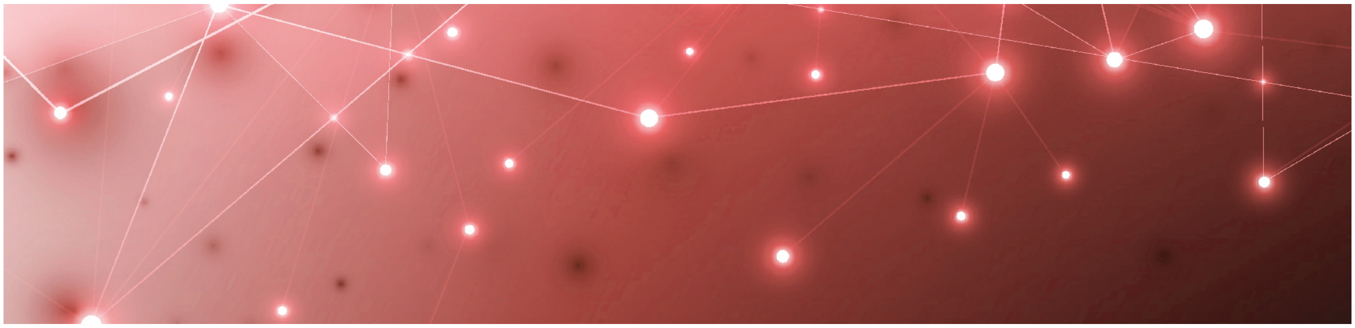

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Martello iQ

USER GUIDE

RELEASE 2.11

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NOTICE

Trademarks

User Guide
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Contents

CHAPTER 1

Introduction

Document Purpose and Intended Audience

This document provides information about how to use Martello iQ to analyze and manage data from your existing monitoring tools, cloud platforms and ITSM systems.

This guide is intended for use by administrators and operators.

Revision History

Document Date	Description
May 13, 2021	Martello iQ User Guide Release 2.11

CHAPTER 2

About Martello iQ

Martello iQ is a powerful IT analytics solution that consolidates the information from your existing monitoring tools, cloud platforms and ITSM systems into a single system. It pulls alerts and health state information from your various monitoring systems and unifies them in groups, known as boards. Consolidating the information from various monitoring tools allows you to see the overall health status of a system quickly. For example, you can use Martello iQ to view the status of computers monitored by SCOM, network objects monitored by SolarWinds, and Linux computers monitored by Nagios—all in one board. Martello iQ handles the IT alerts and Elasticsearch allows you to search and analyze data quickly.

Martello iQ also integrates with your ITSM system. When it pulls information from your monitoring systems, it also retrieves any alerts. Because the integrations are bi-directional, you can use Martello iQ to create an incident based on several alerts and then close those alerts once the incident has been resolved.

CHAPTER 3

About the Interface

The Martello iQ main menu allows you to manage boards, services, and administrative settings.

The following sections describe each of the menu options and the functionality they provide:

- "Home" on page 9
- "Boards" on page 20
- "Services Overview" on page 20
- "Settings" on page 21

Home

The Home page provides access to the following tabs, which allow you to view and search health information, as well as the raw properties that Martello iQ collects from the source systems.

- "Computers" on page 9
- "Alerts" on page 12
- "Incidents" on page 14
- "Groups and Services" on page 14
- "Components" on page 17
- "Saved Searches" on page 19

In addition, the Home page provides a Search bar that allows you to search the details or raw properties of each object, alert, and incident.

Computers

The Computers tab provides information about the properties of the computers that are monitored by your systems. Each monitoring system or ITSM that Martello iQ connects with uses its own terminology. For consistency, Martello iQ normalizes the monitored objects into data types. On the Computers tab, the data types are:

- Computer
- Virtual machine

You can filter the computers and virtual machines using the following options:

- **Types**—Filter based on the type of object: computers or virtual machines.
- **Integration Types**—Filter based on the type of integration, such as Operations Manager or PRTG. This option lists all the supported integration types, not only the ones that you have configured.
- **Integrations**—Filter based on the names of the integrations that you have configured.
- **Hide Correlated Components**—This option is selected by default. When it is selected, the page displays the consolidated components but does not show the components that are correlated with them. Deselect this option to show all components.
- **Consolidation Rules**—Filter the list based on consolidation rules that apply to this type of component.
- **State**—Filter based on the health status of the object.

When you select a single computer or virtual machine, the properties panel displays. It shows information about the number of open alerts and incidents, as well as the Mean Time to Resolution (MTTR). It also provides information about uptime and state changes, and it indicates the component type and the source monitoring system. For consolidated components, the component type is indicated by the consolidation icon, and the source system is listed as Consolidation.

The following functions are available from the properties panel of a computer or virtual machine:

Button	Function	Description
	Raw properties	Use the toggle to view raw properties from the original monitoring system.

Button	Function	Description
	More Details	This button opens a page with the details about the selected computer. The page contains the following tabs: • **Properties**—View the raw properties from the original monitoring system. • **Explorer**—View a topology diagram that shows components and relationships. For more information about using the Explorer, see "Use the Components Explorer" on page 59 • **Alerts**—View alerts related to the selected computer or virtual machine. • **Incidents**—View incidents related to the selected computer or virtual machine. • **Boards**—View boards that the computer or virtual machine is a member of. • **Services**—View services that the computer or virtual machine is a member of. • **Correlated Components**—This tab displays for consolidated components only. Use it to view a list of the components that are contained in the consolidated component. You can select a component to view its properties, such as the object type and the source system that is monitoring it.
	Source	This button opens a new browser tab and navigates to the selected object in the console of the integrated source system.
	Action	This button provides access to the following options:

Button	Function	Description
	Incident Automation	This button opens a dialog box that allows you to configure incident automation for the selected consolidated component. This feature is available for consolidated components only, and you must have integrated an ITSM system with Martello iQ to use this feature.
	Pin	This button pins the object to a new or existing board.
	Service	This button pins the object to a service.

