study." http://content.adestra.com/hubfs/2016_Reports_and_eGuides/2016_Consumer_Adoption_and_Usage_Study.pdf.

⁵ Radicati Group. "2016 Annual Email Report."

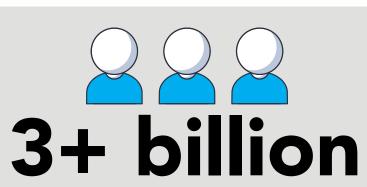
 $http://www.radicati.com/wp/wp-content/uploads/2016/01/Email_Statistics_Report_2016-2020_Executive_Summary.pdf.$

Government of Canada, "Canada's Anti-Spam Legislation." http://fightspam.gc.ca/eic/site/030.nsf/eng/home, last modified Aug 4, 2016.

⁷The EU General Data Protection Regulation (GDPR). http://www.eugdpr.org/.



worldwide email users as of 2016



worldwide email users as of 2020

THE ISP OPPORTUNITY

Internet Service Providers face a crossroads with email. Many consumers still use ISP-provided email—even a small chunk of a massive installed ISP account base cumulatively represents tens or even hundreds of millions of users. These are users with whom an ISP can build trust through the delivery of world-class email services, positioning themselves to retain customers and build upon that base by channeling additional value-added (and profit-generating) services. As ISPs deliver more services to consumers—such as on-demand, streaming, OTT options, exclusives—the options to integrate them with email also increase.

A long-term ISP vision of email should be a foundation to establish subscriber trust. Rather than look at email as an underutilized tool and cost center, the unrealized potential of inactive email accounts should be viewed as the lowest hanging of all potential fruit—they have already walked through your door, you just have to turn on the lights and give them more of a reason to stick around. It's not too late to drive consumer usage of ISP email, despite 'free' email services such as Hotmail, Yahoo Mail, and Gmail. Bringing those eyeballs on email back to ISPs and keeping them there will not be easy, but the rewards for doing so successfully are far too great to overlook.







EMAIL ADDRESS AS DIGITAL PASSPORT

The modern internet is hooked on email address as the primary unique identifier for customer service, engagement, and marketing. A measure of email's ubiquitous digital passport function is that an email address is often a prerequisite for signing up for services—even those that seek to displace email as the primary repository of asynchronous communications.

Users are highly protective of their email addresses. When websites require that users enter an email address to continue to the site, only 43% of users will provide a real,

current email address. 57% will either leave the site, use a fake email address, or give an old email address.⁸

Beyond simple security, users value email as an extension of their personal realm—if their email is threatened, they are threatened. This protectiveness poses challenges and opportunities for email service providers, but the core insight from this trend is that protectiveness is a proxy for value. There is a strong gravitational pull from the scale—in billions of active users—of email accounts as primary identifier, strong enough to make email as viable as any current platform for capturing the digital dashboard of the future.

ADD-ON MARKET GROWTH

Recognizing that innovation in email has been stagnate, a steady stream of start-ups seeking to improve email have garnered investment funding and generated M&A buzz. With the goal of helping users achieve "inbox zero," save money, or simplify their inboxes, several start-ups have seen mass adoption of their tools resulting in successful exits. In 2012, LinkedIn purchased Rapportive for managing detailed contact information. Acompli provides email and calendar management tools, and was acquired by Microsoft in 2014. Among the more successful email add-on start-ups, several were acquired by large companies which eventually shut them down. Mailbox was ac-

quired and then discontinued by Dropbox in 2015, while Summify was acquired and then discontinued by Twitter in 2012,¹¹ suggesting the services were not as profitable or as easy to monetize as expected.

