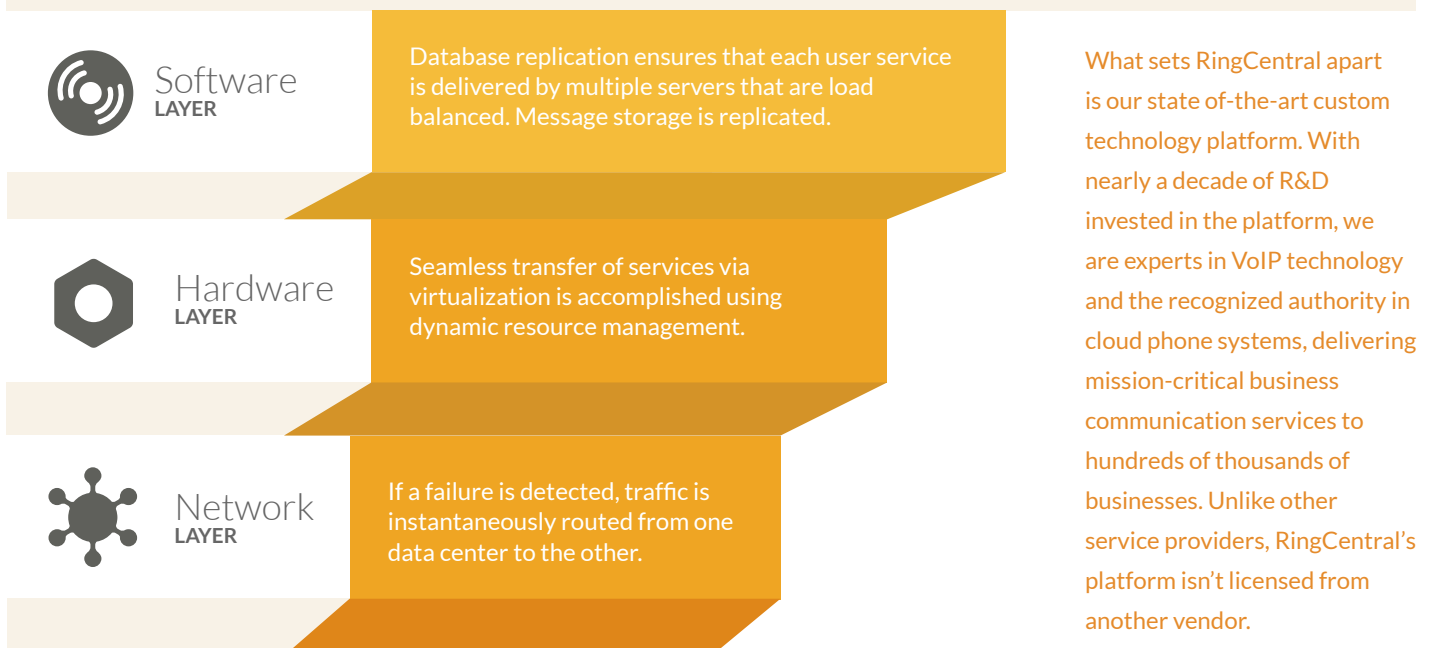# Platform Architecture and Operations

The RingCentral platform is more than a phone system. It delivers a reliable, scalable and secure platform for quality business voice and fax communication without on-premise PBX hardware.

The RingCentral Platform

RingCentral's pod architecture also offers a variety of "self healing" failsafes on every layer:

Software LAYER
Database replication ensures that each user service is delivered by multiple servers that are load balanced. Message storage is replicated.

Hardware LAYER
Seamless transfer of services via virtualization is accomplished using dynamic resource management.

Network LAYER
If a failure is detected, traffic is instantaneously routed from one data center to the other.

What sets RingCentral apart is our state of-the-art custom technology platform. With nearly a decade of R&D invested in the platform, we are experts in VoIP technology and the recognized authority in cloud phone systems, delivering mission-critical business communication services to hundreds of thousands of businesses. Unlike other service providers, RingCentral's platform isn't licensed from another vendor.

RingCentral employs three layers of network and service redundancy to help ensure our customers' phone systems are always on:

Our data centers provide the first layer of redundancy. Data between the bi-coastal locations is synchronized consistently, with latency not to exceed one minute. Each features a redundant power supply. This ensures nearly seamless operation that minimizes risk of loss and service interruption in case of geographic outages as well as natural disasters, and delivers 99.999% (five nines) site availability.

The data centers share hosted facilities space with some of the world's largest Internet companies and financial institutions. In close physical proximity to the world's top 20 Internet exchange points, they are also co-located with all the major U.S. telecommunications carriers to maintain the fastest response times and interconnect services possible.

Delivers
99.99999**%**
site availability

RingCentral | Authorized Dealer

We manage carrier-grade network operations centers (NOCs):

- 13 different service-level agreements (SLAs) are proactively monitored
- Continuous monitoring of VoIP Quality of Service (QoS)
- Mean Opinion Score (MOS) of VoIP quality greater than 4 (out of 5)

Our vendor-agnostic, commodity-based architecture is fully replaceable and fault-tolerant, providing a second layer of redundancy.

We utilize both load balancing and failover technology to keep our systems continuously up and running — a third layer of redundancy. For example, primary and secondary servers contain multiple servers that back each other up.

RingCentral's flexible N+1 architecture is the key to reliable services.

- Primary, + 1 completely redundant system to ensure availability.
- Ability to add new features and test them without disruption of service.
- Migrate existing users to new features with no loss of service.
- Rolling software upgrades.

Scalability

The RingCentral platform supports hundreds of thousands of users. It's designed to handle 2x capacity, and is currently managing over one billion minutes of voice traffic per year. The modular pod design offers remarkable flexibility and enables us to seamlessly integrate additional pods as our subscriber base continues to grow.

Unlimited numbers of new user groups can be added at any time, without the need to take the entire system offline to rebuild databases and add new servers. There are thousands of network application triggers that alert us when a reallocation of resources is required, and the entire system is constantly monitored for any bottlenecks or other blockages.

In addition, the pod architecture incorporates a virtual chassis deploying a direct-path algorithm that enables multiple individual physical switches to act as one via a high-speed link—they can couple or uncouple depending on system demands. The result is optimal traffic flow, superior flexibility, and instantaneous scalability.

Regardless of system load, the RingCentral platform is robust enough to handle unforeseen spikes in activity. And that capacity is always fully available as we also operate a full-scale laboratory environment offline to thoroughly test any network changes before we roll them out—expansion efforts never affect our customers' phone service.

Security

Once deployed, RingCentral's solutions become an integral part of the small- and medium-sized business infrastructure. Therefore, security on every level is of paramount importance.

Website

Our firewall-protected website uses secure socket layer (SSL) certificates to secure online transactions and session privacy at the end-user level.

Physical security

RingCentral's world-class data centers and servers are continually monitored 24/7 and staffed by highly trained, on-site engineering specialists as well as by security guards. Electronic prevention includes CCTV with recorders, motion detection, and fiber vaults. Entry into each data center location requires biometric identification as well as dual-person authentication, and is protected by a built-in system of "man traps". Security and safety systems are audited monthly for maximum insurance.

In general, all RingCentral features and functions are as secure as using a traditional landline telephone. See your RingCentral Authorized Dealer for details.