



GreatHorn, Inc.

System and Organization Controls Report (SOC 3)

Independent Report of the Controls to meet the criteria for the Security, Availability, and Confidentiality categories for the period of November 1, 2019 through December 31, 2020.



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TABLE OF CONTENTS

ASSERTION OF GREATHORN, INC. MANAGEMENT.....	1
INDEPENDENT SERVICE AUDITOR’S REPORT.....	3
Scope.....	4
Service Organization’s Responsibilities.....	4
Service Auditor’s Responsibilities.....	4
Inherent Limitations.....	5
Opinion.....	5
GREATHORN, INC.’S DESCRIPTION OF ITS EMAIL SECURITY SOFTWARE AS A SERVICE SYSTEM.....	6
Section A: GreatHorn, Inc.’s Description of the Boundaries of Its email security software as a service System.....	7
Services Provided.....	7
Infrastructure.....	8
Software.....	8
People.....	8
Data.....	10
Processes and Procedures.....	10
Section B: Principal Service Commitments and System Requirements.....	11
Regulatory Commitments.....	11
Contractual Commitments.....	11
System Design.....	11

ASSERTION OF GREATHORN, INC. MANAGEMENT

ASSERTION OF GREATHORN, INC. MANAGEMENT

We are responsible for designing, implementing, operating, and maintaining effective controls within GreatHorn, Inc.'s email security software as a service system (system) throughout the period November 1, 2019, to December 31, 2020, to provide reasonable assurance that GreatHorn, Inc.'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 A 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 November 1, 2019, to December 31, 2020, to provide reasonable assurance that GreatHorn, Inc.'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*). GreatHorn, Inc.'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 B.

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 November 1, 2019, to December 31, 2020, to provide reasonable assurance that GreatHorn, Inc.'s service commitments and system requirements were achieved based on the applicable trust services criteria.

INDEPENDENT SERVICE AUDITOR'S REPORT

INDEPENDENT SERVICE AUDITOR'S REPORT

Kevin O'Brien
Chief Executive Officer
GreatHorn, Inc.
1075 Main St, Suite 210
Waltham, MA 02451

Scope

We have examined GreatHorn, Inc.'s accompanying assertion titled "Assertion of GreatHorn, Inc. Management" (assertion) that the controls within GreatHorn, Inc.'s email security software as a service system (system) were effective throughout the period November 1, 2019, to December 31, 2020, to provide reasonable assurance that GreatHorn, Inc.'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*).

Service Organization's Responsibilities

GreatHorn, Inc. is responsible for its service commitment and system requirements and for designing, implementing, and operating effective controls within the system to provide reasonable assurance that GreatHorn, Inc.'s service commitments and system requirements were achieved. GreatHorn, Inc. has also provided the accompanying assertion about the effectiveness of controls within the system. When preparing its assertion, GreatHorn, Inc. 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. 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 GreatHorn, Inc.'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 GreatHorn, Inc.'s service commitments and system requirements based on the applicable trust services criteria

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

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 GreatHorn, Inc.'s email security software as a service system were effective throughout the period November 1, 2019, to December 31, 2020, to provide reasonable assurance that GreatHorn, Inc.'s service commitments and system requirements were achieved based on the applicable trust services criteria is fairly stated, in all material respects.



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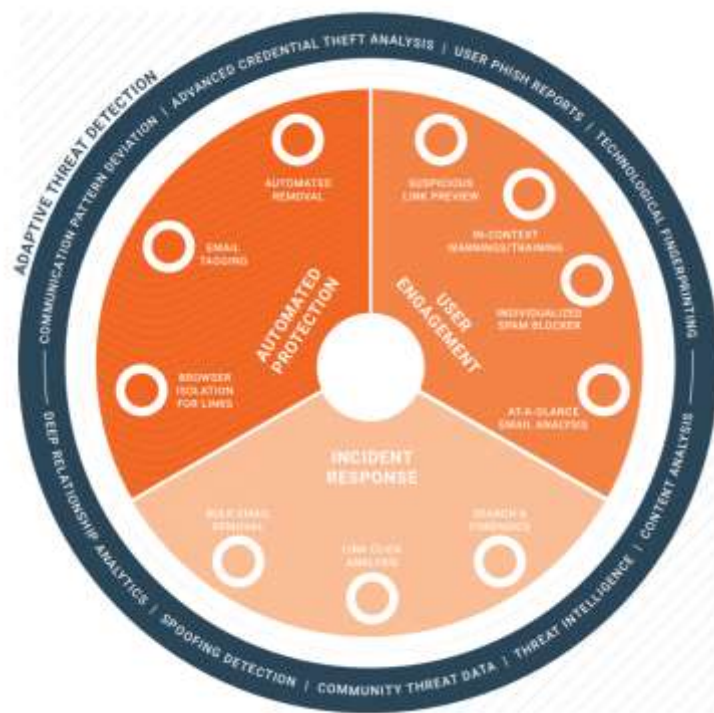
March 1, 2021

