

TIBCO LogLogic® Compliance Suite - Sarbanes-Oxley Edition Guide

Software Release 3.9.0

November 2017

Document Updated: April 2018

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TIBCO Documentation and Support Services

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit <https://docs.tibco.com>.

Product-Specific Documentation

The following documents for this product can be found on the TIBCO Documentation site:

- *TIBCO LogLogic® Compliance Suite - Sarbanes Oxley Edition Guide*
- *TIBCO LogLogic® Compliance Suite - Sarbanes Oxley Edition Readme*
- *TIBCO LogLogic® Compliance Suite - Sarbanes Oxley Edition Release Notes*

How to Contact TIBCO Support

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- For an overview of TIBCO Support, visit <http://www.tibco.com/services/support>.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at <https://support.tibco.com>.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to <https://support.tibco.com>. If you do not have a user name, you can request one by clicking Register on the website.

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Establishment IT Controls for Sarbanes-Oxley Compliance

Enacted in 2002 to restore investor confidence in the public markets and enhance corporate governance, the Sarbanes-Oxley (SOX) Act stipulates that companies establish and maintain internal control over financial reporting and assess the effectiveness of those controls annually. To carry out the mandates specified by SOX, Control Objectives for Information and Related Technology (COBIT) was established as a blueprint for IT risk management activities. COBIT maps IT processes to the components set forth by the Committee of the Sponsoring Organizations (COSO), the general framework recommended by the Public Company Accounting Oversight Board (PCAOB) to companies striving to achieve SOX compliance.

Basic best practices for implementing the COBIT framework include:

- Automating the Log Management and Intelligence (LMI) process
- Deploying LMI in a distributed environment
- Ensuring data integrity
- Establishing regular compliance reporting capabilities
- Performing ongoing user monitoring

It is the fiduciary responsibility of management to protect corporate assets against misuse, theft and downtime. Critical infrastructure data in the form of log files from corporate firewalls, VPN concentrators, web proxies, IDS systems, email servers, operating systems, enterprise applications and backup systems provide critical insight into the use of corporate assets, risks and IT performance. However, these logs are often not readily available or accessible when corporations need them most – during compliance audits or when responding to Legal, Human Resources and other business requests. Achieving compliance requires you to be able, in real-time, to access, search through and organize such data quickly and cost-effectively.

Today, tens of thousands of log data messages are produced by enterprise systems, applications and network devices every second. In most Fortune 1000 enterprises, these log messages add up to terabytes of data per month. At these rates, it is not humanly possible to extract from logs the necessary information using homegrown scripts. For example, to satisfy SOX auditors, you must not only ensure that appropriate IT controls are in place, you must also provide evidence of functioning controls and the documented results of testing procedures. This could take days using scripts – a luxury and expense that you can't afford.

The LogLogic® Compliance Suite - Sarbanes-Oxley Edition Overview

The LogLogic® Compliance Suite - Sarbanes-Oxley Edition delivers automated process validation, reporting and alerts based on infrastructure data to evidence and enforce business and IT policies related to compliance. By automating compliance reporting and alerting based on critical infrastructure data collected and stored by TIBCO LogLogic's appliances, the TIBCO LogLogic Compliance Suite reduces the complexity and resource requirements for implementing control frameworks like COBIT to successfully meet SOX and other regulations.

TIBCO LogLogic's Compliance Suite:

- Automates compliance activities and dramatically improves audit accuracy.
- Reduces the time to mitigate the risk factor.
- Allows organizations to use infrastructure data to provide evidence of and enforce IT controls.
- Provides industry-leading reporting depth and breadth, including real-time reporting and alerting on COBIT for SOX compliance.
- Delivers approximately 520 out-of-the-box Compliance Reports and 170 out-of-the-box Alerts with executive-level views.

- Enables customization of any Compliance Report to map reports against your company's policies.
- Focuses on compliance with Section 404 of the SOX Act, which establishes the need for internal controls based on a recognized control framework.

To create the Compliance Suite, TIBCO identified a number of COBIT control objectives and mapped the general control principles with the functionality provided by TIBCO LogLogic reports and alerts. As a result, the Compliance Suite provides reports and alerts that are directly aligned with specific COBIT objectives.

The SOX act of 2002 sets a standard for corporate accountability, requiring the definition and enforcement of internal IT controls and processes. It applies to all public companies. The Sarbanes-Oxley Act recommends companies regularly audit log files and keep a record of audit logs for up to seven years. SOX specifically requires companies to “audit unauthorized access, misuse and fraud, to ensure the accuracy of corporate financial and business information,” and to “maintain financial records for seven years.”

Sarbanes-Oxley Act Overview

The Sarbanes-Oxley Act is arguably the most well known of all recent regulatory changes impacting enterprises of all kinds. It was passed in July 2002 to restore investor confidence in the US public market after it was damaged by business scandals and lapses in corporate governance. As a result of SOX mandates, companies are taking measures to strengthen internal checks and balances and, ultimately, corporate accountability.

Several of the act's sections can be supported by IT controls and the TIBCO LogLogic Compliance Suite:

- Section 302 requires CFOs and CEOs to personally certify and attest to the accuracy of their companies' financial results.
- Section 404 establishes the need for internal controls based on a recognized control framework.
- Section 802 sets criminal penalties for destroying records connected with control audits.
- Section 409 defines requirements for real-time reporting of material events that could affect a company's financial performance.

Determining which and how many controls constitute an effective internal control environment is made and evaluated by management within a company, but must be agreed to by an external auditor.

Sarbanes-Oxley Section 404 Specifications

Section 404 requires senior management and business process owners to establish and maintain an adequate internal control structure. In addition, the specification requires senior management to assess the internal control's effectiveness on an annual basis. The following provides some specifics of Section 404:

- Management of public companies must assess the effectiveness of the organization's internal control over financial reporting.
- An annual review and assessment of the effectiveness of the internal controls must be completed.
- A company's independent auditor must attest to management's assessment of its internal control over financial reporting.
- A company must demonstrate the following internal controls:
 - Records are logged in reasonable details, accurate and reflect the transactions.
 - Transactions are being recorded.
 - Prevention or timely detection of unauthorized acquisition, use or disposition of the assets that could have a material effect on the financial statements.

- The IT control environment must include the IT governance process, monitoring and reporting.
- The IT governance process must include the information systems strategic plan, the IT risk management process, compliance and regulatory management, IT policies, procedures and standards.
- Monitoring and reporting exists to ensure IT is aligned with business requirements.

An ineffective control environment can be a significant deficiency and a strong indicator that a material weakness in internal control over financial reporting exists.

Benefits of Building a Strong Internal Control Program within IT:

- Enhances overall IT governance.
- Enhances the understanding of IT among executives.
- Enables better business decisions with higher-quality and timely information.
- Aligns project initiatives with business requirements.
- Prevents loss of intellectual assets and the possibility of a system breach.
- Contributes to the compliance of other regulatory requirements, such as privacy.
- Provides a competitive advantage through more efficient and effective operations.
- Optimizes operations with an integrated approach to security, availability, and processing integrity.
- Enhances risk management competencies and prioritization of initiatives.

PCAOB Auditing Standard No. 5 Overview

The Public Company Accounting Oversight Board (PCAOB) was formed to protect the interests of investors and further the public interest in the preparation of informative, fair and independent audit reports. PCAOB was created under SOX as a private sector, non-profit corporation to oversee the auditors of public companies. It establishes auditing standards and provides direction to auditors.

The PCAOB adopted Auditing Standard No. 5, entitled “An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements” in May 2007. This standard supersedes the previous standard, Auditing Standard No. 2, and is effective for all audits of internal controls for fiscal years ending on or after November 15, 2007.

The four main goals of Auditing Standard No. 5 are to:

- Focus internal control audit on the most critical areas and areas of greatest risk. This includes focusing audit scope, improved audit planning, and providing guidance on alternatives for addressing lower risk areas.
- Eliminate unnecessary procedures. The PCAOB has removed the previous standard’s detailed requirements to evaluate management’s own evaluation process and removing the requirement to render an opinion on the adequacy of management’s process.
- Make the audit scalable. The updated standard provides details on how to scale the audit based on the organization’s size and complexity, allowing for an approach that is better tailored for smaller and less complex organizations.
- Simplify the standard. The new standard is shorter and more readable. This includes text reordering and reduction of duplication.

IT Controls to Consider

The following IT controls should be considered for compliance with PCAOB Auditing Standard No. 5:

- Access to Programs and Data

Controls provide reasonable assurance that all financially significant systems (that is networks, applications, and databases) are appropriately secured to prevent unauthorized use, disclosure, modification, damage or loss of data.

Risks of Non-compliance – Informal security administration and monitoring activities might result in unauthorized and/or inappropriate access to key financial systems, which might negatively impact the existence, accuracy and completeness of financial statements.

- **Application Software Changes**

Controls provide reasonable assurance that all systems and system changes are appropriately requested, approved, tested, and validated by authorized personnel before the implementation to the production environment.

Risks of Non-compliance – Informal change management activities might result in unauthorized changes and/or improper roll-out of new source code to key financial systems. This can negatively impact the existence, accuracy and completeness of financial statements.

- **Computer Operations**

Controls provide reasonable assurance that authorized programs are executed as planned and deviations from scheduled processing are identified and investigated.

Controls provide reasonable assurance that data recorded, processed, and reported remain complete, accurate and valid throughout the storage process.

Controls provide reasonable assurance that problems and issues over the processing of business/IT transactions are addressed in a timely manner.

Controls provide reasonable assurance that third party services are appropriately retained and monitored to ensure that activities are executed in accordance with Company standards.

- **Risks of Non-Compliance**

Unauthorized program execution might result in inaccurate or untimely processing of key financial data.

Informal and/or ineffective data management activities might result in loss of key financial data that can negatively impact the existence, accuracy and completeness of financial statements.

Informal and/or ineffective problem management activities might result in unresolved system issues that might negatively impact the existence, accuracy and completeness of financial data.

Informal third party services management might result in vendor activities that are inconsistent with company standards. This might lead to a negative impact on the accuracy and completeness of financial statements.

- **Program Development**

Controls provide reasonable assurance that systems are developed and/or purchased in a manner that supports the accuracy and completeness of financial statements.

Risks of Non-compliance – Informal system development activities might result in improper rollout of key financial systems.

Process Elements

The PCAOB standard requires auditors to evaluate all process elements that might be involved in period-end financial reporting: IT services, executive management and business processes. The following table identifies these process elements.

| IT SERVICES | EXECUTIVE MANAGEMENT | BUSINESS PROCESSES |
|---|--|---|
| Shared services are those that are required by more than one department or process and are often delivered as a common service. From an IT perspective, services such as security, telecommunications and storage are necessary for any department or business unit and are often managed by a central IT function. | Executive management establishes and incorporates strategy into business activities. At the enterprise or entity level, business objectives are set, policies are established, and decisions are made on how to deploy and manage the resources of the organization. From an IT perspective, policies and other enterprise-wide guidelines are set and communicated throughout the organization. | Business processes are the organization's mechanism of creating and delivering value to its stakeholders. Inputs, processing and outputs are functions of business processes. Increasingly, business processes are being automated and integrated with complex and highly efficient IT systems. |
| General Controls Controls embedded in IT services form general controls, such as: Program development Program changes Computer operations Access to programs and data | Company-level Controls Company-level controls over the IT control environment set the tone for the organization. Examples include: Operating style Enterprise policies Governance Collaboration Information sharing | Application Controls Controls embedded in business process applications, such as large ERP systems and smaller best-of-breed systems, are commonly referred to as application controls. Examples include: Completeness Accuracy Validity Authorization Segregation of duties |

COSO Overview

To fulfill the PCAOB auditing standard, SOX requires that organizations to select and implement a suitable internal control framework. The COSO framework (Internal Control—Integrated Framework) has become the most commonly adopted framework. Although other suitable frameworks have been published in other countries and can contain the same elements, PCAOB recommends that they carry all of COSO's general themes. Companies must be able to demonstrate how their IT controls support the COSO framework.

Based on the COSO framework, there are five essential components for effective internal control:

- **Control environment:** Control environment establishes the basis for effective internal control and creates the 'tone at the top' required for successful corporate governance.
- **Risk assessment:** Risk assessment includes the identification, analysis, and evaluation of risks that can impact the achievement of corporate objectives. The risk assessment component helps provide the basis for control design and related activities.
- **Control activities:** The policies and procedures that are implemented for the achievement of business objectives comprise the organization's control activities. These activities also include the various risk mitigation strategies that are put in to place based on the results of risk assessment.
- **Information and communication:** Information relevant to the business must be identified appropriately, and an organization's information systems must process and report on the data

effectively to support normal operations and control of the business. In addition, the organization must be appropriately structured to facilitate both internal and external communications.

- **Monitoring:** Monitoring must be in place to allow the organization to detect, measure, and assess the quality and performance of internal controls over time.

Primary Objectives

The COSO framework identifies three primary objectives of internal control:

- Efficiency and effectiveness of operations
- Financial reporting
- Compliance with laws and regulations

COBIT Version 4.1 Overview

The Committee of the Sponsoring Organizations (COSO) provides a high-level view of the components of an IT control framework necessary for meeting SOX compliance; however, it does not provide details on how to execute the framework. Additional details regarding IT control considerations can be found in COBIT, a control framework published by the IT Governance Institute. COBIT provides controls that address operational and compliance objectives related directly to financial reporting.

In addition to supporting the COSO framework, and hence Sarbanes-Oxley requirements, the COBIT framework addresses IT governance more broadly. IT governance is the responsibility of executives and the board of directors, and consists of the leadership, organizational structures and processes that ensure that the enterprise's IT sustains and extend the organization's strategies and objectives. Furthermore, IT governance integrates and institutionalizes good practices to ensure that an enterprise's IT organization supports business objectives. IT governance therefore enables an enterprise to take full advantage of its information, thereby maximizing benefits, capitalizing on opportunities, and gaining a competitive advantage.

COBIT supports IT governance by providing a framework to ensure that:

- IT is aligned with the business
- IT enables the business and maximizes benefits
- IT resources are used responsibly
- IT risks are managed appropriately

COBIT Version 4.1

COBIT released the fourth version of its control framework in December 2005. Version 4.1 of COBIT was released as an update in 2007. The framework approaches IT controls by looking at all of the information needed to support business requirements and the associated IT resources and processes. COBIT is intended for management, users, and auditors (mostly IT auditors).

Sarbanes-Oxley Section 404 is strictly focused on internal controls over financial reporting. All users of COBIT must first determine the relevance of a significant IT process or IT-dependent process by assessing its primary contributions to internal controls over financial reporting, rather than to the broad spectrum of IT control processes encompassed by COBIT. One way to ensure that IT is properly anchored to a significant account, business process, or major class of transaction is to critically question the role of IT in risk mitigation and in enhancing the integrity of financial reporting and financial-statement assertions. IT auditors have a new opportunity to add value by evaluating the design and operating effectiveness of automated application controls end-to-end in addressing fraud, yet this scope is not explicit in COBIT.

It is important that auditors select relevant IT Control Objectives from COBIT when defining their Sarbanes-Oxley scope. IT's unique contribution centers around its ability to enhance the integrity,

security, and availability of financial information within those identified business processes, as well as safeguarding assets – most notably information assets.

TIBCO LogLogic Compliance Suite Setup

Setting up the LogLogic® Compliance Suite - Sarbanes-Oxley Edition comprises checking that all prerequisites are met before starting the installation process, installing the Compliance Suite file, and enabling the alerts.

See [Installing the Compliance Suite](#) and [Enabling Compliance Suite Alerts](#) for more details.

Installing the Compliance Suite

Prerequisites

Before installing the LogLogic® Compliance Suite - Sarbanes-Oxley Edition, ensure that you have:

- LogLogic LX or MX or ST Appliance running LogLogic LMI Release 5.7.x or higher
- TIBCO LogLogic® Log Source Packages (LSP) 32.1 or 33 installed

The Compliance Suite includes one XML file containing SOX or COBIT search filters, custom reports, and alerts:

- `sox.xml` or `cobit.xml` – SOX and COBIT Reports, Search Filters, and Alerts



If you have previously imported any earlier versions of the Compliance Suite files, importing this version of the Compliance Suite will not overwrite the original files or any changes that have been made, unless you have saved the changes to the object using the default name.

If you have made any changes to base Compliance Suite alerts, search filters, or custom reports, TIBCO recommends saving these items with non-default names. This will help ensure that the latest Compliance Suite updates can be installed without any compatibility issues or naming conflicts.

Procedure

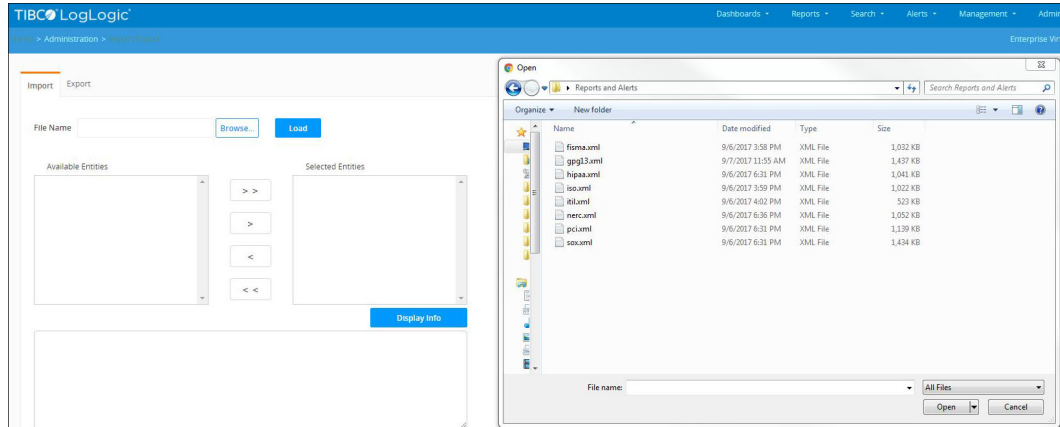
1. Log in to your LogLogic LX or MX or ST Appliance as admin.
2. From the navigation menu, select **Administration > Import or Export**.

The **Import** and **Export** tabs appear.

3. Load the Compliance Suite file by completing the following steps:
 - a) In the **Import** tab, click **Browse**.
 - b) In the **File Upload** window, select the appropriate XML file and then click **Open**.

The following figure shows the **File Upload** window that appears after clicking **Browse** on the **Import** tab.

Loading a Compliance Suite File



- c) Click **Load**.

This loads the **Available Entities** from the XML file.

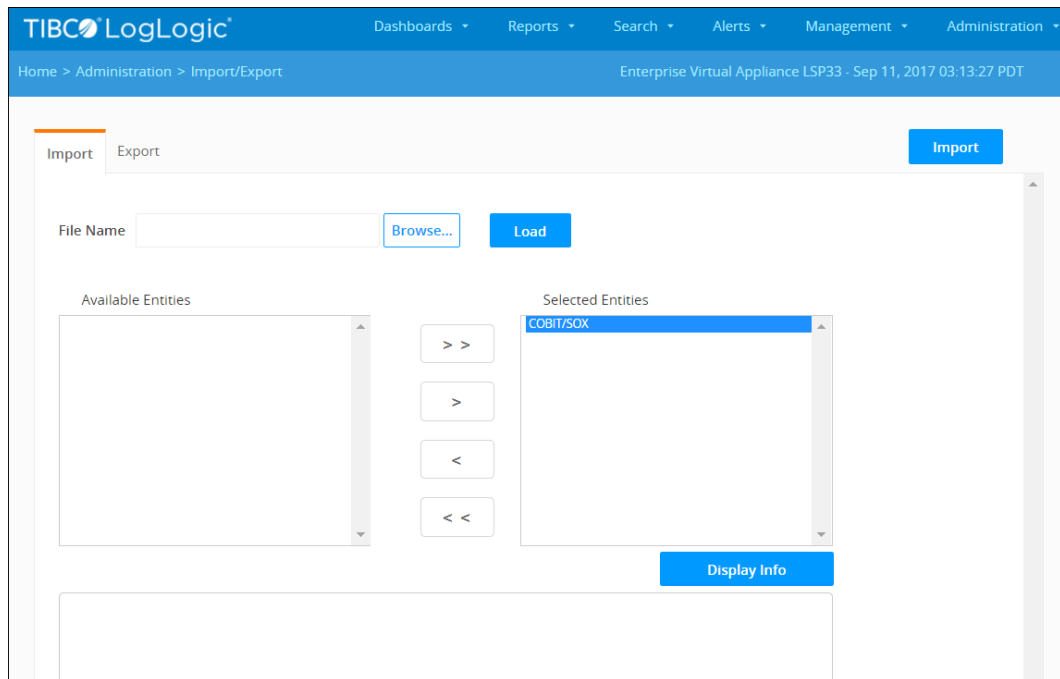
- d) Click **Add All Entities**.



You can also select the specific COBIT or SOX entity from the **Available Entities** text block, and click **Add Selected Entities**.

The following figure shows all entities of the COBIT XML file that were selected by clicking **Add All Entities**.

Selected Entities to be Imported



4. Click **Import**.

An import successfully completed message appears above the **File Name** text field.

Installation is complete after the XML file is successfully imported.

The Compliance Suite Usage

After you have successfully installed the LogLogic® Compliance Suite - Sarbanes-Oxley Edition, you can begin using the custom reports and alerts.

The following sections help you view, test, and modify, the packaged custom reports and alerts. The custom reports and alerts were designed to run out-of-the box; however, LogLogic LMI enables you to perform further customization if necessary.

Compliance Suite Reports

All LogLogic® Compliance Suite - Sarbanes-Oxley Edition reports are designed to run out-of-the box as well as to be flexible if you must make modifications based on your business needs.

For a description of all custom reports in this Compliance Suite, see [TIBCO LogLogic Reports for COBIT 4.1 and Sarbanes-Oxley](#).

Viewing Compliance Suite Reports and Output Data

By using TIBCO LogLogic LX or MX or ST Appliance, you can view all the Compliance Suite reports for the device and run them as well as view the output data.

Procedure

1. Log in to your LogLogic LX or MX or ST Appliance as admin.
2. From the navigation menu, select **Reports > COBIT/SOX**.



You can also access all of your custom reports on the Appliance including the Compliance Suite reports you installed, by selecting **Reports > All Saved Reports**.

3. On the **Reports** page, you can see all of the custom reports you loaded during the installation process.

You can navigate through all of the custom reports using the page navigation buttons at the top and bottom of the **Reports** page.

The following figure shows a cropped list of the Compliance Suite reports loaded from the COBIT XML file.

Compliance Suite Reports

TIBCO LogLogic®

Dashboards

Reports

Search

Alerts

Management

Home > Reports > COBIT/SOX

Enterprise Virtual Appliance

| Actions | Name | Type | Description | Suite | Scheduled |
|-----------------------------------|------------------|----------------|--|-----------|-----------|
| <div><div></div><div></div></div> | COBIT: Accept... | VPN Access | Displays all users connected to the internal network thr... | COBIT/SOX | No |
| <div><div></div><div></div></div> | COBIT: Accou... | User Access | Displays all accounts activities on UNIX servers to ensur... | COBIT/SOX | No |
| <div><div></div><div></div></div> | COBIT: Accou... | Windows Eve... | Displays all accounts activities on Windows servers to e... | COBIT/SOX | No |
| <div><div></div><div></div></div> | COBIT: Accou... | User Access | Displays all accounts changed on NetApp Filer to ensure... | COBIT/SOX | No |
| <div><div></div><div></div></div> | COBIT: Accou... | User Access | Displays all accounts changed on TIBCO ActiveMatrix Ad... | COBIT/SOX | No |

4. Click the **Edit** button of a report to see details such as, the appliance where the report runs, the associated device type, and when the report runs.
 - a) To view the filter parameters, click **Columns and Filters**.
 - b) To view details about a report such as the report name and description, click **Properties**.

The following figure shows the details of the **COBIT: Windows Events Summary** report.

Windows Events Summary Report Details

5. Run the report to view the report output data by completing the following steps:
 - a) Click **Run**.

The report runs and returns data based on the set parameters.

- b) To view detailed drill-down information, click the **Count** column link.



You can use the **Back to summarized results** button to return to the main data output view.

The following figure shows sample results from the **COBIT: Windows Events Summary** report.

Windows Events Summary Results

| Number | Source Device | User | Action | Status | Count |
|--------|---------------|----------|--------|---------|-------|
| 1 | All Devices | | Login | Failure | 9552 |
| 2 | All Devices | - | Login | Failure | 4624 |
| 3 | All Devices | tsmith | Login | Failure | 4455 |
| 4 | All Devices | tsmith | Login | Failure | 2820 |
| 5 | All Devices | rot | Login | Failure | 2399 |
| 6 | All Devices | ACSAdmin | Login | Failure | 1898 |
| 7 | All Devices | adam | Login | Failure | 1794 |



If you want to modify the main data output view, you can modify the report parameters and then run the report again.

Customizing Compliance Suite Reports

The LogLogic® Compliance Suite - Sarbanes-Oxley Edition reports are designed to run out-of-the-box to meet specific compliance requirements. However, you might want to modify the reports to include additional information or devices depending on your business needs.

Procedure

1. Make sure that you are on the **Reports** page and click the **Edit** button of a report you want to modify.
2. Modify the report details (that is name, description, and so on.), filters, and parameters.

LogLogic enables you to customize everything pertaining to the summarization and presentation of the reports. You can modify one of the devices on which the report runs, schedule when the report runs, and set specific report search filters.

The following figure shows the report filters available under **Columns and Filters**.

Advanced Options and Update Saved Custom Report Views

COBIT: Windows Events Summary Properties...

Log Sources
0 dynamic rules and 6 specific devices selected.

Columns and Filters (Summarized)
3 columns and 0 filters selected.

| Column | Filter |
|---------------|---------------------|
| Name | Show Operator Value |
| Source Device | |
| Event ID | |
| Count | |

Sort by: **Count**
Direction: **Descending**

Scheduling
No schedules selected.

Add Columns and Filters

☒ Summarized ☐ Detailed

| Column Name | Operator | Value |
|---|----------|-------|
| <input checked="" type="checkbox"/> Source Device | | |
| <input checked="" type="checkbox"/> Event ID | = | |
| <input type="checkbox"/> User | = | |
| <input type="checkbox"/> Source Domain | = | |
| <input type="checkbox"/> Target User | = | |
| <input type="checkbox"/> Target Domain | = | |
| <input type="checkbox"/> Originating Host | = | |
| <input type="checkbox"/> Subsystem | = | |

Sort by: **Count** **Descending** << Apply Reset

Run Save & Close Save As... Cancel



It is a good practice to test your modifications to ensure that the report meets your business needs.

3. To test the report, click **Run**.

The report runs and returns data based on the set parameters. Verify that the returned data is what you want. Continue modifying and testing the report as needed.

4. Save the report by completing the following steps:
 - a) Click **Save As**.

Make any necessary modifications to the report details (that is **Report Name**, **Report Description**, and so on.).

- b) Click **Save & Close**.

A report saved message appears. Your report is now modified. Consider testing the output of the report again to ensure you are returning all of the data you need from this report.

The Compliance Suite Alerts

The LogLogic® Compliance Suite - Sarbanes-Oxley Edition alerts enable you to manage activities and operations in conjunction with Sarbanes-Oxley compliance and COBIT 4.1 control objectives. Activities can include detecting unusual traffic on your network or detecting appliance system anomalies. By default, the Compliance Suite alerts are disabled so that you can configure your environment with only those alerts that are necessary.

For a description of all alerts in this Compliance Suite, see [TIBCO LogLogic Alerts for COBIT 4.1 and Sarbanes-Oxley](#).

Accessing Available Compliance Suite Alerts

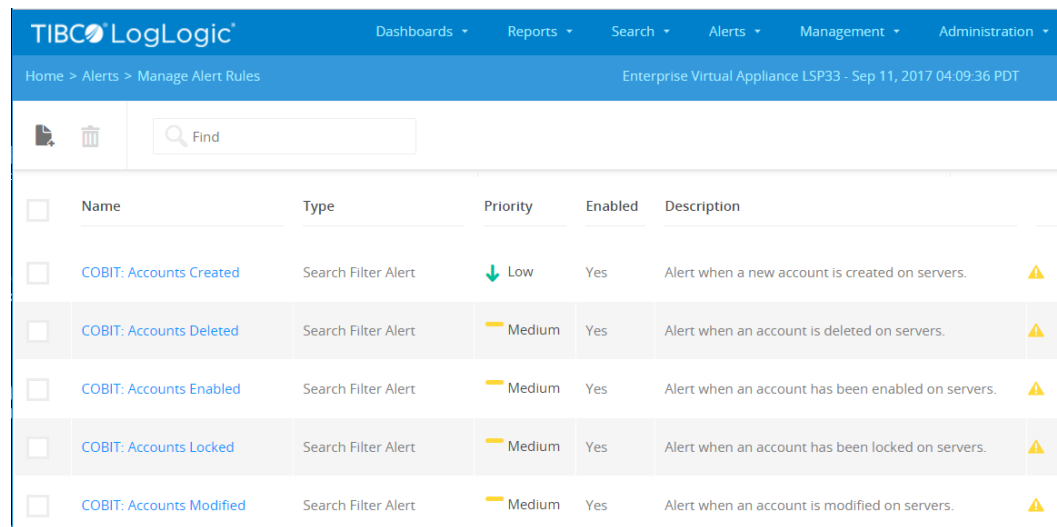
The Compliance Suite package contains a number of alerts that can be easily enabled and modified for your business needs.

Procedure

1. From the navigation menu, click **Alerts > Manage Alert Rules**.

The following figure shows a cropped list of the Compliance Suite alerts loaded from the COBIT XML file.

Compliance Suite Alerts



| <input type="checkbox"/> | Name | Type | Priority | Enabled | Description |
|--------------------------|--------------------------|---------------------|----------|---------|--|
| <input type="checkbox"/> | COBIT: Accounts Created | Search Filter Alert | Low | Yes | Alert when a new account is created on servers. |
| <input type="checkbox"/> | COBIT: Accounts Deleted | Search Filter Alert | Medium | Yes | Alert when an account is deleted on servers. |
| <input type="checkbox"/> | COBIT: Accounts Enabled | Search Filter Alert | Medium | Yes | Alert when an account has been enabled on servers. |
| <input type="checkbox"/> | COBIT: Accounts Locked | Search Filter Alert | Medium | Yes | Alert when an account has been locked on servers. |
| <input type="checkbox"/> | COBIT: Accounts Modified | Search Filter Alert | Medium | Yes | Alert when an account is modified on servers. |

2. To view details of a specific alert, click the **Name** of the alert.

The **General** tab is selected by default, but each tab on the page contains information required to enable an alert.

3. Click on each of the tabs to view the default entries.

Result



Make sure that you identify the default entries and areas that might have to be modified.

Enabling Compliance Suite Alerts

By default, the compliance suite alerts have pre-configured information to help you get started. In some instances, you can simply enable the alert because the default settings are aimed at capturing a broad range of alerts.

To enable alerts, you must set one of the devices to monitor, the SNMP trap receivers, as well as who receives an alert notification and how they receive it.

Procedure

1. From the navigation menu, select **Alerts > Manage Alert Rules**.
2. Click the **Name** of the alert.
3. On the **General** tab, for **Enable** select the **Yes** radio button.

