



IBM Cloud for Financial Services – Tech Zone Demo Environment
Hybrid Cloud Ecosystem – Ecosystem Labs

Scanning for Compliance

This document will walk you through the demonstration of the Security and Compliance Center (SCC) showing you the controls that are being validated to the FS Cloud Reference architecture. The intent of this demo is to highlight the Security and Compliance Center, show relevant features, and help attendees understand how they can effectively use the SCC.

Goals for the Demo

- Familiarize the audience with the Security & Compliance Center
- View scan results by pass/fail
- View scan results per resource instance
- View failing compliance controls and reason for failure

Prerequisites

- If you have not already done so, request access to the FS Cloud demo environment at: <https://techzone.ibm.com/collection/ibm-cloud-for-financial-services>



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Demo Steps

Dashboard

1. Log in to the IBM Cloud account – <https://cloud.ibm.com>
2. Say: “This is an account where the IBM Cloud for Financial Services Reference Architecture has been deployed and the Security and Compliance Center has been set up to monitor and manage the security posture of the deployment.”
3. Click on the “Hamburger” menu in the top left and select “Security and Compliance Center” from the menu.
- 4.

The screenshot shows the IBM Cloud dashboard interface. On the left, there's a sidebar with various service categories like Classic Infrastructure, Cloud Foundry, Functions, Kubernetes, OpenShift, Satellite, Security and Compliance, VMware, VPC Infrastructure, API Management, App Development, Container Registry, DevOps, Interconnectivity, Observability, and Schematics. The 'Security and Compliance' section is currently selected, indicated by a checked checkbox icon and a dropdown arrow. A sub-menu for 'Security and Compliance' is open, listing options: Getting started, Overview, Dashboard, Manage posture, Assess, Configure, Results, Configure, Gain insight, Insights, Findings, Configure, and Integrations. To the right of the sidebar, there are several cards: 'Architecture center' (Learn best practices and leverage reference architectures for the cloud), 'IBM Push Notifications' (Send real-time and personalized notifications to mobile and web applications via a unified push service), 'Incorporate DevOps into your process' (Shorten releases, improve reliability, and stay ahead of the competition with IBM DevOps), and 'Learn and hc your u' (Learn and hc your u). Below these cards, there are sections for 'View all' and 'Planned maintenance' with some numerical data. At the bottom of the screenshot, the URL <https://cloud.ibm.com/security-compliance/overview> is visible.

5. Say: “The Security and Compliance Center is an account-level service that can be used to continuously scan the environment to determine the current security posture of the deployed services, set up rules to govern how new services are provisioned, and monitor for threats and vulnerabilities in the



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environment.”

6. Navigate to the [SCC Dashboard](#) by clicking on the “Dashboard” link in the left-side menu.

7. Say: “The dashboard gives an overview of all the current security posture and results of the threat detection. Let’s start by looking at how to manage the Security Posture.”

Manage posture - Configure

1. Click on “Configure” → “Collectors” under the “Manage Posture” section on the left menu.



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The screenshot shows the IBM Cloud interface with the left sidebar open. The 'Collectors' option is selected under the 'Configure' section. The main area displays a table titled 'Collectors' with one item listed:

Name	Description	Last contact	Managed by	Endpoint type	Status
managed	-	2021-10-12 1:13:06 PM	IBM	Private	Inactive

Below the table, it says 'Items per page: 25' and '1–1 of 1 item'.

2. Say: “Before a scan can be run, a collector must be deployed. In this case, we have a provisioned an IBM-managed collector into the account and provided it with an API key that has the required permission to scan the resources within the account.”
3. Click on “Configure” → “Scopes” under the “Manage Posture” section on the left menu.

The screenshot shows the IBM Cloud interface with the left sidebar open. The 'Scopes' option is selected under the 'Configure' section. The main area displays a table titled 'Scopes' with one item listed:

Name	Description	Last scan	Scan status
frontoffice		2021-10-12 12:58:28 PM	Validation completed

Below the table, it says 'Items per page: 25' and '1–1 of 1 item'. A detailed view of the 'frontoffice' scope is shown below the table, including 'Details' such as 'Collector' (managed), 'Type' (Validation), 'Time' (2021-10-12 12:58:28 PM), and 'Status' (Validation completed).

4. Say: “The next step is to define a scope. When the scope is created it is given a name and assigned a collector. The scope will then use the collector to discover the services available within the account.”
5. Click on the name of the “frontoffice” scope to see the details.



