System Description of the Message Video Phone System

SOC 3
Relevant to Security, Availability, and Confidentiality

JANUARY 1, 2022 TO DECEMBER 31, 2022
Table of Contents

I. Independent Service Auditor’s Report 1

II. RingCentral’s Assertion 4

III. RingCentral’s Description of the Boundaries of Its Message Video Phone System 6
   A. System Overview 6
      1. Services Provided 6
      2. Infrastructure 8
      3. Software 10
      4. People 11
      5. Data 14
      6. Processes and Procedures 14
   B. Principal Service Commitments and System Requirements 15
   C. Complementary Subservice Organization Controls 16
   D. Complementary User Entity Controls 18
I. Independent Service Auditor’s Report

RingCentral, Inc.
20 Davis Dr.
Belmont, CA 94002

To the Management of RingCentral:

Scope

We have examined RingCentral’s accompanying assertion in Section II titled “RingCentral’s Assertion” (assertion) that the controls within RingCentral’s Message Video Phone System (system) were effective throughout the period January 1, 2022 to December 31, 2022, to provide reasonable assurance that RingCentral’s service commitments and system requirements were achieved based on the trust services criteria relevant to Security, Availability, and Confidentiality (applicable trust services criteria) set forth in TSP Section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria).

RingCentral uses the following subservice organizations:

- Amazon Web Services (AWS) for cloud computing environment, infrastructure services, and data storage
- Equinix for colocation services supporting production systems and network devices
- Google Cloud Platform (GCP) for technology used to support the product’s live reports feature
- Nice CXone for cloud contact center software
- Zoom for technology used to deliver RingCentral Meetings

The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at RingCentral, to achieve RingCentral’s service commitments and system requirements based on the applicable trust services criteria. The description presents the types of complementary subservice organization controls assumed in the design of RingCentral’s controls. The description does not disclose the actual controls at the subservice organization. Our examination did not include the services provided by the subservice organization, and we have not evaluated the suitability of the design or operating effectiveness of such complementary subservice organization controls.

The description indicates that complementary user entity controls that are suitably designed and operating effectively are necessary, along with controls at RingCentral, to achieve RingCentral’s service commitments and system requirements based on the applicable trust services criteria. Our examination did not include such complementary user entity controls and we have not evaluated the suitability of the design or operating effectiveness of such controls.
Service Organization’s Responsibilities

RingCentral is responsible for its service commitments and system requirements and for designing, implementing, and operating effective controls within the system to provide reasonable assurance that RingCentral’s service commitments and system requirements were achieved. RingCentral has also provided the accompanying assertion about the effectiveness of controls within the system. When preparing its assertion, RingCentral is responsible for selecting, and identifying in its assertion, the applicable trust services criteria and for having a reasonable basis for its assertion by performing an assessment of the effectiveness of the controls within the system.

Service Auditor’s Responsibilities

Our responsibility is to express an opinion, based on our examination, on whether management’s assertion that controls within the system were effective throughout the period to provide reasonable assurance that the service organization’s service commitments and system requirements were achieved based on the applicable trust services criteria. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA). Those standards require that we plan and perform our examination to obtain reasonable assurance about whether management’s assertion is fairly stated, in all material respects. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Our examination included:

- Obtaining an understanding of the system and the service organization’s service commitments and system requirements
- Assessing the risks that controls were not effective to achieve RingCentral’s service commitments and system requirements based on the applicable trust services criteria
- Performing procedures to obtain evidence about whether controls within the system were effective to achieve RingCentral’s service commitments and system requirements based the applicable trust services criteria

Our examination also included performing such other procedures as we considered necessary in the circumstances.

We are required to be independent and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to the engagement.

Inherent Limitations

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls.

Because of their nature, controls may not always operate effectively to provide reasonable assurance that the service organization’s service commitments and system requirements were achieved based on the applicable trust services criteria. Also, the projection to the future of any conclusions about the effectiveness of controls is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.
Opinion

In our opinion, management’s assertion that the controls within RingCentral’s Message Video Phone System were effective throughout the period January 1, 2022 to December 31, 2022, to provide reasonable assurance that RingCentral’s service commitments and system requirements were achieved based on the applicable trust services criteria is fairly stated, in all material respects.

