RINGRx

RingRx helps IT professionals deploy communications solutions

that improve workflow and security and cuts costs

RingRx is a next-generation cloud communications platform designed to simplify and improve patient-staff communications for healthcare providers in any sized organization from small independent practices to multi-location clinics, regional medical centers, hospitals, and healthcare business associates. A completely HIPAA compliant communications solution, RingRx helps practices improve communications, reduce costs and minimize errors.

Deploying RingRx in a hospital, multi location clinic, call center, or other enterprise organization can help improve operations in numerous ways. RingRx was built for a modern healthcare enterprise and is loaded with security and communications features to streamline operations and ensure compliance in high volume and complex environments.

Improve workforce efficiency with workflow oriented features

RingRx is built with the most comprehensive set of features available to help improve the way organizations work. The ultimate goal of every healthcare technology solution is to improve productivity and patient care.

RingRx helps tailor workflows at the department and staff level to reduce task inefficiencies, optimize call route functionality, and maximize patient satisfaction.

- **Mailbox Sharing –** The RingRx platform allows for users to share mailboxes. This helps empower teams to complete crossover tasks. Very efficient and helps improve supervision

- **Email notifications –** Make sure you are always aware of the latest tasks with email, voicemail and fax notifications

- **Portal faxing –** Easily send and receive faxes from any web enabled pc or mobile device

- **Web based features –** RingRx user portal gives of power to staff and management to complete tasks, analyze activity, and maintain your system for optimal performance

- **Text messaging –** Keep engaged with patients on their terms. Securely test patients (Note – for details on texting and security, request the Texting the Right Way with RingRx guide here https://ringrx.com/hipaa-compliant-text-messages/#)

- **Ring Groups –** one of the most powerful and versatile of features enables cross-sharing of incoming calls and texts to help give you the highest patient experience with lower staff burdens

- **CNAM –** Display your office, department, or user with the correct name so callers know its you and improve rapid engagement

- **Privacy and Reputation management –** Help eliminate unwanted telemarketing, robot, and other spam calls with our ingenious call blocking and filtering system.

- **Inbound routing rules –** large call centers, specialized departments, or multi-location facilities, benefit from optimal routing that improves patient experience by reducing hold times and optimizing agent performance

Unified System

Every enterprise operation in today's modern economy relies on numerous technologies and services to accomplish all the tasks their workforce needs. This is especially true in healthcare where compliance and market forces create extra obstacles and demands. RingRx helps you streamline your operation with single source solutions for the most important cycle of the business – your communications. This minimizes disruption while enhancing productivity and management oversight.

Voice – Enterprise quality high-definition voice at your desk or on the go. Empower your team with the latest in workflow features and simplicity

Fax – Fax on the web, mobile, or from a machine. Enable your staff to easily complete tasks wherever they want

Text – Secure team texting keeps your staff in touch with each other to remove obstacles to productivity. Patient engagement keeps satisfaction high and minimizes no-shows

On-Call – Eliminate costly live-agent services or inadequate voicemail hybrids and give your patients and provider team the most reliable and cost-effective after hours service available.

Mobility

Virtually nothing can empower your team with productivity enhancing benefits than providing mobility to the regular tasks they perform throughout the day. The RingRx mobile app extends powerful enterprise class communication solution to co-workers wherever they need to go. This reduces the burden of daily work and speeds up the communication.

Making routine calls, texts, and faxing are vastly simplified resulting in a more efficient workplace, more staff satisfaction, and better patient care. With RingRx all users have the option of installing the mobile app and accessing their own services.

Deployment options

RingRx is designed and built completely with the cloud in mind. Not just our cloud but any cloud. This means:

- Cloud technology agnostic. We recognize that cloud compute providers are a fabric and as a result designed the platform to be able to run on any of them.

- With a cloud native product we make no assumptions about the security of the network the platform runs in. As a result RingRx encrypts all traffic, even between platform elements, using bi-directional authentication. This ensures that even if an attacker gained access to the cloud network, still nothing could be accessed.