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The screenshot shows the IBM Cloud Security and Compliance interface. At the top, there's a navigation bar with links for Catalog, Docs, Support, Manage, and a user profile. Below the navigation is a search bar and a breadcrumb trail: Security and Compliance / Scopes / frontoffice. On the left, a sidebar titled 'Settings' includes an 'Event history' section. The main content area displays a table for the 'frontoffice-scc' scope, which is managed by IBM and has an 'Inactive' status. The table shows 1-1 of 1 item. The 'Inventory' section lists resources categorized by type:

Resource type	Detail
Account	IBMid-550008K4QH
Identity and Access Management	IBMid-110000SNV8
Resource Groups	
Resource Group	frontoffice-edge
Resource Group	Default
Resource Group	frontoffice-management
Resource Group	techzone
Resource Group	frontoffice-workload
Resource Group	security-ops
Resource Group	frontoffice-common
Containers	

6. Say: “After the discovery scan runs, the inventory of resources are listed. At this point, if desired the list of resources can be pruned for this particular scope to include only a subset of the resources are included in the scan.”
7. Click on “Configure” → “Profiles” under the “Manage Posture” section on the left menu.



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The screenshot shows the IBM Cloud interface with the left sidebar expanded to the 'Security and Compliance' section. The 'Profiles' option is selected. The main content area is titled 'Profiles' and displays a table of available profiles. The table has columns for Name, Description, Type, and Goals. The profiles listed are:

Name	Description	Type	Goals
CIS IBM Foundations Benchmark 1.0.0	CIS IBM Foundations Benchmark 1.0.0	Predefined	78
IBM Cloud Best Practices Controls 1.0	IBM Cloud Best Practices Controls 1.0	Predefined	345
IBM Cloud for Financial Services v0.1	IBM Cloud for Financial Services Best Practices v0.1	Predefined	134
IBM Cloud for Financial Services v0.1.1	IBM Cloud for Financial Services Best Practices v0.1.1	Predefined	124
IBM Cloud for Financial Services v0.1.2	IBM Cloud for Financial Services Best Practices v0.1.2	Predefined	135
Best Practices - AWS S3 Controls	Best Practices - AWS S3 Controls	Predefined	20
Best Practices - Firewalls	Best Practices - Firewalls	Predefined	1
Best Practices - Linux Hardening	Best Practices - Linux Hardening	Predefined	79
Best Practices - MySQL	Best Practices - MySQL	Predefined	7
Best Practices - SQL Server	Best Practices - SQL Server	Predefined	2
CIS - Kubernetes	CIS Kubernetes Benchmark v1.3.0	Predefined	96
CIS AWS 3-tier Web Architecture Benchmark 1.0	CIS AWS 3-tier Web Architecture Benchmark 1.0	Predefined	91

8. Say: “The next step is to determine the controls that will be evaluated against the scope to determine the current posture. The controls are grouped into Profiles. A number of profiles have been provided out of the box and custom profiles can be created to define a particular collection of controls.”
9. Click on the “IBM Cloud for Financial Services v0.1.2” profile.
10. Say: “We will use the FS Cloud profile for this scan. The controls are organized into the NIST control families. (NIST stands for National Institute of Standards and Technology and it defined a standard control language and base set of controls.)”
11. Expand the “AC” control family.



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The screenshot shows the IBM Cloud for Financial Services v0.1.2 interface. On the left, there's a sidebar titled "Controls". The main area displays a table with two columns: "Name" and "Description". The "Name" column lists control families: AC, AU, and CA. The "Description" column provides a brief overview of each family. The "AC" family is expanded, showing its sub-controls: AC-2: Account Management, AC-3: Access Enforcement, AC-4: Information Flow Enforcement, AC-5: Separation of Duties, AC-6: Least Privilege, and AC-17: Remote Access.

Name	Description
AC	Access Control
AC-2: Account Management	
AC-3: Access Enforcement	
AC-4: Information Flow Enforcement	
AC-5: Separation of Duties	
AC-6: Least Privilege	
AC-17: Remote Access	
AU	Audit and Accountability
CA	Security Assessment and Authorization

12. Say: “Within the control family a number of controls have been defined. The ‘AC’ control family defines the controls related to Access Control in the environment.”
13. Expand the “AC-2” control.

The screenshot shows the same interface as above, but the "AC-2: Account Management" sub-control is now expanded. This reveals a detailed list of requirements or sub-controls under the AC-2 family. The expanded section includes: AC-2(1): Account Management | Automated System Account Management, AC-2(3): Account Management | Automated System Account Management, AC-2(7): Account Management | Privileged User Accounts, AC-2(a): Identifies and selects the following types of information system accounts to support organizational missions/business functions, AC-2(c): Establishes conditions for group and role membership, AC-2(f): Creates, enables, modifies, disables, and removes information system accounts in accordance with organization-defined procedures, and AC-2(l): Authorize access to the system based on: 1. A valid access authorization; 2. Intended system usage; and 3. Assignment: organization-defined roles and responsibilities.



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14. Say: “In this case, the ‘AC-2’ control is broken down into sub-parts.”
15. Expand the “AC-2(1)” control.