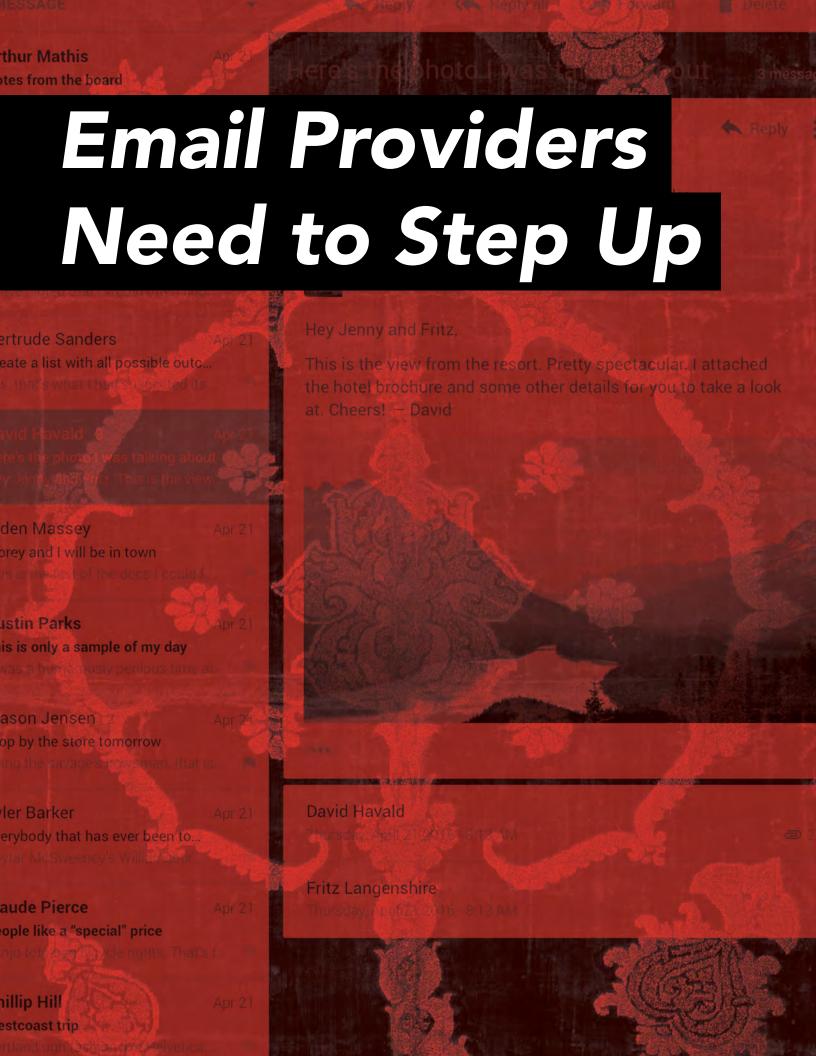
OtherInbox has emerged as a central hub for many of these email add-on services, most of which are free and have attempted to monetize through advertising revenue or through consumer subscription. These monetization paths require significant scale to retain viability—scale that has proved difficult among the current landscape of major email provider business models.

⁸ Adestra. "2016 Consumer Adoption & Usage Study." http://content.adestra.com/hubfs/2016_Reports_and_eGuides/2016_Consumer_Adoption_and_Usage_Study.pdf.

⁹ Ha, A. "Rapportive Announces Acquisition by LinkedIn, (Basically) Confirms \$15M Price." TechCrunch, Feb 22, 2012. https://techcrunch.com/2012/02/22/rapportive-linkedin-acquisition/.

¹⁰ Warren, T. "Microsoft acquires email app Acompli." The Verge, Dec 1, 2014. http://www.theverge.com/2014/12/1/7298679/microsoft-acquires-acompli.

¹¹ Finley, K. "Dropbox Kills Mailbox, an App It Bought for \$100M." Wired, Dec 12, 2015. https://www.wired.com/2015/12/dropbox-kills-carousel-and-mailbox-as-it-turns-toward-businesses/. Isaac, M. "Twitter Acquires Social-Aggregation Startup Summify." Wired, Jan 19, 2012. https://www.wired.com/2012/01/twitter-summify-acquisition/



mail remains the most vital of all communications touch points, serving as both conduit and repository for the most private, deeply personal information. Email remains the platform of first and last resort that documents the majority of life's most significant interactions with work, school, government agencies, doctors, friends, and family.

The importance attached to email by consumers has not, however, been matched in kind by email software and service providers. Within the current landscape of communications tools, email provides a choice between options that are rigid and expensive (Microsoft Outlook), or free and invasive (Gmail), with collaboration and messaging tools attempting to fill the gap between these offerings.