San Francisco, California
March 9, 2023

Moss Adams LLP
II. RingCentral’s Assertion

We are responsible for designing, implementing, operating, and maintaining effective controls within RingCentral’s Message Video Phone System (system) throughout the period January 1, 2022 to December 31, 2022 to provide reasonable assurance that RingCentral’s service commitments and system requirements relevant to Security, Availability, and Confidentiality were achieved. Our description of the boundaries of the system is presented in Section III titled “RingCentral’s Description of the Boundaries of Its Message Video Phone System” and identifies the aspects of the system covered by our assertion.

We have performed an evaluation of the effectiveness of the controls within the system throughout the period January 1, 2022 to December 31, 2022, to provide reasonable assurance that RingCentral’s service commitments and system requirements were achieved based on the trust services criteria relevant to Security, Availability, and Confidentiality (applicable trust services criteria) set forth in TSP Section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria). RingCentral’s objectives for the system in applying the applicable trust services criteria are embodied in its service commitments and system requirements relevant to the applicable trust services criteria. The principal service commitments and system requirements related to the applicable trust services criteria are presented in Section III titled “RingCentral’s Description of the Boundaries of Its Message Video Phone System.”

RingCentral uses the following subservice organizations:

- Amazon Web Services (AWS) for cloud computing environment, infrastructure services, and data storage
- Equinix for colocation services supporting production systems and network devices
- Google Cloud Platform (GCP) for technology used to support the product’s live reports feature
- Nice CXone for cloud contact center software
- Zoom for technology used to deliver RingCentral Meetings

The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at RingCentral, to achieve RingCentral’s service commitments and system requirements based on the applicable trust services criteria. The description presents the types of complementary subservice organization controls assumed in the design of RingCentral’s controls. The description does not disclose the actual controls at the subservice organizations.

The description indicates that complementary user entity controls that are suitably designed and operating effectively are necessary, along with controls at RingCentral, to achieve RingCentral’s service commitments and system requirements based on the applicable trust services criteria. The description presents RingCentral’s complementary user entity controls assumed in the design of RingCentral’s controls.

There are inherent limitations in any system of internal control, including the possibility of human error and the circumvention of controls. Because of these inherent limitations, a service organization may achieve reasonable, but not absolute, assurance that its service commitments and system requirements are achieved.
We assert that the controls within the system were effective throughout the period January 1, 2022 to December 31, 2022, to provide reasonable assurance that RingCentral’s service commitments and system requirements were achieved based on the applicable trust services criteria.
III. RingCentral’s Description of the Boundaries of Its Message Video Phone System

A. System Overview

1. Services Provided

COMPANY OVERVIEW

RingCentral is a leading provider of global enterprise cloud communications, collaboration, and contact center solutions. RingCentral products empower employees to work better together, from any location, on any device, and via any mode, improving business efficiency and customer satisfaction. The company provides unified voice, video meetings, team messaging, digital customer engagement, and integrated contact center solutions for enterprises globally.

SYSTEM DESCRIPTION

RINGCENTRAL MESSAGE VIDEO PHONE

RingCentral Message Video Phone (RingCentral MVP) is a cloud-based business communications system with enterprise-grade voice, fax, text, online meetings, conferencing, and collaboration. RingCentral MVP integrates phone, fax, video, meetings, and messaging in one reliable, easy-to-use solution. With RingCentral MVP, customers can easily connect their office, remote, and mobile employees under one phone system, regardless of their location. Key features of RingCentral MVP include:

- Multi-tenant unified communications as a service (UCaaS) solution combining enterprise-grade telephony, team messaging and collaboration, audio conferencing, high-definition video meetings, webinars, business SMS/MMS, and fax.
- Smartphone, tablet, PC, and desk phones compatibility.
- Global coverage in 120+ countries.
- 200+ public integrations available with several leading productivity (Google, Office 365), automation (Okta, Box), customer relationship management (Salesforce, Microsoft Dynamics), and customer support (Zendesk, ServiceNow) apps.
- Open application program interfaces (API) and software development kits (SDK) for custom integrations.
- In-depth analytics designed for IT admin and line of business.
- Full range of network connectivity options to customers, including software-defined networking (SD-WAN).
RINGCENTRAL VIDEO

RingCentral Video, a component of RingCentral MVP, is a virtualized meetings experience powered by RingCentral unified communications platform. It combines high-quality video, audio, screen sharing, and team messaging into a collaborative online meeting hub—anytime, anywhere, on any device. Key RingCentral Video features include:

- High definition audio and video
- Powerful browser-based video meetings — no downloads needed
- Mobile and desktop meeting client with presence and instant messaging
- Interactive multimedia content and screen sharing cloud meetings recording
- In-meeting public and private chat
- Up to 200 interactive video participants
- Voice over Internet Protocol (VoIP) with call-in and call-out audio options
- Quality-of-service analytics and usage insights
- Background noise reduction
- Personal meeting ID
- Open APIs
- Integration with Office 365 and Google Calendar
- Integration with Microsoft Teams, Salesforce, Slack, and other business apps
- Integration with RingCentral MVP

SYSTEM BOUNDARIES

Systems within the scope of this report include production, infrastructure, software, people, procedures, and data supporting RingCentral MVP.

