



Proprietary & Confidential



Fraud Dispute Offerings

SOC 2

Report on Quavo's System and Organization Controls
Relevant to Security



APRIL 1, 2021 TO SEPTEMBER 30, 2021

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I. Independent Service Auditor's Report



Quavo
300 M.A.C. Ave.
Suite 210
East Lansing, MI 48823

To the Management of Quavo:

Scope

We have examined Quavo's accompanying description of its Fraud Dispute Offerings in Section III titled "Quavo's Description of Its Fraud Dispute Offerings" throughout the period April 1, 2021 to September 30, 2021 (description) based on the criteria for a description of a service organization's system in DC Section 200, *2018 Description Criteria for a Description of a Service Organization's System in a SOC 2® Report* (AICPA, *Description Criteria*) (description criteria) and the suitability of the design and operating effectiveness of controls stated in the description throughout the period April 1, 2021 to September 30, 2021, to provide reasonable assurance that Quavo's service commitments and system requirements were achieved based on the trust services criteria for Security (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*).

The information included in Section V titled "Other Information Provided by Quavo That Is Not Covered by the Service Auditor's Report" is presented by Quavo management to provide additional information and is not a part of Quavo's description. Information about Quavo's Management's Response to Identified Testing Exceptions has not been subjected to the procedures applied in the examination of the description and of the suitability of the design and operating effectiveness of the controls to achieve Quavo's service commitments and system requirements based on the applicable trust services criteria, and accordingly, we express no opinion on it.

Quavo uses a subservice organization for cloud hosting and infrastructure. The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at Quavo, to achieve Quavo's service commitments and system requirements based on the applicable trust services criteria. The description presents Quavo's controls, the applicable trust services criteria, and the types of complementary subservice organization controls assumed in the design of Quavo'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 Quavo, to achieve Quavo's service commitments and system requirements based on the applicable trust services criteria. The description presents Quavo's controls, the applicable trust services criteria, and the complementary user entity controls assumed in the design of Quavo's controls. 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

Quavo 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 Quavo's service commitments and system requirements were achieved. Quavo has provided the accompanying assertion in Section II titled "Quavo's Assertion" (assertion) about the description and the suitability of design and operating effectiveness of controls stated therein. Quavo is also responsible for preparing the description and assertion, including the completeness, accuracy, and method of presentation of the description and assertion; providing the services covered by the description; selecting the applicable trust services criteria and stating the related controls in the description; and identifying the risks that threaten the achievement of the service organization's service commitments and system requirements.

Service Auditor's Responsibilities

Our responsibility is to express an opinion on the description and on the suitability of the design and operating effectiveness of the controls stated in the description based on our examination. 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, in all material respects, the description is presented in accordance with the description criteria and the controls stated therein were suitably designed and operated effectively to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

An examination of the description of a service organization's system and the suitability of the design and operating effectiveness of controls involves the following:

- Obtaining an understanding of the system and Quavo's service commitments and system requirements
- Assessing the risks that the description is not presented in accordance with the description criteria and that controls were not suitably designed or did not operate effectively
- Performing procedures to obtain evidence about whether the description is presented in accordance with the description criteria



- Performing procedures to obtain evidence about whether the controls stated in the description were suitably designed to provide reasonable assurance that the service organization achieved its service commitments and system requirements based on the applicable trust services criteria
- Testing the operating effectiveness of the controls stated in the description to provide reasonable assurance that the service organization achieved its service commitments and system requirements based on the applicable trust services criteria
- Evaluating the overall presentation of the description

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

Inherent Limitations

The description is prepared to meet the common needs of a broad range of report users and may not, therefore, include every aspect of the system that individual users may consider important to meet their informational needs.

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 are achieved based on the applicable trust services criteria. Also, the projection to the future of any conclusions about the suitability of the design and operating 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.

Description of Tests of Controls

The specific controls we tested and the nature, timing, and results of our tests are listed in Section IV of this report titled "Trust Services Category, Criteria, Related Controls, and Tests of Controls."

Opinion

In our opinion, in all material respects:

- the description presents Quavo's Fraud Dispute Offerings that was designed and implemented throughout the period April 1, 2021 to September 30, 2021, in accordance with the description criteria.
- the controls stated in the description were suitably designed throughout the period April 1, 2021 to September 30, 2021 to provide reasonable assurance that Quavo's service commitments and system requirements would be achieved based on the applicable trust services criteria, if the controls operated effectively throughout that period, and if the subservice organization and user entities applied the complementary controls assumed in the design of Quavo's controls throughout that period.
- the controls stated in the description operated effectively throughout the period April 1, 2021 to September 30, 2021 to provide reasonable assurance that Quavo's service commitments and system requirements were achieved based on the applicable trust services criteria, if complementary subservice organization controls and complementary user entity controls assumed in the design of Quavo's controls operated effectively throughout that period.



Restricted Use

This report, including the description of tests of controls and results thereof in Section IV, is intended solely for the information and use of Quavo, user entities of Quavo's Fraud Dispute Offerings during some or all of the period April 1, 2021 to September 30, 2021, business partners of Quavo subject to risks arising from interactions with the Fraud Dispute Offerings, practitioners providing services to such user entities and business partners, prospective user entities and business partners, and regulators who have sufficient knowledge and understanding of the following:

- The nature of the service provided by the service organization
- How the service organization's system interacts with user entities, business partners, subservice organizations, and other parties
- Internal control and its limitations
- Complementary user entity controls and complementary subservice organization controls and how those controls interact with the controls at the service organization to achieve the service organization's service commitments and system requirements
- User entity responsibilities and how they may affect the user entity's ability to effectively use the service organization's services
- The applicable trust services criteria
- The risks that may threaten the achievement of the service organization's service commitments and system requirements and how controls address those risks

This report is not intended to be, and should not be, used by anyone other than these specified parties.

MOSS ADAMS LLP

San Francisco, California
December 21, 2021

II. Quavo's Assertion

We have prepared the accompanying description of Quavo's Fraud Dispute Offerings in Section III titled "Quavo's Description of Its Fraud Dispute Offerings" throughout the period April 1, 2021 to September 30, 2021 (description) based on the criteria for a description of a service organization's system in DC Section 200, *2018 Description Criteria for a Description of a Service Organization's System in a SOC 2® Report* (AICPA, *Description Criteria*) (description criteria). The description is intended to provide report users with information about the Fraud Dispute Offerings that may be useful when assessing the risks arising from interactions with Quavo's Fraud Dispute Offerings, particularly information about system controls that Quavo has designed, implemented, and operated to provide reasonable assurance that its service commitments and system requirements were achieved based on the trust services criteria relevant to Security (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*).

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

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

We confirm, to the best of our knowledge and belief, that:

- the description presents Quavo's Fraud Dispute Offerings that was designed and implemented throughout the period April 1, 2021 to September 30, 2021, in accordance with the description criteria.
- the controls stated in the description were suitably designed throughout the period April 1, 2021 to September 30, 2021 to provide reasonable assurance that the Quavo service commitments and system requirements would be achieved based on the applicable trust services criteria, if the controls operated effectively throughout the period, and if the subservice organization and user entities applied the complementary controls assumed in the design of Quavo's controls throughout that period.
- the controls stated in the description operated effectively throughout the period April 1, 2021 to September 30, 2021 to provide reasonable assurance that Quavo's service commitments and system requirements were achieved based on the applicable trust services criteria, if complementary subservice organization controls and complementary user entity controls assumed in the design of Quavo's controls operated effectively throughout that period.



III. Quavo's Description of Its Fraud Dispute Offerings

A. Services Provided

COMPANY OVERVIEW

Quavo, Inc. is a fintech provider of industry-leading, automated dispute management solutions to issuing financial institutions. Quavo's disputes-as-a-service offering features automated software, artificial intelligence (AI) technology, and human intelligence services for financial organizations of all sizes. Quavo's goal is to establish and advance the industry standard in fraud and dispute management by instituting best-in-class principles, delivering unparalleled technology, and advocating for change in the community. Quavo's vision is to challenge industry norms through automation, innovation, and collaboration, delivering leading dispute management solutions that support and empower the fintech community while also inspiring the next generation of financial services technologists.

Quavo believes in providing a supportive and collaborative environment where the best financial and tech minds work together to drive client success, and providing groundbreaking dispute management software and solutions.