Email is highly relevant, but for it to remain so, email providers need to step up and reclaim the mantle of innovation. The protection of privacy is a necessary condition for any business providing communications tools, most of all providers of email. Protecting the security of private data is of paramount importance, with failures to do so affecting the fates of individuals, businesses, and governments. Whether constrained by legacy technical architecture or inflexible and closed business models, dominant providers of email architecture have thus far failed to fully capitalize on API extensibility. Market leaders have seen more success at leveraging the power of cloud computing.

PRIVACY REMAINS A MAJOR CONCERN

Americans do not have confidence in their email provider's privacy standards, with only 29% of respondents in a 2016 Pew Research Center study indicating that they were very confident—or even somewhat confident—that their email records will remain private and secure. Americans consider their emails incredibly private information, ranking just behind their social security number, medical information, and content of phone conversations as being most sensitive.¹²

The privacy concerns of citizens throughout the world have resulted in increasingly restrictive legislation imposing constraints on the maintenance of personal data, as well as the "right to be forgotten." Users need to be able to exert their own direct influence on their data. Service providers are all too aware of the implications of breaching personal privacy: an irretrievable loss of trust.

¹² Pew Research Center's Internet & American Life Project survey, Sept 16, 2016

SECURITY: THE ACHILLES HEEL?

Security threats know no bounds, as individuals, private corporations, and government agencies worldwide scramble to improve security and protect sensitive data. For example:



In late 2016, Yahoo announced the discovery of two separate hacks, with 500 million and one billion accounts impacted, respectively, that contained critical personal data—names, telephone numbers, dates of birth, encrypted passwords.



In the summer of 2016, WikiLeaks released data hacked from the Democratic National Committee's email system.



In 2014, Sony Pictures Entertainment was hacked by a group linked to the government of North Korea. The leak contained 150 gigabytes of confidential marketing materials, proprietary Sony financial data, employee social security numbers.¹³

The future viability of email and collaboration tools is inexorably tied to restoring trust between users and providers of email and collaboration tools. Improving privacy and security is an essential prerequisite for email to maintain its viability in a crowded marketplace of communications options. Delivering robust, state-of-the-art privacy and security measures is difficult, expensive, and seemingly thankless work for email service providers. Yet the stakes could not possibly be higher: those that deliver email systems with the highest level of privacy and security will be rewarded with the most valuable commodity of all: the enduring trust of their customers.

Americans consider their emails incredibly private information, ranking behind their social security number, medical records and phone conversations

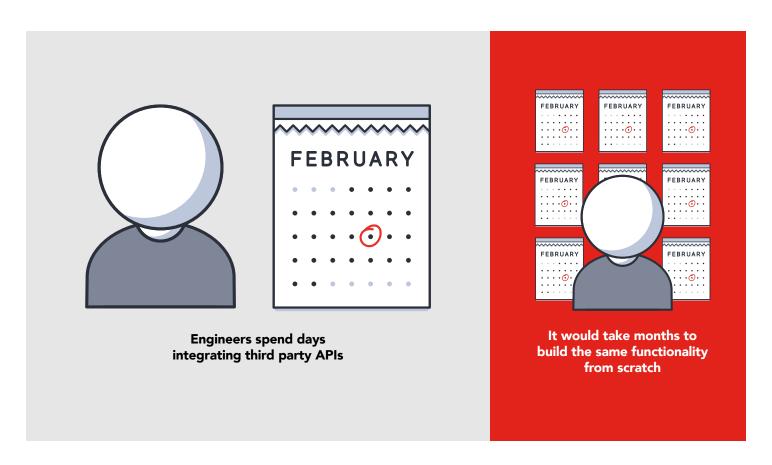
¹³ Biddle, Sam. "Everything You Need to Know About Sony's Unprecedented Hacking Disaster." Gawker, Dec 14, 2014. http://sonyhack.gawker.com/everything-you-need-to-know-about-sonys-unprecedented-h-1671217518.