The screenshot shows the IBM Cloud for Financial Services v0.1.2 interface. In the top navigation bar, there are links for Catalog, Docs, Support, Manage, and a user profile icon. Below the navigation, a search bar says "Search resources and offerings...". The main content area has a breadcrumb path: Security and Compliance / Profiles / IBM Cloud for Financial Services v0.1.2. On the left, a sidebar titled "Controls" lists "AC-2(1): Account Management | Automated System Account Management". This control is expanded, showing a list of 14 specific requirements:

- 3000015: Check whether IAM users are attached to at least one access group
- 3000016: Check whether IAM policies for users are attached only to groups or roles
- 3000023: Check whether the account owner does not have an IBM Cloud API key created in IAM
- 3000024: Check whether IBM Cloud API keys that are managed in IAM are rotated at least every # days
- 3000025: Check whether an account owner has logged in to IBM Cloud in the past # days
- 3000026: Check whether user list visibility restrictions are configured in IAM settings for the account owner
- 3000030: Check whether IAM policies for service IDs are attached only to groups or roles
- 3000035: Check whether account access is managed only by IAM access groups
- 3000039: Check whether IBM Cloud API keys that are unused for 180 days are detected and optionally disabled
- 3000235: Check whether Hyper Protect Crypto Services encryption keys that are generated by the service are rotated automatically at least every # days
- 3000425: Check whether VPN for VPC authentication is configured with a strong pre-shared key with at least 24 alphanumeric characters
- 3000639: Check whether Container Registry access is managed only by IAM access groups
- 3000707: Check whether App ID user profile updates from client apps is disabled
- 3000708: Check whether App ID Cloud Directory users aren't able to update their own accounts
- 3000709: Check whether App ID Cloud Directory users aren't able to self-sign up to applications
- 3000711: Check whether App ID social identity providers are disabled
- 3000712: Check whether App ID anonymous authentication is disabled
- 3000713: Check whether App ID password strength regex is configured
- 3000714: Check whether App ID advanced password policies are enabled

16. Say: “The control contains one or more Goals that map the requirements of the control into specific rules that can be applied to the account and the provisioned services to verify compliance.”
17. Click on one of the goals.



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The screenshot shows a detailed view of a goal logic configuration. The top navigation bar includes 'IBM Cloud', a search bar, and links for Catalog, Docs, Support, Manage, and user profile. The main content area displays the following sections:

- Details**:
 - Description: Check whether IAM users are attached to at least one access group
 - Environment: IBM
 - Tags: IAM, IBM
- Goal attributes**:
 - Fact master attribute: Details
 - Attribute display name: IAM User Access Groups
 - Attribute key: exclude_owner_ac...
- Goal logic**:

```
var objectName = 'Identity and Access Management';
var objectType = 'Identity and Access Management:Users';
var displayEv = 'CTL.IBM_IAM_USER_ATTACHED_TO_GROUPS.EV';
var info = '';
var actualValue = '';
var resultList = [];
try {
  var iamUsers = "";
  if (isDataAvailable(Details, "list_users")) {
    iamUsers = Details['list_users'];
  }
  if (iamUsers === undefined || iamUsers === "" || iamUsers.length === 0) {
    info = "CTL.IBM_USER_NOT_FOUND";
    var result_dict = getObjectTypeResult(Status.UNABLE_TO_PERFORM, displayEv, "", actualValue,
                                          "", info,
                                          objectName, objectType, "");
  }
}
```
- Validation report messages**:
 - Pass
 - Fail
 - Not applicable
 - Unable to perform
 - CTL.NOT_APPLICABLE.STATUS... CTL.IBM_ACCOUNT_N...
 - Fact master value missing
 - CTL.FACT_DETAILS_NOT_FOUND

18. Say: “From this view we can see the details for the goal including the logic used to determine compliance.”
19. Return to the main page of the Security and Compliance Center - <https://cloud.ibm.com/security-compliance/overview>. Click on “Configure” → “Scans” under the “Manage Posture” section on the left menu.



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The screenshot shows the IBM Cloud Security and Compliance Center. The left sidebar is titled 'IBM Cloud' and includes sections for 'Security and Compliance' (Dashboard, Manage posture, Assess, Configure, Collectors, Credentials, Scopes, Profiles, Goals, **Scans**, Results, Configure, Insights, Findings, Configure), 'Govern resources' (Results, Configure), and 'Gain insight' (Insights, Findings, Configure). The main content area is titled 'Scans' and displays a table of three scan entries. The table columns are Name, Scope, Profile, Type, and Scan frequency. The first entry is 'frontoffice - FS Cloud 0-1-2' with scope 'frontoffice', profile 'IBM Cloud for Financial Services v0.1.2', type 'Validation', and frequency '1 day'. The second entry is 'frontoffice - Discovery' with scope 'frontoffice', profile '-', type 'Discovery', and frequency 'On-demand'. The third entry is 'frontoffice - IBMCloudforFinancial' with scope 'frontoffice', profile 'IBM Cloud for Financial Services v0.1.2', type 'Validation', and frequency 'On-demand'. Below the table are pagination controls: 'Items per page: 25', '1–3 of 3 items', '1', '1 of 1 page', and navigation arrows.