SYSTEM DESCRIPTION

Quavo's automated dispute management software, Quavo Fraud & Disputes (QFD), is the only end-to-end dispute management platform to support all transaction types, facilitate cross-departmental communication, and integrate with virtually any banking platform. QFD automates workflows, Reg E, Reg Z, and Nacha compliance, and network mandates in one easily accessible system. Features like self-service, Spanish intake, and all account holder communications are also supported, allowing QFD to integrate with current processes and corporate guidelines seamlessly. The dispute management AI completely automates the dispute resolution process.

ARIA is the industry's only AI that performs the investigation, as a human would, collecting all the data required by law for a successful resolution. ARIA applies tried and tested algorithms to virtually eliminate the challenges and complexities of this heavily regulated process.

Quavo also provides add-ons to its QFD software, namely Dispute Resolution Experts, the human intelligence service. Quavo's Dispute Resolution Experts manage back-office tasks for clients looking to outsource or supplement back-office staff. Clients maintain account-facing interactions, and everyone operates on the QFD platform.

B. System Boundaries

The system boundaries for consideration within the scope of this report are the production systems, infrastructure, software, people, procedures, and data supporting the Quavo Fraud & Disputes (QFD), ARIA and Dispute Resolution Experts, collectively the Fraud Dispute Offerings (System).

Quavo offers the Fraud Dispute Offerings in both hosted and customer on-premises versions. On-premises versions, or customer installations of the Quavo Fraud Dispute Offerings, are excluded from the scope of this report.



C. Subservice Organizations

Quavo uses Amazon Web Services (AWS) for cloud hosting and infrastructure. This subservice organization is excluded from the scope of this report; the controls it is expected to provide are included in the subsequent section titled Complementary Subservice Organization Controls.

D. Principal Service Commitments and System Requirements

Quavo designs its processes and procedures to meet its security objectives. Those objectives are based on the service commitments that Quavo makes to user entities and the financial, operational, and compliance requirements that Quavo has established for the System.

Security commitments to user entities and customers, and a description of the System, are documented within and communicated through the Quavo online Terms of Use.

E. Components of the System Used to Provide the Services

1. Infrastructure

Quavo's System is a Software-as-a-Service (SaaS) cloud-based system. The primary components of the system are built on top of AWS and is built using the following services:

AWS Service	Function
AWS CloudFormation	AWS CloudFormation is a service that helps model and set up AWS resources.
Amazon CloudFront	Amazon CloudFront is a web service that speeds up distribution of the static and dynamic web content.
Amazon CloudWatch	Amazon CloudWatch collects monitoring and operational data in the form of logs, metrics, and events and provides a unified view of AWS resources, applications, and services that run on AWS.
Amazon Cognito	Amazon Cognito provides authentication, authorization, and user management of web and mobile apps.
Amazon DynamoDB	Amazon DynamoDB is a fully managed NoSQL database service.
Amazon Elastic Compute Cloud (EC2)	Amazon EC2 is a web service that provides secure, resizable compute capacity in the cloud.
Amazon Elastic File System (EFS)	Amazon EFS provides a simple, serverless, set-and-forget elastic file system to share file data without provisioning or managing storage.



AWS Service	Function
Amazon Relational Database Service (RDS)	Amazon RDS is a web service used to operate relational databases in the AWS cloud.
Amazon Route 53	Amazon Route 53 is a scalable cloud Domain Name System (DNS) web service.
Amazon Simple Storage Service (S3)	Amazon S3 is virtual storage used in conjunction with Amazon EC2 to store object data. Amazon S3 is also used to automatically replicate data across AWS regions.
Amazon Virtual Private Cloud (VPC)	Amazon VPC is used to provision logically isolated virtual networks in the AWS Cloud. Amazon VPC is used to manage the virtual networking environment, including selection of IP address ranges, creation of subnets, and configuration of route tables and network gateways.
AWS Cloud9	AWS Cloud9 is a cloud-based integrated development environment (IDE) to write, run, and debug code with just a browser.
AWS Identity and Access Management (IAM)	AWS IAM enables users to create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources.
AWS Key Management Service (KMS)	AWS KMS makes it easy to create and manage cryptographic keys and control their use across a wide range of AWS services.
AWS Lambda	AWS Lambda is a serverless compute service for running code without provisioning or managing servers, creating workload-aware cluster scaling logic, maintain event integrations, or managing runtimes.
AWS Secrets Manager	AWS Secrets Manager is a secrets management service that helps protect access to applications, services, and IT resources.
AWS Systems Manager	AWS Systems Manager gives visibility and control over infrastructure in AWS.
AWS Web Application Firewall (WAF)	AWS WAF is a web application firewall that helps protect web applications or APIs against common web exploits that may affect availability, compromise security, or consume excessive resources.



2. Software

The System is built using the Pega platform, which generates Java source code. ARIA is built using AWS serverless tools.

Additionally, the following vendor software is used to help manage the System:

Vendor Software	Function
Bitbucket	Bitbucket is a Git-based source code repository hosting service.
Datadog	Datadog is a monitoring service for cloud-scale applications, providing monitoring of servers, databases, tools, and services, through a SaaS-based data analytics platform.

3. People

The control framework that supports Quavo’s organizational environment starts with its executive team. The following are key roles involved in control implementation and maintenance:

- Chief Executive Officer (CEO)
- Chief Financial Officer (CFO)
- Chief Operating Officer (COO)
- Chief Technology Officer (CTO)

Responsibility for Quavo’s information security resides with the CTO. In addition to the overall governance provided by the executive team, the following teams play a key role in the execution of controls:

- *Engineering* – The Engineering team is responsible for software development.
- *Human Resources (HR)* – The HR team is responsible for employee onboarding, setting policies, and employee reviews.
- *Security* – The Security team is responsible for security of the applications and service data.

4. Data

Within the System, service data includes names, phone numbers, email addresses, mailing addresses, and other similar information and data retrieved from customer systems of record, such as Visa and Mastercard.



5. Processes and Procedures

Quavo has developed and communicated to its personnel procedures to protect service data and the company's assets. Procedures are documented and updated on the company intranet to help ensure personnel are informed and equipped to perform their duties to preserve the security of the System and the service data. These procedures include the following policies:

- Acceptable Use
- Asset Management
- Change Management / Separation of Duties
- Code of Conduct
- Data Protection
- Encryption and Key Management
- Incident Response
- Information Security
- Password
- Risk Assessment and Management
- System Access and Authorization Control
- Vendor Risk Management
- Vulnerability Management and Patch Program

F. Internal Control Framework

Quavo has adopted the following control framework to meet its Security commitments. This framework includes the following aspects: control environment, risk assessment, control activities, information and communication, and monitoring. In addition, the applicable trust services criteria and related controls are presented in Section IV of this report titled "Trust Services Category, Criteria, Related Controls, and Tests of Controls." They were an integral part of Quavo's system description throughout the period April 1, 2021 to September 30, 2021.

1. Control Environment

The Quavo control environment reflects the philosophy of senior management concerning the importance of integrity and ethical values. Quavo understands that leadership sets the tone from the top, where the actions of, and decisions by, management at all levels of the organization establish the basis for acceptable behavior. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance, and requires internal personnel to acknowledge it.

ORGANIZATIONAL STRUCTURE

The board of directors is composed of both senior management and external members, who are independent from Quavo's operations. On a quarterly basis, senior management meets with the board of directors to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.



The structure of Quavo is defined in the organizational chart posted on the intranet. Management maintains the organizational chart to clearly identify positions of authority and the lines of communication and publishes this organizational chart to internal personnel.

HUMAN RESOURCES

Prior to employee onboarding, HR creates job descriptions as a standard to evaluate whether candidates are qualified to perform the required duties. Job descriptions document experience, skills, and education for new positions. Employment candidates pass through evaluative interviews against the posted job descriptions. If a candidate is successful in the screening process, a background check is initiated for new hires.

Formal hiring procedures are followed for new hires. The onboarding process begins when a candidate accepts and signs an offer letter. During orientation, Quavo works to ensure new hires are aware of their obligation to protect Quavo and customer information. Specifically, new hires and contractors review the Acceptable Use, Code of Conduct, Data Protection, and Information Security Policies and formally acknowledge their responsibilities to protect Quavo and service data within 30 days of hire.

Internal personnel complete training programs when they are hired and annually thereafter for information security to help them understand their obligations and responsibilities, including the identification and reporting of security incidents. Failure to comply with these agreed-upon policies may result in a warning or even termination of the employee. Quavo has a formal process for documenting and reporting issues of noncompliance. Events and behaviors that do not meet expectations as outlined in policies are documented, and disciplinary action is taken for the personnel responsible.