API EXTENSIBILITY

Third party API integrations extend many advantages, notably the customization of products and services to serve customer needs. APIs increase speed and reduce cost to market: engineers spend days integrating third party APIs as opposed to months building the same functionality from scratch. APIs allow companies to focus on their core competencies; e.g., Uber uses Google Maps for mapping, Braintree for payments, and Twilio for SMS, leaving Uber to focus on their core competency of providing peer-to-peer transportation.

WeChat—the blockbuster user messaging service tool from Chinese internet giant Tencent—provides a foundational lesson in the scale that API-centric approach can achieve. Nominally a messaging app, WeChat evolved into an open platform that allows other companies to provide services and accept payments within the interface, all through APIs. API-enabled mini apps embedded within WeChat allow users to hail taxis, order delivery, play games, check-in for flights, send money to friends, pay bills, make micro-payments to everyone from global corporations to street vendors. WeChat's collaborative, API-centric approach has made it one of the leading apps globally, with 700 million monthly active users as of Q1 2016.¹⁴

WeChat demonstrates that the battle for a unified digital dashboard is winnable, and a key component of that winning formula is a North Star of collaboration through a foundational orientation toward API extensibility. Could a next generation email solution serve as the digital dashboard in the U.S. in the same way WeChat has commanded the Chinese audience?



¹⁴ BI Intelligence. "WeChat breaks 700 million monthly active users." http://www.businessinsider.com/wechat-breaks-700-million-monthly-active-users-2016-4

THE RISE OF THE CLOUD

The emergence of cloud computing as a defining technology of our time confers now-familiar benefits: lower cost, responsive scalability, and enhanced security. Rooted in a cloud-based infrastructure, email and collaboration tools of the near future will benefit from high quality and persistent UX across devices, the ability to collaborate more efficiently and effectively, and a significantly lower total cost of ownership. Any email service of the near future will be natively rooted in cloud architecture, as the advantages of doing so are so incontrovertibly overwhelming.



Cloud integration enables a positive and persistent user experience across the ever-expanding array of devices. Microsoft Office 365 and Google's Gmail are leading examples of cloud-integrated email services.



The cloud makes it easy to collaborate: A 2015 *Harvard Business Review*¹⁵ study found that use of cloud services improved business agility through increased speed of data exchange, decreased time to market, and the ability to provide client solutions faster and more efficiently.



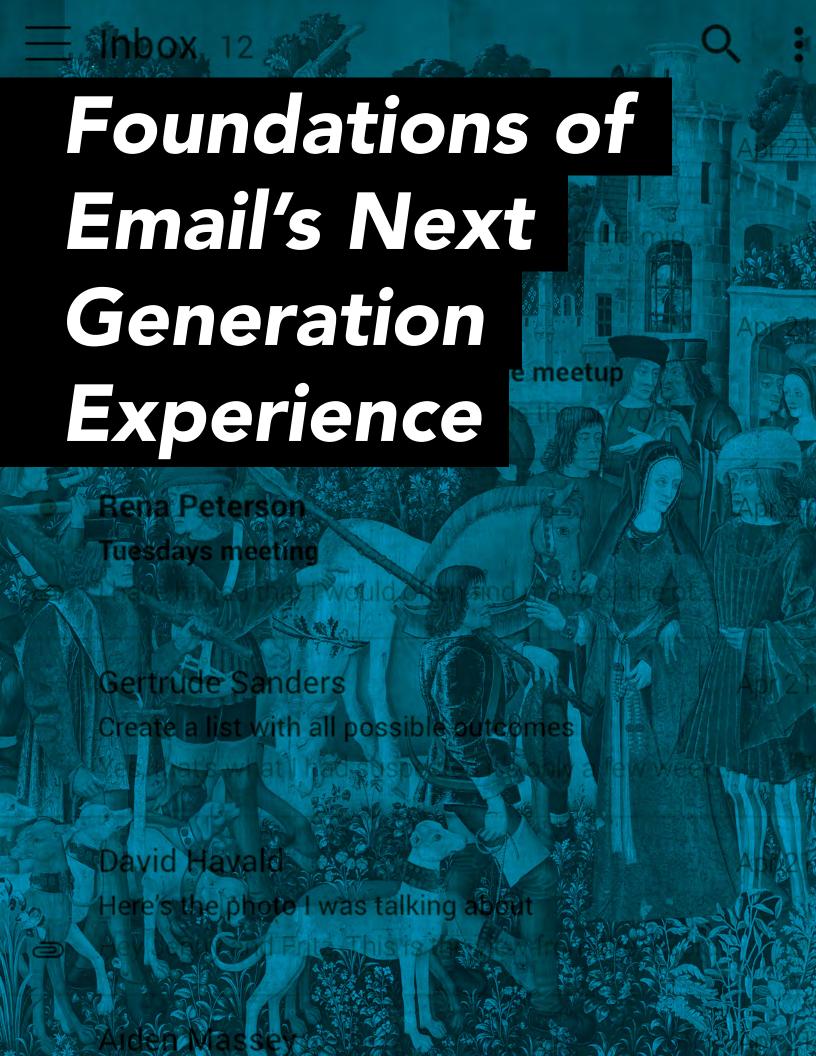
Multiple studies have shown that moving to cloud-based systems can significantly increase cost savings: a survey of Australian companies demonstrated the use of cloud-computing software producing an average savings of 12% on IT costs, 16 while technology market researchers Vanson Bourne report that use of the cloud improved profits by an average of an eye-popping 22%. 17