Name	Scope	Profile	Type	Scan frequency
frontoffice - FS Cloud 0-1-2	frontoffice	IBM Cloud for Financial Services v0.1.2	Validation	1 day
frontoffice - Discovery	frontoffice	-	Discovery	On-demand
frontoffice - IBMCloudforFinancial	frontoffice	IBM Cloud for Financial Services v0.1.2	Validation	On-demand

20. Say: “The last part of the configuration is to set up a scheduled scan. Here we’ve set up a scan that will run every day using the ‘IBM Cloud for Financial Services v0.1.2’ profile. It is also possible to run a scan on-demand against a particular profile.”
21. Return to the Security and Compliance Center overview page - <https://cloud.ibm.com/security-compliance/overview>

Manage posture – Assess

1. Click on “Assess” → “Scan results” under the “Manage Posture” section on the left menu.



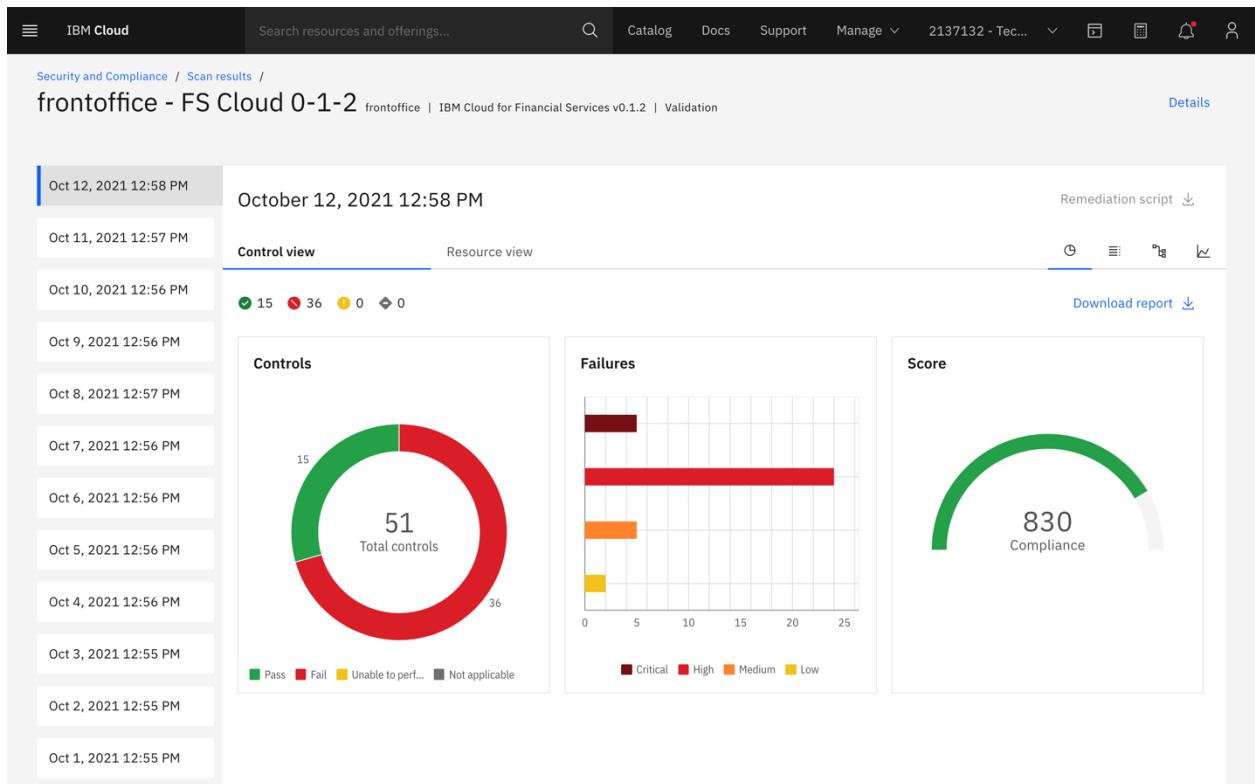
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Name	Scope	Profile	Last scan time	Last scan results
frontoffice - FS Cloud 0-1-2	frontoffice	IBM Cloud for Financial Services v0.1.2	2021-10-12 12:58:20 PM	✓15 ⚡36
frontoffice - IBMCloudforFinancial	frontoffice	IBM Cloud for Financial Services v0.1.2	2021-10-12 12:30:30 AM	✓15 ⚡36
Check transit gateway	fss-london-scan	IBM Cloud for Financial Services v0.1	2021-09-23 9:45:49 PM	✓7 ⚡31 ⚡10
IBM Best Practices	fss-london-scan	IBM Cloud Best Practices Controls 1.0	2021-09-23 5:54:31 PM	✓94 ⚡102 ⚡22 ⚡119
London-NIST	fss-london-scan	NIST	2021-09-23 4:21:56 PM	✓9 ⚡35 ⚡28 ⚡22
GDPR-scan	scope-falcon-cloud-native-prod	GDPR	2021-09-23 10:40:47 AM	⚠15 ⚡5
FS-Scan	fss-london-scan	IBM Cloud for Financial Services v0.1	2021-09-23 9:06:07 AM	✓6 ⚡31 ⚡8 ⚡3
FS-NIST-Production	fss-cloud	NIST	2021-09-23 1:04:31 AM	✓6 ⚡23 ⚡35 ⚡30
NIST-Production	scope-falcon-cloud-native-prod	NIST	2021-09-23 12:20:07 AM	✓8 ⚡30 ⚡26 ⚡30

2. Say: “The results of the on-demand and scheduled scans against the defined scopes are all listed here. We can look at the results of the scan for our ‘frontoffice’ scope.”
3. Click on the “frontoffice - FS Cloud 0-1-2” result.