SUBSERVICE ORGANIZATIONS

RingCentral MVP uses the following subservice organizations:

AMAZON WEB SERVICES

Amazon Web Services (AWS) supports the RingCentral MVP cloud computing environment and provides a secure IT infrastructure for compute power, storage, and other application services over the internet, as well as storage of RingCentral Video recordings.

EQUINIX

Colocation facilities supporting RingCentral MVP production systems and network devices are protected from physical intrusion, theft, fire, flood, excessive ambient temperature, humidity, electromagnetic disturbance, and other hazards.

GOOGLE CLOUD PLATFORM

Google Cloud Platform (GCP) supports the product’s live reports feature, which allows customers to manage queues, quality of service, service level agreements (SLAs), and peak hours.
NICE

NICE CXone, a cloud-native contact center software, supports RingCentral’s customers by providing the RC Contact Center feature, which allows customers to connect via an omni-channel solution through voice, text, chat, and email.

ZOOM

RingCentral is partnered with Zoom to deliver RingCentral Meetings, providing core technology used by RingCentral with meetings hosted on both RingCentral and Zoom’s infrastructure. With the release of RingCentral Video, the proprietary video conferencing solution, RingCentral Meetings is no longer offered to new customers.

These subservice organizations are excluded from the scope of this report. The controls for which they are responsible are included in a subsequent section entitled Complementary Subservice Organization Controls.

2. Infrastructure

System descriptions delineate the boundaries of the system, describe relevant system components, and outline the purpose and design of the system. RingCentral MVP operating system and storage infrastructure is powered by modern component types.

DATA CENTERS

North America customer environments are hosted in five third-party U.S.-based data center facilities in Santa Clara, California, San Jose, California, Ashburn, Virginia, Vienna, Virginia and Chicago, Illinois. Europe customer environments are hosted in three third-party data center facilities in Amsterdam, Netherlands, Frankfurt, Germany, and Zurich, Switzerland. APAC customer environments are hosted in three third-party data center facilities in Singapore, Singapore and Tokyo, Japan. Outside of North America and Europe, customer environments are hosted in one of seven major data centers listed above depending on proximity. RingCentral customer environments and services may also be provided from third-party cloud Infrastructure-as-a-Service (IaaS) data centers in the U.S. and Europe, including us-east, us-central, us-west locations, Amsterdam, Netherlands, Frankfurt, Germany. RingCentral has no access to cloud IaaS data centers; all operations and support is provided in a remote manner.

Data centers host mission-critical computer and communications systems with redundant, fault-tolerant subsystems and compartmentalized security zones. Management maintains a security program designed to help ensure the security and integrity of customer data, protect against security threats, and prevent unauthorized access to customer data. Access is restricted to on-demand servers and networks at production and remote backup facilities. See Figure 1 and Figure 2 for diagrams of data center interconnectivity and data center network design.

NETWORK AND DATABASE ARCHITECTURE AND MANAGEMENT

RingCentral’s network and application perimeter are secured via firewalls with intrusion detection and web-application firewall features and session border controllers (SBCs). In addition, RingCentral has network load balancing that distributes web application traffic across web server farms.
RingCentral MVP databases are based on MongoDB and OracleDB. Databases are run in an active-active or high-availability configuration.

**SERVICE RESILIENCE, BACKUP AND RECOVERY**

RingCentral’s data centers are commercially available data centers with private space for RingCentral equipment. Data centers have full redundancy on production environments and RingCentral has data center switchover and failover procedures in place. In addition, the RingCentral services in the data centers are fault tolerant to each other, which enables continuity of service. With real-time, secured database replication between locations over a private production backbone, and failover built into the service, RingCentral can continue business operations and service functionality completely within one site with minimal reconfiguration.

For RingCentral MVP, RingCentral deploys SBCs for a resilient VoIP border. SBCs inspect and throttle both high volumes of VoIP and anomalous registration traffic.

For RingCentral Video, user dialing in via the RingCentral MVP application, call traffic routes through SBCs.