Throughout employment, the company evaluates the performance of internal personnel through a formal, annual performance evaluation. This process assesses the performance and competence of each individual, and their compliance with company policies and procedures.

2. Risk Assessment

Quavo has established a Risk Assessment and Management Policy that includes the identification, evaluation, communication, and mitigation of risks relating to the company operations, safeguarding of informational assets, product development, and fraud. Within this policy, risk tolerance and strategies are defined. The CTO reviews the Risk Assessment and Management Policy annually.

RISK IDENTIFICATION AND MITIGATION

On an annual basis, the CTO performs an annual formal risk assessment over the System. This assessment includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats. The CTO maintains a risk register, which records the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy. Action plans are created and tracked to address identified risks that are deemed unacceptable.

Management has obtained a cyber risk insurance policy to minimize the financial impact of a cybersecurity loss event.



VENDOR RISK MANAGEMENT

Prior to engaging a new vendor, the CFO performs an assessment to validate potential third-party service providers meet compliance requirements as defined in the Vendor Risk Management Policy. Quavo management maintains an inventory of service providers. The CFO assesses service providers, including an annual review of providers' SOC reports, to help ensure they are meeting expected security commitments.

3. Control Activities

Controls have been established to help ensure processes operate as intended to keep service data secure.

AUTHENTICATION

Quavo mandates strong authentication requirements on production systems. First, access to production systems requires unique IDs and valid SSH keys. Customer passwords to production systems are required to be at least eight characters in length and meet complexity requirements. Internal personnel authenticate with the same user ID and password requirements, but also require two-factor authentication through the use of one-time password tokens.

USER PROVISIONING AND DEPROVISIONING

Quavo has implemented role-based security to limit and control access within Quavo's production environment. Users are provisioned access to systems based on role as defined in the access matrix. System owners review and approve the matrix annually. The CTO approves any additional access required outside the access matrix. When an employee is terminated, the CTO revokes production access within one business day of the employee or contractor's separation date.

Once onboarded, customers have the ability to set up a Quavo account by using their email address and creating a password. The administrator of the account can invite, add, or remove team members to their company's Quavo account.

ACCESS REVIEWS

On a quarterly basis, the system owners conduct user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.

SYSTEM INVENTORY

The Quavo Security team identifies its information assets and updates the description and owners at least annually.

NETWORK SECURITY

In order to protect Quavo's production environment, firewall configurations help ensure available networking ports and protocols are restricted to port 22 and the Transmission Control Protocol (TCP) for incoming traffic. Administrative access to production servers and databases is restricted to the CTO and lead engineers.



ENCRYPTION

Quavo maintains its Encryption and Key Management Policy to support the secure encryption and decryption of application secrets, and govern the use of cryptographic controls. In addition, Quavo users connect to the web application via HTTPS / TLS. The traffic between the Quavo System and external connections is also encrypted in transit. Lastly, databases housing service data are encrypted at rest.

VULNERABILITY MANAGEMENT

Quavo maintains a vulnerability management program to detect and remediate system vulnerabilities. As part of this program, the Security team performs monthly internal vulnerability scans. Identified vulnerabilities rated critical or high are analyzed, communicated to responsible parties, and tracked until resolved by the Engineering team.

USER ENDPOINTS

Management has deployed agents on user endpoint systems to detect malicious code and malware and enforce hard disk encryption. Updates to these agents are deployed automatically.

SYSTEM MONITORING

Quavo uses logging and monitoring software to collect data from servers and endpoints, and detect potential security threats or unusual system activity.

Quavo has also implemented intrusion prevention and detection tools to provide monitoring of network traffic to the production environment. Engineering personnel receive the alerts and respond based on the severity of these alerts.

INCIDENT MANAGEMENT

Management has established an Incident Response Plan outlining the process of identifying, prioritizing, communicating, assigning, and tracking incidents. Identified security events and issues are triaged and tracked to resolution in accordance with the Incident Response Plan. A "lessons learned" document is created after each incident and shared with the Engineering team.

CHANGE MANAGEMENT

Quavo has a formalized change management process documented in its Change Management / Separation of Duties Policy. Specifically, Quavo has developed policies and procedures governing the system development life cycle, including documented processes for tracking, testing, approving, and validating changes. Both code and infrastructure changes are recorded in a ticketing system. The production environment is segregated from the staging environment to allow for changes to be tested outside of production. Production data is not used in the development and staging environments.

For code changes, manual testing is performed prior to changes being merged into production. Following testing, an independent engineer reviews these changes prior to deploying into production. System users who make changes to the development system are unable to deploy their changes into production without independent approval.



CONFIGURATION MANAGEMENT

Quavo uses a configuration management tool to help ensure production infrastructure images are standard and are using the latest configurations. Changes to configurations are tested, reviewed, and approved by an independent engineer before being deployed into production.

4. Information and Communication

To help Quavo achieve its goals, management is committed to using quality information and effective communication channels both with employees and customers. Descriptions of the System and its boundaries are available to both internal and external users on the website via its Terms of Use.

INTERNAL COMMUNICATION

Management publishes policies and procedures, including the primary end-user policies for security (Data Protection Policy, Information Security Policy, Password Policy, System Access and Authorization Control Policy, and Vulnerability Management and Patch Program), on the intranet. The Information Security Policy outlines the roles and responsibilities for personnel with responsibility for the security of the system. The CTO is responsible for the design, implementation, management, and annual review of the security policies.

Quavo has established a confidential reporting process available to internal and external users. Management monitors customer and internal complaints reported via the confidential reporting process and responds in accordance with the Incident Response Plan.

EXTERNAL COMMUNICATION

Quavo communicates security commitments and expectations, changes to roles and responsibilities, and changes impacting the security of the system to customers. Customers may also contact Quavo through the website to report incidents, complaints, and failures on issues related to security. Internal or customer-initiated incident tickets are assigned to the appropriate team or individual and are prioritized based on policy and business impact. An internal tracking system is used to document issues through to resolution.

5. Monitoring Activities

To evaluate the effectiveness of its controls, the CTO utilizes a compliance monitoring tool to continually assess controls and to alert when controls are identified as out of compliance. Senior management evaluates the results at least annually and resolves any deficiencies in accordance with the Risk Assessment and Management Policy. In addition, management performs additional monitoring activities, including quarterly user access reviews, monthly vulnerability scanning and annual review of third parties.



G. Complementary Subservice Organization Controls

Quavo management has determined that complementary controls at its subservice organization that are suitably designed and operating effectively are necessary, along with controls at Quavo, to achieve Quavo's service commitments and system requirements related to the Fraud Dispute Offerings, based on the applicable trust services criteria. Therefore, each user entity's internal controls should be evaluated in conjunction with Quavo's controls and the related tests and results described in Section IV of this report, while also taking into account the related complementary subservice organization controls expected to be implemented at the subservice organization as described below.

Complementary Subservice Organization Controls		Related Criteria
1	Access to hosted systems requires strong authentication mechanisms.	➤ CC 6.1
2	Data at rest on hosted systems is stored in an encrypted format.	➤ CC 6.1
3	New and existing user access and permissions to hosted systems are approved by appropriate personnel prior to be granted.	➤ CC 6.1, CC 6.2, and CC 6.3
4	Terminated user access permissions to hosted systems are removed in a timely manner.	➤ CC 6.1, CC 6.2, and CC 6.3
5	User access permissions to hosted systems are reviewed by appropriate personnel on a regular basis.	➤ CC 6.2 and CC 6.3
6	Privileged access to hosted systems and the underlying data is restricted to appropriate users.	➤ CC 6.3 and CC 6.7
7	Access to the physical facilities housing hosted systems is restricted to authorized users	➤ CC 6.4
8	Production media is securely decommissioned and physically destroyed prior to being removed from the data center.	➤ CC 6.5
9	Network security mechanisms restrict external access to the production environment to authorized ports and protocols.	➤ CC 6.6
10	Connections to the production environment require encrypted communications.	➤ CC 6.6 and CC 6.7
11	Antivirus or antimalware solutions detect or prevent unauthorized or malicious software on hosted systems.	➤ CC 6.8
12	System configuration changes are enforced, logged, and monitored.	➤ CC 6.8 and CC 7.1
13	Hosted systems are scanned for vulnerabilities. Any identified vulnerabilities are tracked to resolution.	➤ CC 7.1



Complementary Subservice Organization Controls		Related Criteria
14	System activities on hosted systems are logged, monitored, and evaluated for security events. Any identified incidents are contained, remediated, and communicated according to defined protocols.	➤ CC 7.2, CC 7.3, and CC 7.4
15	Access to make changes to hosted systems is restricted to appropriate personnel.	➤ CC 8.1
16	Changes to hosted systems are documented, tested, and approved prior to migration to production.	➤ CC 8.1

H. Complementary User Entity Controls

Quavo's Fraud Dispute Offerings was designed under the assumption that certain controls would be implemented by the user entities for whom it provides its Fraud Dispute Offerings. In these situations, the application of specific controls at these customer organizations is necessary to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria.

