Vitalware, LLC
Owned by Health Catalyst, 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 June 1, 2020 through May 31, 2021.

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ASSERTION OF VITALWARE, LLC MANAGEMENT

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We are responsible for designing, implementing, operating, and maintaining effective controls within Vitalware, LLC's mid-revenue cycle software-as-a-service system (system) throughout the period June 1, 2020, to May 31, 2021, to provide reasonable assurance that Vitalware, LLC'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 June 1, 2020, to May 31, 2021, to provide reasonable assurance that Vitalware, LLC'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*). Vitalware, LLC'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 June 1, 2020, to May 31, 2021, to provide reasonable assurance that Vitalware, LLC's service commitments and system requirements were achieved based on the applicable trust services criteria.

INDEPENDENT SERVICE AUDITOR'S REPORT

Dan Burton
CEO
Health Catalyst, Inc. (formerly Vitalware, LLC)
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Scope
We have examined Vitalware, LLC's accompanying assertion titled "Assertion of Vitalware, LLC Management" (assertion) that the controls within Vitalware, LLC's mid-revenue cycle software-as-a-service system (system) were effective throughout the period June 1, 2020, to May 31, 2021, to provide reasonable assurance that Vitalware, LLC'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
Vitalware, LLC 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 Vitalware, LLC's service commitments and system requirements were achieved. Vitalware, LLC has also provided the accompanying assertion about the effectiveness of controls within the system. When preparing its assertion, Vitalware, LLC 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 Vitalware, LLC'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 Vitalware, LLC'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 Vitalware, LLC's mid-revenue cycle software-as-a-service system were effective throughout the period June 1, 2020, to May 31, 2021, to provide reasonable assurance that Vitalware, LLC'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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August 16, 2021

VITALWARE, LLC'S DESCRIPTION OF ITS MID-REVENUE CYCLE SOFTWARE-AS-A-SERVICE SYSTEM

SECTION A:

VITALWARE, LLC'S DESCRIPTION OF THE BOUNDARIES OF ITS MID-REVENUE CYCLE SOFTWARE-AS-A-SERVICE SYSTEM

Services Provided

Vitalware, LLC (Vitalware) provides healthcare, mid-revenue cycle management solutions, data and consulting services, and expert consulting for health systems, hospitals, physicians, and healthcare revenue cycle-solutions providers. The organization's mid-revenue, cycle-solutions scale supports hospitals of all sizes. It also drives positive financial outcomes that protect reimbursement and reputation with an accurate chargemaster and help financial professionals discover and capture missing revenue.

The organization was acquired by Health Catalyst, Inc in 2020 and remain a dedicated business unit under the organizational structure that makes up the larger enterprise. The combined people, process, and technology were evaluated and assessed under the scope as hereto explained.

The systems supporting the services are all housed in the United States. Systems are physically housed in TierPoint colocation facilities in Seattle and Austin. Additional support and development staff are in Uruguay.

Client access to systems is facilitated through Internet Protocol Security (IPsec) virtual private network (VPN) tunnels, IP-whitelisted File Transfer Protocol (FTP), Hypertext Transfer Protocol (HTTP) services, and generally available web-based applications. Clients sign agreements for services, including a master services agreement (MSA), business associates agreements (BAA), and an order form outlining general and specific delivery requirements. Agreements outline general security, confidentiality, and compliance commitments. Customer service and account management teams work with clients during the onboarding process to define appropriate services to provide specifications for data inflows and outflows from the system. In addition, Vitalware has professional services that are available in some business lines to provide additional onboarding and ongoing services to assist customers in implementing and operating the systems provided.

Descriptions of the various service applications and support services are described in more detail in the following sections.

VitalKnowledge™

VitalKnowledge provides clients with a single source for advanced coding, regulatory, and reimbursement resources. VitalKnowledge maintains reference information related to revenue management. Vitalware provides users, including compliance, revenue cycle, and coding teams, with timely automatic updates on comprehensive and current coding, regulatory and financial information that is critical to achieving accurate, compliant coding and reimbursement.

VitalCDM™

VitalCDM was designed to improve visibility into clients' chargemasters for healthcare-related services and supplies and increase staff productivity. It includes functionality for daily workflow

and reporting with corporate standardization and provides detailed insights into issues to decrease compliance risk, increase efficiency, and ensure appropriate reimbursement.