Companies that use cloud computing software save 12% on IT costs and improve profits by 22%

¹⁵ Harvard Business Review Analytic Services. "Cloud, Driving a Faster, More Connected Business." https://hbr.org/resources/pdfs/comm/verizon/19319_HBR_Report_Verizon_Cloud_6.pdf.

¹⁶ Frost & Sullivan. "Australia's cloud services market to soar from \$1.23 billion in 2013 to \$4.55 billion by 2018." http://ww2.frost.com/news/press-releases/australias-cloud-services-market-soar-123-billion-2013-455-billion-2018-says-frost-sullivan.

¹⁷ Columbus, Louis. "Making Cloud Computing Pay." http://www.forbes.com/sites/louiscolumbus/2013/04/10/making-cloud-computing-pay-2/#442fab22513b.



SHIFT FROM VENDOR LOCK-INS TO OPEN SOURCE SOFTWARE

The open source software movement has been nothing short of revolutionary, conferring a host of benefits to its practitioners including increased trustworthiness, an assurance of continuity via commercial backing, reduced cost through shared development, and significantly greater control.



Increased Trustworthiness: Software that is "trustworthy" means that it is verified by skilled independent auditors to perform according to specifications (i.e. without introducing unintended side-effects). The transparency of open source is an important condition for software to even be considered trustworthy.



Continuity: A 2014 Ponemon Institute study found that three in four IT practitioners view commercial open source software as offering greater reliability and continuity than commercial proprietary software. When a proprietary software company goes out of business or stops servicing a software product, you are out of luck. If any open source leader leaves a project or community, others take over.¹⁸



Reduced Cost: Commercial open source software lowers cost through shared development not offered by proprietary software, and through the generation of fewer bugs, because the many community members are constantly scrutinizing the codebase to ensure bugs are found and fixed quickly and effectively.



Greater Control and Flexibility: With closed commercial software, clients can plead for new features or attention to bugs, but the locus of control remains firmly with the owning company. Open source development ensures a seat at the table and ability to directly contribute to the planning and integration of new features and priority of bug fixes for all interested parties.

The benefits of open source development represent an unimpeachable value proposition that extend far beyond the costs of software development. Open source software architecture is both a means to deliver robust tools and services to end users, and an end in itself: the neutrality of open source is inherently valuable as a draw to consumers who seek balanced arbiters who champion their needs. Contrasted with the dictates of proprietary de-

velopment—driven first and foremost by the needs of investors—a neutral open source platform attracts the best and the brightest ideas and tools, elevating the needs of the end user to a position of primacy. Collaborative approaches to vexing issues like privacy and security are best served through the synergies generated through open source transparency, a process that itself generates trust—and potential loyalty—among users.

¹⁸ Ponemon Institute. "The Open Source Collaboration Study: Viewpoints on Security & Privacy in the US & EMEA." Ponemon Institute Research Report November, 2014.