The following figure shows the **General** tab for the **COBIT: CheckPoint Policy Changed** alert.
CheckPoint Policy Change Alert

The screenshot shows the 'Edit Alert Rule' page in the TIBCO LogLogic interface. The breadcrumb trail is 'Home > Alerts > Manage Alert Rules'. The page title is 'Edit Alert Rule'. There are five tabs: 'General' (selected), 'Devices', 'Alert Receivers', 'Email Recipients', and 'Templates'. The 'General' tab contains the following fields:

- Pre-defined Search Filter Alert**
- Name ***: COBIT: Check Point Policy Changed
- Priority**: High
- Search Filter**: COBIT: Check Point Policy Changed (RegEx)
- Timespan ***: 60
- Reset Time**: 300
- Enable**: Yes (selected), No
- SNMP OID**: (empty field)

4. Select one of the devices to be alerted on by completing the following steps:
You can define alerts for all devices, a selection of devices, or a single device.
 - a) Select the **Devices** tab.
 - b) In the **Available Devices** text block, select the appropriate log sources (that is devices) you want to monitor and be alerted on when an alert rule is triggered.



If the **Show Only Device Groups** setting is enabled on the Appliance, then the **Available Devices** text block lists only device groups. To enable or disable this feature, go to **Administration > System Settings > General** tab, scroll down to the **System Performance Settings** section and modify the **Optimize Device Selection List** option.

- c) Click **Add All** or **Add Selected Device(s)**.

The following figure shows the **Devices** tab for the selected alert.

Available and Selected Devices

The screenshot shows the 'Edit Alert Rule' window in TIBCO LogLogic. The 'Devices' tab is active. On the left, under 'Available Devices', there is a scrollable list of device identifiers. On the right, under 'Selected Devices', there is a scrollable list of selected device groups. Between the two lists are four buttons: '> >', '>', '<', and '< <'. At the bottom right, there is a checked checkbox labeled 'Track all devices individually'.

5. The Appliance has the ability to generate an SNMP trap that is sent to an SNMP trap receiver when an alert rule is triggered. Select the alert receivers available to your devices by completing the following steps:
 - a) Select the **Alert Receivers** tab.
 - b) In the **Available Alert Receivers** text block, select the appropriate alert receivers available for your devices.
 - c) Click **Add All** or **Add Selected Receiver(s)**.
6. Select the email recipients to be alerted with a notification email when an alert rule is triggered by completing the following steps:
 - a) Select the **Email Recipients** tab.
 - b) In the **Available Users** text block, select the appropriate email recipients.
 The **Available Users** text block lists all of the user accounts on the Appliance.
 - c) Click **Add All** or **Add Selected User(s)**.
7. Click **Update**.

Viewing Compliance Suite Alert Results

After you have enabled at least one alert, and that alert is triggered, you can view the results.

Procedure

1. In the navigation menu, select **Alerts > Show Triggered Alerts**.

The following figure shows a cropped version of the **Show Triggered Alerts** page.

Aggregated Alert Log

| Time | Source IP | Priority | Type | Alert Destination | Description |
|---------------------|---------------|----------|---------------------|-------------------|---|
| 2017-09-11 04:52:45 | 10.114.98.167 | High | Search Filter Alert | | <p>Alert 'COBIT: LogLogic File Retrieval Errors' (Alert when problems are detected during file retrieval for the following device: :ffff:10.114.98.167, logapp. Alert was configured for All LogLogic Appliances. Message: <11>Sep 11 04:52:38 logapp COLLECTOR_FC: %LOGLOGIC-3 module:engine_filecollector c(report_fc_event:732): action:ERROR: file pull failed for the http src: http://[::ffff:192.168.22.18]/link/device_logs/filepulllogs/Cisco_IPS/Cisco... page not retrieved. The requested url was not found or returned another error w... or above. This return code only appears if -f/-fail is used.), see (download_file_cu... Search Filter (COBIT: LogLogic Retrieval Errors (Exact)) pattern: 'file pull failed'. High threshold: 1 matches within 60 seconds. Subsequent alerts will not be sent until 300 seconds have passed. There were 1 alertable events since last alert message.</p> <p>Alert 'COBIT: LogLogic File Retrieval Errors' (Alert when problems are detected during file retrieval for the following device: :ffff:10.114.98.167, logapp. Alert was configured for All LogLogic Appliances. Message: <11>Sep 11 04:52:38 logapp COLLECTOR_FC: %LOGLOGIC-3 module:engine_filecollector c(report_fc_event:732): action:ERROR: file pull failed for the http src: http://[::ffff:192.168.22.18]/link/device_logs/filepulllogs/Cisco_IPS/Cisco... page not retrieved. The requested url was not found or returned another error w... or above. This return code only appears if -f/-fail is used.), see (download_file_cu... Search Filter (COBIT: LogLogic Retrieval Errors (Exact)) pattern: 'file pull failed'. High threshold: 1 matches within 60 seconds. Subsequent alerts will not be sent until 300 seconds have passed. There were 1 alertable events since last alert message.</p> |

2. From the **Show** drop-down menu, select the desired alert and priority filters to show only those alerts you want to display. The defaults are **New Alerts** and **All Priorities**.
3. (Management Station Appliances Only) From the **From Appliance** drop-down menu, select the appliance from which you want to view the alerts.
4. View the results of your query. You can navigate through all of the data by using the page navigation buttons or page text field.
5. You can either acknowledge or remove an alert. Click the checkbox next to the alert name, then click either **Acknowledge**, **Remove**, or **Remove All**.



Each alert was triggered based on your set alert parameters, so care must be taken when acknowledging or removing the alert.

COBIT 4.1 Control Objectives

By using TIBCO LogLogic Compliance Suite you can implement COBIT 4.1 control objectives.

Plan and Organize

The Plan and Organize Control Objectives addressed by the LogLogic® Compliance Suite - Sarbanes-Oxley Edition are:

PO2 Define the Information Architecture

- PO2.3 Data Classification Scheme (Maps to Process APO03.02 in COBIT 5)
- PO2.4 Integrity Management (Maps to Process APO01.06 in COBIT 5)

PO4 Define the IT Processes, Organization and Relationships

- PO4.11 Segregation of Duties (Maps to Process APO01.02 in COBIT 5)

PO7 Manage IT Human Resources

- PO7.8 Job Change and Termination (Maps to Process APO07.01 in COBIT 5)

PO2.3 Data Classification Scheme

Establish an enterprise-wide data classification scheme based on both business criticality and sensitivity requirements. Use this scheme as the basis for applying data-specific controls, such as encryption, access control, archive, and high availability.

Illustrative Controls and the TIBCO LogLogic Solution

An appropriate data classification scheme serves as the basis for applying, monitoring, and managing data-related IT security controls. The classification scheme provides the means for controlling data access, ensuring availability of critical data, and maintaining an audit trail for sensitive or critical data access.

To satisfy this objective, the organization must architect a classification scheme that accounts for all enterprise data. The scheme will take into account characteristics and issues such as sensitivity, criticality, and encryption and availability requirements. Implementing data access logging and monitoring helps ensure that the scheme is being applied in a suitable fashion and that data is being accessed by appropriate parties.

Reports and Alerts

Refer [PO2.3](#) to see the PO2.3 reports and alerts.

PO2.4 Integrity Management

Develop and institute procedures to ensure electronic data integrity in all forms (that is files, databases, archives).

Illustrative Controls and the TIBCO LogLogic Solution

Organizations must ensure that appropriate controls are in place to safeguard and preserve the integrity of electronic data. Maintaining data integrity provides assurances for the validity and accuracy of data and is a key component for financial reporting.

To satisfy this objective, administrators must ensure that controls are in place to detect and report on unauthorized (both accidental and malicious) data modifications. These controls should be applied on all relevant financial reporting systems. Additionally, strong change management controls and

procedures help reduce the risk of data integrity violations caused by unauthorized or uncontrolled changes to system configurations.

Reports and Alerts

Refer [PO2.4](#) to see the PO2.4 reports and alerts.

PO4.11 Segregation of Duties

Implement a division of roles and responsibilities that reduces the possibility for a single individual to subvert a critical process. Management also makes sure that personnel are performing only authorized duties relevant to their respective jobs and positions.

Illustrative Controls and the TIBCO LogLogic Solution

Organizations must confirm that there is appropriate segregation of duties between the staff responsible for moving a program into production and the staff responsible for developing a program. In addition, organizations must consider whether or not a change to a program is performed in a segregated and controlled environment.

To satisfy this control objective, administrators must ensure that logins to financial reporting servers as well as permissions assigned to these users are appropriate for the tasks they are allowed to perform. Users with overlapping permission sets could indicate a compromise in the segregation of duties control consideration. Administrators must also review the process to request and grant access to systems and data and confirm that the same person does not perform these functions.

Demonstrate that only authorized users have access to sensitive data and applications.

Reports and Alerts

Refer [PO4.11](#) to see the PO4.11 reports and alerts.

PO7.8 Job Change and Termination

Take expedient actions regarding job changes, especially job terminations. Knowledge transfer must be arranged, responsibilities reassigned, and access rights removed such that risks are minimized and continuity of the function is guaranteed.

Illustrative Controls and the TIBCO LogLogic Solution

When a person changes jobs or is terminated from a company, user access privileges must be modified according to the company's business guidelines. To satisfy this control objective, administrators must periodically ensure that only current and authorized employees have access to financial reporting servers. Administrators must ensure that all terminated users have been disabled. In addition, Administrators must ensure that logins to financial reporting servers as well as permissions assigned to users who changed jobs are appropriate for the new role they are in. To ensure that the preceding requirements are met, Administrators must review reports of all user deletions and group member modifications. This ensures that the terminated users are removed and users who changed jobs have been removed from the appropriate groups.

Demonstrate that user access privileges are modified or revoked in a timely manner upon job change or termination. Review reports and alerts on account activities, accounts created or deleted, group members added or deleted, and successful logins to VPN concentrators and critical servers.

Reports and Alerts

Refer [PO7.8](#) to see the PO7.8 reports and alerts.

Acquire and Implement

The Acquire and Implement Control Objectives addressed by the LogLogic® Compliance Suite - Sarbanes-Oxley Edition are:

AI2 Acquire and Maintain Application Software

- AI2.3 Application Control and Auditability (Maps to Process BAI03.05 in COBIT 5)
- AI2.4 Application Security and Availability (Maps to Processes BAI03.01, BAI03.02, BAI03.03, BAI03.05 in COBIT 5)

AI3 Acquire and Maintain Technology Infrastructure

- AI3.2 Infrastructure Resource Protection and Availability (Maps to Processes BAI03.03, DSS02.03 in COBIT 5)
- AI3.3 Infrastructure Maintenance (Maps to Process BAI03.10 in COBIT 5)

AI6 Manage Changes

- AI6.1 Change Standards and Procedures (Maps to Processes BAI06.01, BAI06.02, BAI06.03, BAI06.04 in COBIT 5)

AI2.3 Application Control and Auditability

Ensure that business controls are properly translated into application controls such that processing is accurate, complete, timely, authorized, and auditable. Issues to consider include authorization mechanisms, information integrity, access control, backup and design of audit trails.

Illustrative Controls and the TIBCO LogLogic Solution

Managing problems and incidents addresses how an organization identifies, documents and responds to events that fall outside of normal operations. You must maintain a complete and accurate audit trail for network devices, servers and applications. This enables you to address how your business identifies root causes of issues that can introduce inaccuracy in financial reporting. Also, your problem management system must provide for adequate audit trail facilities which allow tracing from incident to underlying cause.

To satisfy this control objective, administrators must ensure all financial reporting related network devices, servers, and applications are properly configured to log to a centralized server. Administrators must also periodically review logging status to ensure these devices, servers and applications are logging correctly.

Verify that all critical applications and network devices are providing a complete audit trail in the form of log data by reviewing the log source status page.

Reports and Alerts

Refer [AI2.3](#) to see the AI2.3 reports and alerts.

AI2.4 Application Security and Availability

Use identified areas of risk and organization-specific security architecture and data classification to address requirements for application availability and security.

Illustrative Controls and the TIBCO LogLogic Solution

Application security and availability controls help ensure the confidentiality, integrity, and availability of systems, applications, and data. These controls help implement the organization's requirements for data classification, access control, and risk management.

To satisfy this objective, administrators must ensure that preventive and detective controls have been established to protect relevant applications and data. Monitoring availability-related events in application and system logs supports this control objective. Additionally, tracking and monitoring changes in authorization and access levels helps provide assurance that security controls are being implemented according to the policy.

Reports and Alerts

Refer [AI2.4](#) to see the AI2.4 reports and alerts.

AI3.2 Infrastructure Resource Protection and Availability

Apply security and auditability measures during infrastructure and software implementation to ensure system integrity and availability and resource protection. Define roles and responsibilities for the operation of sensitive components and continually monitor and evaluate use.

Illustrative Controls and the TIBCO LogLogic Solution

Implementing controls during system integration and installation helps ensure that the integrity of systems and data.

To satisfy this objective, organizations should ensure the proper separation of responsibilities and environments for testing, development, and production operation. Implementation plans should include security and availability controls. Production deployment and change should be controlled through reviews, approvals, and accompanying rollback plans. Access to and maintenance of financial systems and supporting infrastructure must be monitored and logged.

Reports and Alerts

Refer [AI3.2](#) to see the AI3.2 reports and alerts.

AI3.3 Infrastructure Maintenance

Develop a plan for maintenance of the environment. Ensure that change management procedures govern all changes. Include business requirements, patch management, upgrades, and security factors in the plan.

Illustrative Controls and the TIBCO LogLogic Solution

Unauthorized and unplanned changes to the environment present a significant risk to the infrastructure and associated data integrity and availability. To counter this risk, all changes to critical financial systems must be managed in a formal and controlled manner.

To satisfy this objective, the change management policy should include formal requests, implementation planning, approvals, testing, risk assessment, and contingency planning. System changes must be monitored to ensure that modifications occur only in conjunction with approved requests and plans.

Reports and Alerts

Refer [AI3.3 Infrastructure Maintenance](#) to see the AI3.3 reports and alerts.

AI6 Change Standards and Procedures

Set up formal change management procedures to handle all requests (including maintenance and patches) in a standardized manner.

Illustrative Controls and the TIBCO LogLogic Solution

Managing changes addresses how an organization modifies system functionality to help the business meet its financial reporting objectives. Deficiencies in this area might significantly impact financial reporting. For example, changes to the programs that allocate financial data to accounts require appropriate approvals and testing before the change to ensure classification and reporting integrity.

Businesses must ensure that requests for program changes, system changes, and maintenance (including changes to system software) are standardized, documented, and subject to formal change management procedures.

To satisfy this control objective, administrators must review all changes to the production environment and compare the changes to documented approvals to ensure the approval process is followed. From the archived audit log data, obtain a sample of regular and emergency changes made to applications/systems to determine whether they were adequately tested and approved before being placed into a production environment. Trace the sample of changes back to the change request log and supporting documentation.

Review all changes to the production environment and compare the changes to documented approvals utilizing alerts and reports on policy modifications, groups activities, escalated privilege activities, and permissions changed.

Reports and Alerts

Refer [AI6 Change Standards and Procedures](#) to see the AI6 reports and alerts.

Delivery and Support

The Deliver and Support Control Objectives addressed by the LogLogic® Compliance Suite - Sarbanes-Oxley Edition are:

DS1 Define and Manage Service Levels

- DS1.5 Monitoring and Reporting of Service Level Achievements (Maps to Process APO09.05 in COBIT 5)

DS2 Manage Third-Party Services

- DS2.4 Supplier Performance Monitoring (Maps to Process APO10.05 in COBIT 5)

DS3 Manage Performance and Capacity

- DS3.5 Monitoring and Reporting of Performance and Capacity (Maps to Process BAI04.04 in COBIT 5)

DS4 Ensure Continuous Service

- DS4.1 IT Continuity Framework (Maps to Processes DSS04.01, DSS04.02 in COBIT 5)
- DS4.5 Testing of the IT Continuity Plan (Maps to Process DSS04.05 in COBIT 5)

DS5 Ensure System Security

- DS5.2 IT Security Plan (Maps to Process APO13.02 in COBIT 5)
- DS5.3 Identity Management (1 of 4) (Maps to Process DSS05.04 in COBIT 5)
- DS5.3 Identity Management (2 of 4) (Maps to Process DSS05.04 in COBIT 5)
- DS5.3 Identity Management (3 of 4) (Maps to Process DSS05.04 in COBIT 5)
- DS5.3 Identity Management (4 of 4) (Maps to Process DSS05.04 in COBIT 5)
- DS5.4 User Account Management (Maps to Process DSS05.04 in COBIT 5)
- DS5.5 Security Testing, Surveillance, and Monitoring (Maps to Process DSS05.07 in COBIT 5)
- DS5.7 Protection of Security Technology (Maps to Process DSS05.05 in COBIT 5)
- DS5.8 Cryptographic Key Management (Maps to Process DSS05.03 in COBIT 5)
- DS5.10 Network Security (1 of 2) (Maps to Process DSS05.02 in COBIT 5)
- DS5.10 Network Security (2 of 2) (Maps to Process DSS05.02 in COBIT 5)

DS9 Manage the Configuration

- DS9.3 Configuration Integrity Review (Maps to Processes BAI10.04, BAI10.05, DSS02.05 in COBIT 5)

DS10 Manage Problems

- DS10.2 Problem Tracking and Resolution (Maps to Process DSS03.02 in COBIT 5)

DS11 Manage Data

- DS11.2 Storage and Retention Arrangements (Maps to Process DSS04.08, DSS06.04 in COBIT 5)
- DS11.5 Backup and Restoration (Maps to Process DSS04.08 in COBIT 5)
- DS11.6 Security Requirements for Data Management (Maps to Process DSS01.01, DSS05.08, DSS06.05 in COBIT 5)

DS13 Manage Operations

- DS 13.3 IT Infrastructure Monitoring (Maps to Process DSS01.03 in COBIT 5)

DS1.5 Monitoring and Reporting of Service Level Achievements

Continuously monitor specified service level performance criteria. Reports are provided in a format meaningful to the stakeholders on achievement of service levels. The monitoring statistics are analyzed and acted upon to identify negative and positive trends for individual services as well as for services overall.

Illustrative Controls and the TIBCO LogLogic Solution

The process of defining and managing service levels addresses how an organization meets the functional and operational expectations of its users and, ultimately, the objectives of the business. Deficiencies in this area could significantly impact financial reporting and disclosure of an entity. For example, if systems are poorly managed or system functionality is not delivered as required, financial information can not be processed as intended.

To satisfy this control objective, administrators must configure alerts to ensure all critical application failures, including firewalls, routers, switches, servers, and applications, are recognized immediately. Alerts must be reviewed periodically. In addition, administrators must perform independent reviews on the security, availability, and processing integrity of third-party service providers by continuously monitoring the service level agreements through adequate logging and reporting.

Continuously monitor the availability of the IT infrastructure using behavioral-based alerts. Administrators can configure alerts to monitor performance of firewalls, routers, switches, servers, applications, and operating systems so they can be notified immediately of the failures. Real-time reports and custom, regular-expression searches also enable administrators to quickly identify and determine the root cause of any problems. This further mitigates risk and minimizes interruptions to service availability.

Reports and Alerts

Refer [DS1.5](#) to see the DS1.5 reports and alerts.

DS2.4 Supplier Performance Monitoring

It establishes a process to monitor service delivery to ensure the supplier is meeting current business requirements and is continuing to adhere to the contract agreements and service level agreements, and that performance is competitive with alternative suppliers and market conditions.

Illustrative Controls and the TIBCO LogLogic Solution

Administrators must configure proper alerts to monitor any anomalies related to system availability, capacity and performance.

Continuously monitor the availability of the IT infrastructure using behavioral-based alerts. Administrators can configure alerts to monitor performance of firewalls, routers, switches, servers, applications, and operating systems so they can be notified immediately if of failures. Real-time reports and custom, regular-expression searches also enable administrators to quickly identify and determine the root cause of any problems. This further mitigates risk and minimizes interruptions to service availability.

Reports and Alerts

Refer [DS2.4](#) to see the DS2.4 reports and alerts.

DS3.5 Monitoring and Reporting of Performance and Capacity

Continuously monitor the performance and capacity of IT resources. Data gathered serve two purposes:

- To maintain and tune current performance within IT and address such issues as resilience, contingency, current and projected workloads, storage plans and resource acquisition
- To report delivered service availability to the business as required by the SLAs. Accompany all exception reports with recommendations for corrective action.

Illustrative Controls and the TIBCO LogLogic Solution

Administrators must configure proper alerts to monitor any anomalies related to system availability, capacity and performance.

Continuously monitor the availability of the IT infrastructure using behavioral-based alerts. Administrators can configure alerts to monitor performance of firewalls, routers, switches, servers, applications, and operating systems so they can be notified immediately of the failures. Real-time reports and custom, regular-expression searches also enable administrators to quickly identify and determine the root cause of any problems. This further mitigates risk and minimizes interruptions to service availability.

Reports and Alerts

Refer [DS3.5](#) to see the DS3.5 reports and alerts.

DS4.1 IT Continuity Framework

Develop a framework for IT continuity to support enterprise-wide business continuity management with a consistent process. The objective of the framework is to assist in determining the required resilience of the infrastructure and to drive the development of disaster recovery and IT contingency plans.

The framework should address the organizational structure for continuity management, covering the roles, tasks and responsibilities of internal and external service providers, their management and their customers, and the rules and structures to document, test and execute the disaster recovery and IT contingency plans. The plan should also address items such as the identification of critical resources, the monitoring and reporting of the availability of critical resources, alternative processing, and the principles of backup and recovery.

Illustrative Controls and the TIBCO LogLogic Solution

Policies and procedures addressing backup and restoration activities must be documented, communicated, and updated to ensure guidance reflects current business conditions.

To satisfy this control objective, all policies and procedures must be accessed, reviewed, and updated periodically by appropriate users. Lack of access to these policies and procedures must indicate that they have not been regularly reviewed and updated.

Verify that IT Continuity Framework documents have been reviewed periodically by authorized personnel.

Reports and Alerts

Refer [DS4.1](#) to see the DS4.1 reports and alerts.

DS4.5 Testing of the IT Continuity Plan

Test the IT continuity plan on a regular basis to ensure that IT systems can be effectively recovered, shortcomings are addressed and the plan remains relevant. This requires careful preparation, documentation, reporting test results and, according to the results, implementing an action plan. Consider the extent of testing recovery of single applications to integrated testing scenarios to end-to-end testing and integrated vendor testing.

Illustrative Controls and the TIBCO LogLogic Solution

Organizations must have procedures in place to back up the data and programs based on IT and user requirements.

To satisfy this control objective, administrators must back up the data on a regular basis. In addition, administrators must review backup logs periodically to ensure backups are performed successfully. Backup logs must be reviewed periodically to ensure backup and restore are performed successfully on a regular basis.

Review backup logs periodically to ensure backup and restore are performed successfully on a regular basis.

Reports and Alerts

Refer [DS4.5](#) to see the DS4.5 reports and alerts.

DS5.2 IT Security Plan

Translate business information requirements, IT configuration, information risk action plans and information security culture into an overall IT security plan. The plan is implemented in security policies and procedures together with appropriate investments in services, personnel, software and hardware. Security policies and procedures are communicated to stakeholders and users.

Illustrative Controls and the TIBCO LogLogic Solution

Policies and procedures addressing backup and restoration activities must be documented, communicated, and updated to ensure guidance reflects current business conditions.

To satisfy this control objective, all policies and procedures must be accessed, reviewed, and updated periodically by appropriate users. Lack of access to these policies and procedures should indicate that they have not been regularly reviewed and updated.

Verify that IT Continuity and Security Plans have been reviewed periodically by authorized personnel.

Reports and Alerts

Refer [DS5.2 IT Security Plan](#) to see the DS5.2 reports and alerts.

DS5.3 Identity Management (1 of 4)

All users (internal, external and temporary) and their activity on IT systems (business application, system operation, development and maintenance) should be uniquely identifiable.

Illustrative Controls and the TIBCO LogLogic Solution

Ensuring all users have uniquely identifiable IDs and that accurate and complete audit trails can be maintained. Deficiencies in this area can significantly impact accountability. For example, users logging in using shared IDs can modify financial records. This can prevent future audits to identify who have modified the data.

To satisfy this control objective, administrators must ensure all logins are not shared. Administrators must review the ID list to identify IDs that can be a generic ID and question who is using it and why it is there. Administrators must also validate that attempts to gain unauthorized access to financial reporting systems and subsystems are logged and are followed up on a timely basis. Monitor and verify all user access to programs and data. Review this access to ensure that there is segregation of duties as well as all access privileges are properly assigned and approved.

Reports and Alerts

Refer [DS5.3 Identity Management \(1 of 4\)](#) to see the DS5.3 reports and alerts.

DS5.3 Identity Management (2 of 4)

User access rights to systems and data should be in line with defined and documented business needs and job requirements.

Illustrative Controls and the TIBCO LogLogic Solution

Accurately managing user access rights addresses the issues of unintended or malicious modifications of financial data. Deficiencies in this area might allow unauthorized modifications that could lead to errors in financial reporting.

To satisfy this control objective, administrators must periodically review user access to files and programs to ensure the users have not accessed items outside of their role. Administrators should select a sample of users who have logged in to financial reporting servers and review their access for appropriateness based upon their job functions.

Monitor and verify that all user access to programs and data. Review this access to ensure there is segregation of duties as well as all access privileges are properly assigned and approved.

Reports and Alerts

Use the following link/reference to see the DS5.3 reports and alerts: [DS5.3 Identity Management \(2 of 4\)](#)

DS5.3 Identity Management (3 of 4)

User access rights are requested by user management, approved by the system owner and implemented by the security-responsible person. User identities and access rights are maintained in a central repository.

Illustrative Controls and the TIBCO LogLogic Solution

Ensure that user access rights are properly requested, approved, and implemented. A control process must exist and followed to periodically review and confirm access rights.

To satisfy this control objective, administrators must periodically review all privileged user access to servers and applications that are related to the financial reporting process. Also, Administrators must ensure that new users or users assigned to new groups have the appropriate level of access. Administrators can select a sample of new users created and permissions modified recently and determine if management approved their access and the access granted agrees with the access privileges that were approved.

Monitor and verify that all user access to programs and data. Review access levels to ensure there is segregation of duties as well as all access privileges are properly assigned and approved.

Reports and Alerts

Use the following link/reference to see the DS5.3 reports and alerts: [DS5.3 \(3/4\)](#).

DS5.3 Identity Management (4 of 4)

Cost-effective technical and procedural measures are deployed and kept current to establish user identification, implement authentication and enforce access rights.

Illustrative Controls and the TIBCO LogLogic Solution

All logins to network devices, operating systems, platforms, databases and applications must be reviewed to ensure only authorized and appropriate personnel have access.

To satisfy this control objective, administrators must assess the authentication mechanisms used to validate user credentials (new and existing) for financial reporting systems to support the validity of transactions. Server and application activities must be monitored for locked-out accounts as they can represent malicious activities.

Monitor and verify all user access to programs and data. Review access to ensure there is segregation of duties as well as all access privileges are properly assigned and approved.

Reports and Alerts

Use the following link/reference to see the DS5.3 reports and alerts: [DS5.3 \(4/4\)](#).

DS5.4 User Account Management

Ensure that requesting, establishing, issuing, suspending, modifying, and closing user accounts and related user privileges are tasks that are appropriately addressed by user account management policies and procedures.

An approval procedure outlining the data or system owner granting the access privileges should be included. These procedures should apply for all users, including administrators (privileged users), internal and external users, for normal and emergency cases. Rights and obligations relative to access to enterprise systems and information are contractually arranged for all types of users.

Perform regular management review of all accounts and related privileges.

Illustrative Controls and the TIBCO LogLogic Solution

Demonstrate that procedures exist for the registration, change, and deletion of users from financial reporting systems and subsystems on a timely basis and confirm that the procedures are followed. Procedures must exist and be followed to ensure timely action relating to requesting, establishing, issuing, suspending, and closing user accounts.

To satisfy this control objective, administrators must ensure that permissions have been granted to the appropriate users. Permissions incorrectly assigned to users can indicate failure to meet this control objective. Also, Administrators must ensure that all network and application access requests are adequately documented and approved by appropriate Management personnel. As proof, Administrators can select a sample of terminated employees and to ensure the accounts for these employees have been terminated in a timely manner.

Administrators must ensure the policies on all servers and applications are set appropriately to ensure passwords are changed. Server and application logs must be reviewed to ensure passwords are changed periodically.

Monitor any account management activities such as user or group addition, deletion, and modification to ensure all user access privileges are appropriate and approved. Set up real-time alerts to detect any unauthorized or unapproved changes to users or groups.

Reports and Alerts

Use the following link/reference to see the DS5.4 reports and alerts: [DS5.4](#).

DS5.5 Security Testing, Surveillance, and Monitoring

Ensure that IT security is tested and monitored proactively. IT security should be reaccredited periodically to ensure the approved security level is maintained.

A logging and monitoring function enables the early detection of unusual or abnormal activities that must be addressed.

Access to the logging information is in line with business requirements in terms of access rights and retention requirements.

Illustrative Controls and the TIBCO LogLogic Solution

IT security administration must monitor and log security activity, and identify security violations to report to senior management. This control directly addresses the issues of timely detection and correction of financial data modification.

To satisfy this control, administrators must review the user access logs on a regular basis on a weekly basis for any access violations or unusual activity. Administrators must periodically, such as daily or weekly, review reports that show user access to servers related to financial reporting process. Review of these reports must be shown to auditors to satisfy this requirement.

Monitor and log all user activities on servers and applications. Detect any unusual behavior using real-time alerts. Identify security violations to report to senior management.

Reports and Alerts

Use the following link/reference to see the DS5.5 reports and alerts: [DS5.5](#).

DS5.7 Protection of Security Technology

Make security and related technology tamper-resistant. Do not unnecessarily disclose or distribute security documentation.

Illustrative Controls and the TIBCO LogLogic Solution

Because of their criticality, security technologies must be protected from unauthorized tampering and modification. Documentation and information about security design and infrastructure should be protected appropriately.

To satisfy this objective, the organization should implement and monitor available tamper controls for deployed security technologies. System operations and related events that might signal tampering should be logged and monitored closely. Access to security-related documentation must be strictly controlled and monitored to detect inappropriate access.

Reports and Alerts

Use the following link/reference to see the DS5.7 reports and alerts: [DS5.7](#).

DS5.8 Cryptographic Key Management

Design and implement policies and procedures to govern cryptographic key management. These policies and procedures must include topics such as key generation, revocation, distribution, use, and escrow.

Illustrative Controls and the TIBCO LogLogic Solution

Since encryption is typically employed for an organization's most valuable systems and data, the secure management of these encryption keys is critical to maintaining the confidentiality, integrity, and availability of this data.

To satisfy this control objective, the organization must ensure that key management policies and procedures are appropriate for the sensitivity of the data being encrypted. Logging and monitoring of key management activities should be implemented to help ensure the security and integrity of the key management process.

Reports and Alerts

Use the following link/reference to see the DS5.8 reports and alerts: [DS5.8](#).

DS5.10 Network Security (1 of 2)

Ensure that security techniques and related management procedures are used to authorize access and control information flows from and to networks.

Illustrative Controls and the TIBCO LogLogic Solution

Administrators must periodically review IDS logs to ensure the IDS tools are fully utilized.

Review all remote access to the IT infrastructure through VPN or through firewalls. Detect any anomalies such as excessive IDS attacks or firewall traffic using behavioral-based alerts.

Reports and Alerts

Use the following link/reference to see the DS5.10 reports and alerts: [DS5.10](#).

DS5.10 Network Security (2 of 2)

Ensure that security techniques and related management procedures are used to authorize access and regulate information flows from and to networks with controls such as firewalls and network segmentation.