GREATHORN, INC.'S DESCRIPTION OF ITS EMAIL SECURITY SOFTWARE AS A SERVICE SYSTEM

SECTION A: GREATHORN, INC.'S DESCRIPTION OF THE BOUNDARIES OF ITS EMAIL SECURITY SOFTWARE AS A SERVICE SYSTEM

Services Provided

GreatHorn, Inc. (GreatHorn) provides an email threat detection and response software as a service (SaaS) solution that provides protection before, during, and after an email attack. GreatHorn's cloud-native SaaS is built on a foundation of machine learning and automation to protect client organizations using Office365 and Google Workspace against advanced threats, such as targeted phishing attacks and social engineering attempts aiming to compromise data, credentials, and financial resources. The solution combines threat detection, continuous monitoring, end-user education, and integrated remediation capabilities to support adaptive threat detection.



The following are the key features and benefits of GreatHorn's SaaS solution:

- A single, unified model provides comprehensive internal and external email security before, during, and after an attack.
- The solution integrates with cloud email platforms to provide protection without changing mail routing or MX records.
- The detection technology offers content analytics to identify advanced threats more accurately than reactive methods.
- User engagement tools, banners, and alerts help end users make decisions, improve business process adherence, and reduce the risk of fraud.

- Integrated incident response capabilities streamline response processes, reducing threat exposure.
- Deep forensic capabilities ensure administrators can quickly understand an incident’s full impact.

Infrastructure

GreatHorn maintains a network diagram that illustrates the components in place to support security, availability, confidentiality, and service delivery objectives. Technologies and design concepts used in the infrastructure design include separate virtual private clouds (VPCs) in AWS, a dedicated office network (not shown in the network diagram), IP whitelisting, and firewalls to segment and restrict access to internal and production infrastructure. The diagram is reviewed at least annually and updated to reflect any significant changes.

The organization also maintains an inventory of all critical system components, including virtual technologies. The inventory records the device name, type, vendor, function, operating system, and location of each item.

Software

GreatHorn maintains an inventory of the critical software components used to support its system design and functionality. The inventory records and tracks the name, version, vendor, and function of each of the following items:

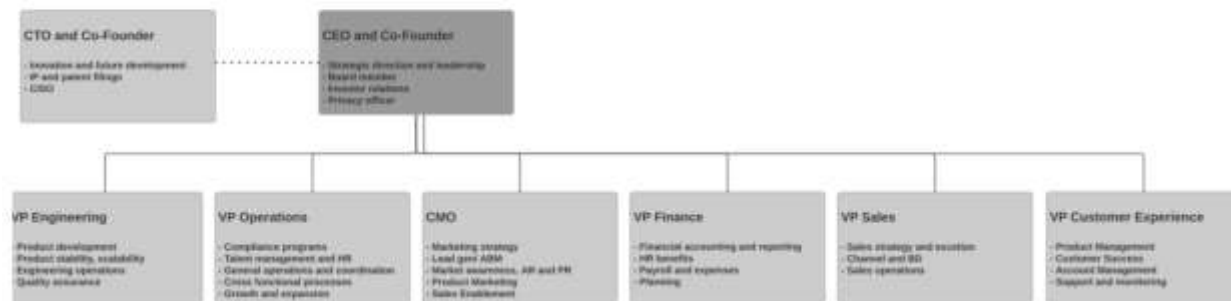
- | | | |
|-----------------|--------------|------------------|
| • AWS Console | • Helm | • RabbitMQ |
| • Azure Console | • Jira | • Redis |
| • Datadog | • Justworks | • Salesforce.com |
| • Elasticsearch | • Kubernetes | • SendGrid |
| • GHC | • Node | • SharePoint |
| • Git/GitLab | • PostgreSQL | • Spot |
| • Golang | • Python | • Threat Stack |

People

GreatHorn operates with a hierarchical structure, illustrated in the chart on the next page, that supports broad management oversight, separation of duties, and clear reporting lines. The structure is divided into seven primary operational areas—Engineering, Operations, Marketing, Finance, Sales, Business Development, and Customer Experience—led by dedicated Vice Presidents (VPs) that report to the Chief Executive Officer (CEO). The Chief Technology Officer (CTO), who also serves as the Chief Information Security Officer (CISO), exercises operational independence and reports directly to the Chief Executive Officer. The role of VP Business Development is currently unfilled.