![FIGURE 1: OVERVIEW OF RINGCENTRAL'S DATA CENTER NETWORK DESIGN](image-url)
3. Software

**IT & SECURITY SYSTEM SOFTWARE**

RingCentral MVP is supported by the following software and types of software:

- Threat Management
- Endpoint protection antivirus
- Continuous monitoring
- Incident Response
- Intrusion detection/prevention
- Logging
- Component-based logging of system events
- Centralized log management
- Monitoring
- Health and Quality of Service (QoS) metrics
- Security-related events
- Alerting
• Application Security
• Input validation
• Application security testing
• Secure software development
• Penetration testing
• Network Protection
• Networking devices (routers, SBCs, load balancers, WAF/firewalls) with access control lists (ACLs)
• Network Intrusion detection/prevention
• Traffic (security/QoS) monitoring
• Firewalls with ACLs
• Distributed Denial of Service (DDoS) protection
• Domain Name System (DNS) and DNS monitoring
• Vulnerability Testing and Vulnerability Management
• Vulnerability scans of major system components
• System User Authentication and Access Management
• Centralized access management
• Two-factor authentication technology
• VPN (virtual private network)
• Change and Configuration Management
• Online internal CMP portal
• Ticketing system
• Testing tools
• Environmental isolation (development, testing, production)

4. People

The executive management team of RingCentral consists of 10 individuals. Their biographies are available at https://www.ringcentral.com/whyringcentral/leadership.html.

CHIEF INFORMATION SECURITY OFFICER (CISO) TEAM

The primary responsibility of the CISO team is to design, implement, and maintain information security measures for RingCentral. In addition to maintaining RingCentral’s Information Security Policy, the CISO team includes several core functions, as depicted in Figure 3, including:

• Security Operations, responsible for:
  o Overall secure hardening, configuration, vulnerability and patch management
  o Management and oversight of critical vulnerability remediation
• Security Operations Center (SOC), responsible for:
  o Monitoring and response to alerts from third-party security tools
  o Creation, monitoring and management of aggregate alarms and response
• Application Security, responsible for:
  ○ Application security reviews and oversight
  ○ Automated security testing
  ○ Internal and independent, third-party penetration testing

• Trust and Enablement, responsible for:
  ○ Implement, maintain, and operate overall third-party risk management discipline for RingCentral’s (outbound) vendors including sub-processors
  ○ Support responses to customer-driven third part risk assessment responses

• Compliance, responsible for:
  ○ Scheduling, managing RingCentral’s third-party audit and certification discipline
  ○ Manage ongoing risk assessment including enterprise level and business continuity risk assessments
  ○ Working with teams to ensure ongoing compliance with RingCentral’s security policies and standards

The following diagram (Figure 3) depicts the functional reporting within RingCentral’s CISO team.

**CISO Staff**

**FIGURE 3: RINGCENTRAL SECURITY PERSONNEL**

**OPERATIONS**

Responsible for the design, build, deployment, and maintenance of physical and virtual operating system infrastructure components, production databases, network components, and VoIP services; providing connectivity and exchange services between RingCentral and traditional carrier services, and monitoring and maintaining gateway connectivity between RingCentral and common carrier PSTNs; providing authentication services; and providing interconnection services. The Operations team consists of various teams including Architectural Operations (ArchOps), Database Administrators (DBAs), Data Center Operations (DCOPs), Cloud Operations (CloudOps), Media Architectural Operations (Media ArchOps), Telco Operations, Network Operations (NetOps), Innovation, Innovation Development, and additional assistance from the System Operations (SysOps) team. Operations also includes the Service Abuse and Fraud Management (SAFM) team, who is responsible for monitoring, and responding to alerts for service abuse or fraud.
INFORMATION TECHNOLOGY (IT)

Responsible for provisioning and managing corporate users’ identity, corporate office networks, users’ endpoints, internal corporate applications, and other corporate assets; responsible for managing the user account lifecycle for RingCentral users’ corporate network credentials. The IT team consists of Corporate IT, which includes Merger and Acquisition (M&A) Integration and IT End User Services (EUS).

SITE RELIABILITY ENGINEERING (SRE)

The SRE team is responsible for processes related to security, availability, and confidentiality of data, information, and services. Made up of three core functions (DevOps, NOC, and SysOps), the SRE team responsibilities include software system deployments including design build and configuration of production databases, network monitoring and troubleshooting, SLA compliance, incident response, system analysis and maintenance.