Charge Capture

Charge Capture was designed to address pre- and post-billing reviews to identify errors and provide improvement opportunities.
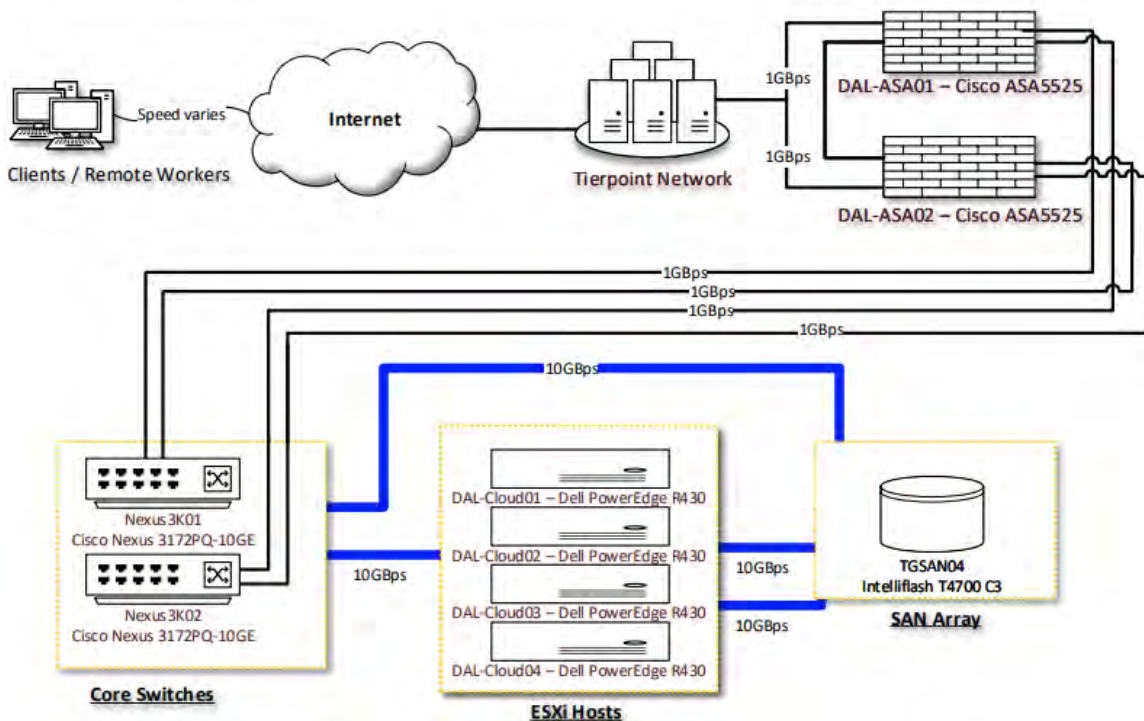
Price Transparency