Illustrative Controls and the TIBCO LogLogic Solution

Administrators must periodically review all firewall rules to ensure accurate access control list. In addition, Administrators must review network traffic correlated with the firewall policy to ensure appropriate rules are used to protect the company.

Review all remote access to the IT infrastructure using VPN or through firewalls. Detect any anomalies such as excessive IDS attacks or firewall traffic using behavioral-based alerts.

Reports and Alerts

Use the following link/reference to see the DS5.10 reports and alerts: [DS5.10](#).

DS9.3 Configuration Integrity Review

Review and verify on a regular basis, using, where necessary, appropriate tools, the status of configuration items to confirm the integrity of the current and historical configuration data and to compare against the actual situation. Review periodically against the policy for software usage the existence of any personal or unlicensed software or any software instances in excess of current license agreements. Errors and deviations must be reported, acted on and corrected.

Illustrative Controls and the TIBCO LogLogic Solution

Configuration management ensures that security, availability, and processing integrity controls are set up in the system and maintained through its life cycle. Insufficient configuration controls can lead to security and availability exposures that can permit unauthorized access to systems and data and impact financial reporting.

To satisfy this control objective, administrators must ensure that only authorized software is permitted for use by employees using company IT assets. System infrastructure, including firewalls, routers, switches, network operating systems, servers and other related devices, is properly configured to prevent unauthorized access. Application software and data storage systems must be properly configured to provision access based on the individual's demonstrated must view, add, change or delete data.

Real-time reports and alerts enable administrators to review and monitor any configuration changes made to critical IT infrastructure. Administrators can take immediate action to mitigate the risks introduced by inappropriate configuration modifications.

Reports and Alerts

Refer [DS9.3](#) to see the DS9.3 reports and alerts.

DS10.2 Problem Tracking and Resolution

The problem management system should provide for adequate audit trail facilities that allow tracking, analyzing, and determining the root cause of all reported problems considering:

- All associated configuration items
- Outstanding problems and incidents
- Known and suspected errors

Illustrative Controls and the TIBCO LogLogic Solution

Managing problems and incidents addresses how an organization identifies, documents and responds to events that fall outside of normal operations. You must maintain a complete and accurate audit trail for network devices, servers, and applications. This enables you to address how your business identifies root causes of issues that can introduce inaccuracy in financial reporting. Also, your problem management system must provide for adequate audit trail facilities which allow tracing from incident to underlying cause.

To satisfy this control objective, administrators must ensure all financial reporting related network devices, servers, and applications are properly configured to log to a centralized server. Administrators must also periodically review logging status to ensure these devices, servers and applications are logging correctly.

By alerting on any failures that occur, administrators can respond rapidly to potential problems and incidents that might affect availability, security, or performance. Real-time data monitoring and reporting capabilities reduce time to repair after incidents, reducing costs, and improving application availability.

Reports and Alerts

Use the following link/reference to see the DS10.2 reports and alerts: [DS10.2](#).

DS11.2 Storage and Retention Arrangements

Implement procedures to govern data storage and retention. Ensure that business and security objectives as well as regulatory requirements are reflected in the procedures.

Illustrative Controls and the TIBCO LogLogic Solution

Organizations must have sound and comprehensive policies and procedures to govern the storage, retention, and archive of enterprise data. All relevant regulatory influences must be accounted for, and the data classification scheme should provide direct input to the implementation of associated access control and data handling procedures.

To satisfy this objective, organizations should ensure that an enterprise-wide data storage, retention, and handling policy has been documented and implemented, and that financial reporting systems are covered appropriately. Backup and restore operations should be proactively monitored to help ensure compliance with organizational policies, and hardware and storage errors should be acted upon immediately to facilitate the organization's availability, storage, and retention requirements.

Reports and Alerts

Use the following link/reference to see the DS11.2 reports and alerts: [DS11.2](#).

DS11.5 Backup and Restoration

Define and implement procedures for backup and restoration of systems, data and documentation in line with business requirements and the continuity plan. Verify compliance with the backup procedures, and verify the ability to and time required for successful and complete restoration. Test backup media and the restoration process.

Illustrative Controls and the TIBCO LogLogic Solution

Organizations must have procedures in place to back up data and programs based on IT and user requirements.

To satisfy this control objective, administrators must back up data on a regular basis. In addition, administrators must review backup logs periodically to ensure backups are performed successfully. Backup logs must be reviewed periodically to ensure backup and restore are performed successfully on a regular basis.

Review backup logs periodically to ensure backup and restore are performed successfully on a regular basis.

Reports and Alerts

Use the following link/reference to see the DS11.5 reports and alerts: [DS11.5](#).

DS11.6 Security Requirements for Data Management

Establish arrangements to identify and apply security requirements applicable to the receipt, processing, physical storage and output of data and sensitive messages. This includes physical records, data transmissions and any data stored offsite.

Illustrative Controls and the TIBCO LogLogic Solution

Changes to data structures are authorized, made in accordance with design specifications and implemented in a timely manner.

To satisfy this control objective, verify that data structure changes adhere to the design specifications and that they are implemented in the time-frame required. Administrators can review data structure changes data such as alerts and reports.

Monitor and review all changes to data structures such as data using alerts and reports.

Reports and Alerts

Use the following link/reference to see the DS11.6 reports and alerts: [DS11.6](#).

DS13.3 IT Infrastructure Monitoring

Define and implement procedures to monitor the IT infrastructure and related events. Ensure sufficient chronological information is being stored in operations logs to enable the reconstruction, review and examination of the time sequences of operations and the other activities surrounding or supporting operations.

Illustrative Controls and the TIBCO LogLogic Solution

Managing operations addresses how an organization maintains reliable application systems in support of the business to initiate, record, process and report financial information. Deficiencies in this area could significantly impact an entity's financial reporting. For instance, lapses in the continuity of application systems might prevent an organization from recording financial transactions and thereby undermine its integrity.

System event data must be sufficiently retained to provide chronological information and logs to enable the review, examination and reconstruction of system and data processing.

System event data can also be used to provide reasonable assurance as to the completeness and timeliness of system and data processing.

To satisfy this control objective, administrators must ensure all financial reporting related network devices, servers, and applications are properly configured to log to a centralized server.

Administrators must also periodically review logging status to ensure these devices, servers and applications are logging correctly.

Review of these reports must be shown to auditors to satisfy this requirement.

Continuously monitor the availability of the IT infrastructure using behavioral-based alerts. Configure alerts to monitor performance of firewalls, routers, switches, servers, and applications and operating systems to be notified immediately if there's a failure.

Reports and Alerts

Use the following link/reference to see the DS13.3 reports and alerts: [DS13.3](#).

TIBCO LogLogic Reports and Alerts for Sarbanes-Oxley and COBIT 4.1

[TIBCO LogLogic Reports for Sarbanes-Oxley and COBIT 4.1](#)

[TIBCO LogLogic Alerts for COBIT 4.1 and Sarbanes-Oxley](#)

[TIBCO LogLogic Reports and Alerts Quick Reference](#)

TIBCO LogLogic Reports for Sarbanes-Oxley and COBIT 4.1

The following table lists the reports included in the LogLogic® Compliance Suite - Sarbanes-Oxley Edition and COBIT 4.1.