This section describes additional controls that should be in operation at the customer organizations to complement the controls at Quavo. User auditors should consider whether the following controls have been placed in operation by the customers.

Each customer must evaluate its own internal control structure to determine if the identified customer controls are in place. Users are responsible for:

Complementary User Entity Controls		Related Criteria
1	Customers are responsible for implementing controls to ensure only authorized individuals are granted access.	➤ CC 6.1, CC 6.2, and CC 6.3
2	Customers are responsible for implementing controls to ensure access for terminated users is removed timely.	➤ CC 6.1, CC 6.2, and CC 6.3
3	Customers are responsible for implementing controls to ensure user accounts and access permissions are periodically reviewed.	➤ CC 6.2 and CC 6.3



IV. Trust Services Category, Criteria, Related Controls, and Tests of Controls

This SOC 2 Type 2 Report was prepared in accordance with the AICPA attestation standards and has been performed to examine the suitability of the design and operating effectiveness of controls to meet the criteria for the Security category set forth in TSP Section 100, *2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy* (AICPA, *Trust Services Criteria*) throughout the period April 1, 2021 through September 30, 2021.

The trust services category for the Security criteria and related controls specified by Quavo are presented in Section IV of this report.

A. Trust Services Criteria

Common Criteria

CC 1.0 Control Environment		
	Trust Services Criteria	Controls Specified by Quavo
CC 1.1	The entity demonstrates a commitment to integrity and ethical values.	ORG-01. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.
		ORG-04. Quavo evaluates the performance of internal personnel through a formal, annual performance evaluation.
CC 1.2	The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control.	ORG-02. The board of directors includes senior management who are independent from the company's operations.
		ORG-03. Senior management meets with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.
CC 1.3	Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.	ORG-06. Management maintains a formal organizational chart to clearly identify positions of authority and the lines of communication, and publishes the organizational chart to internal personnel.
		ORG-10. Management publishes the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel. In addition, internal personnel acknowledge these policies within 30 days of hire.
		POL-02. Quavo's Information Security Policy outlines roles and responsibilities for personnel with responsibility for the security of the system.



CC 1.0 Control Environment	
Trust Services Criteria	Controls Specified by Quavo
CC 1.4 The entity demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives.	ORG-01. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.
	ORG-04. Quavo evaluates the performance of internal personnel through a formal, annual performance evaluation.
	ORG-07. Background checks are performed on new hires before the new hire's start date as permitted by local laws.
	ORG-08. Hiring managers screen new hires or internal transfers to assess their qualifications, experience, and competency to fulfill their responsibilities.
	ORG-09. Internal personnel complete annual training programs for information security to help them understand their obligations and responsibilities related to security. New hires complete training within 30 days of hire.
	ORG-10. Management publishes the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel. In addition, internal personnel acknowledge these policies within 30 days of hire.
CC 1.5 The entity holds individuals accountable for their internal control responsibilities in the pursuit of objectives.	ORG-01. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.
	ORG-04. Quavo evaluates the performance of internal personnel through a formal, annual performance evaluation.
	ORG-06. Management maintains a formal organizational chart to clearly identify positions of authority and the lines of communication, and publishes the organizational chart to internal personnel.



CC 2.0 Communication and Information	
Trust Services Criteria	Controls Specified by Quavo
CC 2.1 The entity obtains or generates and uses relevant, quality information to support the functioning of internal control.	ORG-05. Quavo performs an annual assessment over internal controls used in the achievement of Quavo's service commitments and system requirements. Senior management evaluates the results and resolves any deficiencies in accordance with the Risk Assessment and Management Policy.
	VM-02. Vulnerability scans are executed monthly on production systems. IT tracks critical or high-risk vulnerabilities through resolution.
	VM-03. Quavo engages a third party to conduct a network and application penetration test of the production environment at least annually. IT team reviews the results and tracks high priority findings to resolution.
CC 2.2 The entity internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.	COM-01. Descriptions of the company's system and its boundaries are available to both internal personnel and external users.
	COM-04. Quavo has a confidential reporting channel available to internal personnel and external users to report security concerns. Management monitors customer and internal complaints and responds in accordance with the Incident Response Plan.
	IR-01. Quavo's Incident Response Plan outlines the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.
	ORG-01. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.
	ORG-03. Senior management meets with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.
	ORG-09. Internal personnel complete annual training programs for information security to help them understand their obligations and responsibilities related to security. New hires complete training within 30 days of hire.



CC 2.0 Communication and Information	
Trust Services Criteria	Controls Specified by Quavo
	<p>ORG-10. Management publishes the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel. In addition, internal personnel acknowledge these policies within 30 days of hire.</p> <p>POL-01. The CTO is responsible for the design, implementation, and management of the organization's policies and procedures. Policy owners review these policies and procedures at least annually.</p>
<p>CC 2.3</p> <p>The entity communicates with external parties regarding matters affecting the functioning of internal control.</p>	<p>COM-01. Descriptions of the company's system and its boundaries are available to both internal personnel and external users.</p> <p>COM-02. Quavo publishes its Privacy Statement to both internal personnel and external users. This Privacy Statement details the company's security commitments.</p> <p>COM-03. Customers are notified of any system changes impacting the security of the system.</p> <p>COM-04. Quavo has a confidential reporting channel available to internal personnel and external users to report security concerns. Management monitors customer and internal complaints and responds in accordance with the Incident Response Plan.</p>



CC 3.0 Risk Assessment	
Trust Services Criteria	Controls Specified by Quavo
CC 3.1 The entity specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.	RA-01. Management performs a formal review of the Risk Assessment & Management Program at least annually. Risk tolerance and strategies are defined in the policy.
	RA-02. The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.
CC 3.2 The entity identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.	AC-01. Quavo identifies its information assets and updates the description and owners at least annually.
	RA-02. The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.
	RA-03. The CTO maintains a risk register, which records the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.
	RA-04. Quavo's Vendor Risk Management Policy defines a framework for the onboarding and management of the vendor relationship lifecycle. The CTO assesses new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.
	RA-05. The relationship owner collects and reviews the SOC reports (or equivalent) of its subservice organizations on an annual basis.
CC 3.3 The entity considers the potential for fraud in assessing risks to the achievement of objectives.	RA-02. The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.
CC 3.4 The entity identifies and assesses changes that could significantly impact the system of internal control.	RA-02. The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.
	RA-04. Quavo's Vendor Risk Management Policy defines a framework for the onboarding and management of the vendor relationship lifecycle. The CTO assesses new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.



CC 4.0 Monitoring Activities	
Trust Services Criteria	Controls Specified by Quavo
<p>CC 4.1 The entity selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.</p>	<p>AC-08. System owners conduct quarterly user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.</p>
	<p>ORG-05. Quavo performs an annual assessment over internal controls used in the achievement of Quavo's service commitments and system requirements. Senior management evaluates the results and resolves any deficiencies in accordance with the Risk Assessment and Management Policy.</p>
	<p>VM-02. Vulnerability scans are executed monthly on production systems. IT tracks critical or high-risk vulnerabilities through resolution.</p>
	<p>VM-03. Quavo engages a third party to conduct a network and application penetration test of the production environment at least annually. IT team reviews the results and tracks high priority findings to resolution.</p>
<p>CC 4.2 The entity evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate.</p>	<p>AC-08. System owners conduct quarterly user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.</p>
	<p>ORG-03. Senior management meets with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.</p>
	<p>ORG-05. Quavo performs an annual assessment over internal controls used in the achievement of Quavo's service commitments and system requirements. Senior management evaluates the results and resolves any deficiencies in accordance with the Risk Assessment and Management Policy.</p>
	<p>VM-02. Vulnerability scans are executed monthly on production systems. IT tracks critical or high-risk vulnerabilities through resolution.</p>
	<p>VM-03. Quavo engages a third party to conduct a network and application penetration test of the production environment at least annually. IT team reviews the results and tracks high priority findings to resolution.</p>



CC 5.0 Control Activities		
	Trust Services Criteria	Controls Specified by Quavo
CC 5.1	The entity selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.	AC-01. Quavo identifies its information assets and updates the description and owners at least annually.
		RA-02. The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.
		RA-03. The CTO maintains a risk register, which records the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.
CC 5.2	The entity also selects and develops general control activities over technology to support the achievement of objectives.	POL-02. Quavo's Information Security Policy outlines roles and responsibilities for personnel with responsibility for the security of the system.
		POL-03. Quavo's Change Management Policy governs the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.
CC 5.3	The entity deploys control activities through policies that establish what is expected and in procedures that put policies into action.	ORG-01. Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.
		ORG-10. Management publishes the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel. In addition, internal personnel acknowledge these policies within 30 days of hire.
		POL-01. The CTO is responsible for the design, implementation, and management of the organization's policies and procedures. Policy owners review these policies and procedures at least annually.