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4. Say: “The initial view for the scan results shows the graphs for the Control view. Before getting into the specific results, it is important to understand what the values do and do not mean. The controls are measured by goals and if any one of the goals fail then the control fails. Often the same goal will be referenced by multiple controls, meaning that one error can fail multiple controls. Also, a failed control does not necessarily mean the environment has a vulnerability, just a configuration that doesn’t match the base rule set.”



In this account, to accommodate the demo environment there are a couple of known exceptions to the FS controls. For example: some of the network ACLs are opened to allow VPN traffic and public gateways are attached to the OpenShift cluster subnets to allow access to external repositories.

5. Say: “From left to right, this Controls graph shows the number of passing and failing controls. In this case, 15 of the controls passed and 36 have failed. The Failures graph shows the severity of the goals that failed. Finally, the Score graph gives an overall compliance score. Anything over 800 is a good score.”
6. Click on the list view button to see the results by control.



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IBM Cloud Search resources and offerings... Catalog Docs Support Manage 2137132 - Tec... Details

Security and Compliance / Scan results / frontoffice - FS Cloud 0-1-2 frontoffice | IBM Cloud for Financial Services v0.1.2 | Validation

Oct 12, 2021 12:58 PM October 12, 2021 12:58 PM

Control view Resource view

15 36 0 0

Remediation script ⌂ Download report ⌂

Controls Failures Score

51 Total controls

Pass Fail Unable to perf... Not applicable

Critical High Medium Low

830 Compliance

IBM Cloud Search resources and offerings... Catalog Docs Support Manage 2137132 - Tec... Details

15 36 0 0 Download report ⌂

Status Filter... Severity Filter... Search

Status	ID	Control	Severity	Resource details
🔴	AC-2(1)	Account Management Automated System Account Management	High	165 Pass, 122 Fail, 12 Unable to perf., 0 Not applicable
🔴	AC-2(3)	Account Management Automated System Account Management	Medium	0 Pass, 11 Fail, 0 Unable to perf., 0 Not applicable
🟢	AC-2(7)	Account Management Privileged User Accounts	-	1 Pass, 0 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-2(a)	Identifies and selects the following types of information system accounts to support organizational missions/business functions	Medium	0 Pass, 1 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-2(c)	Establishes conditions for group and role membership	High	147 Pass, 112 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-2(f)	Creates, enables, modifies, disables, and removes information system accounts in accordance with organization-defined procedures or conditions	High	18 Pass, 2 Fail, 1 Unable to perf., 0 Not applicable
🔴	AC-2(i)	Authorizes access to the system based on: 1. A valid access authorization; 2. Intended system usage; and 3. Assignment: organization-defined attributes (as required);	High	185 Pass, 139 Fail, 12 Unable to perf., 0 Not applicable
🔴	AC-3	Access Enforcement	High	163 Pass, 118 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-4	Information Flow Enforcement	Critical	191 Pass, 79 Fail, 2 Unable to perf., 0 Not applicable
🔴	AC-5(b)	Documents separation of duties of individuals	High	158 Pass, 117 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-6-0	Least Privilege	High	165 Pass, 119 Fail, 0 Unable to perf., 0 Not applicable
🟢	AC-6(10)	Least Privilege Prohibit Non-privileged Users from Executing Privileged Functions	-	4 Pass, 0 Fail, 0 Unable to perf., 0 Not applicable
🔴	AC-17(2)	Remote Access Protection of Confidentiality and Integrity Using Encryption	High	5 Pass, 12 Fail, 2 Unable to perf., 0 Not applicable

Determines that the information system is capable of auditing organization.



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7. Say: “Here we see the list of failed controls. We can drill down on a particular control to see the failing goals.”
8. Click on the “AC-2(1)” control to see the list of goals.

The screenshot shows the IBM Cloud Security and Compliance interface. The top navigation bar includes links for Catalog, Docs, Support, Manage, and a user profile. The main page displays a list of goals under the heading "Account Management | Automated System Account Management". The table has columns for Control ID, Severity, Status, and Number of goals. One row is highlighted for Control ID AC-2(1), which has a High severity and a FAIL status, with 25 goals. The "Goals" section shows 15 Pass, 3 Fail, 0 Unable to perform, and 0 Not applicable goals. Below this, a detailed list of 15 specific goals is provided, each with a unique ID and a brief description. Each goal entry includes a green checkmark for Pass, a red X for Fail, a yellow question mark for Unable to perform, and a grey diamond for Not applicable. The interface also features a sidebar with a timeline from Oct 1 to Oct 12, 2021, and a "Control view" section.