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 1 | COBIT: Accepted VPN Connections - RADIUS | Displays all users connected to the internal network through the RADIUS VPN. |
| 2 | COBIT: Account Activities on UNIX Servers | Displays all accounts activities on UNIX servers to ensure authorized and appropriate access. |
| 3 | COBIT: Account Activities on Windows Servers | Displays all accounts activities on Windows servers to ensure authorized and appropriate access. |
| 4 | COBIT: Accounts Changed on NetApp Filer | Displays all accounts changed on NetApp Filer to ensure authorized and appropriate access. |
| 5 | COBIT: Accounts Changed on Sidewinder | Displays all accounts changed on Sidewinder to ensure authorized and appropriate access. |
| 6 | COBIT: Accounts Changed on TIBCO ActiveMatrix Administrator | Displays all accounts changed on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 7 | COBIT: Accounts Changed on TIBCO Administrator | Displays all accounts changed on TIBCO Administrator to ensure authorized and appropriate access. |
| 8 | COBIT: Accounts Changed on UNIX Servers | Displays all accounts changed on UNIX servers to ensure authorized and appropriate access. |
| 9 | COBIT: Accounts Changed on Windows Servers | Displays all accounts changed on Windows servers to ensure authorized and appropriate access. |
| 10 | COBIT: Accounts Created on NetApp Filer | Displays all accounts created on NetApp Filer to ensure authorized and appropriate access. |
| 11 | COBIT: Accounts Created on NetApp Filer Audit | Displays all accounts created on NetApp Filer Audit to ensure authorized and appropriate access. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 12 | COBIT: Accounts Created on Sidewinder | Displays all accounts created on Sidewinder to ensure authorized and appropriate access. |
| 13 | COBIT: Accounts Created on Symantec Endpoint Protection | Displays all accounts created on Symantec Endpoint Protection to ensure authorized and appropriate access. |
| 14 | COBIT: Accounts Created on TIBCO ActiveMatrix Administrator | Displays all accounts created on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 15 | COBIT: Accounts Created on TIBCO Administrator | Displays all accounts created on TIBCO Administrator to ensure authorized and appropriate access. |
| 16 | COBIT: Accounts Created on UNIX Servers | Displays all accounts created on UNIX servers to ensure authorized and appropriate access. |
| 17 | COBIT: Accounts Created on Windows Servers | Displays all accounts created on Windows servers to ensure authorized and appropriate access. |
| 18 | COBIT: Accounts Deleted on NetApp Filer | Displays all accounts deleted on NetApp Filer to ensure authorized and appropriate access. |
| 19 | COBIT: Accounts Deleted on NetApp Filer Audit | Displays all accounts deleted on NetApp Filer Audit to ensure authorized and appropriate access. |
| 20 | COBIT: Accounts Deleted on Sidewinder | Displays all accounts deleted on Sidewinder to ensure authorized and appropriate access. |
| 21 | COBIT: Accounts Deleted on Symantec Endpoint Protection | Displays all accounts deleted on Symantec Endpoint Protection to ensure authorized and appropriate access. |
| 22 | COBIT: Accounts Deleted on TIBCO ActiveMatrix Administrator | Displays all accounts deleted on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 23 | COBIT: Accounts Deleted on TIBCO Administrator | Displays all accounts deleted on TIBCO Administrator to ensure authorized and appropriate access. |
| 24 | COBIT: Accounts Deleted on UNIX Servers | Displays all accounts deleted on UNIX servers to ensure authorized and appropriate access. |
| 25 | COBIT: Accounts Deleted on Windows Servers | Displays all accounts deleted on Windows servers to ensure authorized and appropriate access. |
| 26 | COBIT: Active Connections for Cisco ASA | Displays all currently active firewall connections for Cisco ASA. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|---|
| 27 | COBIT: Active Connections for Cisco FWSM | Displays all currently active firewall connections for Cisco FWSM. |
| 28 | COBIT: Active Connections for Cisco PIX | Displays all currently active firewall connections for Cisco PIX. |
| 29 | COBIT: Active Directory System Changes | Displays changes made within Active Directory. |
| 30 | COBIT: Active VPN Connections for Cisco VPN Concentrators | Displays all currently active VPN connections for Cisco VPN Concentrators. |
| 31 | COBIT: Active VPN Connections for Nortel Contivity | Displays all currently active VPN connections for Nortel Contivity VPN devices. |
| 32 | COBIT: Active VPN Connections for RADIUS | Displays all currently active VPN connections for RADIUS Acct Client. |
| 33 | COBIT: Administrator Logins on Windows Servers | Displays all logins with the administrator account on Windows servers. |
| 34 | COBIT: Allowed URLs by Source IPs | Displays successful access to URLs by source IP addresses. |
| 35 | COBIT: Allowed URLs by Source IPs - F5 BIG-IP TMOS | Displays successful access to URLs by source IP addresses on F5 BIG-IP TMOS. |
| 36 | COBIT: Allowed URLs by Source IPs - Microsoft IIS | Displays successful access to URLs by source IP addresses on Microsoft IIS. |
| 37 | COBIT: Allowed URLs by Source Users | Displays successful access to URLs by source users. |
| 38 | COBIT: Allowed URLs by Source Users - F5 BIG-IP TMOS | Displays successful access to URLs by source users on F5 BIG-IP TMOS. |
| 39 | COBIT: Allowed URLs by Source Users - Microsoft IIS | Displays successful access to URLs by source users on Microsoft IIS. |
| 40 | COBIT: Applications Under Attack | Displays all applications under attack as well as the attack signatures. |
| 41 | COBIT: Applications Under Attack - Cisco IOS | Displays all applications under attack as well as the attack signatures by Cisco IOS. |
| 42 | COBIT: Applications Under Attack - FireEye MPS | Displays all applications under attack as well as the attack signatures by FireEye MPS. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 43 | COBIT: Applications Under Attack - ISS SiteProtector | Displays all applications under attack as well as the attack signatures by ISS SiteProtector. |
| 44 | COBIT: Applications Under Attack - SiteProtector | Displays all applications under attack as well as the attack signatures by SiteProtector. |
| 45 | COBIT: Applications Under Attack - Sourcefire Defense Center | Displays all applications under attack as well as the attack signatures by Sourcefire Defense Center. |
| 46 | COBIT: Attackers by Service | Displays all attack source IP address and service ports. |
| 47 | COBIT: Attackers by Service - Cisco IOS | Displays all attack source IP address and service ports by Cisco IOS. |
| 48 | COBIT: Attackers by Service - ISS SiteProtector | Displays all attack source IP address and service ports by ISS SiteProtector. |
| 49 | COBIT: Attackers by Service - FireEye MPS | Displays all attack source IP address and service ports by FireEye MPS. |
| 50 | COBIT: Attackers by Service - SiteProtector | Displays all attack source IP address and service ports by SiteProtector. |
| 51 | COBIT: Attackers by Service - Sourcefire Defense Center | Displays all attack source IP address and service ports by Sourcefire Defense Center. |
| 52 | COBIT: Attackers by Signature | Displays all attack source IP address and signatures. |
| 53 | COBIT: Attackers by Signature - Cisco IOS | Displays all attack source IP address and signatures by Cisco IOS. |
| 54 | COBIT: Attackers by Signature - FireEye MPS | Displays all attack source IP address and signatures by FireEye MPS. |
| 55 | COBIT: Attackers by Signature - ISS SiteProtector | Displays all attack source IP address and signatures by ISS SiteProtector. |
| 56 | COBIT: Attackers by Signature - SiteProtector | Displays all attack source IP address and signatures by SiteProtector. |
| 57 | COBIT: Attackers by Signature - Sourcefire Defense Center | Displays all attack source IP address and signatures by Sourcefire Defense Center. |
| 58 | COBIT: Attacks Detected | Displays all IDS attacks detected against servers and applications. |
| 59 | COBIT: Attacks Detected - Cisco IOS | Displays all IDS attacks detected against servers and applications by Cisco IOS. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 60 | COBIT: Attacks Detected - HIPS | Displays all IPS attacks detected against servers and applications. |
| 61 | COBIT: Attacks Detected - ISS SiteProtector | Displays all IDS attacks detected against servers and applications by ISS SiteProtector. |
| 62 | COBIT: Attacks Detected - SiteProtector | Displays all IDS attacks detected against servers and applications by SiteProtector. |
| 63 | COBIT: Attacks Detected - Sourcefire Defense Center | Displays all IDS attacks detected against servers and applications by Sourcefire Defense Center. |
| 64 | COBIT: Bandwidth Usage by User | Displays users who are using the most bandwidth. |
| 65 | COBIT: Blocked URLs by Source IPs | Displays URLs that have been blocked by source IP addresses. |
| 66 | COBIT: Blocked URLs by Source IPs - F5 BIG-IP TMOS | Displays URLs that have been blocked by source IP addresses on F5 BIG-IP TMOS. |
| 67 | COBIT: Blocked URLs by Source IPs - Microsoft IIS | Displays URLs that have been blocked by source IP addresses on Microsoft IIS. |
| 68 | COBIT: Blocked URLs by Source Users | Displays URLs that have been blocked by source users. |
| 69 | COBIT: Blocked URLs by Source Users - F5 BIG-IP TMOS | Displays URLs that have been blocked by source users on F5 BIG-IP TMOS. |
| 70 | COBIT: Blocked URLs by Source Users - Microsoft IIS | Displays URLs that have been blocked by source users on Microsoft IIS. |
| 71 | COBIT: Check Point Configuration Changes | Displays all Check Point audit events related to configuration changes. |
| 72 | COBIT: Check Point Management Station Login | Displays all login events to the Check Point management station. |
| 73 | COBIT: Check Point Objects Created | Displays all Check Point audit events related to object creation in policies. |
| 74 | COBIT: Check Point Objects Deleted | Displays all Check Point audit events related to policy objects deleted. |
| 75 | COBIT: Check Point Objects Modified | Displays all Check Point audit events related to policy objects modified. |
| 76 | COBIT: Check Point SIC Revoked | Displays all Check Point audit events related to the security certificate being revoked. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 77 | COBIT: Cisco ESA: Attacks by Event ID | Displays Cisco ESA attacks by Event ID. |
| 78 | COBIT: Cisco ESA: Attacks Detected | Displays attacks detected by Cisco ESA. |
| 79 | COBIT: Cisco ESA: Attacks by Threat Name | Displays Cisco ESA attacks by threat name. |
| 80 | COBIT: Cisco ESA: Scans | Displays scans using Cisco ESA. |
| 81 | COBIT: Cisco ESA: Updated | Displays updates to Cisco ESA. |
| 82 | COBIT: Cisco ISE, ACS Accounts Created | Displays all accounts created on Cisco ISE and Cisco SecureACS to ensure authorized and appropriate access. |
| 83 | COBIT: Cisco ISE, ACS Accounts Removed | Displays all accounts removed on Cisco ISE and Cisco SecureACS to ensure authorized and appropriate access. |
| 84 | COBIT: Cisco ISE, ACS Configuration Changes | Displays Cisco ISE and Cisco SecureACS configuration changes. |
| 85 | COBIT: Cisco ISE, ACS Password Changes | Displays all password change activities on Cisco ISE and Cisco SecureACS to ensure authorized and appropriate access. |
| 86 | COBIT: Cisco Line Protocol Status Changes | Displays all Cisco line protocol up and down events. |
| 87 | COBIT: Cisco Link Status Changes | Displays all Cisco link up and down events. |
| 88 | COBIT: Cisco Peer Reset/Reload | Displays all Cisco Peer reset and reload events. |
| 89 | COBIT: Cisco Peer Supervisor Status Changes | Displays all Cisco Peer Supervisor status changes. |
| 90 | COBIT: Cisco PIX, ASA, FWSM Failover Disabled | Displays all logs related to disabling Cisco PIX, ASA, and FWSM failover capability. |
| 91 | COBIT: Cisco PIX, ASA, FWSM Failover Performed | Displays all logs related to performing a Cisco PIX, ASA, and FWSM failover. |
| 92 | COBIT: Cisco PIX, ASA, FWSM Policy Changed | Displays all configuration changes made to the Cisco PIX, ASA, and FWSM devices. |
| 93 | COBIT: Cisco Routers and Switches Restart | Displays all Cisco routers and switches restart activities to detect unusual activities. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 94 | COBIT: Cisco Switch Policy Changes | Displays all configuration changes to the Cisco router and switch policies. |
| 95 | COBIT: Creation and Deletion of System Level Objects: AIX Audit | Displays AIX audit events related to creation and deletion of system-level objects. |
| 96 | COBIT: Creation and Deletion of System Level Objects: DB2 Database | Displays DB2 database events related to creation and deletion of system-level objects. |
| 97 | COBIT: Creation and Deletion of System Level Objects: HP-UX Audit | Displays HP-UX audit events related to creation and deletion of system-level objects. |
| 98 | COBIT: Creation and Deletion of System Level Objects: Windows | Displays all Windows events related to creation and deletion of system-level objects. |
| 99 | COBIT: Creation and Deletion of System Level Objects: Oracle | Displays Oracle database events related to creation and deletion of system-level objects. |
| 100 | COBIT: Creation and Deletion of System Level Objects: Solaris BSM | Displays Solaris BSM events related to creation and deletion of system-level objects. |
| 101 | COBIT: Creation and Deletion of System Level Objects: SQL Server | Displays Microsoft SQL Server events related to creation and deletion of system-level objects. |
| 102 | COBIT: DB2 Database Backup Failed | Displays all IBM DB2 Database Server backup failures. |
| 103 | COBIT: DB2 Database Configuration Changes | Displays DB2 database configuration changes. |
| 104 | COBIT: DB2 Database Failed Logins | Displays all failed login attempts to review any access violations or unusual activity. |
| 105 | COBIT: DB2 Database Successful Logins | Displays successful DB2 database logins. |
| 106 | COBIT: DB2 Database Restore Failed | Displays all IBM DB2 Database restore failure events. |
| 107 | COBIT: DB2 Database Stop and Start Events | Displays DB2 database events related to starting and stopping the database. |
| 108 | COBIT: DB2 Database User Additions and Deletions | Displays IBM DB2 Database events related to creation and deletion of database users. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 109 | COBIT: Decru DataFort Cryptographic Key Events | Displays events related to cryptographic key handling. |
| 110 | COBIT: Decru DataFort Zeroization Events | Displays events related to Decru DataFort zeroization. |
| 111 | COBIT: Denied Connections by IP Addresses - Check Point | Displays remote IP addresses with the most denied connections from Check Point. |
| 112 | COBIT: Denied Connections by IP Addresses - Cisco ASA | Displays remote IP addresses with the most denied connections from Cisco ASA. |
| 113 | COBIT: Denied Connections by IP Addresses - Cisco FWSM | Displays remote IP addresses with the most denied connections from Cisco FWSM. |
| 114 | COBIT: Denied Connections by IP Addresses - Cisco PIX | Displays remote IP addresses with the most denied connections from Cisco PIX. |
| 115 | COBIT: Denied Connections by IP Addresses - Nortel | Displays remote IP addresses with the most denied connections from Nortel. |
| 116 | COBIT: Denied Connections - Cisco IOS | Displays all connections that have been denied by the Cisco IOS devices. |
| 117 | COBIT: Denied Connections - Cisco NXOS | Displays all connections that have been denied by the Cisco NXOS devices. |
| 118 | COBIT: Denied Connections - Cisco Router | Displays all connections that have been denied by the Cisco Router devices. |
| 119 | COBIT: Denied Connections - VMware vShield | Displays all connections that have been denied by the VMware vShield devices. |
| 120 | COBIT: Denied Connections - Sidewinder | Displays all connections that have been denied by the Sidewinder devices. |
| 121 | COBIT: Denied Inbound Connections - Cisco ASA | Displays all inbound connections that have been denied by the Cisco ASA devices. |
| 122 | COBIT: Denied Inbound Connections - Cisco FWSM | Displays all inbound connections that have been denied by the Cisco FWSM devices. |
| 123 | COBIT: Denied Inbound Connections - Cisco PIX | Displays all inbound connections that have been denied by the Cisco PIX devices. |
| 124 | COBIT: Denied Inbound Connections - Check Point | Displays all inbound connections that have been denied by the Check Point devices. |
| 125 | COBIT: Denied Inbound Connections - Juniper Firewall | Displays all inbound connections that have been denied by the Juniper Firewalls. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 126 | COBIT: Denied Outbound Connections - Cisco ASA | Displays all outbound connections that have been denied by the Cisco ASA. |
| 127 | COBIT: Denied Outbound Connections - Cisco FWSM | Displays all outbound connections that have been denied by the Cisco FWSM. |
| 128 | COBIT: Denied Outbound Connections - Check Point | Displays all outbound connections that have been denied by the Check Point. |
| 129 | COBIT: Denied Outbound Connections - Cisco PIX | Displays all outbound connections that have been denied by the Cisco PIX. |
| 130 | COBIT: Denied Connections - F5 BIG-IP TMOS | Displays all connections that have been denied by the F5 BIG-IP TMOS devices. |
| 131 | COBIT: Denied Outbound Connections - Juniper Firewall | Displays all outbound connections that have been denied by the Juniper Firewall. |
| 132 | COBIT: Denied VPN Connections - RADIUS | Displays all users denied access to the internal network by the RADIUS VPN. |
| 133 | COBIT: Domain activities on Symantec Endpoint Protection | Displays all domain activities on Symantec Endpoint Protection. |
| 134 | COBIT: DHCP Granted/Renewed Activities on Microsoft DHCP | Displays all DHCP Granted/Renewed activities on Microsoft DHCP Server. |
| 135 | COBIT: DHCP Granted/Renewed Activities on VMware vShield | Displays all DHCP Granted/Renewed activities on VMware vShield Edge. |
| 136 | COBIT: DNS Server Error | Displays all events when DNS Server has errors. |
| 137 | COBIT: Domains Sending the Most Email - Exchange 2000/2003 | Displays the top domains sending email. |
| 138 | COBIT: Email Recipients Receiving the Most Emails by Count - Exchange 2000/2003 | Displays the email recipients who receiving the most emails by count. |
| 139 | COBIT: Email Recipients Receiving the Most Emails by Count - Exchange 2007/10 | Displays the email recipients who receiving the most emails by count. |
| 140 | COBIT: Email Recipients Receiving the Most Emails by Size - Exchange 2000/2003 | Displays the email recipients who received the most emails by mail size. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 141 | COBIT: Email Senders Sending the Most Emails by Count - Exchange 2000/2003 | Displays the email senders who sent the most emails by count. |
| 142 | COBIT: Email Senders Sending the Most Emails by Count - Exchange 2007/10 | Displays the email senders who sent the most emails by count. |
| 143 | COBIT: Email Senders Sending the Most Emails by Size - Exchange 2000/2003 | Displays the email senders who sent the most emails by mail size. |
| 144 | COBIT: Email Senders Sending the Most Emails by Size - Exchange 2007/10 | Displays the email senders who sent the most emails by mail size. |
| 145 | COBIT: Email Source IP Sending To Most Recipients | Displays IP addresses that are sending to the most recipients using Exchange 2007/10. |
| 146 | COBIT: Escalated Privilege Activities on Servers | Displays all privilege escalation activities performed on servers to ensure appropriate access. |
| 147 | COBIT: ESX Accounts Activities | Displays all accounts activities on VMware ESX servers to ensure authorized and appropriate access. |
| 148 | COBIT: ESX Accounts Created | Displays all accounts created on VMware ESX servers to ensure authorized and appropriate access. |
| 149 | COBIT: ESX Accounts Deleted | Displays all accounts deleted on VMware ESX servers to ensure authorized and appropriate access. |
| 150 | COBIT: ESX Failed Logins | Failed VMware ESX logins for known user. |
| 151 | COBIT: ESX Group Activities | Displays all group activities on VMware ESX servers to ensure authorized and appropriate access. |
| 152 | COBIT: ESX Kernel log daemon terminating | Displays all VMware ESX Kernel log daemon terminating. |
| 153 | COBIT: ESX Kernel logging Stop | Displays all VMware ESX Kernel logging stops. |
| 154 | COBIT: ESX Logins Failed Unknown User | Failed VMware ESX logins for unknown user. |
| 155 | COBIT: ESX Logins Succeeded | Displays successful logins to VMware ESX to ensure only authorized personnel have access. |
| 156 | COBIT: ESX Syslogd Restart | Displays all VMware ESX syslogd restarts. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 157 | COBIT: F5 BIG-IP TMOS Login Failed | Displays all F5 BIG-IP TMOS login events which have failed. |
| 158 | COBIT: F5 BIG-IP TMOS Login Successful | Displays all F5 BIG-IP TMOS login events which have succeeded. |
| 159 | COBIT: F5 BIG-IP TMOS Password Changes | Displays all password change activities on F5 BIG-IP TMOS to ensure authorized and appropriate access. |
| 160 | COBIT: F5 BIG-IP TMOS Restarted | Displays all events when the F5 BIG-IP TMOS has been restarted. |
| 161 | COBIT: Failed Logins | Displays all failed login attempts to review any access violations or unusual activity. |
| 162 | COBIT: Failed Windows Events Summary | Displays summary of all failed access-related Windows events. |
| 163 | COBIT: Files Accessed on NetApp Filer Audit | Displays all files accessed on NetApp Filer Audit to ensure appropriate access. |
| 164 | COBIT: Files Accessed on Servers | Displays all files accessed on servers to ensure appropriate access. |
| 165 | COBIT: Files Accessed through Juniper SSL VPN (Secure Access) | Displays all files accessed through Juniper SSL VPN (Secure Access). |
| 166 | COBIT: Files Accessed through PANOS | Displays all files accessed through Palo Alto Networks. |
| 167 | COBIT: Files Downloaded via Proxy | Displays all proxy-based downloads ensure authorized and appropriate access. |
| 168 | COBIT: Files Downloaded via Proxy - Cisco WSA | Displays all proxy-based downloads to ensure authorized and appropriate access on Cisco WSA. |
| 169 | COBIT: Files Downloaded via Proxy - Blue Coat Proxy | Displays all proxy-based downloads to ensure authorized and appropriate access on Blue Coat Proxy. |
| 170 | COBIT: Files Downloaded via Proxy - Microsoft IIS | Displays all proxy-based downloads to ensure authorized and appropriate access on Microsoft IIS. |
| 171 | COBIT: Files Downloaded via the Web | Displays all web-based downloads ensure authorized and appropriate access. |
| 172 | COBIT: Files Downloaded via the Web - F5 BIG-IP TMOS | Displays all web-based downloads ensure authorized and appropriate access on F5 BIG-IP TMOS. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|---|
| 173 | COBIT: Files Downloaded via the Web - Microsoft IIS | Displays all web-based downloads ensure authorized and appropriate access on Microsoft IIS. |
| 174 | COBIT: Files Uploaded via Proxy | Displays all proxy-based uploads to ensure only authorized data can be uploaded. |
| 175 | COBIT: Files Uploaded via Proxy - Blue Coat Proxy | Displays all proxy-based uploads to ensure only authorized data can be uploaded on Blue Coat Proxy. |
| 176 | COBIT: Files Uploaded via Proxy - Cisco WSA | Displays all proxy-based uploads to ensure only authorized data can be uploaded on Cisco WSA. |
| 177 | COBIT: Files Uploaded via Proxy - Microsoft IIS | Displays all proxy-based uploads to ensure only authorized data can be uploaded on Microsoft IIS. |
| 178 | COBIT: Files Uploaded via the Web | Displays all web-based uploads to ensure only authorized data can be uploaded. |
| 179 | COBIT: Files Uploaded via the Web - F5 BIG-IP TMOS | Displays all web-based uploads to ensure only authorized data can be uploaded on F5 BIG-IP TMOS. |
| 180 | COBIT: Files Uploaded via the Web - Microsoft IIS | Displays all web-based uploads to ensure only authorized data can be uploaded on Microsoft IIS. |
| 181 | COBIT: FireEye MPS: Attacks Detected | Displays attacks detected by FireEye MPS. |
| 182 | COBIT: FireEye MPS: Attacks by Event ID | Displays FireEye MPS attacks by Event ID. |
| 183 | COBIT: FireEye MPS: Attacks by Threat Name | Displays FireEye MPS attacks by threat name. |
| 184 | COBIT: FortiOS: Attacks by Event ID | Displays FortiOS attacks by Event ID. |
| 185 | COBIT: FortiOS: Attacks by Threat Name | Displays FortiOS attacks by threat name. |
| 186 | COBIT: FortiOS: Attacks Detected | Displays attacks detected by FortiOS. |
| 187 | COBIT: FortiOS DLP Attacks Detected | Displays all DLP attacks detected by FortiOS. |
| 188 | COBIT: Group Activities on NetApp Filer Audit | Displays all group activities on NetApp Filer Audit to ensure authorized and appropriate access. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 189 | COBIT: Group Activities on Symantec Endpoint Protection | Displays all group activities on Symantec Endpoint Protection to ensure authorized and appropriate access. |
| 190 | COBIT: Group Activities on TIBCO ActiveMatrix Administrator | Displays all group activities on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 191 | COBIT: Group Activities on UNIX Servers | Displays all group activities on UNIX servers to ensure authorized and appropriate access. |
| 192 | COBIT: Group Activities on Windows Servers | Displays all group activities on Windows servers to ensure authorized and appropriate access. |
| 193 | COBIT: Groups Created on NetApp Filer Audit | Displays all groups created on NetApp Filer Audit to ensure authorized and appropriate access. |
| 194 | COBIT: Groups Created on TIBCO ActiveMatrix Administrator | Displays all groups created on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 195 | COBIT: Groups Created on UNIX Servers | Displays all groups created on UNIX servers to ensure authorized and appropriate access. |
| 196 | COBIT: Groups Created on Windows Servers | Displays all groups created on Windows servers to ensure authorized and appropriate access. |
| 197 | COBIT: Groups Deleted on NetApp Filer Audit | Displays all groups deleted on NetApp Filer Audit to ensure authorized and appropriate access. |
| 198 | COBIT: Groups Deleted on TIBCO ActiveMatrix Administrator | Displays all groups deleted on TIBCO ActiveMatrix Administrator to ensure authorized and appropriate access. |
| 199 | COBIT: Groups Deleted on UNIX Servers | Displays all groups deleted on UNIX servers to ensure authorized and appropriate access. |
| 200 | COBIT: Groups Deleted on Windows Servers | Displays all groups deleted on Windows servers to ensure authorized and appropriate access. |
| 201 | COBIT: Guardium SQL Guard Audit Configuration Changes | Displays all configuration changes on the Guardium SQL Guard Audit database. |
| 202 | COBIT: Guardium SQL Guard Audit Data Access | Displays all select statements made on Guardium SQL Audit Server. |
| 203 | COBIT: Guardium SQL Guard Audit Logins | Displays all login attempts to the Guardium SQL Server Audit database. |
| 204 | COBIT: Guardium SQL Guard Audit Startup or Shutdown | Displays all startup and shutdown events on Guardium SQL Audit Server. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 205 | COBIT: Guardium SQL Guard Configuration Changes | Displays all configuration changes on the Guardium SQL Guard database. |
| 206 | COBIT: Guardium SQL Guard Data Access | Displays all select statements made on Guardium SQL Server. |
| 207 | COBIT: Guardium SQL Guard Logins | Displays all login attempts to the Guardium SQL Server database. |
| 208 | COBIT: Guardium SQL Guard Startup or Shutdown | Displays all startup and shutdown events on Guardium SQL Server. |
| 209 | COBIT: HP NonStop Audit Configuration Changes | Displays all audit configuration changes on HP NonStop. |
| 210 | COBIT: HP NonStop Audit Login Failed | Displays all HP NonStop Audit login events which have failed. |
| 211 | COBIT: HP NonStop Audit Login Successful | Displays all HP NonStop Audit login events which have succeeded. |
| 212 | COBIT: HP NonStop Audit Object Access | Displays HP NonStop Audit events related to object access. |
| 213 | COBIT: HP NonStop Audit Object Changes | Displays HP NonStop Audit events related to object changes. |
| 214 | COBIT: HP NonStop Audit Permissions Changed | Displays all permission modification activities on HP NonStop Audit to ensure authorized access. |
| 215 | COBIT: Files Accessed through Pulse Connect Secure | Displays all files accessed through Pulse Connect Secure. |
| 216 | COBIT: i5/OS Access Control List Modifications | Displays i5/OS events related to access control list modification. |
| 217 | COBIT: i5/OS Audit Configuration Changes | Displays all audit configuration changes on i5/OS. |
| 218 | COBIT: i5/OS DST Password Reset | Displays i5/OS events related to the reset of the DST (Dedicated Service Tools) password. |
| 219 | COBIT: i5/OS Internet Security Management Events | Displays i5/OS events related to Internet Security Management (IPSec/VPN). |
| 220 | COBIT: i5/OS Key Ring File Events | Displays i5/OS key ring file events (cryptographic key management). |
| 221 | COBIT: i5/OS Network Authentication Events | Displays i5/OS network authentication events. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 222 | COBIT: i5/OS Object Access | Displays i5/OS events related to object access. |
| 223 | COBIT: i5/OS Object Creation and Deletion | Displays i5/OS events related to object creation and deletion. |
| 224 | COBIT: i5/OS Restore Events | Displays i5/OS events related to object, program, and profile restoration. |
| 225 | COBIT: i5/OS Server Security User Information Actions | Displays i5/OS events related to server security user information actions. |
| 226 | COBIT: i5/OS System Management Changes | Displays i5/OS events related to system management changes. |
| 227 | COBIT: i5/OS User Profile Creation, Modification, or Restoration | Displays i5/OS events related to user profile creation, modification, or restoration. |
| 228 | COBIT: Juniper Firewall Escalated Privilege | Displays events related to users having escalated privileges in the Juniper Firewall. |
| 229 | COBIT: Juniper Firewall Policy Changed | Displays all configuration changes to the Juniper Firewall policies. |
| 230 | COBIT: Juniper Firewall Reset Accepted | Displays events that indicate the Juniper Firewall has been reset to its factory default state. |
| 231 | COBIT: Juniper Firewall Reset Imminent | Displays events that indicate the Juniper Firewall will be reset to its factory default state. |
| 232 | COBIT: Juniper Firewall Restarted | Displays all Juniper Firewall restart events. |
| 233 | COBIT: Juniper Firewall VPN Tunnel Status Change | Displays events when the Juniper Firewall VPN Tunnel is setup or taken down. |
| 234 | COBIT: Juniper SSL VPN Successful Logins | Displays successful connections through the Juniper SSL VPN. |
| 235 | COBIT: Juniper SSL VPN (Secure Access) Policy Changed | Displays all configuration changes to the Juniper SSL VPN (Secure Access) policies. |
| 236 | COBIT: Juniper SSL VPN (Secure Access) Successful Logins | Displays all successful logins through the Juniper SSL VPN (Secure Access). |
| 237 | COBIT: Last Activities Performed by Administrators | Displays the latest activities performed by administrators and root users to ensure appropriate access. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 238 | COBIT: Last Activities Performed by All Users | Displays the latest activities performed by all users to ensure appropriate access. |
| 239 | COBIT: Logins by Authentication Type | Displays all logins categorized by the authentication type. |
| 240 | COBIT: LogLogic DSM Configuration Changes | Displays all configuration changes on the LogLogic DSM database. |
| 241 | COBIT: LogLogic DSM Data Access | Displays all select statements made on LogLogic DSM database. |
| 242 | COBIT: LogLogic DSM Logins | Displays all login attempts to the LogLogic DSM database. |
| 243 | COBIT: LogLogic DSM Startup or Shutdown | Displays all startup and shutdown events on LogLogic DSM database. |
| 244 | COBIT: LogLogic File Retrieval Errors | Displays all errors while retrieving log files from devices, servers and applications. |
| 245 | COBIT: LogLogic Management Center Account Activities | Displays all accounts activities on LogLogic management center to ensure authorized and appropriate access. |
| 246 | COBIT: LogLogic Management Center Backup Activities | Displays all backup activities on LogLogic management center. |
| 247 | COBIT: LogLogic Management Center Login | Displays all login events to the LogLogic management center. |
| 248 | COBIT: LogLogic Management Center Password Changes | Displays all password change activities on LogLogic management center to ensure authorized and appropriate access. |
| 249 | COBIT: LogLogic Management Center Restore Activities | Displays all restore activities on LogLogic management center. |
| 250 | COBIT: LogLogic Management Center Upgrade Success | Displays all successful events related to the system's upgrade. |
| 251 | COBIT: LogLogic Message Routing Errors | Displays all log forwarding errors on the LogLogic appliance to ensure all logs are archived properly. |
| 252 | COBIT: LogLogic Universal Collector Configuration Changes | Displays LogLogic universal collector configuration changes. |
| 253 | COBIT: McAfee AntiVirus: Attacks by Event ID | Displays McAfee AntiVirus attacks by Event ID. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 254 | COBIT: McAfee AntiVirus: Attacks by Threat Name | Displays McAfee AntiVirus attacks by threat name. |
| 255 | COBIT: McAfee AntiVirus: Attacks Detected | Displays attacks detected by McAfee AntiVirus. |
| 256 | COBIT: Microsoft Operations Manager - Failed Windows Events | Displays summary of all failed access-related Windows events. |
| 257 | COBIT: Microsoft Operations Manager - Windows Accounts Activities | Displays all accounts activities on Windows servers to ensure authorized and appropriate access. |
| 258 | COBIT: Microsoft Operations Manager - Windows Accounts Changed | Displays all accounts changed on Windows servers to ensure authorized and appropriate access. |
| 259 | COBIT: Microsoft Operations Manager - Windows Accounts Created | Displays all accounts created on Windows servers to ensure authorized and appropriate access. |
| 260 | COBIT: Microsoft Operations Manager - Windows Accounts Enabled | Displays all accounts enabled on Windows servers to ensure authorized and appropriate access. |
| 261 | COBIT: Microsoft Operations Manager - Windows Events by Users | Displays a summary of access-related Windows events by source and target users. |
| 262 | COBIT: Microsoft Operations Manager - Windows Events Summary | Displays a summary of access-related Windows events by count. |
| 263 | COBIT: Microsoft Operations Manager - Windows Password Changes | Displays all password change activities on Windows servers to ensure authorized and appropriate access. |
| 264 | COBIT: Microsoft Operations Manager - Windows Permissions Modified | Displays all permission modification activities on Windows servers to ensure authorized access. |
| 265 | COBIT: Microsoft Operations Manager - Windows Policies Modified | Displays all policy modification activities on Windows servers to ensure authorized and appropriate access. |
| 266 | COBIT: Microsoft Operations Manager - Windows Servers Restarted | Displays all Windows server restart activities to detect unusual activities. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 267 | COBIT: Microsoft Sharepoint Content Deleted | Displays all events when content has been deleted from Microsoft Sharepoint. |
| 268 | COBIT: Microsoft Sharepoint Content Updates | Displays all events when content is updated within Microsoft Sharepoint. |
| 269 | COBIT: Microsoft Sharepoint Permissions Changed | Displays all user/group permission events to Microsoft Sharepoint. |
| 270 | COBIT: Microsoft Sharepoint Policy Add, Remove, or Modify | Displays all events when a Microsoft Sharepoint policy is added, removed, or modified. |
| 271 | COBIT: Microsoft SQL Server Backup Failed | Displays all Microsoft SQL Server backup failures. |
| 272 | COBIT: Microsoft SQL Server Configuration Changes | Displays Microsoft SQL database configuration changes. |
| 273 | COBIT: Microsoft SQL Server Data Access | Displays data access events on Microsoft SQL Server databases. |
| 274 | COBIT: Microsoft SQL Server Database Failed Logins | Displays failed Microsoft SQL Server database logins. |
| 275 | COBIT: Microsoft SQL Server Database Successful Logins | Displays successful Microsoft SQL Server database logins. |
| 276 | COBIT: Microsoft SQL Server Database Permission Events | Displays events related to Microsoft SQL Server database permission modifications. |
| 277 | COBIT: Microsoft SQL Server Database User Additions and Deletions | Displays Microsoft SQL Server events related to creation and deletion of database users. |
| 278 | COBIT: Microsoft SQL Server Password Changes | Displays password changes for Microsoft SQL Server database accounts. |
| 279 | COBIT: Microsoft SQL Server Restore Failed | Displays all Microsoft SQL Server restore failure events. |
| 280 | COBIT: Microsoft SQL Server Schema Corruption | Displays all schema corruption events on Microsoft SQL Server databases. |
| 281 | COBIT: Microsoft SQL Server Shutdown by Reason | Displays all Microsoft SQL Server shutdown events by reason. |
| 282 | COBIT: Most Active Email Senders - Exchange 2000/2003 | Displays the most active email senders based on activity. |
| 283 | COBIT: Most Active Ports Through Firewall - Check Point | Displays the most active ports used through the Check Point firewall. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 284 | COBIT: Most Active Ports Through Firewall - Cisco ASA | Displays the most active ports used through the Cisco ASA firewall. |
| 285 | COBIT: Most Active Ports Through Firewall - Cisco FWSM | Displays the most active ports used through the Cisco FWSM firewall. |
| 286 | COBIT: Most Active Ports Through Firewall - Cisco PIX | Displays the most active ports used through the Cisco PIX firewall. |
| 287 | COBIT: Most Active Ports Through Firewall - Fortinet | Displays the most active ports used through the Fortinet firewall. |
| 288 | COBIT: Most Active Ports Through Firewall - Juniper Firewall | Displays the most active ports used through the Juniper firewall. |
| 289 | COBIT: Most Active Ports Through Firewall - Nortel | Displays the most active ports used through the Nortel firewall. |
| 290 | COBIT: Most Used Mail Commands - Exchange 2000/2003 | Displays the most used email protocol commands on Microsoft Exchange servers. |
| 291 | COBIT: NetApp Filer Audit Accounts Enabled | Displays all accounts enabled on NetApp Filer Audit to ensure authorized and appropriate access. |
| 292 | COBIT: NetApp Filer Audit Group Members Added | Displays all accounts added to groups on the NetApp Filer Audit to ensure appropriate access. |
| 293 | COBIT: NetApp Filer Audit Group Members Deleted | Displays all accounts removed from groups on the NetApp Filer Audit to ensure appropriate access. |
| 294 | COBIT: NetApp Filer Audit Logs Cleared | Displays all audit logs clearing activities on NetApp Filer Audit to detect access violations or unusual activity. |
| 295 | COBIT: NetApp Filer Audit Login Failed | Displays all NetApp Filer Audit Login events which have failed. |
| 296 | COBIT: NetApp Filer Audit Login Successful | Displays all NetApp Filer Audit Login events which have succeeded. |
| 297 | COBIT: NetApp Filer Audit Policies Modified | Displays all policy modification activities on NetApp Filer Audit to ensure authorized and appropriate access. |
| 298 | COBIT: NetApp Filer Snapshot Error | Displays events that indicate backup on the NetApp Filer has failed. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 299 | COBIT: NetApp Filer File Activity | Displays all file activities on NetApp Filer. |
| 300 | COBIT: NetApp Filer Login Failed | Displays all NetApp Filer Login events which have failed. |
| 301 | COBIT: NetApp Filer Login Successful | Displays all NetApp Filer Login events which have succeeded. |
| 302 | COBIT: NetApp Filer Password Changes | Displays all password change activities on NetApp Filer to ensure authorized and appropriate access. |
| 303 | COBIT: Network Traffic per Rule - Check Point | Displays all network traffic flowing through each rule in a network policy to ensure appropriate access. |
| 304 | COBIT: Network Traffic per Rule - Juniper Firewall | Displays all network traffic flowing through each rule in a network policy to ensure appropriate access. |
| 305 | COBIT: Network Traffic per Rule - Nortel | Displays all network traffic flowing through each rule in a network policy to ensure appropriate access. |
| 306 | COBIT: Oracle Database Configuration Changes | Displays Oracle database configuration changes. |
| 307 | COBIT: Oracle Database Data Access | Displays data access events on Oracle databases. |
| 308 | COBIT: Oracle Database Failed Logins | Displays all failed login attempts to the Oracle database. |
| 309 | COBIT: Oracle Database Successful Logins | Displays successful Oracle database logins. |
| 310 | COBIT: Oracle Database Permission Events | Displays events related to Oracle Server database role and privilege management. |
| 311 | COBIT: Oracle Database Shutdown | Displays Oracle database events related to shutting down the server. |
| 312 | COBIT: Oracle Database User Additions and Deletions | Displays Oracle database events related to creation and deletion of database users. |
| 313 | COBIT: PANOS: Attacks by Event ID | Displays Palo Alto Networks attacks by Event ID. |
| 314 | COBIT: PANOS: Attacks by Threat Name | Displays Palo Alto Networks attacks by threat name. |
| 315 | COBIT: PANOS: Attacks Detected | Displays attacks detected by Palo Alto Networks. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 316 | COBIT: Password Changes on Windows Servers | Displays all password change activities on Windows servers to ensure authorized and appropriate access. |
| 317 | COBIT: Peer Servers and Status | Displays all web servers providing data for cache servers and the status of requests. |
| 318 | COBIT: Peer Servers and Status - Cisco WSA | Displays all web servers providing data for cache servers and the status of requests on Cisco WSA. |
| 319 | COBIT: Peer Servers and Status - Blue Coat Proxy | Displays all web servers providing data for cache servers and the status of requests on Blue Coat Proxy. |
| 320 | COBIT: Peer Servers and Status - Microsoft IIS | Displays all web servers providing data for cache servers and the status of requests on Microsoft IIS. |
| 321 | COBIT: Periodic Review of Log Reports | Displays all review activities performed by administrators to ensure review for any access violations. |
| 322 | COBIT: Periodic Review of User Access Logs | Displays all review activities performed by administrators to ensure review for any access violations. |
| 323 | COBIT: Permissions Modified on Windows Servers | Displays all permission modification activities on Windows Servers to ensure authorized access. |
| 324 | COBIT: Policies Modified on Windows Servers | Displays all policy modification activities on Windows servers to ensure authorized and appropriate access. |
| 325 | COBIT: Ports Allowed Access - Check Point | Displays all connections passed through the Check Point by port. |
| 326 | COBIT: Ports Allowed Access - Cisco ASA | Displays all connections passed through the Cisco ASA by port. |
| 327 | COBIT: Ports Allowed Access - Cisco IOS | Displays all connections passed through the Cisco IOS by port. |
| 328 | COBIT: Ports Allowed Access - Cisco FWSM | Displays all connections passed through the Cisco FWSM by port. |
| 329 | COBIT: Ports Allowed Access - Cisco Netflow | Displays all connections passed through the Cisco Netflow by port. |
| 330 | COBIT: Ports Allowed Access - Cisco PIX | Displays all connections passed through the Cisco PIX by port. |
| 331 | COBIT: Ports Allowed Access - F5 BIG-IP TMOS | Displays all connections passed through the F5 BIG-IP TMOS by port. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 332 | COBIT: Ports Allowed Access - Fortinet | Displays all connections passed through the Fortinet by port. |
| 333 | COBIT: Ports Allowed Access - Juniper Firewall | Displays all connections passed through the Juniper Firewall by port. |
| 334 | COBIT: Ports Allowed Access - Juniper JunOS | Displays all connections passed through the Juniper JunOS by port. |
| 335 | COBIT: Ports Allowed Access - Juniper RT Flow | Displays all connections passed through the Juniper RT Flow by port. |
| 336 | COBIT: Ports Allowed Access - Nortel | Displays all connections passed through the Nortel by port. |
| 337 | COBIT: Ports Allowed Access - PANOS | Displays all connections passed through the Palo Alto Networks by port. |
| 338 | COBIT: Ports Allowed Access - Sidewinder | Displays all connections passed through the Sidewinder by port. |
| 339 | COBIT: Ports Allowed Access - VMware vShield | Displays all connections passed through the VMware vShield by port. |
| 340 | COBIT: Ports Denied Access - Check Point | Displays the applications that have been denied access the most by the Check Point. |
| 341 | COBIT: Ports Denied Access - Cisco ASA | Displays the applications that have been denied access the most by the Cisco ASA. |
| 342 | COBIT: Ports Denied Access - Cisco FWSM | Displays the applications that have been denied access the most by the Cisco FWSM. |
| 343 | COBIT: Ports Denied Access - Cisco IOS | Displays the applications that have been denied access the most by the Cisco IOS. |
| 344 | COBIT: Ports Denied Access - Cisco PIX | Displays the applications that have been denied access the most by the Cisco PIX. |
| 345 | COBIT: Ports Denied Access - Cisco Router | Displays the applications that have been denied access the most by the Cisco Router. |
| 346 | COBIT: Ports Denied Access - F5 BIG-IP TMOS | Displays the applications that have been denied access the most by the F5 BIG-IP TMOS. |
| 347 | COBIT: Ports Denied Access - Fortinet | Displays the applications that have been denied access the most by the Fortinet. |
| 348 | COBIT: Ports Denied Access - Juniper Firewall | Displays the applications that have been denied access the most by the Juniper Firewall. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 349 | COBIT: Ports Denied Access - Juniper JunOS | Displays the applications that have been denied access the most by the Juniper JunOS. |
| 350 | COBIT: Ports Denied Access - Juniper RT Flow | Displays the applications that have been denied access the most by the Juniper RT Flow. |
| 351 | COBIT: Ports Denied Access - Nortel | Displays the applications that have been denied access the most by the Nortel. |
| 352 | COBIT: Ports Denied Access - PANOS | Displays the applications that have been denied access the most by the Palo Alto Networks. |
| 353 | COBIT: Ports Denied Access - Sidewinder | Displays the applications that have been denied access the most by the Sidewinder. |
| 354 | COBIT: Ports Denied Access - VMware vShield | Displays the applications that have been denied access the most by the VMware vShield Edge. |
| 355 | COBIT: Pulse Connect Secure Policy Changed | Displays all configuration changes to the Pulse Connect Secure policies. |
| 356 | COBIT: Pulse Connect Secure Successful Logins | Displays all successful logins through the Pulse Connect Secure. |
| 357 | COBIT: RACF Accounts Created | Displays all accounts created on RACF servers to ensure authorized and appropriate access. |
| 358 | COBIT: RACF Accounts Deleted | Displays all accounts deleted on RACF servers to ensure authorized and appropriate access. |
| 359 | COBIT: RACF Accounts Modified | Displays all events when a network user profile has been modified. |
| 360 | COBIT: RACF Failed Logins | Displays all failed login attempts to review any access violations or unusual activity. |
| 361 | COBIT: RACF Files Accessed | Displays all files accessed on RACF servers to ensure appropriate access. |
| 362 | COBIT: RACF Password Changed | Displays all password change activities on RACF servers to ensure authorized and appropriate access. |
| 363 | COBIT: RACF Permissions Changed | Displays all permission modification activities on RACF to ensure authorized access. |
| 364 | COBIT: RACF Process Started | Displays all processes started on the RACF servers. |
| 365 | COBIT: RACF Successful Logins | Displays successful logins to ensure only authorized personnel have access. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 366 | COBIT: Recipient Domains Experiencing Delay - Exchange 2000/2003 | Displays the recipient domains that have experienced the most delivery delays. |
| 367 | COBIT: Root Logins | Displays root logins. |
| 368 | COBIT: Sender and Recipients Exchanging the Most Emails - Exchange 2000/2003 | Displays the top email sender and recipient combinations. |
| 369 | COBIT: Sensors Generating Alerts | Displays the IDS sensors that generated the most alerts. |
| 370 | COBIT: Sensors Generating Alerts - Cisco IOS | Displays the IDS sensors that generated the most alerts by Cisco IOS. |
| 371 | COBIT: Sensors Generating Alerts - FireEye MPS | Displays the IDS sensors that generated the most alerts by FireEye MPS. |
| 372 | COBIT: Sensors Generating Alerts - SiteProtector | Displays the IDS sensors that generated the most alerts by SiteProtector. |
| 373 | COBIT: Sensors Generating Alerts - Sourcefire Defense Center | Displays the IDS sensors that generated the most alerts by Sourcefire Defense Center. |
| 374 | COBIT: Servers Under Attack | Displays all servers under attack. |
| 375 | COBIT: Servers Under Attack - Cisco IOS | Displays all servers under attack by Cisco IOS. |
| 376 | COBIT: Servers Under Attack - HIPS | Displays all servers under attack. |
| 377 | COBIT: Servers Under Attack - FireEye MPS | Displays all servers under attack by FireEye MPS. |
| 378 | COBIT: Servers Under Attack - ISS SiteProtector | Displays all servers under attack by ISS SiteProtector. |
| 379 | COBIT: Servers Under Attack - SiteProtector | Displays all servers under attack by SiteProtector. |
| 380 | COBIT: Servers Under Attack - Sourcefire Defense Center | Displays all servers under attack by Sourcefire Defense Center. |
| 381 | COBIT: Sidewinder Configuration Changes | Displays Sidewinder configuration changes. |
| 382 | COBIT: Source IP Sending To Most Recipients - Exchange 2000/2003 | Displays IP addresses that are sending to the most recipients. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|---|
| 383 | COBIT: Source of Attacks | Displays the sources that have initiated the most attacks. |
| 384 | COBIT: Source of Attacks - Cisco IOS | Displays the sources that have initiated the most attacks by Cisco IOS. |
| 385 | COBIT: Source of Attacks - HIPS | Displays the sources that have initiated the most attacks. |
| 386 | COBIT: Source of Attacks - ISS SiteProtector | Displays the sources that have initiated the most attacks by ISS SiteProtector. |
| 387 | COBIT: Source of Attacks - FireEye MPS | Displays the sources that have initiated the most attacks by FireEye MPS. |
| 388 | COBIT: Source of Attacks - SiteProtector | Displays the sources that have initiated the most attacks by SiteProtector. |
| 389 | COBIT: Source of Attacks - Sourcefire Defense Center | Displays the sources that have initiated the most attacks by Sourcefire Defense Center. |
| 390 | COBIT: Successful Logins | Displays successful logins to ensure only authorized personnel have access. |
| 391 | COBIT: Sybase ASE Database Backup and Restoration | Displays Sybase ASE DUMP and LOAD events. |
| 392 | COBIT: Sybase ASE Database Configuration Changes | Displays configuration changes to the Sybase database. |
| 393 | COBIT: Sybase ASE Database Create Events | Displays Sybase ASE events involving the CREATE statement. |
| 394 | COBIT: Sybase ASE Database Data Access | Displays Sybase ASE events involving the SELECT statement. |
| 395 | COBIT: Sybase ASE Database Drop Events | Displays Sybase ASE events involving the DROP statement. |
| 396 | COBIT: Sybase ASE Database Startup or Shutdown | Displays all startup and shutdown events for the Sybase database. |
| 397 | COBIT: Sybase ASE Database User Additions and Deletions | Displays Sybase database events related to creation and deletion of database users. |
| 398 | COBIT: Sybase ASE Failed Logins | Displays failed Sybase ASE database logins. |
| 399 | COBIT: Sybase ASE Successful Logins | Displays successful Sybase ASE database logins. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 400 | COBIT: Symantec AntiVirus: Attacks by Threat Name | Displays Symantec AntiVirus attacks by threat name. |
| 401 | COBIT: Symantec AntiVirus: Attacks Detected | Displays attacks detected by Symantec AntiVirus. |
| 402 | COBIT: Symantec AntiVirus: Scans | Displays scans using Symantec AntiVirus. |
| 403 | COBIT: Symantec AntiVirus: Updated | Displays updates to Symantec AntiVirus. |
| 404 | COBIT: Symantec Endpoint Protection: Attacks by Threat Name | Displays Symantec Endpoint Protection attacks by threat name. |
| 405 | COBIT: Symantec Endpoint Protection: Attacks Detected | Displays attacks detected by Symantec Endpoint Protection. |
| 406 | COBIT: Symantec Endpoint Protection Configuration Changes | Displays Symantec Endpoint Protection configuration changes. |
| 407 | COBIT: Symantec Endpoint Protection Password Changes | Displays all password change activities on Symantec Endpoint Protection to ensure authorized and appropriate access. |
| 408 | COBIT: Symantec Endpoint Protection Policy Add, Remove, or Modify | Displays all events when a Symantec Endpoint Protection policy is added, removed, or modified. |
| 409 | COBIT: Symantec Endpoint Protection: Scans | Displays scans using Symantec Endpoint Protection. |
| 410 | COBIT: Symantec Endpoint Protection: Updated | Displays updates to Symantec Endpoint Protection. |
| 411 | COBIT: TIBCO ActiveMatrix Administrator Failed Logins | Displays all TIBCO ActiveMatrix Administrator login events which have failed. |
| 412 | COBIT: TIBCO ActiveMatrix Administrator Permission Changes | Displays events related to TIBCO ActiveMatrix Administrator permission modifications. |
| 413 | COBIT: TIBCO ActiveMatrix Administrator Successful Logins | Displays successful logins to TIBCO ActiveMatrix Administrator to ensure only authorized personnel have access. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 414 | COBIT: TIBCO Administrator Password Changes | Displays all password change activities on TIBCO Administrator to ensure authorized and appropriate access. |
| 415 | COBIT: TIBCO Administrator Permission Changes | Displays events related to TIBCO Administrator permission modifications. |
| 416 | COBIT: TrendMicro Control Manager: Attacks Detected | Displays attacks detected by TrendMicro Control Manager. |
| 417 | COBIT: TrendMicro Control Manager: Attacks Detected by Threat Name | Displays attacks detected by TrendMicro Control Manager by threat name. |
| 418 | COBIT: TrendMicro OfficeScan: Attacks Detected | Displays attacks detected by TrendMicro OfficeScan. |
| 419 | COBIT: TrendMicro OfficeScan: Attacks Detected by Threat Name | Displays attacks detected by TrendMicro OfficeScan by threat name. |
| 420 | COBIT: Tripwire Modifications, Additions, and Deletions | Displays system modifications, additions, and deletions detected by Tripwire. |
| 421 | COBIT: Trusted Domain Created on Windows Servers | Displays all trusted domains created on Windows servers to ensure authorized and appropriate access. |
| 422 | COBIT: Trusted Domain Deleted on Windows Servers | Displays all trusted domains deleted on Windows servers to ensure authorized and appropriate access. |
| 423 | COBIT: Unauthorized Logins | Displays all logins from unauthorized users to ensure appropriate access to data. |
| 424 | COBIT: Unencrypted Logins | Displays all unencrypted logins to ensure secure access to data. |
| 425 | COBIT: Unencrypted Network Services - Check Point | Displays Check Point firewall traffic containing unencrypted network services. |
| 426 | COBIT: Unencrypted Network Services - Cisco ASA | Displays Cisco ASA firewall traffic containing unencrypted network services. |
| 427 | COBIT: Unencrypted Network Services - Cisco FWSM | Displays Cisco FWSM firewall traffic containing unencrypted network services. |
| 428 | COBIT: Unencrypted Network Services - Cisco IOS | Displays Cisco IOS firewall traffic containing unencrypted network services. |
| 429 | COBIT: Unencrypted Network Services - Cisco Netflow | Displays Cisco Netflow traffic containing unencrypted network services. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 430 | COBIT: Unencrypted Network Services - Cisco PIX | Displays Cisco PIX firewall traffic containing unencrypted network services. |
| 431 | COBIT: Unencrypted Network Services - F5 BIG-IP TMOS | Displays F5 BIG-IP TMOS firewall traffic containing unencrypted network services. |
| 432 | COBIT: Unencrypted Network Services - Fortinet | Displays Fortinet firewall traffic containing unencrypted network services. |
| 433 | COBIT: Unencrypted Network Services - Juniper Firewall | Displays Juniper firewall traffic containing unencrypted network services. |
| 434 | COBIT: Unencrypted Network Services - Juniper JunOS | Displays Juniper JunOS firewall traffic containing unencrypted network services. |
| 435 | COBIT: Unencrypted Network Services - Juniper RT Flow | Displays Juniper RT Flow firewall traffic containing unencrypted network services. |
| 436 | COBIT: Unencrypted Network Services - Nortel | Displays Nortel firewall traffic containing unencrypted network services. |
| 437 | COBIT: Unencrypted Network Services - PANOS | Displays Palo Alto Networks firewall traffic containing unencrypted network services. |
| 438 | COBIT: Unencrypted Network Services - Sidewinder | Displays Sidewinder firewall traffic containing unencrypted network services. |
| 439 | COBIT: Unencrypted Network Services - VMware vShield | Displays VMware vShield firewall traffic containing unencrypted network services. |
| 440 | COBIT: UNIX Failed Logins | Displays failed UNIX logins for known and unknown users. |
| 441 | COBIT: Users Created on Servers | Displays all users created on servers to ensure authorized and appropriate access. |
| 442 | COBIT: Users Removed from Servers | Displays all users removed from servers to ensure timely removal of terminated users. |
| 443 | COBIT: Users Using the Proxies | Displays users who have been surfing the web through the proxy servers. |
| 444 | COBIT: Users Using the Proxies - Cisco WSA | Displays users who have been surfing the web through the proxy servers on Cisco WSA. |
| 445 | COBIT: Users Using the Proxies - Blue Coat Proxy | Displays users who have been surfing the web through the proxy servers on Blue Coat Proxy. |
| 446 | COBIT: Users Using the Proxies - Microsoft IIS | Displays users who have been surfing the web through the proxy servers on Microsoft IIS. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|---|
| 447 | COBIT: vCenter Change Attributes | Modification of VMware vCenter and VMware ESX properties. |
| 448 | COBIT: vCenter Data Move | Entity has been moved within the VMware vCenter Infrastructure. |
| 449 | COBIT: vCenter Datastore Events | Displays create, modify, and delete datastore events on VMware vCenter. |
| 450 | COBIT: vCenter Failed Logins | Failed logins to the VMware vCenter console. |
| 451 | COBIT: vCenter Modify Firewall Policy | Displays changes to the VMware ESX allowed services firewall policy. |
| 452 | COBIT: vCenter Orchestrator Change Attributes | Modification of VMware vCenter Orchestrator properties. |
| 453 | COBIT: vCenter Orchestrator Datastore Events | Displays create, modify, and delete datastore events on VMware vCenter Orchestrator. |
| 454 | COBIT: vCenter Orchestrator Data Move | Entity has been moved within the VMware vCenter Orchestrator Infrastructure. |
| 455 | COBIT: vCenter Orchestrator Failed Logins | Displays all failed logins for VMware vCenter Orchestrator. |
| 456 | COBIT: vCenter Orchestrator Virtual Machine Created | Virtual machine has been created from VMware vCenter Orchestrator. |
| 457 | COBIT: vCenter Orchestrator Virtual Machine Deleted | Virtual machine has been deleted from VMware vCenter Orchestrator. |
| 458 | COBIT: vCenter Orchestrator Virtual Machine Shutdown | Virtual machine has been shutdown or paused from VMware vCenter Orchestrator console. |
| 459 | COBIT: vCenter Orchestrator Virtual Machine Started | Virtual machine has been started or resumed from VMware vCenter Orchestrator console. |
| 460 | COBIT: vCenter Orchestrator vSwitch Added, Changed or Removed | vSwitch has been added, modified or removed from VMware vCenter Orchestrator console. |
| 461 | COBIT: vCenter Resource Usage Change | Resources have changed on VMware vCenter. |
| 462 | COBIT: vCenter Restart ESX Services | VMware vCenter restarted services running on VMware ESX Server. |
| 463 | COBIT: vCenter Shutdown or Restart of ESX Server | VMware ESX Server is shutdown or restarted from VMware vCenter console. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|--|
| 464 | COBIT: vCenter Successful Logins | Successful logins to the VMware vCenter console. |
| 465 | COBIT: vCenter User Permission Change | A permission role has been added, changed, removed, or applied to a user on VMware vCenter server. |
| 466 | COBIT: vCenter Virtual Machine Created | Virtual machine has been created from VMware vCenter console. |
| 467 | COBIT: vCenter Virtual Machine Deleted | Virtual machine has been deleted or removed from VMware vCenter console. |
| 468 | COBIT: vCenter Virtual Machine Shutdown | Virtual machine has been shutdown or paused from VMware vCenter console. |
| 469 | COBIT: vCenter Virtual Machine Started | Virtual machine has been started or resumed from VMware vCenter console. |
| 470 | COBIT: vCenter vSwitch Added, Changed or Removed | vSwitch on VMware ESX server has been added, modified or removed from the VMware vCenter console. |
| 471 | COBIT: vCloud Failed Logins | Failed logins to the VMware vCloud Director console. |
| 472 | COBIT: vCloud Organization Created | VMware vCloud Director Organization created events. |
| 473 | COBIT: vCloud Organization Deleted | VMware vCloud Director Organization deleted events. |
| 474 | COBIT: vCloud Organization Modified | VMware vCloud Director Organization modified events. |
| 475 | COBIT: vCloud Successful Logins | Successful logins to the VMware vCloud Director console. |
| 476 | COBIT: vCloud User Created | VMware vCloud Director User created events. |
| 477 | COBIT: vCloud User Deleted or Removed | VMware vCloud Director users have been deleted or removed from the system. |
| 478 | COBIT: vCloud vApp Created, Modified, or Deleted | VMware vCloud Director vApp created, deleted, and modified events. |
| 479 | COBIT: vCloud vDC Created, Modified, or Deleted | VMware vCloud Director virtual datacenter created, modified, or deleted events. |
| 480 | COBIT: VPN Connection Average Bandwidth | Displays the average bandwidth for VPN connections. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|--|---|
| 481 | COBIT: VPN Connection Average Duration | Displays the average duration of VPN connections. |
| 482 | COBIT: VPN Connections by Users | Displays users who are made the most connections. |
| 483 | COBIT: VPN Denied Connections by Users | Displays users with the most denied connections. |
| 484 | COBIT: VPN Connection Disconnect Reasons | Displays the disconnect reasons for VPN connections. |
| 485 | COBIT: VPN Sessions by Destination IPs | Displays all VPN sessions categorized by destination IP addresses. |
| 486 | COBIT: VPN Sessions by Source IPs | Displays all VPN sessions categorized by source IP addresses. |
| 487 | COBIT: VPN Sessions by Users | Displays all VPN sessions categorized by authenticated users. |
| 488 | COBIT: VPN Users Accessing Corporate Network | Displays all users logging into the corporate network via Virtual Private Network to ensure appropriate access. |
| 489 | COBIT: vShield Edge Configuration Changes | Displays changes to VMware vShield Edge policies. |
| 490 | COBIT: Web Access from All Users | Displays all web-based access by all users for regular reviews and updates. |
| 491 | COBIT: Web Access from All Users - F5 BIG-IP TMOS | Displays all web-based access by all users for regular reviews and updates on F5 BIG-IP TMOS. |
| 492 | COBIT: Web Access from All Users - Fortinet | Displays all web-based access by all users for regular reviews and updates on Fortinet. |
| 493 | COBIT: Web Access from All Users - PANOS | Displays all web-based access by all users for regular reviews and updates on Palo Alto Networks. |
| 494 | COBIT: Web Access from All Users - Microsoft IIS | Displays all web-based access by all users for regular reviews and updates on Microsoft IIS. |
| 495 | COBIT: Web Access to Applications | Displays all web-based access to applications to ensure appropriate and authorized access. |
| 496 | COBIT: Web Access to Applications - F5 BIG-IP TMOS | Displays all web-based access to applications to ensure appropriate and authorized access on F5 BIG-IP TMOS. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 497 | COBIT: Web Access to Applications - Fortinet | Displays all web-based access to applications to ensure appropriate and authorized access on Fortinet. |
| 498 | COBIT: Web Access to Applications - PANOS | Displays all web-based access to applications to ensure appropriate and authorized access on Palo Alto Networks. |
| 499 | COBIT: Web Access to Applications - Microsoft IIS | Displays all web-based access to applications to ensure appropriate and authorized access on Microsoft IIS. |
| 500 | COBIT: Web URLs Visited | Displays URLs that have been visited. |
| 501 | COBIT: Web URLs Visited - F5 BIG-IP TMOS | Displays URLs that have been visited on F5 BIG-IP TMOS. |
| 502 | COBIT: Web URLs Visited - Fortinet | Displays URLs that have been visited on Fortinet. |
| 503 | COBIT: Web URLs Visited - Microsoft IIS | Displays URLs that have been visited on Microsoft IIS. |
| 504 | COBIT: Web URLs Visited - PANOS | Displays URLs that have been visited on Palo Alto Networks. |
| 505 | COBIT: Web URLs Visited via Proxy | Displays URLs that have been visited via a proxy server. |
| 506 | COBIT: Web URLs Visited via Proxy - Blue Coat Proxy | Displays URLs that have been visited via a proxy server on Blue Coat Proxy. |
| 507 | COBIT: Web URLs Visited via Proxy - Cisco WSA | Displays URLs that have been visited via a proxy server on Cisco WSA. |
| 508 | COBIT: Web URLs Visited via Proxy - Microsoft IIS | Displays URLs that have been visited via a proxy server on Microsoft IIS. |
| 509 | COBIT: Windows Accounts Enabled | Displays all accounts enabled on Windows servers to ensure authorized and appropriate access. |
| 510 | COBIT: Windows Audit Logs Cleared | Displays all audit logs clearing activities on Windows servers to detect access violations or unusual activity. |
| 511 | COBIT: Windows Events by Users | Displays a summary of access-related Windows events by source and target users. |
| 512 | COBIT: Windows Events Summary | Displays a summary of access-related Windows events by count. |