CC 6.0 Logical and Physical Access Controls	
Trust Services Criteria	Controls Specified by Quavo
CC 6.1 The entity implements logical access security software, infrastructure, and architectures over protected information assets to protect them from security events to meet the entity's objectives.	AC-01. Quavo identifies its information assets and updates the description and owners at least annually.
	AC-02. Users are assigned unique IDs to access production machines, network devices, and support tools.
	AC-03. Internal user access to systems and applications with service data requires two-factor authentication in the form of user ID / password, and one-time passcode.
	AC-04. Quavo has formal policies for password strength and use of authentication mechanisms. These policies require the following: <ul style="list-style-type: none"> ● Minimum length of ten characters ● Password complexity
	AC-05. Administrative access to production servers, databases, and internal administrative tools is restricted to the CTO and lead engineers.
	AC-06. Internal users are provisioned access to systems based on role as defined in the access matrix. Director of Technology reviews and approves the access matrix annually. The IT team approves any additional access required outside the access matrix.
	AC-07. Upon termination or when internal users no longer require access, infrastructure and application access is removed within one business day.
	AC-09. Service data is encrypted at rest.
	NET-03. Firewall configurations restrict networking ports and protocols are restricted to approved business rules.
	POL-04. Quavo's security policies (Asset Management, Data Classification, Encryption and Key Management, Incident Response, Password, System Access and Authorization Control, and Vulnerability Management and Patch Program) outline the processes and responsibilities for information security.



CC 6.0 Logical and Physical Access Controls	
Trust Services Criteria	Controls Specified by Quavo
CC 6.2 Prior to issuing system credentials and granting system access, the entity registers and authorizes new internal and external users whose access is administered by the entity. For those users whose access is administered by the entity, user system credentials are removed when user access is no longer authorized.	AC-06. Internal users are provisioned access to systems based on role as defined in the access matrix. Director of Technology reviews and approves the access matrix annually. The IT team approves any additional access required outside the access matrix.
	AC-07. Upon termination or when internal users no longer require access, infrastructure and application access is removed within one business day.
	AC-08. System owners conduct quarterly user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.
CC 6.3 The entity authorizes, modifies, or removes access to data, software, functions, and other protected information assets based on roles, responsibilities, or the system design and changes, giving consideration to the concepts of least privilege and segregation of duties, to meet the entity's objectives.	AC-05. Administrative access to production servers, databases, and internal administrative tools is restricted to the CTO and lead engineers.
	AC-06. Internal users are provisioned access to systems based on role as defined in the access matrix. Director of Technology reviews and approves the access matrix annually. The IT team approves any additional access required outside the access matrix.
	AC-07. Upon termination or when internal users no longer require access, infrastructure and application access is removed within one business day.
CC 6.4 The entity restricts physical access to facilities and protected information assets (for example, data center facilities, backup media storage, and other sensitive locations) to authorized personnel to meet the entity's objectives.	AC-08. System owners conduct quarterly user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.
CC 6.4 The entity restricts physical access to facilities and protected information assets (for example, data center facilities, backup media storage, and other sensitive locations) to authorized personnel to meet the entity's objectives.	Controls related to this criterion are the responsibility of AWS. See expected controls in the Complementary Subservice Organization Controls section.
CC 6.5 The entity discontinues logical and physical protections over physical assets only after the ability to read or recover data and software from those assets has been diminished and is no longer required to meet the entity's objectives.	Controls related to this criterion are the responsibility of AWS. See expected controls in the Complementary Subservice Organization Controls section.



CC 6.0 Logical and Physical Access Controls	
Trust Services Criteria	Controls Specified by Quavo
CC 6.6 The entity implements logical access security measures to protect against threats from sources outside its system boundaries.	AC-10. Encryption is used to protect the transmission of data over the internet.
	NET-03. Firewall configurations restrict networking ports and protocols are restricted to approved business rules.
	POL-04. Quavo's security policies (Asset Management, Data Classification, Encryption and Key Management, Incident Response, Password, System Access and Authorization Control, and Vulnerability Management and Patch Program) outline the processes and responsibilities for information security.
CC 6.7 The entity restricts the transmission, movement, and removal of information to authorized internal and external users and processes and protects it during transmission, movement, or removal to meet the entity's objectives.	AC-05. Administrative access to production servers, databases, and internal administrative tools is restricted to the CTO and lead engineers.
	AC-09. Service data is encrypted at rest.
	AC-10. Encryption is used to protect the transmission of data over the internet.
	NET-04. Quavo encrypts hard drives for portable devices with full disk encryption.
CC 6.8 The entity implements controls to prevent or detect and act upon the introduction of unauthorized or malicious software to meet the entity's objectives.	CM-01. Quavo uses a tool to enforce standard infrastructure configurations for production servers.
	NET-01. Malware detection software is installed on susceptible endpoints that can access the production environment and is configured to perform daily scans.
	POL-03. Quavo's Change Management Policy governs the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.



CC 7.0 System Operations		
Trust Services Criteria	Controls Specified by Quavo	
CC 7.1	To meet its objectives, the entity uses detection and monitoring procedures to identify (1) changes to configurations that result in the introduction of new vulnerabilities, and (2) susceptibilities to newly discovered vulnerabilities.	CM-01. Quavo uses a tool to enforce standard infrastructure configurations for production servers.
		VM-02. Vulnerability scans are executed monthly on production systems. IT tracks critical or high-risk vulnerabilities through resolution.
CC 7.2	The entity monitors system components and the operation of those components for anomalies that are indicative of malicious acts, natural disasters, and errors affecting the entity's ability to meet its objectives; anomalies are analyzed to determine whether they represent security events.	NET-02. Management has implemented intrusion prevention and detection tools to provide monitoring of network traffic to the production environment.
		NET-05. IT team uses logging and monitoring software to collect data from servers and endpoints, detect potential security threats and unusual system activity.
		NET-06. IT team uses alerting software to notify impacted teams of potential security events.
CC 7.3	The entity evaluates security events to determine whether they could or have resulted in a failure of the entity to meet its objectives (security incidents) and, if so, takes actions to prevent or address such failures.	COM-04. Quavo has a confidential reporting channel available to internal personnel and external users to report security concerns. Management monitors customer and internal complaints and responds in accordance with the Incident Response Plan.
		IR-01. Quavo's Incident Response Plan outlines the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.
		IR-02. IT Team tracks identified incidents according to the Incident Response Plan.
CC 7.4	The entity responds to identified security incidents by executing a defined incident response program to understand, contain, remediate, and communicate security incidents, as appropriate.	IR-01. Quavo's Incident Response Plan outlines the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.
		IR-02. IT Team tracks identified incidents according to the Incident Response Plan.
		IR-03. IT creates a 'lessons learned' document after each incident and shares this document with the Engineering team to make any required changes.
CC 7.5	The entity identifies, develops, and implements activities to recover from identified security incidents.	IR-02. IT Team tracks identified incidents according to the Incident Response Plan.
		IR-03. IT creates a 'lessons learned' document after each incident and shares this document with the Engineering team to make any required changes.