- **DevOps** – DevOps is responsible for deployment of software systems, i.e., application layer, products in laboratory and stage environments, in addition to the production environment. DevOps is also responsible for code deployments and for the design, build, and configuration of the production databases.

- **Network Operations Center (NOC)** – The NOC team maintains monitoring and troubleshooting services for the RingCentral networks. The NOC maintains a 24x7x365 schedule to help ensure compliance with service level agreements. The NOC is responsible for resolving or escalating any production incidents identified through its continuous monitoring of services and hosts. The NOC is further responsible for communicating incidents with external partners, customers and internal teams as required.

- **SysOps** – SysOps is responsible for the 24x7x365 maintenance of software systems and related APIs. SysOps maintains the customer-facing web components of RingCentral MVP. In addition, SysOps also responds to issue escalation and resolution from the NOC teams, systems analysis, and development review of new systems.

CUSTOMER SUPPORT

The Global Support Services (GSS) team assists customers troubleshoot account and service-usage issues. Tier 1, 2 and 3 support teams are part of the broader GSS team. Within this team are Customer Success Managers (CSM) and Customer Ad.

HUMAN RESOURCES/PEOPLE OPERATIONS

The Human Resources (HR) team, internally rebranded to “People and Place” midway through 2021, is responsible for recruiting, onboarding, training, evaluations, compensation, and development of RingCentral employees.

RingCentral maintains relationships with sub-contractors who may act as sub-processors in the performance of duties. Sub-processors execute controls on behalf of RingCentral under the oversight of RingCentral’s management. RingCentral communicates security, confidentiality, and availability requirements to its sub-contractors through its contracts. These subcontractors provide aspects of engineering, operations, development, quality assurance, and customer support.
5. **Data**

RingCentral MVP production databases contain customer data, metadata, and history data for the message, video, and phone services. RingCentral Video production databases contain video, history, and metadata.

Key types of customer content collected by RingCentral MVP include, but not limited:

- Text messages
- Faxes
- Attachments
- Voicemails
- Transcripts
- Messages
- Message Attachments
- Video recordings
- Video meeting transcripts
- Video meeting chat messages

Key types of service data collected by RingCentral MVP include, but not limited to:

- Account data (including customer name and email address)
- Usage data
- Call detail records (CDRs)
- Metadata (including time, recipient, sender, and location) associated with faxes, voicemails, and call recordings

Key types of data collected by RingCentral Video include, but not limited to:

- Chat messages
- Participants’ names
- Account IDs
- Extension IDs
- Phone numbers
- List of rooms and room statuses
- Meeting recordings

6. **Processes and Procedures**

RingCentral maintains the following key policies and procedures related to RingCentral’s security, availability, and confidentiality operations:

- Active Directory-SSL VPN Access Policy
- User Accounts Management on Databases
• Backup Retention Policy
• Security Policy
• Network Access Policy
• Access Control Procedure
• Change Management Policy
• Cybersecurity Risk Assessment Policy
• Data Classification Standard
• Data Retention Policy and Procedure
• Datacenter Switchover/Isolation and Restoration and Datacenter Outages Prevention Playbooks
• External Vulnerability Scan and Remediation Policy
• Hardening Procedures
• Incident Management Process
• Information Security Policy
• Network Access Policy
• Phone Support Call Handling and Escalation Process
• Risk Assessment Policy
• Secure Development Lifecycle (SDLC) Policy
• Security Incident Response Plan
• Vulnerability Management and Patch Management Standard

B. Principal Service Commitments and System Requirements

RingCentral policies, procedures, and processes ensure security, availability, and confidentiality of services and has established programs to help ensure compliance with various laws, regulations, and frameworks, including HIPAA Security Rule requirements, FINRA cybersecurity regulations, and National Institute of Standards and Framework’s Cybersecurity Framework (NIST CSF) standards.
RingCentral commitments to security, availability, and confidentiality are documented and communicated to customers in RingCentral’s published Information Security Addendum available through the RingCentral generally available Trust Center via RingCentral's website and upon request. Agreements with third parties and vendors include clearly defined terms, conditions, and responsibilities. Formal information-sharing agreements, such as confidentiality agreements or data processing agreements are in place with third parties and vendors who have access to customer-generated content and provide customer-facing features. In addition, third-party service providers with access to ePHI sign business associate agreements (BAAs), which require business associates to appropriately safeguard information and report any security incidents in accordance with HIPAA. Security, availability, and confidentiality commitments, between RingCentral and third parties performing services for RingCentral for its customers, are further communicated to customers in Terms of Service located on the RingCentral website, or contractual agreements signed by customers and RingCentral, such as RingCentral Master Services Agreements (MSA), including similar terms than the online Terms of Service. Each RingCentral online Terms of Services and MSA includes RingCentral Data Processing Addendum and Security Addendum, describing RingCentral’s commitment to its customers regarding security, availability, and confidentiality of their data.