| Serial Number | TIBCO LogLogic Report | Description |
|---------------|---|--|
| 513 | COBIT: Windows Group Members Added | Displays all accounts added to groups on the Windows servers to ensure appropriate access. |
| 514 | COBIT: Windows Group Members Deleted | Displays all accounts removed from groups on the Windows servers to ensure appropriate access. |
| 515 | COBIT: Windows New Services Installed | Displays a list of new services installed on Windows servers to ensure authorized access. |
| 516 | COBIT: Windows Programs Accessed | Displays all programs started and stopped on servers to ensure appropriate access. |
| 517 | COBIT: Windows Servers Restarted | Displays all Windows server restart activities to detect unusual activities. |
| 518 | COBIT: Windows Software Update Activities | Displays all events related to the system's software or patch update. |
| 519 | COBIT: Windows Software Update Failures | Displays all failed events related to the system's software or patch update. |
| 520 | COBIT: Windows Software Update Successes | Displays all successful events related to the system's software or patch update. |

TIBCO LogLogic Alerts for Sarbanes-Oxley and COBIT 4.1

The following table lists the alerts included in the LogLogic[®] Compliance Suite - Sarbanes-Oxley Edition and COBIT 4.1.

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|-----------------------------------|--|
| 1 | COBIT: Accounts Created | Alerts when a new account is created on servers. |
| 2 | COBIT: Accounts Deleted | Alerts when an account is deleted on servers. |
| 3 | COBIT: Accounts Enabled | Alerts when an account has been enabled on servers. |
| 4 | COBIT: Accounts Locked | Alerts when an account has been locked on servers. |
| 5 | COBIT: Accounts Modified | Alerts when an account is modified on servers. |
| 6 | COBIT: Active Directory Changes | Alerts when changes are made within Active Directory. |
| 7 | COBIT: Allowed Connections | Allowed firewall connections. |
| 8 | COBIT: Check Point Policy Changed | Alerts when a Check Point firewall's policy has been modified. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|--|
| 9 | COBIT: Cisco ISE, ACS Configuration Changed | Alerts when configuration changes are made to the Cisco ISE or Cisco SecureACS. |
| 10 | COBIT: Cisco ISE, ACS Passwords Changed | Alerts when a user changes their password via Cisco ISE or Cisco SecureACS. |
| 11 | COBIT: Cisco PIX, ASA, FWSM Commands Executed | Alerts when a Cisco PIX, ASA, or FWSM commands are executed. |
| 12 | COBIT: Cisco PIX, ASA, FWSM Failover Disabled | Alerts when a Cisco PIX, ASA, or FWSM HA configuration is disabled. |
| 13 | COBIT: Cisco PIX, ASA, FWSM Failover Errors | Alerts when an error has occurred during PIX, ASA, or FWSM failover. |
| 14 | COBIT: Cisco PIX, ASA, FWSM Failover Performed | Alerts when a failover has occurred on the Cisco PIX, ASA, or FWSM devices. |
| 15 | COBIT: Cisco PIX, ASA, FWSM Fragment Database Limit | The fragment database count has been reached on Cisco PIX, ASA, or FWSM devices. |
| 16 | COBIT: Cisco PIX, ASA, FWSM Logon Failure | Login failure attempts to the Cisco PIX, ASA, or FWSM devices. |
| 17 | COBIT: Cisco PIX, ASA, FWSM Logon Success | Successful login attempts to the Cisco PIX, ASA, or FWSM Firewall. |
| 18 | COBIT: Cisco PIX, ASA, FWSM NAT Failure | Failures in Network Address Translation (NAT) on the Cisco PIX, ASA, or FWSM. |
| 19 | COBIT: Cisco PIX, ASA, FWSM Policy Changed | Alerts when a Cisco PIX, ASA, or FWSM firewall policy has been modified. |
| 20 | COBIT: Cisco PIX, ASA, FWSM Protocol Failure | Alerts when possible network protocol failures on the Cisco PIX, ASA, or FWSM devices. |
| 21 | COBIT: System Restarted | Alerts when system has been restarted |
| 22 | COBIT: Cisco PIX, ASA, FWSM Routing Failure | Alerts when routing failure occurred in the Cisco PIX, ASA, or FWSM devices. |
| 23 | COBIT: Cisco PIX, ASA, FWSM Shun Added | Alerts when a shun rule has been added to the PIX, ASA, or FWSM configuration. |
| 24 | COBIT: Cisco PIX, ASA, FWSM Shun Deleted | Alerts when a shun rule has been removed from the PIX, ASA, or FWSM configuration. |
| 25 | COBIT: Cisco PIX, ASA, FWSM VPN Tunnel Creation | A VPN tunnel has been created on the Cisco PIX, ASA, or FWSM devices. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|---|
| 26 | COBIT: Cisco PIX, ASA, FWSM VPN Tunnel Teardown | Alerts when a VPN tunnel has been removed on the Cisco PIX, ASA, or FWSM devices. |
| 27 | COBIT: Cisco Switch Card Insert | Alerts when a card module is inserted into a switch. |
| 28 | COBIT: Cisco Switch Device Reload | Alerts when a command to reload a Cisco switch has been executed. |
| 29 | COBIT: Cisco Switch Device Restart | Alerts when a router or switch has been rebooted. |
| 30 | COBIT: Cisco Switch HA Failure (ver) | Alerts when a HA setup has version incompatibility issues. |
| 31 | COBIT: Cisco Switch Interface Change | Alerts when network interfaces are going up or down. |
| 32 | COBIT: Cisco Switch Interface Down | Alerts when Cisco switch interface is going down. |
| 33 | COBIT: Cisco Switch Interface Up | Alerts when the Cisco switch interface is back up. |
| 34 | COBIT: Cisco Switch Policy Changed | Alerts when Cisco router or switch configuration has been modified. |
| 35 | COBIT: DB2 Database Backup Failed | Alerts when a DB2 database backup fails. |
| 36 | COBIT: DB2 Database Configuration Change | Alerts when a configuration is changed on a DB2 database. |
| 37 | COBIT: DB2 Database Restore Failed | Alerts when a database restore fails on a DB2 database. |
| 38 | COBIT: DB2 Database Started or Stopped | Alerts when a DB2 database is started or stopped. |
| 39 | COBIT: DB2 Database User Added or Dropped | Alerts when a user is added or dropped from a DB2 database. |
| 40 | COBIT: Disallowed Services | Disallowed firewall services. |
| 41 | COBIT: DNS Server Shutdown | Alerts when DNS Server has been shutdown. |
| 42 | COBIT: DNS Server Started | Alerts when DNS Server has been started. |
| 43 | COBIT: Excessive IDS Attack | IDS anomalies using message volume threshold alerts. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|---|
| 44 | COBIT: Group Members Added | Alerts when new members are added to user groups. |
| 45 | COBIT: Group Members Deleted | Alerts when members are removed from user groups. |
| 46 | COBIT: Groups Created | Alerts when new user groups are created. |
| 47 | COBIT: Groups Deleted | Alerts when a user group is deleted. |
| 48 | COBIT: Groups Modified | Alerts when a user group has been modified. |
| 49 | COBIT: Guardium SQL Guard Config Changes | Alerts when a configuration is changed on Guardium SQL Database. |
| 50 | COBIT: Guardium SQL Guard Data Access | Alerts when a select statement is made on Guardium SQL Database. |
| 51 | COBIT: Guardium SQL Guard Logins | Alerts when a user logs into the Guardium SQL Database. |
| 52 | COBIT: Guardium SQL Guard Startup or Shutdown | Alerts when the Guardium SQL Database is started or stopped. |
| 53 | COBIT: HP NonStop Audit Configuration Changed | Alerts when configuration changes are made to the HP NonStop Audit. |
| 54 | COBIT: HP NonStop Audit Permission Changed | Alerts on HP NonStop Audit permission changed events. |
| 55 | COBIT: i5/OS Network Profile Changes | Alerts when any changes are made to an i5/OS network profile. |
| 56 | COBIT: i5/OS Permission or Policy Change | Alerts when policies or permissions are changed on the i5/OS. |
| 57 | COBIT: i5/OS Server or Service Status Change | Alerts when the i5/OS is restarted or a service stops or starts. |
| 58 | COBIT: i5/OS Software Updates | Alerts when events related to the i5/OS software updates. |
| 59 | COBIT: i5/OS User Profile Changes | Alerts when a user profile is changed on the i5/OS. |
| 60 | COBIT: IBM AIX Password Changed | Alerts when an account password is changed on IBM AIX servers. |
| 61 | COBIT: Juniper Firewall HA State Change | Alerts when Juniper Firewall has changed its failover state. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|--|
| 62 | COBIT: Juniper Firewall Logon Failure | Login failure attempts to the Juniper Firewall. |
| 63 | COBIT: Juniper Firewall Logon Success | Successful login attempts to the Juniper Firewall. |
| 64 | COBIT: Juniper Firewall Peer Missing | Alerts when a Juniper Firewall HA peer is missing. |
| 65 | COBIT: Juniper Firewall Policy Changes | Alerts when Juniper Firewall configuration is changed. |
| 66 | COBIT: Juniper Firewall Policy Out of Sync | Alerts when the Juniper Firewall's policy is out of sync. |
| 67 | COBIT: Juniper Firewall System Reset | Alerts when the Juniper Firewall has been reset to system default. |
| 68 | COBIT: Juniper VPN Policy Change | Alerts when Juniper VPN policy or configuration change. |
| 69 | COBIT: Logins Failed | Alerts when login failures are over the defined threshold. |
| 70 | COBIT: Logins Succeeded | Alerts when successful logins are over the defined threshold. |
| 71 | COBIT: LogLogic Disk Full | Alerts when the LogLogic appliance's disk is near full. |
| 72 | COBIT: LogLogic DSM Configuration Changes | Alerts when a configuration is changed on LogLogic DSM database. |
| 73 | COBIT: LogLogic DSM Data Access | Alerts when a select statement is made on LogLogic DSM database. |
| 74 | COBIT: LogLogic DSM Logins | Alerts when a user logs into the LogLogic DSM database. |
| 75 | COBIT: LogLogic DSM Startup or Shutdown | Alerts when the LogLogic DSM database is started or stopped. |
| 76 | COBIT: LogLogic File Retrieval Errors | Alerts when problems are detected during log file retrieval. |
| 77 | COBIT: LogLogic Management Center Backed Up or Restored | Alerts on backup and restore events to the LogLogic management center. |
| 78 | COBIT: LogLogic Management Center Passwords Changed | Alerts when users have changed their passwords. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|---|
| 79 | COBIT: LogLogic Management Center Upgrade Succeeded | Alerts for successful events related to the system's upgrade. |
| 80 | COBIT: LogLogic Message Routing Errors | Alerts when problems are detected during message forwarding. |
| 81 | COBIT: LogLogic Universal Collector Configuration Changed | Alerts when configuration changes are made to the LogLogic universal collector. |
| 82 | COBIT: Microsoft Operations Manager - Permissions Changed | Alerts when user or group permissions have been changed. |
| 83 | COBIT: Microsoft Operations Manager - Windows Passwords Changed | Alerts when users have changed their passwords. |
| 84 | COBIT: Microsoft Operations Manager - Windows Policies Changed | Alerts when Windows policies changed. |
| 85 | COBIT: Microsoft Operations Manager- Windows Server Restarted | Alerts when a Windows server has been restarted. |
| 86 | COBIT: Microsoft Sharepoint Content Deleted | Alerts on Microsoft Sharepoint content deleted events. |
| 87 | COBIT: Microsoft Sharepoint Content Updated | Alerts on Microsoft Sharepoint content updated events. |
| 88 | COBIT: Microsoft Sharepoint Permission Changed | Alerts on Microsoft Sharepoint permission changed events. |
| 89 | COBIT: Microsoft Sharepoint Policies Added, Removed, Modified | Alerts on Microsoft Sharepoint policy additions, deletions, and modifications. |
| 90 | COBIT: Microsoft SQL Server Backup Failed | Alerts when Microsoft SQL Server backup process has failed. |
| 91 | COBIT: Microsoft SQL Server Restore Failed | Alerts when Microsoft SQL Server restore process failed. |
| 92 | COBIT: Microsoft SQL Server Shutdown | Alerts when Microsoft SQL Server has been shutdown. |
| 93 | COBIT: Neoteris Files Accessed | Identifies all files being accessed through the Juniper SSL VPN. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|--|
| 94 | COBIT: NetApp Authentication Failure | Alerts when NetApp authentication failure events occur. |
| 95 | COBIT: NetApp Bad File Handle | Alerts when a bad file handle is detected on a NetApp device. |
| 96 | COBIT: NetApp Bootblock Update | Alerts when the bootblock has been updated on a NetApp Filer. |
| 97 | COBIT: NetApp Filer Audit Policies Changed | Alerts when NetApp Filer Audit policies changed. |
| 98 | COBIT: NetApp Filer Disk Failure | Alerts when a disk fails on a NetApp Filer. |
| 99 | COBIT: NetApp Filer Disk Inserted | Alerts when a disk is inserted into the NetApp Filer. |
| 100 | COBIT: NetApp Filer Disk Missing | Alerts when a disk is missing on the NetApp Filer device. |
| 101 | COBIT: NetApp Filer Disk Pulled | Alerts when a RAID disk has been pulled from the Filer device. |
| 102 | COBIT: NetApp Filer Disk Scrub Suspended | Alerts when the disk scrubbing process has been suspended. |
| 103 | COBIT: NetApp Filer File System Full | Alerts when the file system is full on the NetApp Filer device. |
| 104 | COBIT: NetApp Filer NIS Group Update | Alerts when the NIS group has been updated on the Filer device. |
| 105 | COBIT: NetApp Filer Snapshot Error | Alerts when an error has been detected during a NetApp Filer snapshot. |
| 106 | COBIT: NetApp Filer Unauthorized Mounting | Alerts when an unauthorized mount event occurs. |
| 107 | COBIT: Oracle Database Configuration Change | Alerts when a ALTER or UPDATE command is executed on Oracle DB's. |
| 108 | COBIT: Oracle Database Data Access | Alerts when Oracle tables are accessed. |
| 109 | COBIT: Oracle Database Permissions Changed | Alerts when permissions are changed on Oracle databases. |
| 110 | COBIT: Oracle Database Shutdown | Alerts when an Oracle database is shutdown. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|--|---|
| 111 | COBIT: Oracle Database User Added or Deleted | Alerts when a user is added or deleted from an Oracle database. |
| 112 | COBIT: Policy Violation | Firewall policy violations. |
| 113 | COBIT: Pulse Connect Secure Policy Change | Alerts when Pulse Connect Secure Policy or configuration changes. |
| 114 | COBIT: RACF Files Accessed | Alerts when files are accessed on the RACF servers. |
| 115 | COBIT: RACF Passwords Changed | Alerts when users have changed their passwords. |
| 116 | COBIT: RACF Permissions Changed | Alerts when user or group permissions have been changed. |
| 117 | COBIT: RACF Process Started | Alerts whenever a process is run on a RACF server. |
| 118 | COBIT: Sidewinder Configuration Changed | Alerts when configuration changes are made to the Sidewinder. |
| 119 | COBIT: Sybase ASE Database Backed Up or Restored | Alerts on backup and restore events to the Sybase ASE Database. |
| 120 | COBIT: Sybase ASE Database Config Changes | Alerts on Sybase ASE Database configuration change events. |
| 121 | COBIT: Sybase ASE Database Data Access | Alerts on Sybase ASE Database data access events. |
| 122 | COBIT: Sybase ASE Database Started | Alerts on Sybase ASE Database start events. |
| 123 | COBIT: Sybase ASE Database Stopped | Alerts on Sybase ASE Database stop events. |
| 124 | COBIT: Symantec Endpoint Protection Configuration Changed | Alerts when configuration changes are made to the Symantec Endpoint Protection. |
| 125 | COBIT: Symantec Endpoint Protection Policy Add, Delete, Modify | Alerts on Symantec Endpoint Protection additions, deletions, and modifications. |
| 126 | COBIT: System Anomalies | Detects and alerts any anomalies based on past log patterns. |
| 127 | COBIT: System Restarted | Alerts when systems such as routers and switches have restarted. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|--|---|
| 128 | COBIT: TIBCO ActiveMatrix Administrator Permission Changed | Alerts on TIBCO ActiveMatrix Administrator permission changed events. |
| 129 | COBIT: UNIX Groups Added | Alerts when a new group has been added to the UNIX/Linux servers. |
| 130 | COBIT: UNIX Groups Deleted | Alerts when a user group is deleted on UNIX/Linux servers. |
| 131 | COBIT: UNIX Groups Modified | Alerts when a user group has been modified on UNIX/Linux servers. |
| 132 | COBIT: UNIX Privilege Escalated | Alerts when a user has escalated privileges using commands such as su/sudo. |
| 133 | COBIT: vCenter Create Virtual Machine | Alerts when virtual machine has been created from VMware vCenter console. |
| 134 | COBIT: vCenter Data Move | Alerts when entity has been moved within the VMware vCenter infrastructure. |
| 135 | COBIT: vCenter Datastore Event | Alerts on create, modify, and delete datastore events on VMware vCenter. |
| 136 | COBIT: vCenter Delete Virtual Machine | Alerts when a virtual machine has been deleted or removed from VMware vCenter console. |
| 137 | COBIT: vCenter Firewall Policy Change | Alerts when changes to the VMware ESX allowed services firewall policy. |
| 138 | COBIT: vCenter Orchestrator Create Virtual Machine | Virtual machine has been created from VMware vCenter Orchestrator console. |
| 139 | COBIT: vCenter Orchestrator Data Move | Entity has been moved within the VMware vCenter Orchestrator infrastructure. |
| 140 | COBIT: vCenter Orchestrator Datastore Events | Alerts on create, modify, and delete datastore events on VMware vCenter Orchestrator. |
| 141 | COBIT: vCenter Orchestrator Delete Virtual Machine | Alerts when a virtual machine has been deleted or removed from VMware vCenter Orchestrator console. |
| 142 | COBIT: vCenter Orchestrator Login Failed | Failed logins to the VMware vCenter Orchestrator console. |
| 143 | COBIT: vCenter Orchestrator Virtual Machine Shutdown | Virtual machine has been shutdown or paused from VMware vCenter Orchestrator console. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|---|
| 144 | COBIT: vCenter Orchestrator Virtual Machine Started | Virtual machine has been started or resumed from VMware vCenter Orchestrator console. |
| 145 | COBIT: vCenter Orchestrator vSwitch Add, Modify or Delete | vSwitch on VMware ESX server has been added, modified or removed from vCenter Orchestrator. |
| 146 | COBIT: vCenter Permission Change | Alerts when a permission role has been added, changed, removed, or applied on VMware vCenter. |
| 147 | COBIT: vCenter Restart ESX Services | Alerts when VMware vCenter restarted services running on VMware ESX Server. |
| 148 | COBIT: vCenter Shutdown or Restart ESX | Alerts when VMware ESX Server is shutdown from vCenter console. |
| 149 | COBIT: vCenter User Login Failed | Alerts on failed logins to the VMware vCenter console. |
| 150 | COBIT: vCenter User Login Successful | Alerts on successful logins to the VMware vCenter console. |
| 151 | COBIT: vCenter Virtual Machine Shutdown | Alerts when virtual machine has been shutdown or paused from VMware vCenter console. |
| 152 | COBIT: vCenter Virtual Machine Started | Alerts when virtual machine has been started or resumed from VMware vCenter console. |
| 153 | COBIT: vCenter vSwitch Add, Modify or Delete | Alerts when vSwitch on VMware ESX server has been added, modified or removed from vCenter. |
| 154 | COBIT: vCloud Director Login Failed | Alerts on failed logins to the VMware vCloud Director console. |
| 155 | COBIT: vCloud Director Login Success | Alerts on successful logins to the VMware vCloud Director console. |
| 156 | COBIT: vCloud Organization Created | Alerts when organization successfully created on VMware vCloud Director. |
| 157 | COBIT: vCloud Organization Deleted | Alerts when organization successfully deleted on VMware vCloud Director. |
| 158 | COBIT: vCloud Organization Modified | Alerts when organization successfully modified on VMware vCloud director. |
| 159 | COBIT: vCloud User Created | Alerts when a user successfully created on VMware vCloud Director. |
| 160 | COBIT: vCloud User, Group, or Role Modified | Alerts when VMware vCloud Director user, group, or role has been modified. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|--|---|
| 161 | COBIT: vCloud vApp Created, Deleted, or Modified | Alerts when VMware vCloud Director vApp has been created, deleted, or modified. |
| 162 | COBIT: vCloud vDC Created, Modified, or Deleted | Alerts when VMware vCloud Director Virtual Datacenters have been created, deleted, or modified. |
| 163 | COBIT: vShield Edge Configuration Change | Alerts when configuration changes to VMware vShield Edge policies. |
| 164 | COBIT: Windows Audit Log Cleared | Alerts when audit logs on Windows servers have been cleared. |
| 165 | COBIT: Windows Files Accessed | Show files accessed on the Windows servers. |
| 166 | COBIT: Windows Group Members Added | Alerts when new members are added to user groups on Windows servers. |
| 167 | COBIT: Windows Group Members Deleted | Alerts when members are removed from user groups on Windows servers. |
| 168 | COBIT: Windows Groups Created | Alerts when new user groups are created on Windows servers. |
| 169 | COBIT: Windows Groups Deleted | Alerts when a user group is deleted on Windows servers. |
| 170 | COBIT: Windows Groups Modified | Alerts when a user group has been modified on Windows servers. |
| 171 | COBIT: Windows Passwords Changed | Alerts when users have changed their passwords. |
| 172 | COBIT: Windows Permissions Changed | Alerts when user or group permissions have been changed. |
| 173 | COBIT: Windows Policies Changed | Alerts when Windows policies changed. |
| 174 | COBIT: Windows Privileges Escalated | Alerts when a user or program has escalated the privileges. |
| 175 | COBIT: Windows Programs Accessed | Alerts when a program is accessed on a Windows server. |
| 176 | COBIT: System Restarted | Alerts when system has been restarted. |
| 177 | COBIT: Windows Software Updates | Alerts when events related to the Windows' software updates. |

| Serial Number | TIBCO LogLogic Alert | Description |
|---------------|---|---|
| 178 | COBIT: Windows Software Updates Failed | Alerts when failed events related to the software updates. |
| 179 | COBIT: Windows Software Updates Succeeded | Alerts for successful events related to the software updates. |

TIBCO LogLogic Reports and Alerts Quick Reference

The following table describes the reports and alerts included in the LogLogic® Compliance Suite - Sarbanes-Oxley Edition and COBIT 4.1.