Control ID	Severity	Status	Number of goals
AC-2(1)	High	FAIL	25

Goals	Pass	Fail	Unable to perform	Not applicable
ID: 3000015 Check whether IAM users are attached to at least one access group	8	3	0	0
ID: 3000016 Check whether IAM policies for users are attached only to groups or roles	63	18	0	0
ID: 3000023 Check whether the account owner does not have an IBM Cloud API key created in IAM	1	0	0	0
ID: 3000024 Check whether IBM Cloud API keys that are managed in IAM are rotated at least every # days	4	7	0	0
ID: 3000025 Check whether an account owner has logged in to IBM Cloud in the past # days	0	1	0	0
ID: 3000026 Check whether user list visibility restrictions are configured in IAM settings for the account owner	1	0	0	0
ID: 3000030 Check whether IAM policies for service IDs are attached only to groups or roles	63	90	0	0
ID: 3000035 Check whether account access is managed only by IAM access groups	0	1	0	0
ID: 3000039 Check whether IBM Cloud API keys that are unused for 180 days are detected and optionally disabled	0	0	11	0
ID: 3000235 Check whether Hyper Protect Crypto Services encryption keys that are generated by the service are rotated automatically at least every # months	0	0	0	0
ID: 3000425 Check whether VPN for VPC authentication is configured with a strong pre-shared key with at least 128 bits of strength	0	0	1	0

9. Say: “This view shows the goals associated with this control and the current state. We can look at the details of a goal to see the values that are causing the failure.”
10. Click on goal “3000015”.



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The screenshot shows the IBM Cloud interface with a scan results page. The goal ID is 3000015, titled "Check whether IAM users are attached to at least one access group". The status bar indicates 8 green, 3 red, 0 yellow, and 0 grey items. The table below lists resources categorized by environment (IBM), resource type (XaaS), and detailed resource type (Identity and Access Management). The expected value is that IAM users should be attached to at least one access group.

Environment	Resource category	Resource type	Resource
IBM	XaaS	Identity and Access Management	Identity and Access Management

Expected value: IAM users should be attached to at least one access group

Resource status	All	Search
Status	Filter	

Status	Resource	Resource type	Actual value	Detail
✓	amtrice@us.ibm.com	Identity and Access Management:Users	[{"AccessGroupId-1aa081e9-05ab-4f2a-ba1f-deefcb7856cf"}, {"AccessGroupId-74e75fe3-432a-4e50-af75-146483080434"}]	User is attached to at least one access group
✓	Erik.Lind@ibm.com	Identity and Access Management:Users	[{"AccessGroupId-1aa081e9-05ab-4f2a-ba1f-deefcb7856cf"}]	User is attached to at least one access group
✗	matthewperrins@gmail.com	Identity and Access Management:Users	[]	User is not attached to any access group
✓	mjperrin@us.ibm.com	Identity and Access Management:Users	[{"AccessGroupId-1aa081e9-05ab-4f2a-ba1f-deefcb7856cf"}, {"AccessGroupId-74e75fe3-432a-4e50-af75-146483080434"}, {"AccessGroupId-8c38a89c-2ce6-4e46-ba19-876736d4e531"}]	User is attached to at least one access group
✓	Noe.Samaille@ibm.com	Identity and Access Management:Users	[{"AccessGroupId-1aa081e9-05ab-4f2a-ba1f-deefcb7856cf"}]	User is attached to at least one access group
✓	ramragh1@in.ibm.com	Identity and Access Management:Users	[{"AccessGroupId-1aa081e9-05ab-4f2a-ba1f-deefcb7856cf"}, {"AccessGroupId-3ddc3343-9acf-471b-89d3-8775f9822b9d"}, {"AccessGroupId-e7f4671e-387d-4b7e-8fbd-ec23a35f9224"}]	User is attached to at least one access group
✗	seansund@gmail.com	Identity and Access Management:Users	[]	User is not attached to any access group

11. Say: “Goal 3000015 requires that every user is attached to an access group. The results show all of the users in the account and which ones are missing access groups.”

12. Click on the “Resource view” to list the resource categories.

The screenshot shows the IBM Cloud interface with a resource view for IBM Best Practices validation. A blue arrow points to the "Resource view" button in the navigation bar. The sidebar shows a timeline from Sep 23, 2021 6:54 PM to Sep 13, 2021 6:56 PM. The main area displays a list of resources categorized under "Resources" and "Status".