C. Complementary Subservice Organization Controls

RingCentral’s controls related to the Message Video Phone System cover only a portion of overall internal control for each user entity of RingCentral. It is not feasible for the criteria related to the Message Video Phone System to be achieved solely by RingCentral. Therefore, each user entity’s internal controls must be evaluated in conjunction with RingCentral’s controls, taking into account the types of controls expected to be implemented by the subservice organization as described below.

<table>
<thead>
<tr>
<th>Complementary Subservice Organization Controls</th>
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<tbody>
<tr>
<td>1 Access to hosted systems requires users to use a secure method to authenticate.</td>
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<tr>
<td>2 User content is segregated and made viewable only to authorized individuals.</td>
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<tr>
<td>3 Network security mechanisms restrict external access to the production environment.</td>
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<tr>
<td>4 New user accounts are approved by appropriate individuals prior to being provisioned.</td>
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<tr>
<td>5 User accounts are removed when access is no longer needed.</td>
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<tr>
<td>6 User accounts are reviewed on a regular basis by appropriate personnel.</td>
</tr>
<tr>
<td>7 Access modifications to hosted systems are approved by appropriate individuals prior to being provisioned.</td>
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<tr>
<td>8 Access to physical facilities is restricted to authorized users.</td>
</tr>
<tr>
<td>9 Production media is securely decommissioned and physically destroyed prior to being removed from the data center.</td>
</tr>
<tr>
<td>10 Encrypted communication is required for connections to the production system.</td>
</tr>
<tr>
<td>11 Access to hosted data is restricted to appropriate users.</td>
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</tbody>
</table>
## Complementary Subservice Organization Controls

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>Hosted data is protected during transmission through encryption and secure protocols.</td>
</tr>
<tr>
<td>13</td>
<td>Antivirus or antimalware solutions are installed to detect or prevent unauthorized or malicious software.</td>
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<tr>
<td>14</td>
<td>System configuration changes are logged and monitored.</td>
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<tr>
<td>15</td>
<td>Vulnerabilities are identified and tracked to resolution.</td>
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<tr>
<td>16</td>
<td>Security events are monitored and evaluated to determine potential impact per policy.</td>
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<tr>
<td>17</td>
<td>Operations personnel log, monitor, and evaluate incident events identified by monitoring systems.</td>
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<tr>
<td>18</td>
<td>Operations personnel respond to, contain, and remediate incident events, and update stakeholders, as needed.</td>
</tr>
<tr>
<td>19</td>
<td>System changes are documented, tested, and approved prior to migration to production.</td>
</tr>
<tr>
<td>20</td>
<td>Access to make system changes is restricted to appropriate personnel.</td>
</tr>
<tr>
<td>21</td>
<td>Operations personnel monitor processing and system capacity.</td>
</tr>
<tr>
<td>22</td>
<td>Environmental controls protect the physical devices supporting the production environment.</td>
</tr>
<tr>
<td>23</td>
<td>System failover and backup procedures are tested.</td>
</tr>
</tbody>
</table>
D. Complementary User Entity Controls

RingCentral’s Message Video Phone System was designed under the assumption that certain controls would be implemented by the user entities for whom it provides its Message Video Phone System. In these situations, the application of specific controls at these user entities is necessary to achieve certain criteria included in this report.

This section describes additional controls that should be in operation at the user entities to complement the controls at RingCentral. User auditors should consider whether the following controls have been placed in operation by the user entity.

Each user entity must evaluate its own internal control structure to determine if the identified user entity controls are in place. User entities are responsible for:

<table>
<thead>
<tr>
<th>Complementary User Entity Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Securing communications with their email system.</td>
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<tr>
<td>2. Implementing single sign-on.</td>
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<tr>
<td>3. Their account and meeting configurations.</td>
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<tr>
<td>4. The settings on their extensions.</td>
</tr>
<tr>
<td>5. Managing their account policies, user permissions, and login information.</td>
</tr>
<tr>
<td>6. Designating an administrator extension (phone numbers).</td>
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</tbody>
</table>