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--|----------------------------|--|
| PO2 Define the Information Architecture | | |
| PO2.3 | Data Classification Scheme | <p>Compliance Suite Reports</p> <p>COBIT: Guardium SQL Guard Audit Data Access</p> <p>COBIT: Guardium SQL Guard Data Access</p> <p>COBIT: HP NonStop Audit Object Access</p> <p>COBIT: LogLogic DSM Data Access</p> <p>COBIT: Microsoft Sharepoint Content Deleted</p> <p>COBIT: Microsoft Sharepoint Content Updates</p> <p>COBIT: Microsoft SQL Server Data Access</p> <p>COBIT: Microsoft SQL Server Schema Corruption</p> <p>COBIT: Oracle Database Data Access</p> <p>COBIT: Sybase ASE Database Data Access</p> <p>COBIT: i5/OS Object Access</p> <p>Compliance Suite Alerts</p> <p>COBIT: Guardium SQL Guard Data Access</p> <p>COBIT: LogLogic DSM Data Access</p> <p>COBIT: Microsoft Sharepoint Content Deleted</p> <p>COBIT: Microsoft Sharepoint Content Updated</p> <p>COBIT: Oracle Database Data Access</p> <p>COBIT: Sybase ASE Database Data Access</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--|----------------------|--|
| PO2.4 | Integrity Management | Compliance Suite Report COBIT: Microsoft Sharepoint Content Deleted COBIT: Microsoft Sharepoint Content Updates COBIT: Microsoft SQL Server Schema Corruption COBIT: Tripwire Modifications, Additions, and Deletions Compliance Suite Alerts COBIT: Microsoft Sharepoint Content Deleted COBIT: Microsoft Sharepoint Content Updated |
| PO4 Define the IT Processes, Organization and Relationships | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-----------------------|---|
| PO4.11 | Segregation of Duties | Compliance Suite Reports COBIT: Pulse Connect Secure successful Logins COBIT: Accepted VPN Connections - RADIUS COBIT: Account Activities on UNIX Servers COBIT: Account Activities on Windows Servers COBIT: Accounts Created on NetApp Filer Audit COBIT: Accounts Created on NetApp Filer COBIT: Accounts Created on Sidewinder COBIT: Accounts Created on Symantec Endpoint Protection COBIT: Accounts Created on TIBCO ActiveMatrix Administrator COBIT: Accounts Created on TIBCO Administrator COBIT: Accounts Created on UNIX Servers COBIT: Accounts Created on Windows Servers COBIT: Active Directory System Changes COBIT: Administrator Logins on Windows Servers COBIT: Check Point Management Station Login COBIT: Cisco ISE, ACS Accounts Created COBIT: DB2 Database Successful Logins COBIT: ESX Accounts Activities COBIT: ESX Accounts Created COBIT: ESX Group Activities COBIT: ESX Logins Succeeded COBIT: F5 BIG-IP TMOS Login Successful COBIT: Group Activities on NetApp Filer Audit COBIT: Group Activities on Symantec Endpoint Protection COBIT: Group Activities on TIBCO ActiveMatrix Administrator COBIT: Group Activities on UNIX Servers COBIT: Group Activities on Windows Servers COBIT: Groups Created on NetApp Filer Audit COBIT: Groups Created on TIBCO ActiveMatrix Administrator COBIT: Groups Created on UNIX Servers COBIT: Groups Created on Windows Servers |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-----------------------|--|
| PO4.11 | Segregation of Duties | <p>Compliance Suite Reports (<i>Cont.</i>)</p> <p>COBIT: Groups Deleted on NetApp Filer Audit</p> <p>COBIT: Groups Deleted on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Groups Deleted on UNIX Servers</p> <p>COBIT: Groups Deleted on Windows Servers</p> <p>COBIT: Guardium SQL Guard Audit Logins</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: HP NonStop Audit Login Successful</p> <p>COBIT: HP NonStop Audit Permissions Changed</p> <p>COBIT: i5/OS Access Control List Modifications</p> <p>COBIT: Juniper SSL VPN Successful Logins</p> <p>COBIT: Juniper SSL VPN (Secure Access) Successful Logins</p> <p>COBIT: Last Activities Performed by Administrators</p> <p>COBIT: Last Activities Performed by All Users</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: LogLogic Management Center Account Activities</p> <p>COBIT: LogLogic Management Center Login</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Activities</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Created</p> <p>COBIT: Microsoft Operations Manager - Windows Permissions Modified</p> <p>COBIT: Microsoft Sharepoint Permissions Changed</p> <p>COBIT: Microsoft Sharepoint Policy Add, Remove, or Modify</p> <p>COBIT: Microsoft SQL Server Database Permission Events</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: NetApp Filer Audit Login Successful</p> <p>COBIT: NetApp Filer Login Successful</p> <p>COBIT: Oracle Database Permission Events</p> <p>COBIT: Oracle Database Successful Logins</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-----------------------|---|
| PO4.11 | Segregation of Duties | Compliance Suite Reports (Cont.) COBIT: Permissions Modified on Windows Servers COBIT: RACF Accounts Created COBIT: RACF Permissions Changed COBIT: RACF Successful Logins COBIT: Root Logins COBIT: Successful Logins COBIT: Sybase ASE Successful Logins COBIT: TIBCO ActiveMatrix Administrator Permission Changes COBIT: TIBCO ActiveMatrix Administrator Successful Logins COBIT: TIBCO Administrator Permission Changes COBIT: Unauthorized Logins COBIT: Unencrypted Logins COBIT: vCenter Orchestrator Virtual Machine Created COBIT: vCenter Orchestrator Virtual Machine Deleted COBIT: vCenter Successful Logins COBIT: vCenter User Permission Change COBIT: vCenter Virtual Machine Created COBIT: vCenter Virtual Machine Deleted COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud Successful Logins COBIT: vCloud User Created COBIT: vCloud vApp Created, Modified, or Deleted COBIT: vCloud vDC Created, Modified, or Deleted |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-----------------------|--|
| PO4.11 | Segregation of Duties | Compliance Suite Alerts COBIT: Accounts Created COBIT: Cisco PIX, ASA, FWSM Logon Success COBIT: DB2 Database User Added or Dropped COBIT: Groups Created COBIT: Groups Deleted COBIT: Group Members Added COBIT: Guardium SQL Guard Logins COBIT: HP NonStop Audit Permission Changed COBIT: i5/OS Permission or Policy Change COBIT: Juniper Firewall Logon Success COBIT: Logins Succeeded COBIT: LogLogic DSM Logins COBIT: Microsoft Operations Manager - Permissions Changed COBIT: Microsoft Sharepoint Permission Changed COBIT: Microsoft Sharepoint Policies Added, Removed, Modified COBIT: Oracle Database Permissions Changed COBIT: RACF Permissions Changed COBIT: Symantec Endpoint Protection Policy Add, Delete, Modify COBIT: TIBCO ActiveMatrix Administrator Permission Changed COBIT: UNIX Groups Added COBIT: UNIX Groups Deleted COBIT: vCenter Create Virtual Machine COBIT: vCenter Delete Virtual Machine COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCenter Permission Change COBIT: vCenter User Login Successful COBIT: vCloud Director Login Success COBIT: vCloud Organization Created |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--------------------------------------|-----------------------|--|
| PO4.11 | Segregation of Duties | Compliance Suite Alerts (Cont.) COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud User Created COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: Windows Group Members Added COBIT: Windows Groups Created COBIT: Windows Groups Deleted COBIT: Windows Permissions Changed |
| PO7 Manage IT Human Resources | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|---|
| PO7.8 | Job Change and Termination | <p>Compliance Suite Reports</p> <p>COBIT: Pulse Connect Secure Successful Logins</p> <p>COBIT: Accepted VPN Connections - RADIUS</p> <p>COBIT: Account Activities on UNIX Servers</p> <p>COBIT: Account Activities on Windows Servers</p> <p>COBIT: Accounts Changed on NetApp Filer</p> <p>COBIT: Accounts Changed on TIBCO Administrator</p> <p>COBIT: Accounts Created on NetApp Filer</p> <p>COBIT: Accounts Created on NetApp Filer Audit</p> <p>COBIT: Accounts Created on Sidewinder</p> <p>COBIT: Accounts Created on Symantec Endpoint Protection</p> <p>COBIT: Accounts Created on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Accounts Created on TIBCO Administrator</p> <p>COBIT: Accounts Changed on UNIX Servers</p> <p>COBIT: Accounts Changed on Windows Servers</p> <p>COBIT: Accounts Changed on Sidewinder</p> <p>COBIT: Accounts Created on UNIX Servers</p> <p>COBIT: Accounts Created on Windows Servers</p> <p>COBIT: Accounts Deleted on NetApp Filer</p> <p>COBIT: Accounts Deleted on NetApp Filer Audit</p> <p>COBIT: Accounts Deleted on Sidewinder</p> <p>COBIT: Accounts Deleted on Symantec Endpoint Protection</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|---|
| PO7.8 | Job Change and Termination | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Accounts Deleted on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Accounts Deleted on TIBCO Administrator</p> <p>COBIT: Accounts Deleted on UNIX Servers</p> <p>COBIT: Accounts Deleted on Windows Servers</p> <p>COBIT: Active VPN Connections for Cisco VPN Concentrators</p> <p>COBIT: Active VPN Connections for Nortel Contivity</p> <p>COBIT: Active VPN Connections for RADIUS</p> <p>COBIT: Check Point Management Station Login</p> <p>COBIT: Cisco ISE, ACS Accounts Created</p> <p>COBIT: Cisco ISE, ACS Accounts Removed</p> <p>COBIT: DB2 Database Failed Logins</p> <p>COBIT: DB2 Database Successful Logins</p> <p>COBIT: ESX Accounts Activities</p> <p>COBIT: ESX Accounts Created</p> <p>COBIT: ESX Accounts Deleted</p> <p>COBIT: ESX Failed Logins</p> <p>COBIT: ESX Group Activities</p> <p>COBIT: ESX Logins Failed Unknown User</p> <p>COBIT: ESX Logins Succeeded</p> <p>COBIT: F5 BIG-IP TMOS Login Failed</p> <p>COBIT: F5 BIG-IP TMOS Login Successful</p> <p>COBIT: Failed Logins</p> <p>COBIT: Group Activities on NetApp Filer Audit</p> <p>COBIT: Group Activities on Symantec Endpoint Protection</p> <p>COBIT: Group Activities on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Group Activities on UNIX Servers</p> <p>COBIT: Group Activities on Windows Servers</p> <p>COBIT: Guardium SQL Guard Audit Logins</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: HP NonStop Audit Login Failed</p> <p>COBIT: HP NonStop Audit Login Successful</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|---|
| | | COBIT: HP NonStop Audit Permissions Changed |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|--|
| PO7.8 | Job Change and Termination | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Last Activities Performed by All Users</p> <p>COBIT: i5/OS Access Control List Modifications</p> <p>COBIT: i5/OS Network Authentication Events</p> <p>COBIT: Juniper SSL VPN Successful Logins</p> <p>COBIT: Juniper SSL VPN (Secure Access) Successful Logins</p> <p>COBIT: Last Activities Performed by Administrators</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: LogLogic Management Center Account Activities</p> <p>COBIT: LogLogic Management Center Login</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Activities</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Changed</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Created</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Enabled</p> <p>COBIT: Microsoft Operations Manager - Windows Permissions Modified</p> <p>COBIT: Microsoft SQL Server Database Failed Logins</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: NetApp Filer Audit Group Members Deleted</p> <p>COBIT: NetApp Filer Audit Login Failed</p> <p>COBIT: NetApp Filer Audit Login Successful</p> <p>COBIT: NetApp Filer Login Failed</p> <p>COBIT: NetApp Filer Login Successful</p> <p>COBIT: Oracle Database Failed Logins</p> <p>COBIT: Oracle Database Successful Logins</p> <p>COBIT: Permissions Modified on Windows Servers</p> <p>COBIT: RACF Accounts Created</p> <p>COBIT: RACF Accounts Deleted</p> <p>COBIT: RACF Accounts Modified</p> <p>COBIT: RACF Failed Logins</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|--|
| | | COBIT: RACF Permissions Changed COBIT: RACF Successful Logins |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|--|
| PO7.8 | Job Change and Termination | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Successful Logins</p> <p>COBIT: Sybase ASE Failed Logins</p> <p>COBIT: Sybase ASE Successful Logins</p> <p>COBIT: TIBCO ActiveMatrix Administrator Failed Logins</p> <p>COBIT: TIBCO ActiveMatrix Administrator Permission Changes</p> <p>COBIT: TIBCO ActiveMatrix Administrator Successful Logins</p> <p>COBIT: TIBCO Administrator Permission Changes</p> <p>COBIT: Unencrypted Logins</p> <p>COBIT: UNIX Failed Logins</p> <p>COBIT: Users Removed from Servers</p> <p>COBIT: vCenter Failed Logins</p> <p>COBIT: vCenter Orchestrator Failed Logins</p> <p>COBIT: vCenter Successful Logins</p> <p>COBIT: vCloud Failed Logins</p> <p>COBIT: vCloud Successful Logins</p> <p>COBIT: vCloud User Created</p> <p>COBIT: vCloud User Deleted or Removed</p> <p>COBIT: Windows Group Members Deleted</p> <p>Compliance Suite Alerts</p> <p>COBIT: Accounts Created</p> <p>COBIT: Accounts Deleted</p> <p>COBIT: Accounts Modified</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Success</p> <p>COBIT: DB2 Database User Added or Dropped</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: Groups Deleted</p> <p>COBIT: Group Members Added</p> <p>COBIT: Group Members Deleted</p> <p>COBIT: Groups Modified</p> <p>COBIT: HP NonStop Audit Permission Changed</p> <p>COBIT: i5/OS Network Profile Changes</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--|--------------------------------------|---|
| COBIT: i5/OS User Profile Changes | | |
| PO7.8 | Job Change and Termination | Compliance Suite Alerts (Cont.) COBIT: Juniper Firewall Logon Failure COBIT: Juniper Firewall Logon Success COBIT: Logins Failed COBIT: Logins Succeeded COBIT: LogLogic DSM Logins COBIT: NetApp Filer NIS Group Update COBIT: UNIX Groups Deleted COBIT: UNIX Groups Modified COBIT: vCenter Orchestrator Login Failed COBIT: vCenter User Login Failed COBIT: vCenter User Login Successful COBIT: vCloud Director Login Failed COBIT: vCloud Director Login Success COBIT: vCloud User Created COBIT: vCloud User, Group, or Role Modified COBIT: Windows Group Members Added COBIT: Windows Group Members Deleted COBIT: Windows Groups Deleted COBIT: Windows Groups Modified |
| AI2 Acquire and Maintain Application Software | | |
| AI2.3 | Application Control and Auditability | Compliance Suite Reports COBIT: ESX Kernel log daemon terminating COBIT: ESX Kernel logging Stop COBIT: ESX Syslogd Restart COBIT: LogLogic File Retrieval Errors COBIT: LogLogic Message Routing Errors COBIT: RACF Process Started COBIT: vCenter Orchestrator Virtual Machine Created COBIT: vCenter Orchestrator Virtual Machine Deleted COBIT: vCenter Restart ESX Services |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--------------------------------------|---|
| AI2.3 | Application Control and Auditability | Compliance Suite Reports (Cont.) COBIT: vCenter Virtual Machine Created COBIT: vCenter Virtual Machine Deleted COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Modified, or Deleted COBIT: vCloud vDC Created, Modified, or Deleted COBIT: Windows New Services Installed |
| AI2.3 | Application Control and Auditability | Compliance Suite Alerts COBIT: LogLogic Message Routing Errors COBIT: LogLogic File Retrieval Errors COBIT: RACF Process Started COBIT: vCenter Create Virtual Machine COBIT: vCenter Delete Virtual Machine COBIT: vCenter Restart ESX Services COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: Windows Programs Accessed |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------------|--|
| AI2.4 | Application Security and Availability | <p>Compliance Suite Reports</p> <p>COBIT: Active Directory System Changes</p> <p>COBIT: HP NonStop Audit Permissions Changed</p> <p>COBIT: i5/OS Access Control List Modifications</p> <p>COBIT: Microsoft Operations Manager - Windows Permissions Modified</p> <p>COBIT: Microsoft Sharepoint Permissions Changed</p> <p>COBIT: Microsoft Sharepoint Policy Add, Remove, or Modify</p> <p>COBIT: Microsoft SQL Server Database Permission Events</p> <p>COBIT: Oracle Database Permission Events</p> <p>COBIT: Permissions Modified on Windows Servers</p> <p>COBIT: RACF Permissions Changed</p> <p>COBIT: TIBCO ActiveMatrix Administrator Permission Changes</p> <p>COBIT: TIBCO Administrator Permission Changes</p> <p>COBIT: vCenter Orchestrator Virtual Machine Created</p> <p>COBIT: vCenter Orchestrator Virtual Machine Deleted</p> <p>COBIT: vCenter User Permission Change</p> <p>COBIT: vCenter Virtual Machine Created</p> <p>COBIT: vCenter Virtual Machine Deleted</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud vApp Created, Modified, or Deleted</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> <p>Compliance Suite Alerts</p> <p>COBIT: HP NonStop Audit Permission Changed</p> <p>COBIT: i5/OS Permission or Policy Change</p> <p>COBIT: Microsoft Sharepoint Permission Changed</p> <p>COBIT: Microsoft Sharepoint Policies Added, Removed, Modified</p> <p>COBIT: Oracle Database Permissions Changed</p> <p>COBIT: RACF Permissions Changed</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|---|---|---|
| AI2.4 | Application Security and Availability | Compliance Suite Reports (Cont.) COBIT: Symantec Endpoint Protection Policy Add, Delete, Modify COBIT: TIBCO ActiveMatrix Administrator Permission Changed COBIT: vCenter Create Virtual Machine COBIT: vCenter Delete Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCenter Permission Change COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: Windows Permissions Changed |
| AI3 Acquire and Maintain Technology Infrastructure | | |
| AI3.2 | Infrastructure Resource Protection and Availability | Compliance Suite Reports COBIT: Active Directory System Changes COBIT: Check Point Objects Created COBIT: Check Point Objects Deleted COBIT: Creation and Deletion of System Level Objects: AIX Audit COBIT: Creation and Deletion of System Level Objects: DB2 Database COBIT: Creation and Deletion of System Level Objects: HP-UX Audit COBIT: Creation and Deletion of System Level Objects: Windows COBIT: Creation and Deletion of System Level Objects: Oracle COBIT: Creation and Deletion of System Level Objects: SQL Server COBIT: Creation and Deletion of System Level Objects: Solaris BSM |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---|---|
| AI3.2 | Infrastructure Resource Protection and Availability | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Domain activities on Symantec Endpoint Protection</p> <p>COBIT: i5/OS Object Creation and Deletion</p> <p>COBIT: Microsoft SQL Server Schema Corruption</p> <p>COBIT: Sybase ASE Database Create Events</p> <p>COBIT: Sybase ASE Database Drop Events</p> <p>COBIT: Tripwire Modifications, Additions, and Deletions</p> <p>COBIT: Trusted Domain Created on Windows Servers</p> <p>COBIT: Trusted Domain Deleted on Windows Servers</p> <p>COBIT: vCenter Orchestrator Virtual Machine Created</p> <p>COBIT: vCenter Orchestrator Virtual Machine Deleted</p> <p>COBIT: vCenter Virtual Machine Created</p> <p>COBIT: vCenter Virtual Machine Deleted</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud vApp Created, Modified, or Deleted</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> |
| AI3.2 | Infrastructure Resource Protection and Availability | <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM NAT Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Protocol Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Routing Failure</p> <p>COBIT: vCenter Create Virtual Machine</p> <p>COBIT: vCenter Delete Virtual Machine</p> <p>COBIT: vCenter Orchestrator Create Virtual Machine</p> <p>COBIT: vCenter Orchestrator Delete Virtual Machine</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud vApp Created, Deleted, or Modified</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|---|
| AI3.3 | Infrastructure Maintenance | <p>Compliance Suite Reports</p> <p>COBIT: Active Directory System Changes</p> <p>COBIT: Check Point Configuration Changes</p> <p>COBIT: Cisco ISE, ACS Configuration Changes</p> <p>COBIT: Cisco Peer Reset/Reload</p> <p>COBIT: Cisco Peer Supervisor Status Changes</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: Cisco Routers and Switches Restart</p> <p>COBIT: DB2 Database Configuration Changes</p> <p>COBIT: DB2 Database Stop and Start Events</p> <p>COBIT: Cisco ESA: Updated</p> <p>COBIT: F5 BIG-IP TMOS Restarted</p> <p>COBIT: Guardium SQL Guard Audit Configuration Changes</p> <p>COBIT: Guardium SQL Guard Audit Startup or Shutdown</p> <p>COBIT: Guardium SQL Guard Configuration Changes</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: HP NonStop Audit Configuration Changes</p> <p>COBIT: i5/OS System Management Changes</p> <p>COBIT: Juniper Firewall Reset Accepted</p> <p>COBIT: Juniper Firewall Reset Imminent</p> <p>COBIT: Juniper Firewall Restarted</p> <p>COBIT: LogLogic DSM Configuration Changes</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: LogLogic Management Center Upgrade Success</p> <p>COBIT: LogLogic Universal Collector Configuration Changes</p> <p>COBIT: Microsoft Operations Manager - Windows Servers Restarted</p> <p>COBIT: Microsoft SQL Server Configuration Changes</p> <p>COBIT: Microsoft SQL Server Shutdown by Reason</p> <p>COBIT: Oracle Database Configuration Changes</p> <p>COBIT: Oracle Database Shutdown</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|--|
| AI3.3 | Infrastructure Maintenance | <p>Compliance Suite Reports (<i>Cont.</i>)</p> <p>COBIT: Peer Servers and Status</p> <p>COBIT: Peer Servers and Status - Blue Coat Proxy</p> <p>COBIT: Peer Servers and Status - Cisco WSA</p> <p>COBIT: Peer Servers and Status - Microsoft IIS</p> <p>COBIT: Periodic Review of Log Reports</p> <p>COBIT: Periodic Review of User Access Logs</p> <p>COBIT: RACF Process Started</p> <p>COBIT: Sidewinder Configuration Changes</p> <p>COBIT: Sybase ASE Database Configuration Changes</p> <p>COBIT: Sybase ASE Database Startup or Shutdown</p> <p>COBIT: Symantec AntiVirus: Updated</p> <p>COBIT: Symantec Endpoint Protection Configuration Changes</p> <p>COBIT: Symantec Endpoint Protection: Updated</p> <p>COBIT: vCenter Orchestrator Virtual Machine Created</p> <p>COBIT: vCenter Orchestrator Virtual Machine Deleted</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart of ESX Server</p> <p>COBIT: vCenter Virtual Machine Created</p> <p>COBIT: vCenter Virtual Machine Deleted</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud vApp Created, Modified, or Deleted</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> <p>COBIT: Windows New Services Installed</p> <p>COBIT: Windows Servers Restarted</p> <p>COBIT: Windows Software Update Activities</p> <p>COBIT: Windows Software Update Failures</p> <p>COBIT: Windows Software Update Successes</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|----------------------------|---|
| AI3.3 | Infrastructure Maintenance | <p>Compliance Suite Alerts</p> <p>COBIT: Check Point Policy Changed</p> <p>COBIT: Microsoft Operations Manager - Windows Server Restarted</p> <p>COBIT: Cisco ISE, ACS Configuration Changed</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Errors</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: System Restarted</p> <p>COBIT: Cisco Switch Card Insert</p> <p>COBIT: Cisco Switch Device Reload</p> <p>COBIT: Cisco Switch Device Restart</p> <p>COBIT: Cisco Switch HA Failure (ver)</p> <p>COBIT: DB2 Database Configuration Change</p> <p>COBIT: DB2 Database Started or Stopped</p> <p>COBIT: DNS Server Shutdown</p> <p>COBIT: DNS Server Started</p> <p>COBIT: Guardium SQL Guard Config Changes</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: HP NonStop Audit Configuration Changed</p> <p>COBIT: i5/OS Server or Service Status Change</p> <p>COBIT: i5/OS Software Updates</p> <p>COBIT: Juniper Firewall HA State Change</p> <p>COBIT: Juniper Firewall Peer Missing</p> <p>COBIT: Juniper Firewall System Reset</p> <p>COBIT: LogLogic Disk Full</p> <p>COBIT: LogLogic DSM Configuration Changes</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: LogLogic Management Center Upgrade Succeeded</p> <p>COBIT: LogLogic Universal Collector Configuration Changed</p> <p>COBIT: Microsoft SQL Server Shutdown</p> <p>COBIT: NetApp Bad File Handle</p> <p>COBIT: NetApp Filer Disk Failure</p> <p>COBIT: NetApp Filer Disk Missing</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|---------------------------|----------------------------|---|
| | | COBIT: NetApp Filer File System Full COBIT: NetApp Filer Disk Inserted COBIT: NetApp Filer Disk Pulled |
| AI3.3 | Infrastructure Maintenance | Compliance Suite Alerts (Cont.) COBIT: Oracle Database Configuration Change COBIT: Oracle Database Shutdown COBIT: RACF Process Started COBIT: Sidewinder Configuration Changed COBIT: Sybase ASE Database Config Changes COBIT: Sybase ASE Database Started COBIT: Sybase ASE Database Stopped COBIT: Symantec Endpoint Protection Configuration Changed COBIT: System Anomalies COBIT: System Restarted COBIT: vCenter Create Virtual Machine COBIT: vCenter Delete Virtual Machine COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCenter Orchestrator Virtual Machine Shutdown COBIT: vCenter Orchestrator Virtual Machine Started COBIT: vCenter Shutdown or Restart ESX COBIT: vCenter Virtual Machine Shutdown COBIT: vCenter Virtual Machine Started COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: System Restarted COBIT: Windows Software Updates COBIT: Windows Software Updates Failed COBIT: Windows Software Updates Succeeded |
| AI6 Manage Changes | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|---|
| AI6 | Change Standards and Procedures | Compliance Suite Reports COBIT: Cisco PIX, ASA, FWSM Failover Disabled COBIT: Cisco PIX, ASA, FWSM Failover Performed COBIT: vCenter Orchestrator Virtual Machine Created |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|--|
| AI6 | Change Standards and Procedures | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: vCenter Orchestrator Virtual Machine Deleted</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart of ESX Server</p> <p>COBIT: vCenter Virtual Machine Created</p> <p>COBIT: vCenter Virtual Machine Deleted</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud vApp Created, Modified, or Deleted</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Errors</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: System Restarted</p> <p>COBIT: Cisco Switch Device Reload</p> <p>COBIT: Cisco Switch Device Restart</p> <p>COBIT: Cisco Switch HA Failure (ver)</p> <p>COBIT: DB2 Database Configuration Change</p> <p>COBIT: DB2 Database Started or Stopped</p> <p>COBIT: DNS Server Shutdown</p> <p>COBIT: DNS Server Started</p> <p>COBIT: i5/OS Server or Service Status Change</p> <p>COBIT: Juniper Firewall HA State Change</p> <p>COBIT: Juniper Firewall Peer Missing</p> <p>COBIT: Juniper Firewall System Reset</p> <p>COBIT: Microsoft SQL Server Shutdown</p> <p>COBIT: Microsoft Operations Manager - Windows Server Restarted</p> <p>COBIT: NetApp Filer File System Full</p> <p>COBIT: Oracle Database Configuration Change</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|---|
| | | COBIT: Oracle Database Shutdown |
| AI6 | Change Standards and Procedures | Compliance Suite Alerts (Cont.) COBIT: System Anomalies COBIT: System Restarted COBIT: vCenter Create Virtual Machine COBIT: vCenter Delete Virtual Machine COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCenter Orchestrator Virtual Machine Shutdown COBIT: vCenter Orchestrator Virtual Machine Started COBIT: vCenter Shutdown or Restart ESX COBIT: vCenter Virtual Machine Shutdown COBIT: vCenter Virtual Machine Started COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: System Restarted |
| AI6.1 | Change Standards and Procedures | Compliance Suite Reports COBIT: Active Directory System Changes COBIT: Check Point Configuration Changes COBIT: Check Point Objects Modified COBIT: Cisco ESA: Updated COBIT: Cisco ISE, ACS Configuration Changes COBIT: Cisco Peer Reset/Reload COBIT: Cisco Peer Supervisor Status Changes COBIT: Cisco Routers and Switches Restart COBIT: DB2 Database Configuration Changes COBIT: DB2 Database Stop and Start Events COBIT: Domain activities on Symantec Endpoint Protection COBIT: F5 BIG-IP TMOS Restarted |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|--|
| AI6.1 | Change Standards and Procedures | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Guardium SQL Guard Audit Configuration Changes</p> <p>COBIT: Guardium SQL Guard Audit Startup or Shutdown</p> <p>COBIT: Guardium SQL Guard Configuration Changes</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: HP NonStop Audit Configuration Changes</p> <p>COBIT: i5/OS Audit Configuration Changes</p> <p>COBIT: i5/OS System Management Changes</p> <p>COBIT: Juniper Firewall Reset Accepted</p> <p>COBIT: Juniper Firewall Reset Imminent</p> <p>COBIT: Juniper Firewall Restarted</p> <p>COBIT: LogLogic DSM Configuration Changes</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: LogLogic Management Center Upgrade Success</p> <p>COBIT: LogLogic Universal Collector Configuration Changes</p> <p>COBIT: Microsoft Operations Manager - Windows Servers Restarted</p> <p>COBIT: Microsoft SQL Server Configuration Changes</p> <p>COBIT: Microsoft SQL Server Shutdown by Reason</p> <p>COBIT: Oracle Database Configuration Changes</p> <p>COBIT: Oracle Database Shutdown</p> <p>COBIT: Peer Servers and Status</p> <p>COBIT: Peer Servers and Status - Blue Coat Proxy</p> <p>COBIT: Peer Servers and Status - Cisco WSA</p> <p>COBIT: Peer Servers and Status - Microsoft IIS</p> <p>COBIT: Periodic Review of Log Reports</p> <p>COBIT: Periodic Review of User Access Logs</p> <p>COBIT: RACF Process Started</p> <p>COBIT: Sidewinder Configuration Changes</p> <p>COBIT: Sybase ASE Database Configuration Changes</p> <p>COBIT: Sybase ASE Database Startup or Shutdown</p> <p>COBIT: Symantec AntiVirus: Updated</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--------------------------------------|---------------------------------|---|
| | | COBIT: Symantec Endpoint Protection Configuration Changes COBIT: Symantec Endpoint Protection: Updated |
| AI6.1 | Change Standards and Procedures | Compliance Suite Reports (Cont.) COBIT: Trusted Domain Created on Windows Servers COBIT: Trusted Domain Deleted on Windows Servers COBIT: Windows New Services Installed COBIT: Windows Servers Restarted COBIT: Windows Software Update Activities COBIT: Windows Software Update Failures COBIT: Windows Software Update Successes Compliance Suite Alerts COBIT: Check Point Policy Changed COBIT: Cisco ISE, ACS Configuration Changed COBIT: Guardium SQL Guard Config Changes COBIT: Guardium SQL Guard Startup or Shutdown COBIT: HP NonStop Audit Configuration Changed COBIT: i5/OS Software Updates COBIT: LogLogic DSM Configuration Changes COBIT: LogLogic DSM Startup or Shutdown COBIT: LogLogic Management Center Upgrade Succeeded COBIT: LogLogic Universal Collector Configuration Changed COBIT: RACF Process Started COBIT: Sidewinder Configuration Changed COBIT: Sybase ASE Database Config Changes COBIT: Sybase ASE Database Started COBIT: Sybase ASE Database Stopped COBIT: Symantec Endpoint Protection Configuration Changed COBIT: Windows Software Updates COBIT: Windows Software Updates Failed COBIT: Windows Software Updates Succeeded |
| DS1 Define and Manage Service Levels | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|---|
| DS1.5 | Monitoring and Reporting of Service Level Achievements | Compliance Suite Reports COBIT: Cisco Line Protocol Status Changes COBIT: Cisco Link Status Changes COBIT: Cisco Peer Reset/Reload COBIT: Cisco Peer Supervisor Status Changes |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|--|
| DS1.5 | Monitoring and Reporting of Service Level Achievements | <p>Compliance Suite Reports (<i>Cont.</i>)</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: Cisco Routers and Switches Restart</p> <p>COBIT: DB2 Database Stop and Start Events</p> <p>COBIT: DHCP Granted/Renewed Activities on Microsoft DHCP</p> <p>COBIT: DHCP Granted/Renewed Activities on VMware vShield</p> <p>COBIT: DNS Server Error</p> <p>COBIT: F5 BIG-IP TMOS Restarted</p> <p>COBIT: Failed Windows Events Summary</p> <p>COBIT: Guardium SQL Guard Audit Startup or Shutdown</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: Juniper Firewall Reset Accepted</p> <p>COBIT: Juniper Firewall Reset Imminent</p> <p>COBIT: Juniper Firewall Restarted</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: Microsoft Operations Manager - Failed Windows Events</p> <p>COBIT: Microsoft Operations Manager - Windows Events Summary</p> <p>COBIT: Microsoft Operations Manager - Windows Servers Restarted</p> <p>COBIT: Microsoft SQL Server Shutdown by Reason</p> <p>COBIT: Oracle Database Shutdown</p> <p>COBIT: Peer Servers and Status</p> <p>COBIT: Peer Servers and Status - Blue Coat Proxy</p> <p>COBIT: Peer Servers and Status - Cisco WSA</p> <p>COBIT: Peer Servers and Status - Microsoft IIS</p> <p>COBIT: Periodic Review of Log Reports</p> <p>COBIT: Periodic Review of User Access Logs</p> <p>COBIT: Sybase ASE Database Startup or Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|---|
| DS1.5 | Monitoring and Reporting of Service Level Achievements | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart of ESX Server</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: Windows Events Summary</p> <p>COBIT: Windows Servers Restarted</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Errors</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: Cisco PIX, ASA, FWSM NAT Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Protocol Failure</p> <p>COBIT: System Restarted</p> <p>COBIT: Cisco PIX, ASA, FWSM Routing Failure</p> <p>COBIT: Cisco Switch Device Reload</p> <p>COBIT: Cisco Switch Device Restart</p> <p>COBIT: Cisco Switch HA Failure (ver)</p> <p>COBIT: Cisco Switch Interface Change</p> <p>COBIT: Cisco Switch Interface Down</p> <p>COBIT: Cisco Switch Interface Up</p> <p>COBIT: DB2 Database Started or Stopped</p> <p>COBIT: DNS Server Shutdown</p> <p>COBIT: DNS Server Started</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: i5/OS Server or Service Status Change</p> <p>COBIT: Juniper Firewall HA State Change</p> <p>COBIT: Juniper Firewall Peer Missing</p> <p>COBIT: Juniper Firewall System Reset</p> <p>COBIT: LogLogic Disk Full</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: Microsoft Operations Manager - Windows Server Restarted</p> <p>COBIT: Microsoft SQL Server Shutdown</p> <p>COBIT: NetApp Bad File Handle</p> <p>COBIT: NetApp Filer Disk Failure</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--|--|--|
| | | COBIT: NetApp Filer Disk Missing |
| DS1.5 | Monitoring and Reporting of Service Level Achievements | Compliance Suite Alerts (Cont.) COBIT: NetApp Filer File System Full COBIT: Oracle Database Shutdown COBIT: Sybase ASE Database Started COBIT: Sybase ASE Database Stopped COBIT: System Anomalies COBIT: System Restarted COBIT: vCenter Orchestrator Virtual Machine Shutdown COBIT: vCenter Orchestrator Virtual Machine Started COBIT: vCenter Shutdown or Restart ESX COBIT: vCenter Virtual Machine Shutdown COBIT: vCenter Virtual Machine Started COBIT: System Restarted |
| DS2 Manage Third-Party Services | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|--|
| DS2.4 | Supplier Performance Monitoring | Compliance Suite Reports COBIT: Cisco PIX, ASA, FWSM Failover Disabled COBIT: Cisco PIX, ASA, FWSM Failover Performed COBIT: Cisco Routers and Switches Restart COBIT: DB2 Database Stop and Start Events COBIT: DNS Server Error COBIT: F5 BIG-IP TMOS Restarted COBIT: Guardium SQL Guard Audit Startup or Shutdown COBIT: Guardium SQL Guard Startup or Shutdown COBIT: Juniper Firewall Reset Accepted COBIT: Juniper Firewall Reset Imminent COBIT: Guardium SQL Guard Audit Startup or Shutdown COBIT: Guardium SQL Guard Startup or Shutdown COBIT: Juniper Firewall Reset Accepted COBIT: Juniper Firewall Reset Imminent COBIT: Juniper Firewall Restarted COBIT: Juniper Firewall VPN Tunnel Status Change COBIT: LogLogic DSM Startup or Shutdown |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------------|--|
| DS2.4 | Supplier Performance Monitoring | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Microsoft Operations Manager - Windows Servers Restarted</p> <p>COBIT: Microsoft SQL Server Shutdown by Reason</p> <p>COBIT: Oracle Database Shutdown</p> <p>COBIT: Peer Servers and Status</p> <p>COBIT: Peer Servers and Status - Blue Coat Proxy</p> <p>COBIT: Peer Servers and Status - Cisco WSA</p> <p>COBIT: Peer Servers and Status - Microsoft IIS</p> <p>COBIT: Periodic Review of Log Reports</p> <p>COBIT: Periodic Review of User Access Logs</p> <p>COBIT: Sybase ASE Database Startup or Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart of ESX Server</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: Windows Servers Restarted</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Errors</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: System Restarted</p> <p>COBIT: Cisco PIX, ASA, FWSM VPN Tunnel Creation</p> <p>COBIT: Cisco PIX, ASA, FWSM VPN Tunnel Teardown</p> <p>COBIT: Cisco Switch Device Reload</p> <p>COBIT: Cisco Switch Device Restart</p> <p>COBIT: Cisco Switch HA Failure (ver)</p> <p>COBIT: DB2 Database Started or Stopped</p> <p>COBIT: DNS Server Shutdown</p> <p>COBIT: DNS Server Started</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: i5/OS Server or Service Status Change</p> <p>COBIT: Juniper Firewall HA State Change</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|--|---------------------------------|---|
| | | COBIT: Juniper Firewall System Reset |
| DS2.4 | Supplier Performance Monitoring | Compliance Suite Alerts (Cont.) COBIT: LogLogic DSM Startup or Shutdown COBIT: Microsoft SQL Server Shutdown COBIT: Microsoft Operations Manager - Windows Server Restarted COBIT: NetApp Filer File System Full COBIT: Oracle Database Shutdown COBIT: Sybase ASE Database Started COBIT: Sybase ASE Database Stopped COBIT: System Anomalies COBIT: System Restarted COBIT: vCenter Orchestrator Virtual Machine Shutdown COBIT: vCenter Orchestrator Virtual Machine Started COBIT: vCenter Shutdown or Restart ESX COBIT: vCenter Virtual Machine Shutdown COBIT: vCenter Virtual Machine Started COBIT: System Restarted |
| DS3 Manage Performance and Capacity | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|---|
| DS3.5 | Monitoring and Reporting of Performance and Capacity | Compliance Suite Reports COBIT: Bandwidth Usage by User COBIT: Cisco Line Protocol Status Changes COBIT: Cisco Link Status Changes COBIT: Cisco Peer Reset/Reload COBIT: Cisco Peer Supervisor Status Changes COBIT: Cisco PIX, ASA, FWSM Failover Disabled COBIT: Cisco PIX, ASA, FWSM Failover Performed COBIT: Cisco Routers and Switches Restart COBIT: DB2 Database Stop and Start Events COBIT: DNS Server Error COBIT: F5 BIG-IP TMOS Restarted COBIT: Failed Windows Events Summary COBIT: Guardium SQL Guard Audit Startup or Shutdown COBIT: Guardium SQL Guard Startup or Shutdown COBIT: Juniper Firewall Reset Accepted COBIT: Juniper Firewall Reset Imminent COBIT: Juniper Firewall Restarted |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|--|
| DS3.5 | Monitoring and Reporting of Performance and Capacity | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: Microsoft Operations Manager - Failed Windows Events</p> <p>COBIT: Microsoft Operations Manager - Windows Events Summary</p> <p>COBIT: Microsoft Operations Manager - Windows Servers Restarted</p> <p>COBIT: Microsoft SQL Server Shutdown by Reason</p> <p>COBIT: Oracle Database Shutdown</p> <p>COBIT: Peer Servers and Status</p> <p>COBIT: Peer Servers and Status - Blue Coat Proxy</p> <p>COBIT: Peer Servers and Status - Cisco WSA</p> <p>COBIT: Peer Servers and Status - Microsoft IIS</p> <p>COBIT: Periodic Review of Log Reports</p> <p>COBIT: Periodic Review of User Access Logs</p> <p>COBIT: Sybase ASE Database Startup or Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart of ESX Server</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: VPN Connection Average Bandwidth</p> <p>COBIT: VPN Connection Average Duration</p> <p>COBIT: VPN Connection Disconnect Reasons</p> <p>COBIT: Windows Events Summary</p> <p>COBIT: Windows Servers Restarted</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Disabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Errors</p> <p>COBIT: Cisco PIX, ASA, FWSM Failover Performed</p> <p>COBIT: Cisco PIX, ASA, FWSM NAT Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Protocol Failure</p> <p>COBIT: System Restarted</p> <p>COBIT: Cisco PIX, ASA, FWSM Routing Failure</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|--|
| DS3.5 | Monitoring and Reporting of Performance and Capacity | <p>Compliance Suite Alerts (Cont.)</p> <p>COBIT: Cisco Switch Device Reload</p> <p>COBIT: Cisco Switch HA Failure (ver)</p> <p>COBIT: Cisco Switch Device Restart</p> <p>COBIT: Cisco Switch Interface Change</p> <p>COBIT: Cisco Switch Interface Down</p> <p>COBIT: Cisco Switch Interface Up</p> <p>COBIT: DB2 Database Started or Stopped</p> <p>COBIT: DNS Server Shutdown</p> <p>COBIT: DNS Server Started</p> <p>COBIT: Guardium SQL Guard Startup or Shutdown</p> <p>COBIT: i5/OS Server or Service Status Change</p> <p>COBIT: Juniper Firewall HA State Change</p> <p>COBIT: Juniper Firewall Peer Missing</p> <p>COBIT: Juniper Firewall System Reset</p> <p>COBIT: LogLogic Disk Full</p> <p>COBIT: LogLogic DSM Startup or Shutdown</p> <p>COBIT: Microsoft SQL Server Shutdown</p> <p>COBIT: Microsoft Operations Manager - Windows Server Restarted</p> <p>COBIT: NetApp Bad File Handle</p> <p>COBIT: NetApp Filer Disk Failure</p> <p>COBIT: NetApp Filer Disk Missing</p> <p>COBIT: NetApp Filer File System Full</p> <p>COBIT: Oracle Database Shutdown</p> <p>COBIT: Sybase ASE Database Started</p> <p>COBIT: Sybase ASE Database Stopped</p> <p>COBIT: System Anomalies</p> <p>COBIT: System Restarted</p> <p>COBIT: vCenter Orchestrator Virtual Machine Shutdown</p> <p>COBIT: vCenter Orchestrator Virtual Machine Started</p> <p>COBIT: vCenter Shutdown or Restart ESX</p> <p>COBIT: vCenter Virtual Machine Shutdown</p> <p>COBIT: vCenter Virtual Machine Started</p> <p>COBIT: System Restarted</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------------------|-------------|-------------------------------------|
| DS4 Ensure Continuous Service | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------------------|--|