CC 8.0 Change Management	
Trust Services Criteria	Controls Specified by Quavo
CC 8.1 The entity authorizes, designs, develops or acquires, configures, documents, tests, approves, and implements changes to infrastructure, data, software, and procedures to meet its objectives.	CM-01. Quavo uses a tool to enforce standard infrastructure configurations for production servers.
	CM-02. System changes are tested via test scripts prior to being deployed into production.
	CM-03. Code merge requests are independently peer reviewed prior to integrating the code change into the master branch.
	CM-04. System users who make changes to the development system do not have access to deploy changes to production.
	CM-05. The production and staging environments are segregated.
	CM-06. Production data is not used in the development and testing environments.
	POL-03. Quavo's Change Management Policy governs the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.



CC 9.0 Risk Mitigation		
Trust Services Criteria		Controls Specified by Quavo
CC 9.1	The entity identifies, selects, and develops risk mitigation activities for risks arising from business disruption.	ORG-11. Management has a current insurance policy to help minimize the financial impact of cybersecurity loss events.
		RA-03. The CTO maintains a risk register, which records the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.
CC 9.2	The entity assesses and manages risks associated with vendors and business partners.	RA-04. Quavo's Vendor Risk Management Policy defines a framework for the onboarding and management of the vendor relationship lifecycle. The CTO assesses new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.
		RA-05. The relationship owner collects and reviews the SOC reports (or equivalent) of its subservice organizations on an annual basis.



B. Description of Test of Controls and Results

Certain tests of controls require the obtaining and review of information provided by the entity (IPE) being assessed. This testing may include controls that require validation of populations for sample-based testing, review of evidence provided in electronic format, or system reports. To address the completeness and accuracy of IPE during the attestation examination, we performed a combination of revalidation procedures to assess the origin of the IPE, and inspection of the query or source data used to provide the IPE. Additionally, where controls required management of the entity to use IPE as part of a control review (such as periodic review of access or system changes), we reviewed the validity of the IPE used as part of the control execution.

Test procedures performed in connection with determining the operating effectiveness of controls detailed here in Section IV are described below:

Test Procedure	Description
Inquiries >	Inquiry of appropriate personnel and corroboration with management.
Observation >	Observation of the application, performance, or existence of the control.
Inspection >	Inspection of documents and reports indicating performance of the control.
Reperformance >	Reperformance of the control.



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
AC-01	Quavo identifies its information assets and updates the description and owners at least annually.	<p>Inquired of the Director of Technology to confirm Quavo identified its information assets and updated the description and owners at least annually.</p> <p>Inspected the list of information assets to ascertain whether Quavo identified its information assets and updated the description and owners at least annually.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
AC-02	Users are assigned unique IDs to access production machines, network devices, and support tools.	<p>Inquired of the Director of Technology to confirm users were assigned unique IDs to access production machines, network devices, and support tools.</p> <p>Inspected access lists to production systems to ascertain whether users were assigned unique IDs to access production machines, network devices, and support tools.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
AC-03	Internal user access to systems and applications with service data requires two-factor authentication in the form of user ID / password, and one-time passcode.	<p>Inquired of the Director of Technology to confirm Internal user access to systems and applications with service data required two-factor authentication in the form of user ID / password, and one-time passcode.</p> <p>Inspected authentication configurations to ascertain whether Internal user access to systems and applications with service data required two-factor authentication in the form of user ID / password, and one-time passcode.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
AC-04	<p>Quavo has formal policies for password strength and use of authentication mechanisms. These policies require the following:</p> <ul style="list-style-type: none"> ● Minimum length of ten characters ● Password complexity 	<p>Inquired of the Director of Technology to confirm Quavo had formal policies for password strength and use of authentication mechanisms. These policies required the following:</p> <ul style="list-style-type: none"> ● Minimum length of ten characters ● Password complexity <p>Inspected the Password Policy to ascertain whether Quavo had formal password policies for password strength and use of authentication mechanisms.</p> <p>Inspected the Password Policy to ascertain whether Quavo had formal policies for password strength and use of authentication mechanisms. These policies required the following:</p> <ul style="list-style-type: none"> ● Minimum length of ten characters ● Password complexity 	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>Password configurations were not a minimum of ten characters.</p> <p><i>See Section V - Other Information Provided by Quavo That Is Not Covered by the Service Auditor's Report for management response to the noted exception.</i></p>
AC-05	<p>Administrative access to production servers, databases, and internal administrative tools is restricted to the CTO and lead engineers.</p>	<p>Inquired of the Director of Technology to confirm administrative access to production servers, databases, and internal administrative tools was restricted to the CTO and lead engineers.</p> <p>Inspected access lists of users with administrative access to production servers and databases and the organizational chart to ascertain whether access was restricted to the CTO and lead engineers.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
AC-06	Internal users are provisioned access to systems based on role as defined in the access matrix. Director of Technology reviews and approves the access matrix annually. The IT team approves any additional access required outside the access matrix.	<p>Inquired of the Director of Technology to confirm internal users were provisioned access to systems based on role as defined in the access matrix. The Director of Technology reviewed and approved the access matrix annually. The IT team approved any additional access required outside the access matrix.</p> <p>Inspected the Provisioning Matrix and tickets of a sample of access requests to ascertain whether internal users were provisioned access to systems based on role as defined in the access matrix. The Director of Technology reviewed and approved the access matrix during the examination period. The IT team approved any additional access required outside the access matrix.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
AC-07	Upon termination or when internal users no longer require access, infrastructure and application access is removed within one business day.	<p>Inquired of the Director of Technology to confirm upon termination or when internal users no longer required access, infrastructure and application access was removed within one business day.</p> <p>Inspected tickets and user access lists of a sample of terminated users to ascertain whether infrastructure and application access for these users was removed within one business day.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
AC-08	System owners conduct quarterly user access reviews of production servers, databases, and applications to validate internal user access is commensurate with job responsibilities. Identified access changes are tracked to remediation.	<p>Inquired of the Director of Technology to confirm system owners conducted quarterly user access reviews of production servers, databases, and applications to validate internal user access was commensurate with job responsibilities. Identified access changes were tracked to remediation.</p> <p>Inspected access review documentation and tickets for a sample of quarters to ascertain whether system owners conducted quarterly user access reviews of production servers, databases, and applications to validate internal user access was commensurate with job responsibilities. Identified access changes were tracked to remediation.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
AC-09	Service data is encrypted at rest.	<p>Inquired of the Director of Technology to confirm service data was encrypted at rest.</p> <p>Inspected the encryption configuration for production databases to ascertain whether service data was encrypted at rest.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
AC-10	Encryption is used to protect the transmission of data over the internet.	Inquired of the Director of Technology to confirm encryption was used to protect the transmission of data over the internet. Inspected encryption configurations to ascertain whether encryption was used to protect the transmission of data over the internet.	No exceptions noted. No exceptions noted.
CM-01	Quavo uses a tool to enforce standard infrastructure configurations for production servers.	Inquired of the Director of Technology to confirm Quavo used a tool to enforce standard infrastructure configurations for production servers. Inspected production image configurations to ascertain whether Quavo used a tool to enforce standard infrastructure configurations for production servers.	No exceptions noted. No exceptions noted.
CM-02	System changes are tested via test scripts prior to being deployed into production.	Inquired of the Director of Technology to confirm system changes were tested via test scripts prior to being deployed into production. Inspected tickets for a sample of system changes to ascertain whether system changes were tested via test scripts prior to being deployed into production.	No exceptions noted. No exceptions noted.
CM-03	Code merge requests are independently peer reviewed prior to integrating the code change into the master branch.	Inquired of the Director of Technology to confirm code merge requests were independently peer reviewed prior to integrating the code change into the master branch. Inspected tickets for a sample of changes to ascertain whether these changes were independently peer reviewed prior to the code change being committed to the master branch.	No exceptions noted. No exceptions noted.