Open Source Success Studies



Launched as a joint effort between NASA and Rackspace Hosting in 2010, OpenStack sought to offer companies cloud-computing services running on standard hardware with the ability to create and decommission server resources as needed. IT companies could use OpenStack code to create their own cloud service offerings as direct competitors to the dominant industry force, Amazon. OpenStack is governed by a non-profit foundation and is used by over 500 leading global companies, including HP, Oracle, AT&T, and Wikimedia. A 2015 Gartner report cited OpenStack's widely accepted cloud management API, broad ecosystem, adaptability, and interoperability for its success. ¹⁹ The OpenStack Foundation promotes the importance of transforming business culture to embrace the strength of transparency and collaboration with partners and customers. ²⁰



WordPress arrived on the scene in 2003, which sounds strangely recent for a service that has become so intimately ingrained into the fabric of the modern internet. The free self-hosting blogging tool that transformed itself into a ubiquitous content management platform continues to shine as a definitional example of the power of open source software. And why not—it's safe and secure, flexible, customizable, and has served as the continuous spark feeding successive waves of innovation. WordPress is an innovation accelerant to individuals, governments, and businesses large and small that provides a wealth of inspirational lessons from open source software development.



Linux, the open source operating system, transformed the possibilities for open source when it arrived on the scene in the 1990s. Challenging the likes of Microsoft and Apple for operating system supremacy was thought to be preposterous, especially from a project based on a collaborative model that was radical for the time. The ubiquity of Linux today is still staggering. As The Linux Foundation notes: "It's in your phones, in your cars, in your refrigerators, your Roku devices. It runs most of the Internet, the supercomputers making scientific breakthroughs, and the world's stock exchanges. But before Linux became the platform to run desktops, servers, and embedded systems across the globe, it was (and still is) one of the most reliable, secure, and worry-free operating systems available."²¹

¹⁹Waite, A. "Is OpenStack Ready for Mainstream Private Cloud Adoption?" Gartner, Apr 27, 2015. http://www.gartner.com/document/2976226.

²⁰ Donnelly, C. "OpenStack: "Cloud success determined by business culture, not technology."" Computer Weekly, Apr 26, 2016. http://www.computerweekly.com/news/450291450/OpenStack-Cloud-success-depends-more-on-business-culture-than-technology/.

^{21 &}quot;What is Linux?" https://www.linux.com/what-is-linux

IT TAKES A VILLAGE (OF APIs)

The road to a collaborative future of a community of providers serving business, consumer, and government needs is paved with the dominant technology trends of the day, critically including harnessing innovative offerings regardless of their company of origin through APIs, and the leveraging of continuous analytics derived from big data, all within a neutral open source development architecture. A neutral, open source development framework offers increased trustworthiness, an assurance of continuity via commercial backing, reduced cost through shared development, and significantly greater control over the development path.

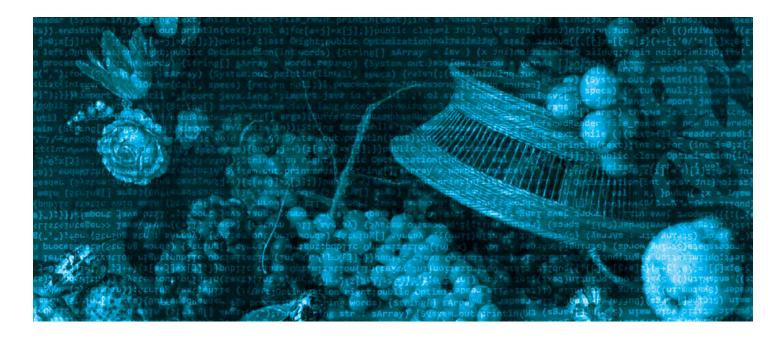
Messaging and collaboration tools such as Slack and Hip-Chat are defined by their open and collaborative nature, and they have all thrived in part by leveraging an API model from the beginning. Email systems are no strangers to APIs, as witnessed by the offerings of Amazon SES, Mailgun, SendGrid, and others. But email has lagged in API development and adoption relative to messaging, calendaring, and collaboration tools.