Price Transparency publishes regulatory required pricing information based on the organization's standard charges.
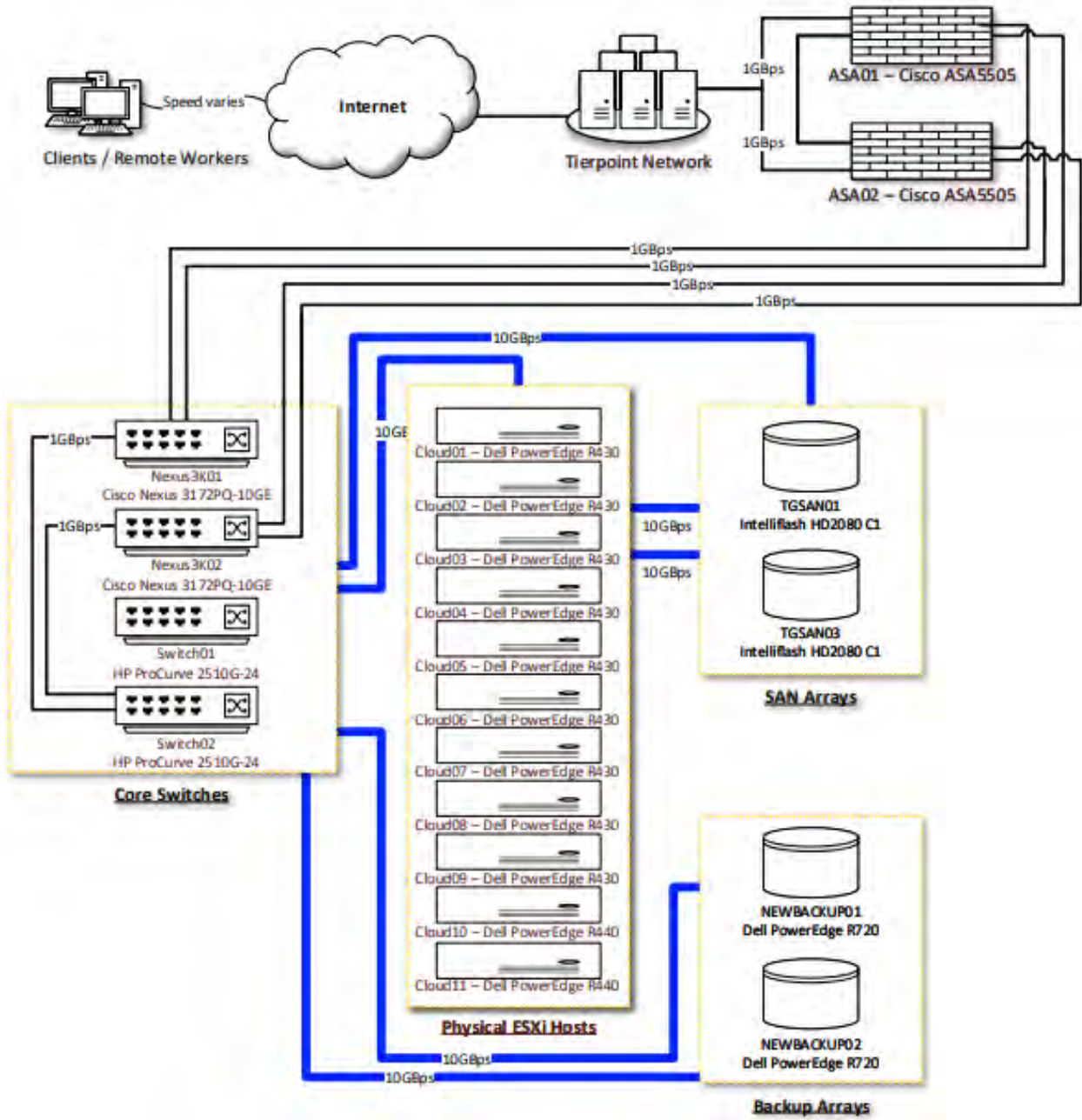
Infrastructure

Vitalware maintains a network diagram that showcases the organization's technical infrastructure and critical network infrastructure. The network diagram is reviewed, updated, and approved by the IT staff annually or when changes are made. Sensitive systems are isolated from other systems using virtual local area networks (VLANs) and firewalls that segment VLANs.

The organization's Information Security Management System Policy addresses how Vitalware maintains an inventory of systems automatically by system management software.

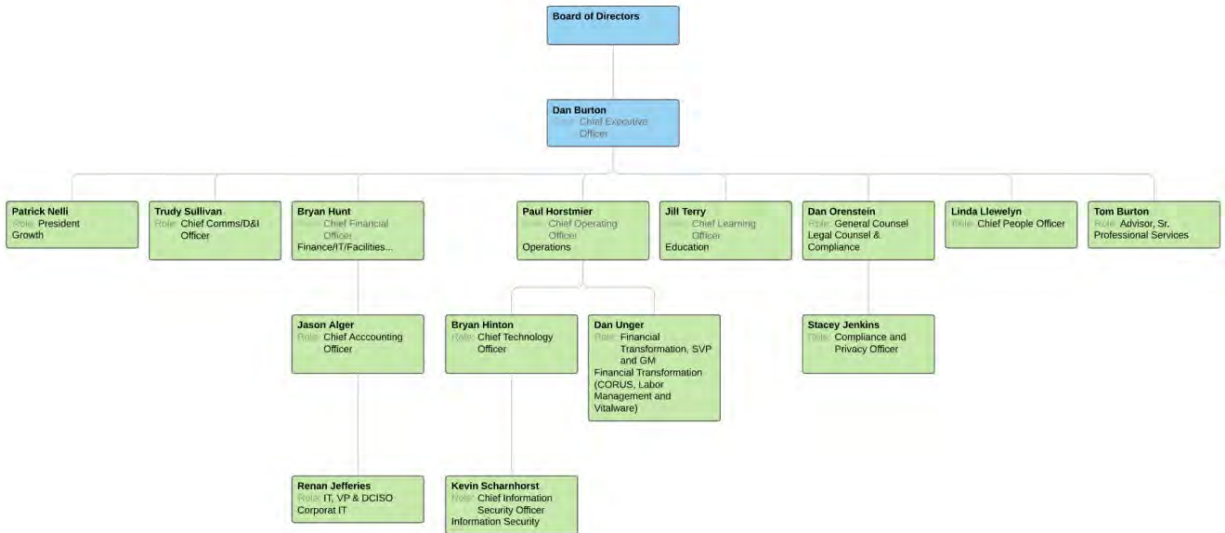| DEPT / TITLE:		RESPONSIBLE PARTY:
		Dan DiMarco
IT: Seattle Datacenter Network Architecture Diagram		CREATED ON:
		01/07/2020
PAGE:	REVISION HISTORY:	REVISED ON:
1 OF 1	01/04	05/14/2021