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
CM-04	System users who make changes to the development system do not have access to deploy changes to production.	<p>Inquired of the Director of Technology to confirm system users who made changes to the development system did not have access to deploy changes to production.</p> <p>Inspected the deployment tool configurations to ascertain whether system users who made changes to the development system were unable to deploy their changes to production without independent approval.</p> <p>Inspected list of users with administrative access to the deployment tool to ascertain whether users with development responsibilities did not have access to modify the deployment tool configurations.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
CM-05	The production and staging environments are segregated.	<p>Inquired of the Director of Technology to confirm the production and staging environments were segregated.</p> <p>Inspected production and staging environment management consoles to ascertain whether the production and staging environments were segregated.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
CM-06	Production data is not used in the development and testing environments.	<p>Inquired of the Director of Technology to confirm production data was not used in the development and testing environments.</p> <p>Inspected the query results of a sample account within the development and production environment to ascertain whether production data was not used in the development and testing environments.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
COM-01	Descriptions of the company's system and its boundaries are available to both internal personnel and external users.	<p>Inquired of the Director of Technology to confirm descriptions of the company's system and its boundaries were available to both internal personnel and external users.</p> <p>Inspected Quavo's website to ascertain whether descriptions of the company's system and its boundaries were available to both internal personnel and external users.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
COM-02	Quavo publishes its Privacy Statement to both internal personnel and external users. This Privacy Statement details the company's security commitments.	<p>Inquired of the Director of Technology to confirm Quavo published its Privacy Statement to both internal personnel and external users. This Privacy Statement detailed the company's security commitments.</p> <p>Inspected Quavo's website to ascertain whether Quavo published its Privacy Statement to both internal personnel and external users.</p> <p>Inspected the Privacy Statement to ascertain whether this Privacy Statement detailed the company's security commitments.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
COM-03	Customers are notified of any system changes impacting the security of the system.	<p>Inquired of the Director of Technology to confirm customers were notified of any system changes impacting the security of the system.</p> <p>Inspected customer notifications for a sample of system changes impacting the security of the system to ascertain whether customers were notified of these system changes.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
COM-04	Quavo has a confidential reporting channel available to internal personnel and external users to report security concerns. Management monitors customer and internal complaints and responds in accordance with the Incident Response Plan.	<p>Inquired of the Director of Technology to confirm Quavo had a confidential reporting channel available to internal personnel and external users to report security concerns; and management monitored customer and internal complaints, and responded in accordance with the Incident Response Plan.</p> <p>Inspected Quavo's support page to ascertain whether Quavo had a confidential reporting channel available to internal personnel and external users to report security concerns.</p> <p>Inspected records for a sample of customer and internal complaints to ascertain whether management monitored and responded to these complaints in accordance with the Incident Response Plan.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
IR-01	Quavo's Incident Response Plan outlines the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.	<p>Inquired of the Director of Technology to confirm Quavo's Incident Response Plan outlined the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.</p> <p>Inspected the Incident Response Plan to ascertain whether Quavo's Incident Response Plan outlined the process of identifying, prioritizing, communicating, assigning, and tracking incidents through to resolution.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
IR-02	IT Team tracks identified incidents according to the Incident Response Plan.	<p>Inquired of the Director of Technology to confirm the IT team tracked identified incidents according to the Incident Response Plan.</p> <p>Inspected tickets for a sample of incidents to ascertain whether the IT team tracked identified incidents according to the Incident Response Plan.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
IR-03	IT creates a 'lessons learned' document after each incident and shares this document with the Engineering team to make any required changes.	<p>Inquired of the Director of Technology to confirm IT created a 'lessons learned' document after each incident and shared this document with the Engineering team to make any required changes.</p> <p>Inspected the lessons learned documentation and tickets for a sample of incidents to ascertain whether IT created a 'lessons learned' document after each incident and shared this document with the Engineering team to make any required changes.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
NET-01	Malware detection software is installed on susceptible endpoints that can access the production environment and is configured to perform daily scans.	<p>Inquired of the Director of Technology to confirm malware detection software was installed on susceptible endpoints that could access the production environment and was configured to perform daily scans.</p> <p>Inspected the malware detection software console for a sample of user laptops that could access the production environment to ascertain whether malware detection software was installed on these endpoints.</p> <p>Inspected the malware detection software configurations to ascertain whether the software was configured to perform daily scans.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
NET-02	Management has implemented intrusion prevention and detection tools to provide monitoring of network traffic to the production environment.	<p>Inquired of the Director of Technology to confirm management had implemented intrusion prevention and detection tools to provide monitoring of network traffic to the production environment.</p> <p>Inspected monitoring software to ascertain whether management had implemented intrusion prevention and detection tools to provide monitoring of network traffic to the production environment.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
NET-03	Firewall configurations restrict networking ports and protocols are restricted to approved business rules.	<p>Inquired of the Director of Technology to confirm firewall configurations restricted networking ports and protocols to approved business rules.</p> <p>Inspected firewall configurations and approval ticket to ascertain whether firewall configurations restricted networking ports and protocols to approved business rules.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
NET-04	Quavo encrypts hard drives for portable devices with full disk encryption.	<p>Inquired of the Director of Technology to confirm Quavo encrypted hard drives for portable devices with full disk encryption.</p> <p>Inspected encryption configurations for a sample of company laptops from the system inventory to ascertain whether the hard drives for these laptops were encrypted with full disk encryption.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
NET-05	IT team uses logging and monitoring software to collect data from servers and endpoints, detect potential security threats and unusual system activity.	<p>Inquired of the Director of Technology to confirm the IT team used logging and monitoring software to collect data from servers and endpoints, detect potential security threats and unusual system activity.</p> <p>Inspected monitoring consoles to ascertain whether the IT team used logging and monitoring software to collect data from servers and endpoints, detect potential security threats and unusual system activity.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
NET-06	IT team uses alerting software to notify impacted teams of potential security events.	<p>Inquired of the Director of Technology to confirm the IT team used alerting software to notify impacted teams of potential security events.</p> <p>Inspected alert configurations to ascertain whether the IT team used alerting software to notify impacted teams of potential security events.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-01	Quavo has established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.	<p>Inquired of the Director of Technology to confirm Quavo had established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.</p> <p>Inspected the Code of Conduct to ascertain whether Quavo had established a Code of Conduct outlining ethical expectations, behavior standards, and ramifications of noncompliance.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-02	The board of directors includes senior management who are independent from the company's operations.	<p>Inquired of the Director of Technology to confirm the board of directors included senior management who were independent from the company's operations.</p> <p>Inspected a list of board members from the board meeting minutes to ascertain whether the board of directors included senior management who were independent from the company's operations.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-03	Senior management meets with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.	<p>Inquired of the Director of Technology to confirm senior management met with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.</p> <p>Inspected meeting notes for a sample of quarters to ascertain whether senior management met with the board of directors quarterly to review business objectives, company initiatives, resource needs, and risk management activities, including results from internal and external assessments.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
ORG-04	Quavo evaluates the performance of internal personnel through a formal, annual performance evaluation.	<p>Inquired of the Director of Technology to confirm Quavo evaluated the performance of internal personnel through a formal, annual performance evaluation.</p> <p>Inspected performance evaluations for a sample of internal personnel to ascertain whether Quavo evaluated the performance of these personnel during the examination period.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-05	Quavo performs an annual assessment over internal controls used in the achievement of Quavo's service commitments and system requirements. Senior management evaluates the results and resolves any deficiencies in accordance with the Risk Assessment and Management Policy.	<p>Inquired of the Director of Technology to confirm Quavo performed an annual assessment over internal controls used in the achievement of Quavo's service commitments and system requirements. Senior management evaluated the results and resolved any deficiencies in accordance with the Risk Assessment and Management Policy.</p> <p>Inspected the continuous monitoring tool to ascertain whether the tool was configured to perform a continuous assessment over internal controls.</p> <p>Inspected control evaluations from the continuous monitoring tool to ascertain whether senior management evaluated the results of the continuous monitoring tool and resolved deficiencies in accordance with the Risk Assessment and Management Policy.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-06	Management maintains a formal organizational chart to clearly identify positions of authority and the lines of communication, and publishes the organizational chart to internal personnel.	<p>Inquired of the Director of Technology to confirm management maintained a formal organizational chart to clearly identify positions of authority and the lines of communication, and published the organizational chart to internal personnel.</p> <p>Inspected the organizational chart to ascertain whether management maintained a formal organizational chart to clearly identify positions of authority and the lines of communication, and published the organizational chart to internal personnel.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
ORG-07	Background checks are performed on new hires before the new hire's start date as permitted by local laws.	<p>Inquired of the Director of Technology to confirm background checks were performed on new hires before the new hire's start date as permitted by local laws.</p> <p>Inspected background check results for a sample of new hires to ascertain whether background checks were performed on new hires before the new hire's start date as permitted by local laws.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-08	Hiring managers screen new hires or internal transfers to assess their qualifications, experience, and competency to fulfill their responsibilities.	<p>Inquired of the Director of Technology to confirm hiring managers screened new hires or internal transfers to assess their qualifications, experience, and competency to fulfill their responsibilities.</p> <p>Inspected interview notes for a sample of new hires to ascertain whether hiring managers screened these personnel to assess their qualifications, experience, and competency to fulfill their responsibilities.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-09	Internal personnel complete annual training programs for information security to help them understand their obligations and responsibilities related to security. New hires complete training within 30 days of hire.	<p>Inquired of the Director of Technology to confirm Internal personnel completed annual training programs for information security to help them understand their obligations and responsibilities related to security; new hires completed the training within 30 days of hire.</p> <p>Inspected security training materials and records for a sample of internal personnel to ascertain whether internal personnel completed annual training programs for information security to help them understand their obligations and responsibilities related to security.</p> <p>Inspected security training records for a sample of new hires to ascertain whether these new hires completed training within 30 days of hire.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
ORG-10	Management publishes the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel. In addition, internal personnel acknowledge these policies within 30 days of hire.	<p>Inquired of the Director of Technology to confirm management published the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel; and internal personnel acknowledged these policies within 30 days of hire.</p> <p>Inspected the internal wiki to ascertain whether management published the Acceptable Use, Code of Conduct, Data Protection, and Information Security policies to internal personnel.</p> <p>Inspected the policy acknowledgements for a sample of new hires to ascertain whether these new hires acknowledged these policies within 30 days of hire.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
ORG-11	Management has a current insurance policy to help minimize the financial impact of cybersecurity loss events.	<p>Inquired of the Director of Technology to confirm management had a current insurance policy to help minimize the financial impact of cybersecurity loss events.</p> <p>Inspected the insurance policy to ascertain whether management had a current insurance policy to help minimize the financial impact of cybersecurity loss events.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
POL-01	The CTO is responsible for the design, implementation, and management of the organization's policies and procedures. Policy owners review these policies and procedures at least annually.	<p>Inquired of the Director of Technology to confirm the CTO was responsible for the design, implementation, and management of the organization's policies and procedures, and the policy owners reviewed these policies and procedures at least annually.</p> <p>Inspected Quavo's policies to ascertain whether the CTO was responsible for the design, implementation, and management of the organization's policies and procedures</p> <p>Inspected the policy approval timestamps for Quavo's policies to ascertain whether the policy owners reviewed the policies and procedures during the examination period.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
POL-02	Quavo's Information Security Policy outlines roles and responsibilities for personnel with responsibility for the security of the system.	<p>Inquired of the Director of Technology to confirm Quavo's Information Security Policy outlined roles and responsibilities for personnel with responsibility for the security of the system.</p> <p>Inspected the Information Security Policy to ascertain whether Quavo's Information Security Policy outlined roles and responsibilities for personnel with responsibility for the security of the system.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
POL-03	Quavo's Change Management and Separation of Duties Policy governs the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.	<p>Inquired of the Director of Technology to confirm Quavo's Change Management and Separation of Duties Policy governed the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.</p> <p>Inspected the Change Management and Separation of Duties Policy to ascertain whether Quavo's Change Management and Separation of Duties Policy governed the system development life cycle, including documented policies for tracking, testing, approving, and validating changes.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
POL-04	Quavo's security policies (Asset Management, Data Classification, Encryption and Key Management, Incident Response, Password, System Access and Authorization Control, and Vulnerability Management and Patch Program) outline the processes and responsibilities for information security.	<p>Inquired of the Director of Technology to confirm Quavo's security policies (Asset Management, Data Classification, Encryption and Key Management, Incident Response, Password, System Access and Authorization Control, and Vulnerability Management and Patch Program) outlined the processes and responsibilities for information security.</p> <p>Inspected the security policies to ascertain whether the policies outlined the processes and responsibilities for information security.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
RA-01	Management performs a formal review of the Risk Assessment & Management Program at least annually. Risk tolerance and strategies are defined in the policy.	<p>Inquired of the Director of Technology to confirm management performed a formal review of the Risk Assessment & Management Program at least annually; and risk tolerance and strategies were defined in the policy.</p> <p>Inspected the timestamp and approval to ascertain whether management performed a formal review of the Risk Assessment & Management Program during the examination period.</p> <p>Inspected the Risk Assessment and Management Program to ascertain whether risk tolerance and strategies were defined in this policy.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
RA-02	The CTO performs an annual formal risk assessment, which includes the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.	<p>Inquired of the Director of Technology to confirm the CTO performed an annual formal risk assessment, which included the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.</p> <p>Inspected the most recent risk assessment to ascertain whether the CTO performed a formal risk assessment during the examination period, which included the identification of relevant internal and external threats related to security and fraud, and an analysis of risks associated with those threats.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
RA-03	The CTO maintains a risk register, which records the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.	<p>Inquired of the Director of Technology to confirm the CTO maintained a risk register, which recorded the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.</p> <p>Inspected the risk register to ascertain whether the CTO maintained a risk register, which recorded the risk mitigation strategies for identified risks, and the development or modification of controls consistent with the risk mitigation strategy.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
RA-04	Quavo's Vendor Risk Management Policy defines a framework for the onboarding and management of the vendor relationship lifecycle. The CTO assesses new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.	<p>Inquired of the Director of Technology to confirm Quavo's Vendor Risk Management Policy defined a framework for the onboarding and management of the vendor relationship lifecycle; the CTO assessed new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.</p> <p>Inspected the Vendor Risk Management Policy to ascertain whether Quavo's Vendor Risk Management Policy defined a framework for the onboarding and management of the vendor relationship lifecycle; the CTO assessed new vendors according to the Vendor Risk Management Policy prior to engaging with the vendor.</p>	<p>No exceptions noted.</p> <p>The circumstances that warrant the operation of this control did not occur during the period covered by the examination, as there were no new vendors during this period; therefore, no testing was performed.</p>
RA-05	The relationship owner collects and reviews the SOC reports (or equivalent) of its subservice organizations on an annual basis.	<p>Inquired of the Director of Technology to confirm the relationship owner collected and reviewed the SOC reports (or equivalent) of its subservice organizations on an annual basis.</p> <p>Inspected the SOC report reviews for a sample of subservice organizations to ascertain whether the relationship owner collected and reviewed the SOC reports (or equivalent) of its subservice organizations during the examination period.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
VM-01	Quavo's Vulnerability Management and Patch Program outlines the procedures to identify, assess, and remediate identified vulnerabilities.	<p>Inquired of the Director of Technology to confirm Quavo's Vulnerability Management and Patch Program outlined the procedures to identify, assess, and remediate identified vulnerabilities.</p> <p>Inspected the Vulnerability Management and Patch Program to ascertain whether Quavo's Vulnerability Management and Patch Program outlined the procedures to identify, assess, and remediate identified vulnerabilities.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>