| DS4.1 | IT Continuity Framework | <p>Compliance Suite Reports</p> <p>COBIT: Files Accessed through Pulse Connect Secure</p> <p>COBIT: Files Accessed on NetApp Filer Audit</p> <p>COBIT: Files Accessed on Servers</p> <p>COBIT: Files Accessed through Juniper SSL VPN (Secure Access)</p> <p>COBIT: Files Accessed through PANOS</p> <p>COBIT: Files Downloaded via Proxy</p> <p>COBIT: Files Downloaded via Proxy - Blue Coat Proxy</p> <p>COBIT: Files Downloaded via Proxy - Cisco WSA</p> <p>COBIT: Files Downloaded via Proxy - Microsoft IIS</p> <p>COBIT: Files Downloaded via the Web</p> <p>COBIT: Files Downloaded via the Web - F5 BIG-IP TMOS</p> <p>COBIT: Files Downloaded via the Web - Microsoft IIS</p> <p>COBIT: Files Uploaded via Proxy</p> <p>COBIT: Files Uploaded via Proxy - Blue Coat Proxy</p> <p>COBIT: Files Uploaded via Proxy - Cisco WSA</p> <p>COBIT: Files Uploaded via Proxy - Microsoft IIS</p> <p>COBIT: Files Uploaded via the Web</p> <p>COBIT: Files Uploaded via the Web - F5 BIG-IP TMOS</p> <p>COBIT: Files Uploaded via the Web - Microsoft IIS</p> <p>COBIT: NetApp Filer Snapshot Error</p> <p>COBIT: NetApp Filer File Activity</p> <p>COBIT: RACF Files Accessed</p> <p>COBIT: vCenter Datastore Events</p> <p>COBIT: vCenter Data Move</p> <p>COBIT: vCenter Orchestrator Datastore Events</p> <p>COBIT: vCenter Orchestrator Data Move</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM NAT Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Protocol Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Routing Failure</p> <p>COBIT: Neoteris Files Accessed</p> <p>COBIT: NetApp Filer Snapshot Error</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-----------------------------------|-----------------------------------|--|
| DS4.1 | IT Continuity Framework | Compliance Suite Alerts (Cont.) COBIT: NetApp Filer Unauthorized Mounting COBIT: RACF Files Accessed COBIT: vCenter Datastore Event COBIT: vCenter Data Move COBIT: vCenter Orchestrator Data Move COBIT: vCenter Orchestrator Datastore Events COBIT: Windows Files Accessed |
| DS4.5 | Testing of the IT Continuity Plan | Compliance Suite Reports COBIT: DB2 Database Backup Failed COBIT: LogLogic Management Center Backup Activities COBIT: LogLogic Management Center Restore Activities COBIT: Microsoft SQL Server Backup Failed COBIT: NetApp Filer Snapshot Error COBIT: Sybase ASE Database Backup and Restoration Compliance Suite Alert COBIT: DB2 Database Backup Failed COBIT: LogLogic Management Center Backed Up or Restored COBIT: Microsoft SQL Server Backup Failed COBIT: Sybase ASE Database Backed Up or Restored |
| DS5 Ensure System Security | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------|---|
| DS5.2 | IT Security Plan | <p>Compliance Suite Reports</p> <p>COBIT: Files Accessed through Pulse Connect Secure</p> <p>COBIT: Files Accessed on NetApp Filer Audit</p> <p>COBIT: Files Accessed on Servers</p> <p>COBIT: Files Accessed through Juniper SSL VPN (Secure Access)</p> <p>COBIT: Files Accessed through PANOS</p> <p>COBIT: Files Downloaded via Proxy</p> <p>COBIT: Files Downloaded via Proxy - Blue Coat Proxy</p> <p>COBIT: Files Downloaded via Proxy - Cisco WSA</p> <p>COBIT: Files Downloaded via Proxy - Microsoft IIS</p> <p>COBIT: Files Downloaded via the Web</p> <p>COBIT: Files Downloaded via the Web - F5 BIG-IP TMOS</p> <p>COBIT: Files Downloaded via the Web - Microsoft IIS</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|--|
| DS5.2 | IT Security Plan | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Files Uploaded via Proxy</p> <p>COBIT: Files Uploaded via Proxy - Blue Coat Proxy</p> <p>COBIT: Files Uploaded via Proxy - Cisco WSA</p> <p>COBIT: Files Uploaded via Proxy - Microsoft IIS</p> <p>COBIT: Files Uploaded via the Web</p> <p>COBIT: Files Uploaded via the Web - F5 BIG-IP TMOS</p> <p>COBIT: Files Uploaded via the Web - Microsoft IIS</p> <p>COBIT: NetApp Filer File Activity</p> <p>COBIT: RACF Files Accessed</p> <p>COBIT: vCenter Datastore Events</p> <p>COBIT: vCenter Data Move</p> <p>COBIT: vCenter Orchestrator Datastore Events</p> <p>COBIT: vCenter Orchestrator Data Move</p> <p>Compliance Suite Alerts</p> <p>COBIT: Neoteris Files Accessed</p> <p>COBIT: NetApp Filer Unauthorized Mounting</p> <p>COBIT: RACF Files Accessed</p> <p>COBIT: vCenter Datastore Event</p> <p>COBIT: vCenter Data Move</p> <p>COBIT: vCenter Orchestrator Data Move</p> <p>COBIT: vCenter Orchestrator Datastore Events</p> <p>COBIT: Windows Files Accessed</p> |
| DS5.3 | Identity Management (1/4) | <p>Compliance Suite Reports</p> <p>COBIT: Files Accessed Through Pulse Connect Secure</p> <p>COBIT: Pulse Connect Secure Successful Logins</p> <p>COBIT: Accepted VPN Connections - RADIUS</p> <p>COBIT: Account Activities on Windows Servers</p> <p>COBIT: Accounts Changed on NetApp Filer</p> <p>COBIT: Accounts Changed on Sidewinder</p> <p>COBIT: Accounts Changed on TIBCO Administrator</p> <p>COBIT: Accounts Changed on UNIX Servers</p> <p>COBIT: Accounts Changed on Windows Servers</p> <p>COBIT: Accounts Created on NetApp Filer</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 | Identity Management (1/4) | Compliance Suite Reports (Cont.) COBIT: Accounts Created on NetApp Filer Audit COBIT: Accounts Created on Sidewinder COBIT: Accounts Created on Symantec Endpoint Protection COBIT: Accounts Created on TIBCO ActiveMatrix Administrator COBIT: Accounts Created on TIBCO Administrator COBIT: Accounts Created on UNIX Servers COBIT: Accounts Created on Windows Servers COBIT: Check Point Management Station Login COBIT: Cisco ISE, ACS Accounts Created COBIT: DB2 Database Failed Logins COBIT: DB2 Database Successful Logins COBIT: DB2 Database User Additions and Deletions COBIT: Denied VPN Connections - RADIUS COBIT: ESX Accounts Activities COBIT: ESX Accounts Created COBIT: ESX Failed Logins COBIT: ESX Group Activities COBIT: ESX Logins Failed Unknown User COBIT: ESX Logins Succeeded COBIT: F5 BIG-IP TMOS Login Failed COBIT: F5 BIG-IP TMOS Login Successful COBIT: Failed Logins COBIT: Files Accessed on NetApp Filer Audit COBIT: Files Accessed through Juniper SSL VPN (Secure Access) COBIT: Groups Deleted on UNIX Servers COBIT: Groups Deleted on Windows Servers COBIT: Guardium SQL Guard Audit Logins COBIT: Guardium SQL Guard Logins COBIT: Group Activities on NetApp Filer Audit COBIT: Group Activities on Symantec Endpoint Protection COBIT: Group Activities on TIBCO ActiveMatrix Administrator |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|--|
| DS5.3 | Identity Management (1/4) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: HP NonStop Audit Login Failed</p> <p>COBIT: HP NonStop Audit Login Successful</p> <p>COBIT: HP NonStop Audit Object Changes</p> <p>COBIT: HP NonStop Audit Permissions Changed</p> <p>COBIT: i5/OS Network Authentication Events</p> <p>COBIT: i5/OS User Profile Creation, Modification, or Restoration</p> <p>COBIT: Juniper SSL VPN Successful Logins</p> <p>COBIT: Juniper SSL VPN (Secure Access) Successful Logins</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: LogLogic Management Center Account Activities</p> <p>COBIT: LogLogic Management Center Login</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Activities</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Changed</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Created</p> <p>COBIT: Microsoft Operations Manager - Windows Events by Users</p> <p>COBIT: Microsoft Operations Manager - Windows Permissions Modified</p> <p>COBIT: Microsoft Operations Manager - Windows Policies Modified</p> <p>COBIT: Microsoft Sharepoint Permissions Changed</p> <p>COBIT: Microsoft Sharepoint Policy Add, Remove, or Modify</p> <p>COBIT: Microsoft SQL Server Database Failed Logins</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: NetApp Filer Audit Login Failed</p> <p>COBIT: NetApp Filer Audit Login Successful</p> <p>COBIT: NetApp Filer File Activity</p> <p>COBIT: NetApp Filer Login Failed</p> <p>COBIT: NetApp Filer Login Successful</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 | Identity Management (1/4) | Compliance Suite Reports (Cont.) COBIT: Oracle Database Failed Logins COBIT: Oracle Database Successful Logins COBIT: Oracle Database User Additions and Deletions COBIT: RACF Accounts Created COBIT: RACF Accounts Modified COBIT: RACF Failed Logins COBIT: RACF Files Accessed COBIT: RACF Permissions Changed COBIT: RACF Successful Logins COBIT: Successful Logins COBIT: Sybase ASE Database User Additions and Deletions COBIT: Sybase ASE Successful Logins COBIT: Sybase ASE Failed Logins COBIT: TIBCO ActiveMatrix Administrator Failed Logins COBIT: TIBCO ActiveMatrix Administrator Permission Changes COBIT: TIBCO ActiveMatrix Administrator Successful Logins COBIT: TIBCO Administrator Permission Changes COBIT: Unauthorized Logins COBIT: Unencrypted Logins COBIT: UNIX Failed Logins COBIT: Users Created on Servers COBIT: vCenter Datastore Events COBIT: vCenter Data Move COBIT: vCenter Failed Logins COBIT: vCenter Orchestrator Datastore Events COBIT: vCenter Orchestrator Data Move COBIT: vCenter Orchestrator Failed Logins COBIT: vCenter Successful Logins COBIT: vCenter User Permission Change |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 | Identity Management (1/4) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: vCloud Failed Logins</p> <p>COBIT: vCloud Successful Logins</p> <p>COBIT: vCloud User Created</p> <p>COBIT: VPN Users Accessing Corporate Network</p> <p>COBIT: Windows Accounts Enabled</p> <p>Compliance Suite Alerts</p> <p>COBIT: Accounts Created</p> <p>COBIT: Accounts Enabled</p> <p>COBIT: Accounts Modified</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Success</p> <p>COBIT: DB2 Database User Added or Dropped</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: Groups Created</p> <p>COBIT: Group Members Added</p> <p>COBIT: HP NonStop Audit Permission Changed</p> <p>COBIT: i5/OS Network Profile Changes</p> <p>COBIT: i5/OS Permission or Policy Change</p> <p>COBIT: i5/OS User Profile Changes</p> <p>COBIT: Juniper Firewall Logon Failure</p> <p>COBIT: Juniper Firewall Logon Success</p> <p>COBIT: Logins Succeeded</p> <p>COBIT: Logins Failed</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: Microsoft Operations Manager - Permissions Changed</p> <p>COBIT: Microsoft Operations Manager - Windows Policies Changed</p> <p>COBIT: Microsoft Sharepoint Permission Changed</p> <p>COBIT: Microsoft Sharepoint Policies Added, Removed, Modified</p> <p>COBIT: NetApp Filer Audit Policies Changed</p> <p>COBIT: NetApp Authentication Failure</p> <p>COBIT: NetApp Filer NIS Group Update</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 | Identity Management (1/4) | Compliance Suite Alerts (Cont.) COBIT: Oracle Database User Added or Deleted COBIT: RACF Files Accessed COBIT: RACF Permissions Changed COBIT: Symantec Endpoint Protection Policy Add, Delete, Modify COBIT: TIBCO ActiveMatrix Administrator Permission Changed COBIT: UNIX Groups Added COBIT: UNIX Groups Deleted COBIT: UNIX Groups Modified COBIT: vCenter Datastore Event COBIT: vCenter Data Move COBIT: vCenter Orchestrator Data Move COBIT: vCenter Orchestrator Datastore Events COBIT: vCenter Orchestrator Login Failed COBIT: vCenter Permission Change COBIT: vCenter User Login Successful COBIT: vCloud Director Login Success COBIT: vCloud User Created COBIT: vCenter User Login Failed COBIT: vCloud Director Login Failed COBIT: Windows Group Members Added COBIT: Windows Groups Created |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|--|
| DS5.3 (2/4) | Identity Management (2/4) | Compliance Suite Reports COBIT: Account Activities on UNIX Servers COBIT: Account Activities on Windows Servers COBIT: Check Point Management Station Login COBIT: DB2 Database Successful Logins COBIT: Escalated Privilege Activities on Servers COBIT: Files Accessed on Servers COBIT: Group Activities on UNIX Servers COBIT: Group Activities on Windows Servers COBIT: Groups Deleted on TIBCO ActiveMatrix Administrator COBIT: i5/OS Access Control List Modifications COBIT: i5/OS Network Authentication Events COBIT: Juniper Firewall Escalated Privilege COBIT: Juniper SSL VPN Successful Logins COBIT: Juniper SSL VPN (Secure Access) Successful Logins COBIT: Logins by Authentication Type COBIT: Microsoft SQL Server Database Successful Logins COBIT: Oracle Database Successful Logins COBIT: Permissions Modified on Windows Servers COBIT: Policies Modified on Windows Servers COBIT: Successful Logins COBIT: Sybase ASE Successful Logins COBIT: Unauthorized Logins COBIT: Unencrypted Logins COBIT: VPN Users Accessing Corporate Network COBIT: Windows Events by Users COBIT: Windows Programs Accessed |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 (2/4) | Identity Management (2/4) | Compliance Suite Alerts COBIT: Cisco PIX, ASA, FWSM Logon Success COBIT: Juniper Firewall Logon Success COBIT: Neoteris Files Accessed COBIT: NetApp Filer Unauthorized Mounting COBIT: Logins Succeeded COBIT: UNIX Groups Added COBIT: UNIX Groups Deleted COBIT: UNIX Groups Modified COBIT: UNIX Privilege Escalated COBIT: Windows Files Accessed COBIT: Windows Permissions Changed COBIT: Windows Policies Changed COBIT: Windows Privileges Escalated |
| DS5.3 (3/4) | Identity Management (3/4) | Compliance Suite Reports COBIT: Accounts Created on UNIX Servers COBIT: Accounts Created on Windows Servers COBIT: Groups Deleted on UNIX Servers COBIT: Groups Deleted on Windows Servers COBIT: i5/OS Access Control List Modifications COBIT: i5/OS User Profile Creation, Modification, or Restoration COBIT: Microsoft SQL Server Database User Additions and Deletions COBIT: Permissions Modified on Windows Servers COBIT: Policies Modified on Windows Servers COBIT: Users Created on Servers COBIT: Windows Accounts Enabled COBIT: Windows Group Members Added |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|--|
| DS5.3 (3/4) | Identity Management (3/4) | Compliance Suite Alerts COBIT: Accounts Enabled COBIT: UNIX Groups Added COBIT: UNIX Groups Deleted COBIT: UNIX Groups Modified COBIT: Windows Groups Created COBIT: Windows Group Members Added COBIT: Windows Policies Changed COBIT: Windows Permissions Changed |
| DS5.3 (4/4) | Identity Management (4/4) | Compliance Suite Reports COBIT: Account Activities on UNIX Servers COBIT: Account Activities on Windows Servers COBIT: Accounts Created on UNIX Servers COBIT: Accounts Created on Windows Servers COBIT: Check Point Management Station Login COBIT: DB2 Database Successful Logins COBIT: Escalated Privilege Activities on Servers COBIT: Failed Logins COBIT: Files Accessed on Servers COBIT: Files Accessed through PANOS COBIT: Group Activities on UNIX Servers COBIT: Group Activities on Windows Servers COBIT: Groups Deleted on NetApp Filer Audit COBIT: Groups Deleted on UNIX Servers COBIT: Groups Deleted on Windows Servers COBIT: i5/OS Access Control List Modifications COBIT: i5/OS Network Authentication Events COBIT: i5/OS User Profile Creation, Modification, or Restoration COBIT: Juniper Firewall Escalated Privilege COBIT: Juniper SSL VPN Successful Logins COBIT: Juniper SSL VPN (Secure Access) Successful Logins |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|---|
| DS5.3 (4/4) | Identity Management (4/4) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: Microsoft SQL Server Database Failed Logins</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: NetApp Filer Audit Accounts Enabled</p> <p>COBIT: NetApp Filer Audit Group Members Added</p> <p>COBIT: Oracle Database Successful Logins</p> <p>COBIT: Permissions Modified on Windows Servers</p> <p>COBIT: Policies Modified on Windows Servers</p> <p>COBIT: Successful Logins</p> <p>COBIT: Sybase ASE Failed Logins</p> <p>COBIT: Sybase ASE Successful Logins</p> <p>COBIT: Unauthorized Logins</p> <p>COBIT: Unencrypted Logins</p> <p>COBIT: UNIX Failed Logins</p> <p>COBIT: Users Created on Servers</p> <p>COBIT: VPN Users Accessing Corporate Network</p> <p>COBIT: Windows Accounts Enabled</p> <p>COBIT: Windows Events by Users</p> <p>COBIT: Windows Group Members Added</p> <p>COBIT: Windows Programs Accessed</p> <p>Compliance Suite Alerts</p> <p>COBIT: Accounts Enabled</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Failure</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Success</p> <p>COBIT: Juniper Firewall Logon Failure</p> <p>COBIT: Juniper Firewall Logon Success</p> <p>COBIT: Logins Failed</p> <p>COBIT: Logins Succeeded</p> <p>COBIT: Neoteris Files Accessed</p> <p>COBIT: NetApp Authentication Failure</p> <p>COBIT: NetApp Filer NIS Group Update</p> <p>COBIT: NetApp Filer Unauthorized Mounting</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---------------------------|--|
| DS5.3 (4/4) | Identity Management (4/4) | Compliance Suite Alerts (Cont.) COBIT: UNIX Groups Added COBIT: UNIX Groups Deleted COBIT: UNIX Groups Modified COBIT: UNIX Privilege Escalated COBIT: Windows Files Accessed COBIT: Windows Groups Created COBIT: Windows Group Members Added COBIT: Windows Permissions Changed COBIT: Windows Policies Changed COBIT: Windows Privileges Escalated |
| DS5.4 | User Account Management | Compliance Suite Reports COBIT: Account Activities on UNIX Servers COBIT: Account Activities on Windows Servers COBIT: Accounts Created on NetApp Filer COBIT: Accounts Created on NetApp Filer Audit COBIT: Accounts Created on Sidewinder COBIT: Accounts Created on Symantec Endpoint Protection COBIT: Accounts Created on TIBCO ActiveMatrix Administrator COBIT: Accounts Created on TIBCO Administrator COBIT: Accounts Created on UNIX Servers COBIT: Accounts Created on Windows Servers COBIT: Accounts Deleted on NetApp Filer COBIT: Accounts Deleted on NetApp Filer Audit COBIT: Accounts Deleted on Sidewinder COBIT: Accounts Deleted on Symantec Endpoint Protection COBIT: Accounts Deleted on TIBCO ActiveMatrix Administrator COBIT: Accounts Deleted on TIBCO Administrator COBIT: Accounts Deleted on UNIX Servers COBIT: Accounts Deleted on Windows Servers COBIT: Cisco ISE, ACS Accounts Created COBIT: Cisco ISE, ACS Accounts Removed |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------------------|--|
| DS5.4 | User Account Management | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Cisco ISE, ACS Password Changes</p> <p>COBIT: DB2 Database User Additions and Deletions</p> <p>COBIT: ESX Accounts Activities</p> <p>COBIT: ESX Accounts Created</p> <p>COBIT: ESX Accounts Deleted</p> <p>COBIT: ESX Group Activities</p> <p>COBIT: F5 BIG-IP TMOS Password Changes</p> <p>COBIT: Group Activities on NetApp Filer Audit</p> <p>COBIT: Group Activities on Symantec Endpoint Protection</p> <p>COBIT: Group Activities on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Group Activities on UNIX Servers</p> <p>COBIT: Group Activities on Windows Servers</p> <p>COBIT: Groups Created on NetApp Filer Audit</p> <p>COBIT: Groups Created on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Groups Created on UNIX Servers</p> <p>COBIT: Groups Created on Windows Servers</p> <p>COBIT: Groups Deleted on NetApp Filer Audit</p> <p>COBIT: Groups Deleted on TIBCO ActiveMatrix Administrator</p> <p>COBIT: Groups Deleted on UNIX Servers</p> <p>COBIT: Groups Deleted on Windows Servers</p> <p>COBIT: HP NonStop Audit Object Changes</p> <p>COBIT: HP NonStop Audit Permissions Changed</p> <p>COBIT: i5/OS Access Control List Modifications</p> <p>COBIT: i5/OS Audit Configuration Changes</p> <p>COBIT: i5/OS DST Password Reset</p> <p>COBIT: i5/OS Server Security User Information Actions</p> <p>COBIT: i5/OS User Profile Creation, Modification, or Restoration</p> <p>COBIT: LogLogic Management Center Account Activities</p> <p>COBIT: LogLogic Management Center Password Changes</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------------------|--|
| DS5.4 | User Account Management | <p>COBIT: Microsoft Operations Manager - Windows Accounts Activities</p> <p>COBIT: Microsoft Operations Manager - Windows Accounts Created</p> <p>COBIT: Microsoft Operations Manager - Windows Password Changes</p> <p>COBIT: Microsoft Operations Manager - Windows Permissions Modified</p> <p>COBIT: Microsoft Sharepoint Permissions Changed</p> <p>COBIT: Microsoft Sharepoint Policy Add, Remove, or Modify</p> <p>COBIT: Microsoft SQL Server Database User Additions and Deletions</p> <p>COBIT: Microsoft SQL Server Password Changes</p> <p>COBIT: NetApp Filer Audit Group Members Deleted</p> <p>COBIT: NetApp Filer Password Changes</p> <p>COBIT: Oracle Database User Additions and Deletions</p> <p>COBIT: Password Changes on Windows Servers</p> <p>COBIT: Permissions Modified on Windows Servers</p> <p>COBIT: RACF Accounts Created</p> <p>COBIT: RACF Accounts Deleted</p> <p>COBIT: RACF Password Changed</p> <p>COBIT: RACF Permissions Changed</p> <p>COBIT: Sybase ASE Database User Additions and Deletions</p> <p>COBIT: Symantec Endpoint Protection Password Changes</p> <p>COBIT: TIBCO ActiveMatrix Administrator Permission Changes</p> <p>COBIT: TIBCO ActiveMatrix Administrator Permission Changed</p> <p>COBIT: TIBCO Administrator Password Changes</p> <p>COBIT: TIBCO Administrator Permission Changes</p> <p>COBIT: Users Removed from Servers</p> <p>COBIT: vCenter User Permission Change</p> <p>COBIT: vCloud User Created</p> <p>COBIT: vCloud User Deleted or Removed</p> <p>COBIT: Windows Group Members Deleted</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--|---|
| DS5.4 | User Account Management | Compliance Suite Alerts COBIT: Accounts Created COBIT: Accounts Deleted COBIT: Accounts Locked COBIT: Cisco ISE, ACS Passwords Changed COBIT: DB2 Database User Added or Dropped COBIT: Groups Created COBIT: Group Members Added COBIT: HP NonStop Audit Permission Changed COBIT: i5/OS Permission or Policy Change COBIT: IBM AIX Password Changed COBIT: LogLogic Management Center Passwords Changed COBIT: Microsoft Operations Manager - Permissions Changed COBIT: Microsoft Operations Manager - Windows Passwords Changed COBIT: Microsoft Sharepoint Permission Changed COBIT: Microsoft Sharepoint Policies Added, Removed, Modified COBIT: Oracle Database User Added or Deleted COBIT: RACF Passwords Changed COBIT: RACF Permissions Changed COBIT: Symantec Endpoint Protection Policy Add, Delete, Modify COBIT: UNIX Groups Added COBIT: vCenter Permission Change COBIT: vCloud User Created COBIT: Windows Groups Created COBIT: Windows Group Members Added COBIT: Windows Passwords Changed COBIT: Windows Permissions Changed |
| DS5.5 | Security Testing, Surveillance, and Monitoring | Compliance Suite Reports COBIT: Periodic Review of Log Reports COBIT: Periodic Review of User Access Logs |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-----------------------------------|--|
| DS5.7 | Protection of Security Technology | Compliance Suite Reports COBIT: Decru DataFort Zeroization Events COBIT: Tripwire Modifications, Additions, and Deletions |
| DS5.8 | Cryptographic Key Management | Compliance Suite Reports COBIT: Check Point SIC Revoked COBIT: Decru DataFort Cryptographic Key Events COBIT: Decru DataFort Zeroization Events COBIT: i5/OS Key Ring File Events |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|--|
| DS5.10 | Network Security (1/2) | Compliance Suite Reports COBIT: Applications Under Attack - FireEye MPS COBIT: Attackers by Service - FireEye MPS COBIT: Attackers by Signature - FireEye MPS COBIT: FireEye MPS - Attackers by Event ID COBIT: FireEye MPS - Attackers by Threat Name COBIT: FireEye MPS - Attacks Detected COBIT: Pulse Connect Secure Successful Logins COBIT: Servers Under Attacks - FireEye MPS COBIT: Source of Attack - FireEye MPS COBIT: Accepted VPN Connections - RADIUS COBIT: Active Connections for Cisco ASA COBIT: Active Connections for Cisco FWSM COBIT: Active Connections for Cisco PIX COBIT: Allowed URLs by Source IPs COBIT: Allowed URLs by Source IPs - F5 BIG-IP TMOS COBIT: Allowed URLs by Source IPs - Microsoft IIS COBIT: Allowed URLs by Source Users COBIT: Allowed URLs by Source Users - F5 BIG-IP TMOS COBIT: Allowed URLs by Source Users - Microsoft IIS COBIT: Applications Under Attack COBIT: Applications Under Attack - Cisco IOS COBIT: Applications Under Attack - ISS SiteProtector COBIT: Applications Under Attack - SiteProtector COBIT: Applications Under Attack - Sourcefire Defense Center COBIT: Attackers by Service COBIT: Attackers by Service - Cisco IOS COBIT: Attackers by Service - ISS SiteProtector COBIT: Attackers by Service - SiteProtector COBIT: Attackers by Service - Sourcefire Defense Center COBIT: Attackers by Signature COBIT: Attackers by Signature - Cisco IOS |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|---|
| | | COBIT: Attackers by Signature - ISS SiteProtector |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|--|
| DS5.10 | Network Security (1/2) | <p>Compliance Suite Reports (<i>Cont.</i>)</p> <p>COBIT: Attackers by Signature - SiteProtector</p> <p>COBIT: Attackers by Signature - Sourcefire Defense Center</p> <p>COBIT: Attacks Detected</p> <p>COBIT: Attacks Detected - Cisco IOS</p> <p>COBIT: Attacks Detected - HIPS</p> <p>COBIT: Attacks Detected - ISS SiteProtector</p> <p>COBIT: Attacks Detected - Sourcefire Defense Center</p> <p>COBIT: Attacks Detected - SiteProtector</p> <p>COBIT: Blocked URLs by Source IPs</p> <p>COBIT: Blocked URLs by Source IPs - F5 BIG-IP TMOS</p> <p>COBIT: Blocked URLs by Source IPs - Microsoft IIS</p> <p>COBIT: Blocked URLs by Source Users</p> <p>COBIT: Blocked URLs by Source Users - F5 BIG-IP TMOS</p> <p>COBIT: Blocked URLs by Source Users - Microsoft IIS</p> <p>COBIT: Check Point Management Station Login</p> <p>COBIT: Cisco ESA: Attacks by Event ID</p> <p>COBIT: Cisco ESA: Attacks Detected</p> <p>COBIT: Cisco ESA: Attacks by Threat Name</p> <p>COBIT: Cisco ESA: Scans</p> <p>COBIT: DB2 Database Successful Logins</p> <p>COBIT: Denied Connections by IP Addresses - Check Point</p> <p>COBIT: Denied Connections by IP Addresses - Cisco ASA</p> <p>COBIT: Denied Connections by IP Addresses - Cisco FWSM</p> <p>COBIT: Denied Connections by IP Addresses - Cisco PIX</p> <p>COBIT: Denied Connections by IP Addresses - Nortel</p> <p>COBIT: Denied Connections - Cisco IOS</p> <p>COBIT: Denied Connections - Cisco NXOS</p> <p>COBIT: Denied Connections - Cisco Router</p> <p>COBIT: Denied Connections - F5 BIG-IP TMOS</p> <p>COBIT: Denied Connections - Sidewinder</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|--|
| | | COBIT: Denied Connections - VMware vShield COBIT: Denied Inbound Connections - Cisco ASA COBIT: Denied Inbound Connections - Cisco FWSM |
| DS5.10 | Network Security (1/2) | Compliance Suite Reports (<i>Cont.</i>) COBIT: Denied Inbound Connections - Cisco PIX COBIT: Denied Inbound Connections - Check Point |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|---|
| DS5.10 | Network Security (2/2) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Denied Inbound Connections - Juniper Firewall</p> <p>COBIT: Denied Outbound Connections - Check Point</p> <p>COBIT: Denied Outbound Connections - Cisco ASA</p> <p>COBIT: Denied Outbound Connections - Cisco FWSM</p> <p>COBIT: Denied Outbound Connections - Cisco PIX</p> <p>COBIT: Denied Outbound Connections - Juniper Firewall</p> <p>COBIT: ESX Logins Succeeded</p> <p>COBIT: F5 BIG-IP TMOS Login Successful</p> <p>COBIT: FortiOS: Attacks by Event ID</p> <p>COBIT: FortiOS: Attacks by Threat Name</p> <p>COBIT: FortiOS: Attacks Detected</p> <p>COBIT: FortiOS DLP Attacks Detected</p> <p>COBIT: Guardium SQL Guard Audit Logins</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: HP NonStop Audit Login Successful</p> <p>COBIT: i5/OS Internet Security Management Events</p> <p>COBIT: Juniper SSL VPN Successful Logins</p> <p>COBIT: Juniper SSL VPN (Secure Access) Successful Logins</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: LogLogic Management Center Login</p> <p>COBIT: McAfee AntiVirus: Attacks by Event ID</p> <p>COBIT: McAfee AntiVirus: Attacks by Threat Name</p> <p>COBIT: McAfee AntiVirus: Attacks Detected</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: Most Active Ports Through Firewall - Check Point</p> <p>COBIT: Most Active Ports Through Firewall - Cisco ASA</p> <p>COBIT: Most Active Ports Through Firewall - Cisco FWSM</p> <p>COBIT: Most Active Ports Through Firewall - Cisco PIX</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|--|
| | | COBIT: Most Active Ports Through Firewall - Fortinet |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|---|
| DS5.10 | Network Security (2/2) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Most Active Ports Through Firewall - Juniper Firewall</p> <p>COBIT: Most Active Ports Through Firewall - Nortel</p> <p>COBIT: NetApp Filer Audit Login Successful</p> <p>COBIT: NetApp Filer Login Successful</p> <p>COBIT: Network Traffic per Rule - Check Point</p> <p>COBIT: Network Traffic per Rule - Juniper Firewall</p> <p>COBIT: Network Traffic per Rule - Nortel</p> <p>COBIT: Oracle Database Successful Logins</p> <p>COBIT: PANOS: Attacks by Event ID</p> <p>COBIT: PANOS: Attacks by Threat Name</p> <p>COBIT: PANOS: Attacks Detected</p> <p>COBIT: Ports Allowed Access - Check Point</p> <p>COBIT: Ports Allowed Access - Cisco ASA</p> <p>COBIT: Ports Allowed Access - Cisco IOS</p> <p>COBIT: Ports Allowed Access - Cisco FWSM</p> <p>COBIT: Ports Allowed Access - Cisco Netflow</p> <p>COBIT: Ports Allowed Access - Cisco PIX</p> <p>COBIT: Ports Allowed Access - F5 BIG-IP TMOS</p> <p>COBIT: Ports Allowed Access - Fortinet</p> <p>COBIT: Ports Allowed Access - Juniper JunOS</p> <p>COBIT: Ports Allowed Access - Juniper Firewall</p> <p>COBIT: Ports Allowed Access - Juniper RT Flow</p> <p>COBIT: Ports Allowed Access - Nortel</p> <p>COBIT: Ports Allowed Access - PANOS</p> <p>COBIT: Ports Allowed Access - Sidewinder</p> <p>COBIT: Ports Allowed Access - VMware vShield</p> <p>COBIT: Ports Denied Access - Check Point</p> <p>COBIT: Ports Denied Access - Cisco ASA</p> <p>COBIT: Ports Denied Access - Cisco FWSM</p> <p>COBIT: Ports Denied Access - Cisco IOS</p> <p>COBIT: Ports Denied Access - Cisco PIX</p> <p>COBIT: Ports Denied Access - Cisco Router</p> <p>COBIT: Ports Denied Access - F5 BIG-IP TMOS</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|---------------------------------------|
| | | COBIT: Ports Denied Access - Fortinet |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|---|
| DS5.10 | Network Security (2/2) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: Ports Denied Access - Juniper JunOS</p> <p>COBIT: Ports Denied Access - Juniper Firewall</p> <p>COBIT: Ports Denied Access - Juniper RT Flow</p> <p>COBIT: Ports Denied Access - Nortel</p> <p>COBIT: Ports Denied Access - PANOS</p> <p>COBIT: Ports Denied Access - Sidewinder</p> <p>COBIT: Ports Denied Access - VMware vShield</p> <p>COBIT: RACF Successful Logins</p> <p>COBIT: Servers Under Attack</p> <p>COBIT: Servers Under Attack - Cisco IOS</p> <p>COBIT: Servers Under Attack - HIPS</p> <p>COBIT: Servers Under Attack - ISS SiteProtector</p> <p>COBIT: Servers Under Attack - SiteProtector</p> <p>COBIT: Servers Under Attack - Sourcefire Defense Center</p> <p>COBIT: Source of Attacks</p> <p>COBIT: Source of Attacks - Cisco IOS</p> <p>COBIT: Source of Attacks - HIPS</p> <p>COBIT: Source of Attacks - ISS SiteProtector</p> <p>COBIT: Source of Attacks - SiteProtector</p> <p>COBIT: Source of Attacks - Sourcefire Defense Center</p> <p>COBIT: Sybase ASE Successful Logins</p> <p>COBIT: Symantec AntiVirus: Attacks by Threat Name</p> <p>COBIT: Symantec AntiVirus: Attacks Detected</p> <p>COBIT: Symantec AntiVirus: Scans</p> <p>COBIT: Symantec Endpoint Protection: Attacks Detected</p> <p>COBIT: Symantec Endpoint Protection: Attacks by Threat Name</p> <p>COBIT: Symantec Endpoint Protection: Scans</p> <p>COBIT: Successful Logins</p> <p>COBIT: TIBCO ActiveMatrix Administrator Permission Changes</p> <p>COBIT: TrendMicro Control Manager: Attacks Detected</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|--|
| | | COBIT: TrendMicro Control Manager: Attacks Detected by Threat Name |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|---|
| DS5.10 | Network Security (2/2) | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: TrendMicro OfficeScan: Attacks Detected</p> <p>COBIT: TrendMicro OfficeScan: Attacks Detected by Threat Name</p> <p>COBIT: Unencrypted Logins</p> <p>COBIT: Unencrypted Network Services - Check Point</p> <p>COBIT: Unencrypted Network Services - Cisco ASA</p> <p>COBIT: Unencrypted Network Services - Cisco FWSM</p> <p>COBIT: Unencrypted Network Services - Cisco IOS</p> <p>COBIT: Unencrypted Network Services - Cisco Netflow</p> <p>COBIT: Unencrypted Network Services - Cisco PIX</p> <p>COBIT: Unencrypted Network Services - F5 BIG-IP TMOS</p> <p>COBIT: Unencrypted Network Services - Fortinet</p> <p>COBIT: Unencrypted Network Services - Juniper Firewall</p> <p>COBIT: Unencrypted Network Services - Juniper JunOS</p> <p>COBIT: Unencrypted Network Services - Juniper RT Flow</p> <p>COBIT: Unencrypted Network Services - Nortel</p> <p>COBIT: Unencrypted Network Services - PANOS</p> <p>COBIT: Unencrypted Network Services - Sidewinder</p> <p>COBIT: Unencrypted Network Services - VMware vShield</p> <p>COBIT: Users Using the Proxies</p> <p>COBIT: Users Using the Proxies - Blue Coat Proxy</p> <p>COBIT: Users Using the Proxies - Cisco WSA</p> <p>COBIT: Users Using the Proxies - Microsoft IIS</p> <p>COBIT: vCenter Successful Logins</p> <p>COBIT: vCloud Successful Logins</p> <p>COBIT: VPN Connections by Users</p> <p>COBIT: VPN Sessions by Destination IPs</p> <p>COBIT: VPN Sessions by Source IPs</p> <p>COBIT: VPN Sessions by Users</p> <p>COBIT: VPN Denied Connections by Users</p> <p>COBIT: Web Access from All Users</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------------------------|------------------------|---|
| | | COBIT: Web Access from All Users - Fortinet COBIT: Web Access from All Users - PANOS COBIT: Web Access to Applications |
| DS5.10 | Network Security (2/2) | Compliance Suite Reports (Cont.) COBIT: Web Access to Applications - F5 BIG-IP TMOS COBIT: Web Access to Applications - Microsoft IIS COBIT: Web Access to Applications - Fortinet COBIT: Web Access to Applications - PANOS COBIT: Web Access from All Users - F5 BIG-IP TMOS COBIT: Web Access from All Users - Microsoft IIS COBIT: Web URLs Visited COBIT: Web URLs Visited - F5 BIG-IP TMOS COBIT: Web URLs Visited - Fortinet COBIT: Web URLs Visited - Microsoft IIS COBIT: Web URLs Visited - PANOS COBIT: Web URLs Visited via Proxy COBIT: Web URLs Visited via Proxy - Blue Coat Proxy COBIT: Web URLs Visited via Proxy - Cisco WSA COBIT: Web URLs Visited via Proxy - Microsoft IIS Compliance Suite Alerts COBIT: Active Directory Changes COBIT: Cisco PIX, ASA, FWSM Logon Success COBIT: Disallowed Services COBIT: Guardium SQL Guard Logins COBIT: Juniper Firewall Logon Success COBIT: Logins Succeeded |
| DS5.10 | Network Security (2/2) | Compliance Suite Alerts (Cont.) COBIT: LogLogic DSM Logins COBIT: Excessive IDS Attack COBIT: vCenter User Login Successful COBIT: vCloud Director Login Success |
| DS9 Manage the Configuration | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--------------------------------|---|
| DS9.3 | Configuration Integrity Review | Compliance Suite Reports COBIT: Check Point Management Station Login COBIT: Cisco PIX, ASA, FWSM Policy Changed COBIT: Cisco Switch Policy Changes COBIT: Pulse Connect Secure Policy Changed COBIT: Pulse Connect Secure Successful Logins |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--------------------------------|--|
| DS9.3 | Configuration Integrity Review | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: DB2 Database Successful Logins</p> <p>COBIT: ESX Kernel log daemon terminating</p> <p>COBIT: ESX Kernel logging Stop</p> <p>COBIT: ESX Logins Succeeded</p> <p>COBIT: ESX Syslogd Restart</p> <p>COBIT: F5 BIG-IP TMOS Login Successful</p> <p>COBIT: Guardium SQL Guard Audit Logins</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: HP NonStop Audit Login Successful</p> <p>COBIT: Juniper Firewall Policy Changed</p> <p>COBIT: Juniper SSL VPN (Secure Access) Policy Changed</p> <p>COBIT: Juniper SSL VPN (Secure Access) Successful Logins</p> <p>COBIT: Juniper SSL VPN Successful Logins</p> <p>COBIT: Logins by Authentication Type</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: LogLogic Management Center Login</p> <p>COBIT: Microsoft SQL Server Database Successful Logins</p> <p>COBIT: Microsoft SQL Server Schema Corruption</p> <p>COBIT: NetApp Filer Audit Login Successful</p> <p>COBIT: NetApp Filer Audit Policies Modified</p> <p>COBIT: NetApp Filer Login Successful</p> <p>COBIT: Oracle Database Successful Logins</p> <p>COBIT: RACF Successful Logins</p> <p>COBIT: Successful Logins</p> <p>COBIT: Sybase ASE Successful Logins</p> <p>COBIT: Symantec Endpoint Protection Policy Add, Remove, or Modify</p> <p>COBIT: TIBCO ActiveMatrix Administrator Successful Logins</p> <p>COBIT: Tripwire Modifications, Additions, and Deletions</p> <p>COBIT: Unencrypted Logins</p> <p>COBIT: vCenter Change Attributes</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|-------------|--|
| | | COBIT: vCenter Orchestrator Change Attributes COBIT: vCenter Orchestrator Virtual Machine Created |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|--------------------------------|---|
| DS9.3 | Configuration Integrity Review | <p>Compliance Suite Reports (Cont.)</p> <p>COBIT: vCenter Orchestrator Virtual Machine Deleted</p> <p>COBIT: vCenter Modify Firewall Policy</p> <p>COBIT: vCenter Orchestrator vSwitch Added, Changed or Removed</p> <p>COBIT: vCenter Resource Usage Change</p> <p>COBIT: vCenter Restart ESX Services</p> <p>COBIT: vCenter Successful Logins</p> <p>COBIT: vCenter Virtual Machine Created</p> <p>COBIT: vCenter Virtual Machine Deleted</p> <p>COBIT: vCenter vSwitch Added, Changed or Removed</p> <p>COBIT: vCloud Organization Created</p> <p>COBIT: vCloud Organization Deleted</p> <p>COBIT: vCloud Organization Modified</p> <p>COBIT: vCloud Successful Logins</p> <p>COBIT: vCloud vApp Created, Modified, or Deleted</p> <p>COBIT: vCloud vDC Created, Modified, or Deleted</p> <p>COBIT: vShield Edge Configuration Changes</p> <p>COBIT: Windows Programs Accessed</p> <p>Compliance Suite Alerts</p> <p>COBIT: Cisco PIX, ASA, FWSM Logon Success</p> <p>COBIT: Cisco PIX, ASA, FWSM Policy Changed</p> <p>COBIT: Cisco Switch Policy Changed</p> <p>COBIT: Guardium SQL Guard Logins</p> <p>COBIT: Juniper Firewall Policy Changes</p> <p>COBIT: Juniper Firewall Logon Success</p> <p>COBIT: Juniper Firewall Policy Out of Sync</p> <p>COBIT: Juniper VPN Policy Change</p> <p>COBIT: Logins Succeeded</p> <p>COBIT: LogLogic DSM Logins</p> <p>COBIT: Microsoft Operations Manager - Windows Policies Changed</p> <p>COBIT: Pulse Connect Secure Policy Change</p> <p>COBIT: NetApp Filer Audit Policies Changed</p> <p>COBIT: vCenter Create Virtual Machine</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-----------------------------|---------------------------------|---|
| | | COBIT: vCenter Delete Virtual Machine COBIT: vCenter Firewall Policy Change |
| DS9.3 | Configuration Integrity Review | Compliance Suite Alerts (Cont.) COBIT: vCenter Orchestrator vSwitch Add, Modify or Delete COBIT: vCenter Orchestrator Create Virtual Machine COBIT: vCenter Orchestrator Delete Virtual Machine COBIT: vCenter Restart ESX Services COBIT: vCenter User Login Successful COBIT: vCenter vSwitch Add, Modify or Delete COBIT: vCloud Director Login Success COBIT: vCloud Organization Created COBIT: vCloud Organization Deleted COBIT: vCloud Organization Modified COBIT: vCloud vApp Created, Deleted, or Modified COBIT: vCloud vDC Created, Modified, or Deleted COBIT: vShield Edge Configuration Change COBIT: Windows Policies Changed COBIT: Windows Programs Accessed |
| DS10 Manage Problems | | |
| DS10.2 | Problem Tracking and Resolution | Compliance Suite Reports COBIT: DHCP Granted/Renewed Activities on Microsoft DHCP COBIT: DHCP Granted/Renewed Activities on VMware vShield COBIT: LogLogic File Retrieval Errors COBIT: LogLogic Message Routing Errors Compliance Suite Alert COBIT: LogLogic Message Routing Errors COBIT: LogLogic File Retrieval Errors |
| DS11 Manage Data | | |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------------------|--|
| DS11.2 | Storage and Retention Arrangements | Compliance Suite Reports COBIT: DB2 Database Backup Failed COBIT: i5/OS Restore Events COBIT: LogLogic Management Center Backup Activities |
| DS11.2 | Storage and Retention Arrangements | Compliance Suite Reports (Cont.) COBIT: LogLogic Management Center Restore Activities COBIT: Microsoft SQL Server Backup Failed COBIT: NetApp Filer Snapshot Error COBIT: Sybase ASE Database Backup and Restoration Compliance Suite Alert COBIT: DB2 Database Backup Failed COBIT: LogLogic Management Center Backed Up or Restored COBIT: Microsoft SQL Server Backup Failed COBIT: NetApp Filer Snapshot Error COBIT: Sybase ASE Database Backed Up or Restored |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|------------------------|--|
| DS11.5 | Backup and Restoration | <p>Compliance Suite Reports</p> <p>COBIT: DB2 Database Backup Failed</p> <p>COBIT: DB2 Database Restore Failed</p> <p>COBIT: i5/OS Restore Events</p> <p>COBIT: LogLogic Management Center Backup Activities</p> <p>COBIT: LogLogic Management Center Restore Activities</p> <p>COBIT: Microsoft SQL Server Backup Failed</p> <p>COBIT: Microsoft SQL Server Restore Failed</p> <p>COBIT: NetApp Filer Snapshot Error</p> <p>COBIT: Sybase ASE Database Backup and Restoration</p> <p>Compliance Suite Alerts</p> <p>COBIT: DB2 Database Backup Failed</p> <p>COBIT: DB2 Database Restore Failed</p> <p>COBIT: LogLogic Management Center Backed Up or Restored</p> <p>COBIT: Microsoft SQL Server Backup Failed</p> <p>COBIT: Microsoft SQL Server Restore Failed</p> <p>COBIT: NetApp Filer Snapshot Error</p> <p>COBIT: Sybase ASE Database Backed Up or Restored</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------|---|---|
| DS11.6 | Security Requirements for Data Management | <p>Compliance Suite Reports</p> <p>COBIT: Active Directory System Changes</p> <p>COBIT: Microsoft Operations Manager - Windows Policies Modified</p> <p>COBIT: Policies Modified on Windows Servers</p> <p>COBIT: Ports Allowed Access - Check Point</p> <p>COBIT: Ports Allowed Access - Cisco ASA</p> <p>COBIT: Ports Allowed Access - Cisco FWSM</p> <p>COBIT: Ports Allowed Access - Cisco IOS</p> <p>COBIT: Ports Allowed Access - Cisco Netflow</p> <p>COBIT: Ports Allowed Access - Cisco PIX</p> <p>COBIT: Ports Allowed Access - F5 BIG-IP TMOS</p> <p>COBIT: Ports Allowed Access - Fortinet</p> <p>COBIT: Ports Allowed Access - Juniper Firewall</p> <p>COBIT: Ports Allowed Access - Juniper JunOS</p> <p>COBIT: Ports Allowed Access - Juniper RT Flow</p> <p>COBIT: Ports Allowed Access - Nortel</p> <p>COBIT: Ports Allowed Access - PANOS</p> <p>COBIT: Ports Allowed Access - Sidewinder</p> <p>COBIT: Ports Allowed Access - VMware vShield</p> <p>COBIT: Unencrypted Network Services - Check Point</p> <p>COBIT: Unencrypted Network Services - Cisco ASA</p> <p>COBIT: Unencrypted Network Services - Cisco FWSM</p> <p>COBIT: Unencrypted Network Services - Cisco IOS</p> <p>COBIT: Unencrypted Network Services - Cisco Netflow</p> <p>COBIT: Unencrypted Network Services - Cisco PIX</p> <p>COBIT: Unencrypted Network Services - F5 BIG-IP TMOS</p> <p>COBIT: Unencrypted Network Services - Fortinet</p> <p>COBIT: Unencrypted Network Services - Juniper Firewall</p> <p>COBIT: Unencrypted Network Services - Juniper JunOS</p> <p>COBIT: Unencrypted Network Services - Juniper RT Flow</p> <p>COBIT: Unencrypted Network Services - Nortel</p> |