Software

Vitalware maintains a complete inventory of the software used to support the operation of its technical infrastructure and day-to-day operations activities. The inventory records the name, version, vendor, and function, and is maintained manually with information available from workstation management software and production environment configuration management. Vitalware's software service providers include the following:

- ADAudit Plus
- App Orchard
- Axure RP Pro
- Bitdefender
- ColdFusion
- Confluence
- CrashPlan
- EF Plan Enterprise
- Elasticsearch
- Ext JS Premium Maintenance and Support
- Flare
- GitLab
- Insight
- Jira Service Desk
- Jira Software
- Kendo UI
- Kibana
- Mashery
- Mongo
- MS Visual Studio
- MS Visual Studio Code
- Netwrix
- NextGen Connect
- Octopus Deploy
- Pingdom
- Postman Pro
- Salesforce
- ScreenConnect
- Slack
- Smartsheet
- SQL Compare Professional/SQL Data Compare
- SQL Server
- Studio 3T
- TeamCity
- TestRail
- TrackVia
- TruCode
- Udemy Enterprise Plan
- Veeam
- VMware
- Windows Server 2019 Upgrade
- ZixMail
- Zoom

People

Vitalware maintains an organizational chart that shows divisions operating under executive leadership with executive leadership reporting to the Chief Executive Officer (CEO). The Vitalware organizational chart addresses the organization's traditional hierarchy structure and the relationship between executive management and information security oversight through the Chief Technology Officer (CTO). The organization is built on a framework of senior executive leadership, executive leadership, management, departments, and employees.

Vitalware's security team reports to the same division as the disk operating system (DOS) operations team and all other service teams report to different divisional leadership based on the alignment of the service with the organization's strategic vision. The security team oversees the security and compliance efforts for all product lines.

Vitalware was acquired by Health Catalyst, Inc. during the audit period, and Health Catalyst immediately assumed oversight of the organization. Vitalware acts as a financial services business unit of Health Catalyst, Inc. Health Catalyst, Inc. is publicly traded, and its board of directors consists of appointed members who are responsible for the direction of the organization and have the final decision-making authority. Members of the board of directors are kept informed about information security controls and issues.
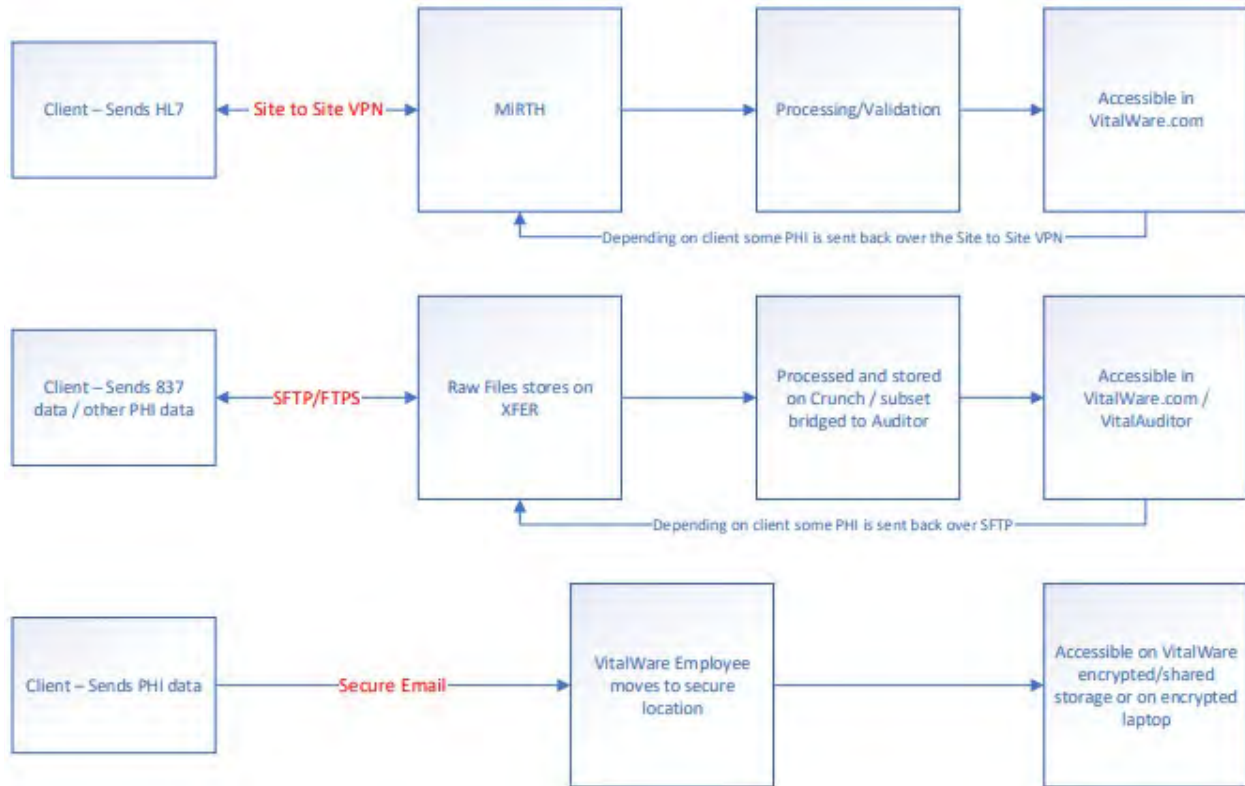
Data