GREATHORN ORGANIZATIONAL CHART - LEADERSHIP

updated October 2020



The organization has also identified the following roles as critical to the operation of this structure and the achievement of service delivery and security objectives:

- Account Executives
- CEO
- Chief Marketing Officer (CMO)
- Content Marketing Manager
- CTO & CISO
- Customer Success Manager
- Data Scientist
- Digital Marketing
- Director of Brand & User Experience
- Director of Cloud Operations
- Director of Customer Success
- Enterprise Account Executives
- Head of Sales Operations
- Manager of Messaging Security
- Mid-Market Account Executive
- Principal Engineers
- QA Engineers
- Sales Development Representatives
- Sales Engineer
- Sales Intern
- Senior Customer Success Manager
- Senior Quality Assurance (QA) Engineers
- Senior Software Engineers
- Software Engineers
- Senior Solutions Engineer
- Support Engineer
- VP of Customer Experience
- VP of Engineering
- VP of Operations
- VP of Finance
- VP of Sales

Data

GreatHorn collects, stores, processes, and transmits a variety of data types to provide its email security SaaS and the application programming interfaces (APIs) customers use to integrate the GreatHorn solution with log aggregation and other tools. GreatHorn periodically retrieves data for a customer from third-party services (e.g., Office365 and G-Suite) and adds it to a database provisioned for that customer. That data is then moved through a data processing pipeline that analyzes data for anomalies and known attack indicators, applies customer-defined policies, and incorporates that data into the anonymized dataset called Fingerprint. Customer-defined policies can be configured to take any of a number of actions, such as emailing administrators, quarantining emails, or modifying an email or message. Processed data is added to a search engine that allows the customer fast access to data via the GreatHorn website and APIs.

The organization uses a variety of technical mechanisms, including encryption and secure transmission protocols, to protect customer data at every stage of processing and service delivery. All at-rest data is stored in encrypted, separate customer databases using 256-bit AES encryption supported by the AWS cloud hosting service. Communication channels between GreatHorn and its hosting providers and clients are encrypted with TLS using ECDHE key exchange, 256-bit AES, and SHA-386 to ensure the integrity and security of data transmissions. Keys are generated and maintained via AWS's Key Management Service (KMS) and Sectigo. These data protection methods are tested with an internal tool, TLS Test, to validate data protection mechanisms are operating as expected.

Processes and Procedures

Management has developed and communicated procedures to guide the provision of the organization's services. Changes to procedures are performed annually and authorized by management. These procedures cover the following key security life cycle areas:

- Data classification and information categorization
- Assessment of business impacts resulting from proposed security approaches
- Selection, documentation, implementation, oversight, and assessment of security controls
- Authorization, changes to, and termination of information system access
- Monitoring security controls
- Management of access and roles
- Maintenance and support of the security system and necessary backup and offline storage
- Incident response
- Maintenance of restricted access to system configurations, user functionality, master passwords, powerful utilities, and security devices

SECTION B:

PRINCIPAL SERVICE COMMITMENTS AND SYSTEM REQUIREMENTS

Regulatory Commitments

Due to the nature of the services it provides and the industries of some clients, GreatHorn is impacted by the following regulatory measures:

- GreatHorn is considered a data processor under the European Union (EU) General Data Protection Regulation (GDPR).
- The organization is considered a service provider under the California Consumer Privacy Act (CCPA).
- GreatHorn signs business associate agreements to meet the requirements of its clients impacted by the Health Insurance Portability and Accountability Act (HIPAA).

GreatHorn has designed its service system, contractual materials, and internal control programs to meet its service delivery and data security and privacy obligations under these regulatory measures.

Contractual Commitments

GreatHorn uses contractual materials, including terms of service, to define the type and scope of its service commitments to clients. Contractual materials may be tailored to individual client needs but generally include sections on the following topics:

- Subject matter of processing
- Duration of processing
- Categories of data subjects
- Nature and purpose of processing
- Types of personal information
- Client acceptable use policy
- Support policy, including request prioritization and resolution commitments
- Service level agreements (SLAs)

System Design

GreatHorn designs its email security SaaS system to meet its regulatory and contractual commitments. These commitments are based on the services that GreatHorn provides to its clients, the laws and regulations that govern the provision of those services, and the financial, operational, and compliance requirements that GreatHorn has established for its services. GreatHorn establishes operational requirements in its system design that support the achievement of its regulatory and contractual commitments. These requirements are communicated in GreatHorn's system policies and procedures, system design documentation, and contracts with clients.