| Control Objective | Description | Compliance Suite Reports and Alerts |
|-------------------------------|------------------------------|---|
| | | COBIT: Unencrypted Network Services - PANOS COBIT: Unencrypted Network Services - Sidewinder COBIT: Unencrypted Network Services - VMware vShield |
| DS13 Manage Operations | | |
| DS13.3 | IT Infrastructure Monitoring | Compliance Suite Reports COBIT: LogLogic File Retrieval Errors COBIT: LogLogic Message Routing Errors COBIT: NetApp Filer Audit Logs Cleared COBIT: Periodic Review of Log Reports COBIT: Periodic Review of User Access Logs COBIT: Windows Audit Logs Cleared Compliance Suite Alert COBIT: LogLogic Message Routing Errors COBIT: LogLogic File Retrieval Errors COBIT: Windows Audit Log Cleared |

References

“Internal Control – Integrated Framework: Executive Summary”. The Committee of Sponsoring Organizations of the Treadway Commission. Available online at:
<http://www.coso.org/>.

“IT Control Objectives for Sarbanes-Oxley: The Role of IT in the Design and Implementation of Internal Control over Financial Reporting”. 2nd Edition. IT Governance Institute. September 2006.

“COBIT 4.1: Framework, Control Objectives, Management Guidelines, Maturity Models”. IT Governance Institute. 2007.

“Auditing Standard No. 5 – An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements”. Public Company Accounting Oversight Board. June 12, 2007.

“Board Approves New Audit Standard For Internal Control Over Financial Reporting and, separately, Recommendations on Inspection Frequency Rule”. Public Company Accounting Oversight Board Press Release. May 24, 2007. Available online at:
http://pcaobus.org/News_and_Events/News/2007/05-24.aspx.