- Is a truly shared nothing architecture. Modern cloud design philosophy dictates that anything and everything be impermanent. This means the platform has no single point of failure, no master databases, and connections between platform elements automatically self-reconfigure in the case of failures or expansion.

RingRx can be deployed as a fully hosted cloud PBX or as a private cloud installation utilizing the enterprise's chosen method of hosting. The decision of which method of deployment depends largely on size and efficiency and the company's internal resources for managing IT infrastructure.

Hosted – RingRx offers hosted service to clinics, hospitals, regional groups, and other enterprises. Hosted solutions are secure and independently managed with our dedicated support team, regional redundancy, and rigorous security.

Private Cloud. Private Cloud deployments are provided for organizations with the need for greater control and specialized security practices. RingRx can provide support or this can be run and managed completely with internal resources.

Systems Designed for Scale and Reliability

Fully Distributed. Fully Redundant. Fully Automated.

RingRx ensures that all customer platforms run simultaneously in a minimum of 3 geographies. This doesn't mean a datacenter with a standby that requires some action. You are active simultaneously on all at the same time.

- Phones and endpoints will automatically search out and find a surviving network gateway to place and receive calls and messages with sub-second failover.

- Internal network elements are perpetually health checking all their neighbors, with aggressive dead peer detection ensuring that faltering elements are removed quickly from the traffic path. Failed transactions are retried on neighboring elements

- Platform changes are replicated in real-time throughout the fabric ensuring that all elements are always operating on the same page.

- Deployment automation prevents any element from deviating from the tested and certified working configurations. Configurations are self-checked against templates perpetually.

Built To Integrate

We recognize that RingRx is just a part of your practice management toolset. Making it easy for RingRx to talk to the rest of the tools in your toolbox adds value for providers and patients alike. We built RingRx with the API at the forefront ensuring that everything the platform can do is available for integration.

- Open standards based for ease of integration and extensibility

- Robust REST API allows for deep hooks into EMR, Practice Management Software etc.

- Event-driven callbacks allow for real time pushes of telecom information into other systems

- Powerful SMS and OnCall platforms enable patient care regardless of location or time

Built on battle hardened, fully open foundations.

RingRx is built using a number of open source frameworks and technologies tested and hardened in global telecom and cloud computing environments. RingRx uses 100% open source foundations with zero commercial code in the environment. Our commitment to open source gives us complete control of the platform at every level and ensures we can exceed all expectations.

1

FREESWITCH

Freeswitch is the media processing engine of choice due to its cloud friendly nature and flexibility as a voice SDK

2

OPENSIPS

OpenSIPS is a blindingly fast flexible and stable SIP routing engine

3

MARIADB

MariaDB is used for its potent self-healing and easily scaled galera cluster technology. The commitment to open source also assures us that the best features remain open

4

COUCHDB

Apache CouchDB storage is used both for its strong eventually-consistent replication that scale well geographically but also for its performance in handling large binary objects and flexible document storage

5

REDIS

Redis caching and distributed in-memory storage powers efficiency and speed for large scale platform coordination

6

NGINX

Boundless performance, flexibility and a broad and powerful security toolset sets Nginx head and shoulders above the rest for handling a perpetual flood of api and web requests

7

HAPROXY

Powering one-to-many high-availability relationships Haproxy allows an entirely new generation of flexible cloud services

8

ADHEARSION

Adhearsion is an advanced call control framework marrying the richness of the ruby programming language to freeswitch for advanced features and call control

Security and HIPAA Compliance

Encrypted at rest. Encrypted in flight.

RingRx has fully embraced automation with LetsEncrypt allowing us to automate and manage certificates globally. LetsEncrypt certificates wrap all public and private communications in strong NIST approved security while orchestration lets us achieve a previously unknown level of security and scalability wrapping all voice and API communications.

- All certificates are trusted by common root authorities

- Certificates maintain short lifecycles and are replaced automatically every 60 days.

- Certificates are not shared across elements. A single key breach never spreads.

Data at rest in all cases is completely encrypted and audited relying on a combination of disk/volume encryption and per record/document encryption.