Control #	Controls Specified by Quavo	Tests Performed by Moss Adams LLP	Test Results
VM-02	Vulnerability scans are executed monthly on production systems. IT tracks critical or high-risk vulnerabilities through resolution.	<p>Inquired of the Director of Technology to confirm vulnerability scans were executed monthly on production systems, and the IT team tracked critical or high-risk vulnerabilities through resolution.</p> <p>Inspected the vulnerability scans for a sample of months to ascertain whether vulnerability scans were executed on production systems for these months.</p> <p>Inspected the resolution log for a sample of critical or high-risk vulnerabilities to ascertain whether the IT team tracked these vulnerabilities to resolution.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
VM-03	Quavo engages a third party to conduct a network and application penetration test of the production environment at least annually. IT team reviews the results and tracks high priority findings to resolution.	<p>Inquired of the Director of Technology to confirm Quavo engaged a third party to conduct a network and application penetration test of the production environment at least annually; and the IT team reviewed the results and tracked high priority findings to resolution.</p> <p>Inspected the most recent penetration test report to ascertain whether Quavo engaged a third party to conduct a network and application penetration test of the production environment during the examination period.</p> <p>Inspected tickets for a sample of high-risk findings to ascertain whether the IT team reviewed the penetration test results and tracked these findings to resolution.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>



V. Other Information Provided by Quavo That Is Not Covered by the Service Auditor's Report

A. Management's Response to Identified Testing Exceptions

Control #	Controls Specified by Quavo	Exception Noted by Moss Adams LLP	Quavo Management Response
AC-04	Quavo has formal policies for password strength and use of authentication mechanisms. These policies require the following: <ul style="list-style-type: none">• Minimum length of ten characters• Password complexity	Password configurations were not a minimum of ten characters.	This was an oversight that does not match our policy. This has been corrected.