Resources	Status
Access Control List	✗
Account	✗
Block Storage	✗
Cloud Certificate	✗
Cloud Key	✗
Cloud Key Protect	✗
Cloud Load Balancer	✗
Cloud Object Storage Bucket	✗
Cloud Security Group	✗
Hyper Protect Crypto	✗



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13. Expand the “OpenShift Cluster” item

Virtual Private Network Cluster

frontoffice-cluster

frontoffice-workload-cluster

nlb-frontoffice-cluster-48d3a96f95acca62076e928d79df50cf-i000.eu-de.containers.appdomain.cloud

nlb-frontoffice-workload-clus-48d3a96f95acca62076e928d79df50cf-i000.eu-de.containers.appdomain.cloud

14. Click on the “frontoffice-workload-cluster” item, to see the controls that are scanned for this specific cluster and see the pass/fail status for each of the controls. Click on any of the controls to see details about that specific scan item.

The screenshot shows the IBM Best Practices interface under the Security and Compliance / Scan results section. A sidebar on the left lists dates from Sep 13 to Sep 23, 2021, with a 'Control view' tab selected. The main panel displays a table for the 'frontoffice-workload-cluster'. The table has columns for Resource type (container), Severity (Medium), Status (FAIL), and Number of controls (5). Below the table is a 'Controls' section with a table showing individual scan items. The first item, ID: 10.2.3, is highlighted with a blue border and shows a Pass status (green checkmark). Other items include ID: 10.2.4 (Ensure OpenShift clusters is accessible only by using private endpoints), ID: 10.2.5 (Ensure OpenShift cluster has image pull secrets enabled), ID: 10.2.6 (Ensure OpenShift clusters are enabled with IBM Cloud Monitoring), and ID: 10.2.7 (Ensure OpenShift clusters are enabled with IBM Log Analysis).

Resource type	Severity	Status	Number of controls
container	Medium	FAIL	5

ID	Goal description	Pass	Fail	Unable to perform	Not applicable
10.2.3	Ensure OpenShift clusters version is up-to-date	0	1	0	0
10.2.4	Ensure OpenShift clusters is accessible only by using private endpoints	1	0	0	0
10.2.5	Ensure OpenShift cluster has image pull secrets enabled	1	0	0	0
10.2.6	Ensure OpenShift clusters are enabled with IBM Cloud Monitoring	0	1	0	0
10.2.7	Ensure OpenShift clusters are enabled with IBM Log Analysis	0	0	1	0

15. Click on the “Control view” tab again then click on “Download report”.



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Oct 12, 2021 12:58 PM October 12, 2021 12:58 PM Remediation script

Oct 11, 2021 12:57 PM Control view Resource view Download report

Oct 10, 2021 12:56 PM

Oct 9, 2021 12:56 PM

Oct 8, 2021 12:57 PM

Oct 7, 2021 12:56 PM

Oct 6, 2021 12:56 PM

Oct 5, 2021 12:56 PM

Oct 4, 2021 12:56 PM

Oct 3, 2021 12:55 PM

Oct 2, 2021 12:55 PM

Oct 1, 2021 12:55 PM

Status Filter... Severity Filter... Search

Status	ID	Control	Severity	Resource details
●	AC-2(1)	Account Management Automated System Account Management	High	✓ 165 ● 121 ○ 12 □ 0
●	AC-2(3)	Account Management Automated System Account Management	Medium	✓ 0 ● 11 ○ 0 □ 0
✓	AC-2(7)	Account Management Privileged User Accounts	-	✓ 1 ● 0 ○ 0 □ 0
●	AC-2(a)	Identifies and selects the following types of information system accounts to support organizational missions/business functions	Medium	✓ 0 ● 1 ○ 0 □ 0
●	AC-2(c)	Establishes conditions for group and role membership	High	✓ 147 ● 111 ○ 0 □ 0
●	AC-2(f)	Creates, enables, modifies, disables, and removes information system accounts in accordance with organization-defined procedures or conditions	High	✓ 18 ● 2 ○ 1 □ 0
●	AC-2(i)	Authorizes access to the system based on: 1. A valid access authorization; 2. Intended system usage; and 3. Assignment: organization-defined attributes (as required);	High	✓ 186 ● 137 ○ 12 □ 0
●	AC-3	Access Enforcement	High	✓ 164 ● 116 ○ 0 □ 0

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Status Filter... Severity Filter... Search

Status	ID	Control
●	AC-2(1)	Account Management Automated System Account Management
●	AC-2(3)	Account Management Automated System Account Management
✓	AC-2(7)	Account Management Privileged User Accounts
●	AC-2(a)	Identifies and selects the following types of information system accounts to support organizational missions/business functions
●	AC-2(c)	Establishes conditions for group and role membership
●	AC-2(f)	Creates, enables, modifies, disables, and removes information system accounts in accordance with organization-defined procedures or conditions
●	AC-2(i)	Authorizes access to the system based on: 1. A valid access authorization; 2. Intended system usage; and 3. Assignment: organization-defined attributes (as required);
●	AC-3	Access Enforcement

Download report

Options Details

What type of report would you like to download?

Report types

Detailed You can choose specific details that you want included in your report.