- Call recordings each bear a unique encryption keyset generated per recording and stored completely separate from the recording itself, ensuring that a compromise of the recording storage cannot create a PHI breach

- All storage in the platform sits on encrypted volumes so absent the running platform nothing can be read or lifted from the hardware or storage.

- Authorized access to PHI contained in voicemails and faxes creates and indelible audit trail that is geographically distributed with the data.

Did You Know? 78% of employees show a lack of preparedness, training and resources to protect the privacy and security of sensitive information like patient data. Source: The 2017 State of Privacy and Security Awareness Report by MediaPro, a cybersecurity and privacy education organization.

Healthcare providers have a legal responsibility, under the Health Information Portability and Accountability Act, to protect every patient's personal health information. As technology continues to penetrate every facet of a modern healthcare practice, the potential for a security breach has become much more likely, and even more difficult to understand.

The RingRx approach helps alleviate this enormous burden by providing a fully HIPAA-compliant and secure cloud-based platform built specifically for the modern healthcare practice. The security of your practice is our top priority and we'll work with you closely to make sure your system is designed and configured to not only help your company perform better, but to also guarantee your compliance with minimal effort on your part.

What is HIPAA and Why is it Relevant?

Working in healthcare you probably already have a pretty good understanding of HIPAA and might even be able to answer this question yourself. If you can, great, skip ahead!
HIPAA has become a central operational and legal matter affecting every practice. Ensuring ongoing compliance with HIPAA regulations requires abundant attention and resources. HIPAA is the acronym for the Health Insurance Portability and Accountability Act. While the regulation covers several areas, the most relevant aspect of it, as it pertains to a healthcare practice, is maintaining confidentiality of patient information. This information is referred to as Protected Health Information, or "PHI." The Department of Health and Human Services ("HHS") is the federal agency responsible for implementing PHI regulation and defines it as:

"Individually identifiable health information" held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral. This information relates to:

- the individual's past, present or future physical or mental health or condition,

- the provision of health care to the individual, or

- the past, present, or future payment for the provision of health care to the

individual, and that identifies the individual or for which there is a reasonable basis to believe can be used to identify the individual. Individually identifiable health information includes many common identifiers (e.g., name, address, birth date, Social Security Number).

Compliance with this basic rule requires policies, procedures, and systems to be in place in nearly every corner of your company. Managing this alone is hard enough, but the company's responsibility does not end there. You are also responsible for making sure any vendors who may come in contact with PHI handle the information properly. These vendors are referred to as "business associates" and, as a modern healthcare company, you will undoubtedly have several. HIPAA requires all healthcare offices follow set practices and procedures with business associates to ensure you always stay in compliance with the regulation.

Exactly How Does RingRx Help ensure HIPAA Compliance?

HIPAA spells out six main areas healthcare practices must follow to remain in compliance. Compliance practices must be applied to every patient file, vendor relationship and communication in your practice.

The Six Pillars of HIPAA Compliance:

Physical security of PHI

Product security/ Password protection

Encryption

Auditing

Training

Business Associate Agreement (BAA)

RingRx follows strict protocols in these six areas to ensure that the service we provide to you is secure and always in compliance with the law. Our commitment to HIPAA-compliance helps ease the burden of healthcare practices, allowing you to return your focus to patient care.

RingRx Ensures the Physical Security of PHI

Our expert team built a unique storage architecture specifically to maintain all PHI data on encrypted hard drives. Servers maintaining this data are managed in several geographic locations to mitigate against localized failures of one or more server facilities. These data silos include any sources with PHI including voicemails, faxes, patient contact information and other personal data. Information in flight is only unencrypted when interactions with the PSTN and/or telephony endpoints require it. All other activity is encrypted and requires bidirectional authentication within the platform elements. This secure encryption protects PHI from hacking attempts, unauthorized access, and adheres to HIPAA-compliance standards.

Ongoing compliance efforts focus on ensuring all systems are managed through orchestration frameworks with constant enforcement against a known baseline to prevent massive log harvesting. By constantly monitoring our system and tracking analytics from all platform elements, we are constantly improving PHI security to achieve an effectively zero error threshold.