The organization identifies and classifies data captured by Vitalware as either confidential, internal, or public. Vitalware's data is primarily healthcare-related and includes electronic protected health information (ePHI) and client activities with its data include the following:

- Data entry and uploading
- Data analytics
- Data exchange with client-side systems
- Data reporting and extracts, including application programming interface (API) and Secure File Transfer delivery

The organization identifies data flows and handles data in compliance with Vitalware's data classification policies and general best practices.

Vitalware's Data Flow Diagram shows how data enters and leaves the control of the organization and includes Health Level Seven (HL7) exchange files, other data files via Secure Shell (SSH) File Transfer Protocol (FTP), and data inbound via secure email. Data processing results in data outputs of file exchanges and user interfaces in Vitalware's web applications.

The organization classifies data to determine data-handling parameters, including retention and storage requirements. In addition, Vitalware stores, processes, and transmits data related to protected health information and is subject to HIPAA compliance as a business associate. Client commitments are documented in contracts and addressed by implementing appropriate data security and retention controls.

The organization maintains encryption for all sensitive data across public and untrusted networks. Encryption is the primary means of data integrity protection in transit. Vitalware's data transmission is limited to HTTPS, SSH protocol, and VPN. Data access methods only use encrypted protocols. The organization implements encryption strengths of Advanced Encryption Standard (AES) 128 for transmission and AES 256 for storage.

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
- Categorization of information
- Assessment of the business impact resulting from proposed security approaches
- Selection, documentation, and implementation of security controls
- Performance of annual management self-assessments to assess 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

Regulatory Commitments

Due to the type of data Vitalware collects, stores, processes, and transmits, the organization is primarily impacted by the Health Insurance Portability and Accountability Act (HIPAA) and strives to maintain security control programs commiserate with those accepted by the healthcare industry. A combination of control design and implementation, compliance and security oversight, contractual safeguards, and technologies are used to support compliance with HIPAA and industry standards. Reviews of the organization's regulatory compliance is completed by HITRUST certification and annual compliance reviews, both internal and third-party.

Contractual Commitments

Vitalware commits to reasonable efforts for availability and uptime, using contractual materials to define its service commitments to clients. Contractual materials are tailored to individual client needs but generally include sections on software licensing and details on selected consultation services.

The organization promises clients a 99.8% uptime outside of schedule maintenance, commits service levels for uptime, and monitors service delivery. Vitalware employees engage constantly and operate a small call center to support after hours calls and alert staff of outages. The organization's colocation centers provide a reliable physical environment for the servers to operate.

System Design

Vitalware designs its mid-revenue cycle software-as-a-service (SaaS) system to meet its regulatory and contractual commitments. These commitments are based on the services that Vitalware provides to its clients, the laws and regulations that govern the provision of those services, and the financial, operational, and compliance requirements that Vitalware has established for its services. Vitalware establishes operational requirements in its system design that support the achievement of its regulatory and contractual commitments. These requirements are communicated in Vitalware's system policies and procedures, system design documentation, and contracts with clients.