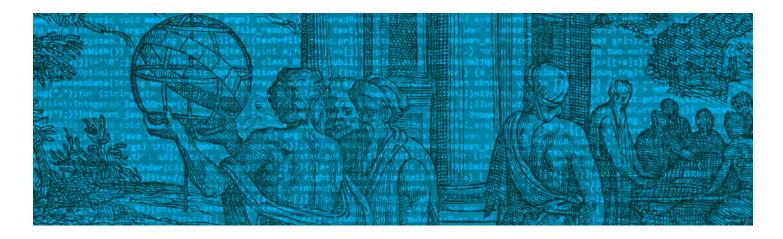
SECURITY: CEMENTING BONDS OF TRUST THROUGH COLLABORATION

There may be no single more appropriate task tailored for an open source software approach than the most important task for any email provider: security. Collaboration allows customers and partners visibility into the product for security reviews, allowing all parties to first verify, then trust. More importantly, it leverages the power of the community to identify and address security issues and respond to them quickly, as they arise. The security threat you face today is likely one faced by someone else yesterday and that will be another person's headache tomorrow. Creating a transpar-

ent framework to learn from the experiences of others toward the end of providing collective defense against security threats is perhaps the killer application.

Protecting private data is treacherous work that requires the defender win every single battle, while the attacker only has to win one. Those are high stakes indeed when it comes to protecting the personal data of your customers, and your own reputation. The power of collaboration is an essential framework from which to fight this ongoing battle.





HOSTED SOLUTIONS

Hosted email solutions are still required in a cloud-based world—specifically to serve the needs of enterprises, ISPs, and governments. Their hosting needs require strong SLA's, resilience, and reliability, none of which are commodity skills. A 2016 Gartner study showed that while cloud email services from Google and Microsoft were used by 13 percent of publicly listed companies globally, "the remaining 87 percent of companies surveyed have on-premises, hybrid, hosted or private cloud email man-

aged by smaller vendors."²² Governments, militaries, and private companies with heightened security needs present an enduring market for on-premises solutions, as do organizations that seek to leverage significant internal IT investments. Email providers that have demonstrated the ability to manage large installations, keep them current, and who have processes that codify years of experience are well-positioned to serve this persistent demand.

INTELLIGENT ADVERTISING

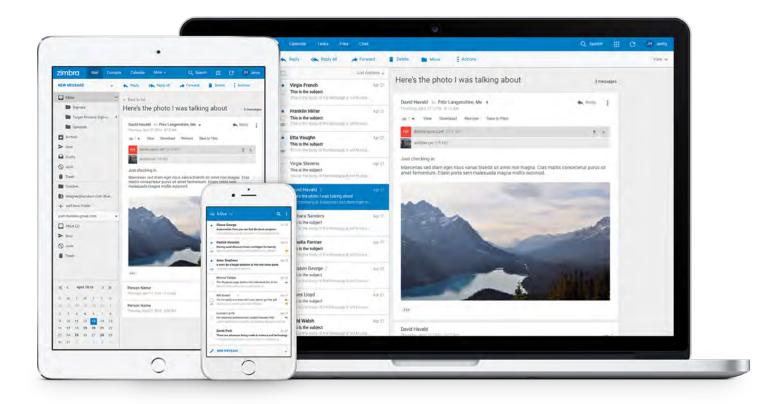
It's well-established that users want to interact with brands via email. But users want that interaction in the way they want it, when they want it, and how they want it. Intelligent modern marketing understands that consumers are not passive recipients of broadcast messages, but rather long-term partners in an ongoing trusted dialog. Striking that balance of delivering meaningful contextual marketing messages via email—while not providing too many, or delivering the wrong message to the wrong person at the wrong time—is a delicate dance that plays out in millions of individual instances every day.

A 2016 IAB report on the importance of maintaining positive user experiences with advertising revealed three key approaches for success: to transform the approach to consumers from transaction-driven to relationship-driven; to anticipate the needs and desires of users through superb UX design; and to enable creativity and innovation by taking risks with technology and data.²³ All of these concepts are directly relevant to email and collaboration tools. Email providers that succeed in the future will put user experience at the forefront of their efforts, everything from the development of SPAM filters, to building granular user controls that allow customization of what messages are allowed in and which stay out, and through promoting responsible email marketing practices through collaborative industry efforts.