Secure Data and File Encryption

Our customers trust us with sensitive information including patient records and health-related voicemails. Using the methods outlined in the previous section on encryption, your RingRx account automatically encrypts all data and files transmitted and saved within your cloud-based account. You don't have to do a thing to maintain compliance so long as all communication takes place through your RingRx phone service.

The system includes full end-to-end encryption of PHI using strong encryption methods on data that is both at rest as well as in-flight. We also use aggressive encryption key rotation strategies to prevent unauthorized access of files containing PHI.

Staff Training is Essential

Encrypting and securing data are critical to ensuring a compliant cloud service, but it is not enough. If the staff involved in the daily operations of any provider's office is not aware of the sensitivity of data and the accepted practices for managing and controlling data, a breach becomes much more likely. And because 78% of employees lack data security preparedness, it's essential they be educated before interacting with any patient data.

A comprehensive and ongoing education and training program is a critical aspect for ensuring HIPAA-compliance. All staff at every healthcare practice must be trained to follow processes and procedures to ensure your office remains in compliance at all times. .

At RingRx, our entire staff undergoes rigorous and regular training of security laws and practices, internal standards and product design. Our initial training is supplemented with regular ongoing training, education, and updates to new legal interpretations.

Regular Auditing

RingRx maintains a rigorous auditing system. External audits of network systems and data custody is conducted annually, which includes deployment and maintenance practices. All infrastructure is managed using orchestration frameworks to minimize any possibility of policy deviation.

Routine automated audits are also conducted regularly and on an ongoing basis to ensure access is limited to authorized personnel only.

Sign a Business Associate Agreement (BAA)
with Every Vendor

The US Department of Health and Human Services defines a "business associate" as "a person or entity, other than a member of the workforce of a covered entity, who performs functions or activities on behalf of, or provides certain services to, a covered entity that involve access by the business associate to protected health information."

HIPAA requires healthcare providers and business associates enter into a formal agreement to affirm their relationship and the responsibilities the business associate has in protecting and safeguarding protected health information. You should have a BAA signed with every vendor who comes into contact with any amount of PHI.

Vendors that provide cloud-based PBX services, like RingRx, definitely fall under this position. Healthcare providers should ensure that any cloud-based services follow appropriate HIPAA procedures and sign a BAA as part of their normal course of business.

Does RingRx Provide a Business Associate Agreement (BAA)?

RingRx does indeed provide a BAA for every customer regardless of the size of company or scope of service. RingRx uses an approved agreement that we will complete and sign within one business day of your request. If you have your own BAA you prefer to use, please allow five business days for review and completion.

You may request your BAA using our automated form here: https://ringrx.com/business-associate-agreement-request. Or, if you have any questions or concerns about the BAA, just give us a call at **888-980-6860.**

What Protections Are Taken to Maximize Confidentiality?

Data encryption, PHI security, staff training, auditing and BAAs are all ways in which we ensure the confidentiality of patient information. But the most important protection offered to our customers is our understanding of the relationship between a healthcare provider and their patients and the role we play in that relationship.

Our goal is to make it easier and safer to communicate with patients and other healthcare staff members to help you grow your practice safely. We also implement and manage multiple layers of security within our system to prevent any attempt of unauthorized access and external threats.

What Kind of Information is Covered by HIPAA?

As previously mentioned, the information that HIPAA is most concerned about is Protected Health Information, or PHI. In communications solutions, PHI can take the form of any type of communication or data, including voice messages, text messages, fax information, provider notes, or any other kind of communication that results in stored data.

Some cloud-based communications services struggle with a lack of control over PHI stored in automated systems. That's why RingRx implements security at every level of our service where PHI could potentially be received and stored. Regardless whether it's a voicemail, a recorded call, or a physician note about a received message, everything is secure and protected within your RingRx phone system.

Conclusion

There are many factors you should consider when picking your next communications service provider and compliance is only one of them. RingRx's philosophy is to make communications and compliance for our customers an effortless exercise so they can focus on what is most important to them: Running their business. Our other features and tools will help you with that as well!

If you have any questions about the content of this whitepaper or RingRx in general, please contact us:

Telephone: 1-888-980-6860

Email: info@ringrx.com

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