Report format

PDF

Delta With the delta report, you can compare two scans to see how changes occur over time. The report is available as a PDF only.

Cancel Next



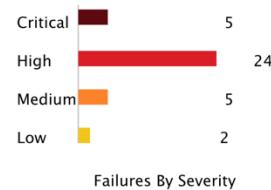
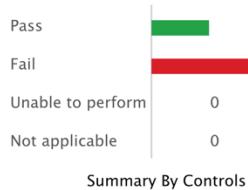
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16. Say: “A report of the scan results can also be downloaded as either a PDF or Excel spreadsheet to share with others.”

Executive Summary

Report Generated	2021-10-13 04:25:21 PM UTC
FACTs Collected	2021-10-12 05:58:19 PM UTC
Validation Performed	2021-10-12 05:58:24 PM UTC
Report Profile	IBM Cloud for Financial Services v0.1.2
Scope	frontoffice
Report run by	IBMid-110000SNV8

Result	Critical	High	Medium	Low	Total
Passed:	2	6	6	1	15
Failed:	5	24	5	2	36
Unable to Perform:					
Not Applicable:					
TOTAL:	7	30	11	3	51



17. Return to the Security and Compliance Center overview page - <https://cloud.ibm.com/security-compliance/overview>

Govern resources

1. Say: “The Security and Compliance Center allows rules to define the constraints that should be placed on resources that are provisioned in the account.”
2. Click on “Configure” → “Rules” under the “Govern resources” section on the left menu.



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Name	Service	Attachments	Labels	Enforcement actions
Stop cross-account connections	Transit Gateway	1	-	Disallow

3. Say: “This page lists the rules that have been configured for this account.”
4. Click on the “Stop cross-account connections” rule to see the details.

```
        "rule_type": "user_defined",
        "target": {
            "service_name": "transit",
            "resource_kind": "service",
            "additional_target_attributes": []
        },
        "required_config": {
            "and": [
                {
                    "property": "cross_account_connection_approved",
                    "operator": "is_false",
                    "value": "false"
                }
            ],
            "enforcement_actions": [
                {
                    "action": "disallow"
                }
            ],
            "labels": []
        }
```

5. Say: “The rules are defined as allowed values for the various attributes of the service and an enforcement action. This rule is requiring that the ‘cross_account_connection_approved’ attribute for a Transit Gateway is false, meaning that a Transit Gateway cannot be created to connect VPCs across accounts.”
6. Click on “Rules” in the breadcrumbs at the top then click on “Results” under the “Govern resources” section on the left menu.



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The screenshot shows the IBM Cloud Security and Compliance interface. The left sidebar is titled 'IBM Cloud' and includes sections for 'Security and Compliance' (selected), 'Dashboard', 'Manage posture', 'Assess', 'Configure', 'Govern resources', 'Results' (selected), 'Configure', 'Gain insight', 'Insights' (selected), 'Findings', 'Configure', 'Integrations', and 'Global settings'. The main content area is titled 'Evaluation results' and shows a timestamp of '2021-10-13 8:57:34 AM'. It displays a message: 'You are 100% compliant. Congratulations! Your latest scan came back completely compliant.' Below this is a table with the following data:

Name	Service	Noncompliant	Status
Stop cross-account connections	Transit Gateway	0	✓

At the bottom, there are pagination controls: 'Items per page: 25' and '1–1 of 1 item'.

7. Say: “The rules are enforced for any new services that are provisioned. The ‘Evaluation results’ view shows the compliance status of the existing services against the defined rules.”
8. Click on “Insights” under the “Gain insights” section on the left menu.



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The screenshot shows the IBM Cloud Security and Compliance Center Insights dashboard. The left sidebar is titled 'IBM Cloud' and includes sections for Security and Compliance, Dashboard, Manage posture, Assess, Configure, Govern resources, Results, Configure, Gain insight, Insights (which is selected), Findings, Configure, Integrations, and Global settings. The main content area has a search bar at the top. Below it is a summary section with four categories: Critical (0/1), High (1/1), Medium (0/1), and Low (0/1). Each category has a status indicator (red for critical, orange for high, yellow for medium, green for low) and a count. A 'View all findings' link is located in the top right of this section. Below the summary is a 'Built-in Insights' section with three cards: 'Vulnerability in Images' (Vulnerability Advisor), 'Certificates' (Certificate Manager), and 'Suspicious Inbound Traffic' (Network Insights). The 'Certificates' card includes a chart showing certificate expiration counts over time.

9. Say: “The Insights function of Security and Compliance Center monitors a number of services to watch for vulnerabilities and suspicious activity. The results of Vulnerability Advisor are monitored for issues with the images. Certificates in Certificate Manager are checked to notify of upcoming expirations. Finally, the Flow Logs are scanned for suspicious inbound and outbound network traffic within the VPC network. Additional tools and custom findings can be integrated into the Security and Compliance Center to give one dashboard to view security and compliance related information.”

THIS CONCLUDES THE DEMO STEPS