^{22 &}quot;Gartner Says Cloud Email Is Gaining Traction Among Enterprises Worldwide." Gartner, Feb 1, 2016. http://www.gartner.com/newsroom/id/3196317.

^{23 &}quot;Improving Digital Advertising Experiences with Liquid Creativity." Interactive Advertising Bureau (IAB), June 16, 2016. http://www.iab.com/liquidcreativity/.





Surviving every wave of new digital technology, email remains standing at the core of critical infrastructure for the digital age. Consumers demand safe, trusted, private, modern email and collaboration tools with an endless ability to customize and extend functionality. What they receive instead is a patchwork of incompatible proprietary email systems that have proven insecure, inflexible, indiscreet, and increasingly antiquated. Consumers expect more, and it is time for email providers to step up and deliver. Email is as relevant as ever, but users will flee to other solutions if email providers fail to innovate.

Strengthening bonds with consumers via innovative services is mission critical. Users demand more from their email providers, and that demand opens doors to engage

consumers. A collaborative approach offers the promise and power to put enterprise-class communication tools in the pocket of the consumer, increase security and privacy through the power of collaboration, unlock an enormous latent market for innovation, and open the door to email as the digital communications dashboard.

At Synacor, we believe that an open source community that harnesses shared knowledge and expertise can benefit the email and collaboration software marketplace. Rethinking email innovation from the ground up means investing in the wisdom of community collaboration to realize the potential for scale, while breaking down proprietary barriers inhibiting innovation.

A collaborative approach opens the door to email as the digital communications dashboard.



Product innovation between Synacor and the open source community: This new path forward seeks to reignite and harness the power of the open source community to create a flexible, scalable, and secure email and collaboration platform filling in the gaps in modern communications infrastructure.



Security and Privacy: Consumers demand unassailable privacy and security in email. Providing this would require proprietary email providers to build new architectures. By harnessing the collective wisdom of the open source community, email providers can focus on this critical task related to security.



Operation and Cloud Expertise: Whether your private cloud, a public cloud, or Synacor's managed services, cloud architecture allows for increased choice, improved efficiency and lower costs. At the end user level, efficient cloud architectures provide increased reliability, an improved cross device experience and faster responsiveness.



Migration Capabilities: Migrating email services is difficult work that demands a partner you can trust. Any organization looking to upgrade their email services demands no downtime and turnkey capabilities that seamlessly maintain all data, contacts, calendars, and more.



Intelligent and Respectful Advertising: Email systems that rely on scraping user email content to serve contextual advertising runs counter to consumer privacy demands. Synacor offers intelligent advertising and opt-in solutions that respect and honor privacy by partnering with consumers to provide affordable solutions that will deliver better performance for advertisers and improve user trust. Zimbra can be purchased as an advertising free email platform or paired with Synacor's opt-in advertising solutions.

Email offers foundational utility and a logical center of gravity around which an open source communications platform can coalesce. We believe that employing all of these essential elements of a new information architecture will produce email and collaboration tools with state-of-the-art security and privacy, delivering operational excellence at an affordable price.

A renaissance in email services is upon us, as the power of community collaboration is capable of building something much greater than the sum of its parts. Rooted in an approach that leverages the power of API extensibility and the paradigm shift of cloud computing to deliver a secure, positive user experience, the future of email is as bright as ever.

About Synacor and Zimbra Email

Nown for managed portals and apps, advertising, email and collaboration, authentication, and end-to-end advanced video services, Synacor (Nasdaq:SYNC) is the trusted technology development, multiplatform services and revenue partner for video, internet and communications providers, device manufacturers, and enterprises. We deliver modern, multiscreen experiences and advertising to their consumers that require scale, actionable data and sophisticated implementation. Synacor enables our customers to better engage with their consumers.

Zimbra, a Synacor product, connects people and information with unified collaboration software that includes email, calendaring, file sharing, chat and video chat. We provide more than 500 million mailboxes and work with 1500 partners. More than 2500 enterprises, 1,000 governments and 120 service providers trust Zimbra, the largest provider of open source-based collaboration software in the world.





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