If you want to perform an action for multiple objects on this tab, you can use the Ctrl and Shift keys to select them. For example, you can pin multiple objects to a board or service. When you select multiple objects, the following functions are available.

Button	Function	Description
	Action	This button provides access to the following options:
	Pin	This button pins the object to a new or existing board.
	Service	This button pins the object to a service.

Note: Not every monitoring system has the concept of computers. Some monitoring systems identify objects as devices, which may be computers. Martello iQ shows objects that may be considered computers or virtual machines on this tab; however, if a computer does not display on this tab, it may be due to the way that the original monitoring system has identified it. If you are unable to find a computer on this tab, you can find it in the Components tab, which contains all objects.

Alerts

The Alerts tab displays all of the alerts from the different monitoring systems. The most recent alerts are shown at the top of the tab by default, but you can change the sort order.

You can filter alerts using the following options:

- **Integration Types**—Filter based on the type of integration, such as Operations Manager or PRTG. This option lists all the supported integration types, not only the ones that you have configured.
- **Integrations**—Filter based on the names of the integrations that you have configured.
- **Severity**—Filter based on the severity of the alert.
- **Active**—Show active alerts only.
- **Time**—Filter based on the length of time since the alert was raised or updated.

You can use the Ctrl and Shift keys to select multiple alerts on this tab. When you select a single alert, the properties panel displays.

The following functions are available on the properties panel:

Button	Function	Description
	Details	Use the toggle to display messages related to the Alert.
	Editable Fields	This toggle displays for SCOM integrations. Use it to view editable fields in SCOM.
	Raw Properties	Use the toggle to view details from the original monitoring system.
	Related Components	This button opens a new page that lists details about components in Martello iQ that are related to this alert.
	Source	This button opens a new browser tab and navigates to the selected object in the console of the integrated source system.
	Resolve	Resolve the alert in the source system.
	Link an Incident	Link the alert to an existing incident.
	Acknowledge an Alert	Acknowledge an alert in the source system.
	Create an Incident	Link the alert to a new incident.

Incidents

The Incidents tab displays incidents that Martello iQ has retrieved from your integrated systems.

You can filter incidents using the following options:

- **Integration Types**—Filter based on the type of integration, such as ServiceNow or Ivanti. This option lists all the supported integration types, not only the ones that you have configured.
- **Integrations**—Filter based on the names of the integrations that you have configured.
- **Active**—Show active incidents only.
- **Created by Martello iQ**—Show only those incidents created by Martello iQ.
- **Time**—Filter based on the length of time since the alert was raised or updated.

When you select a single incident, the properties panel displays.

The following functions are available from the properties panel:

Button	Function	Description
	Details	Use the toggle to view details about the incident, such as a description of the problem and who the incident is assigned to for resolution.
	Raw Properties	Use the toggle to view additional details collected from the source system.
	More Details	Use the button to view the incident page with raw properties and related alerts.
	Related Components	This button opens a new page that lists details about components in Martello iQ that are related to this incident.
	Source	This button opens a new browser tab and navigates to the selected object in the console of the integrated source system.

Groups and Services

The Groups & Services tab displays all groups and services from your monitoring systems. This tab allows you to view the group health as well as the health of the objects within the group.

You can filter groups and services using the following options:

- **Types**—Filter based on the type of object: groups or services.

- **Integration Types**—Filter based on the type of integration, such as Operations Manager or PRTG. This option lists all the supported integration types, not only the ones that you have configured.
- **Integrations**—Filter based on the names of the integrations that you have configured.
- **Hide Correlated Components**—This option is selected by default. When it is selected, the page displays the consolidated components but does not show the components that are correlated with them. Deselect this option to show all components.
- **Consolidation Rules**—Filter the list based on consolidation rules that apply to this type of component.
- **State**—Filter based on the health status of the object.

You can use the Ctrl and Shift keys to select multiple objects on this tab. When you select a single group or service, the properties panel displays.

The following functions are available when you select an object:

Button	Function	Description
	Raw properties	Use the toggle to view raw properties from the original monitoring system.

Button	Function	Description
	More Details	This button opens the Component page. The page contains the following tabs: • **Properties**—View the raw properties from the original monitoring system. • **Members**—View members of the group or service. You can click the name of the member to view more information about that object. • **Explorer**—View a topology diagram that shows components and relationships. You can use the diagram to explore the group or service to see the hierarchy of objects. For more information about using the Explorer, see "Use the Groups and Services Explorer" on page 58. • **Alerts**—View alerts related to the selected group or service. • **Incidents**—View incidents related to the selected group or service. • **Boards**—View boards that the group or service is a member of. • **Services**—View services that the group or service is a member of. • **Correlated Components**—This tab displays for consolidated components only. Use it to view a list of the groups and services that are included in the consolidated component. You can select a component to view its properties, such as the object type and the source system that is monitoring it.
	Action	This button provides access to the following options:
	Import a Live Maps Service	Import a Live Maps service from Microsoft System Center Operations Manager (SCOM).

Button	Function	Description
	Create a Synced Board	A synched board displays the members of the group as they are configured in the source system. When members are added or removed in the source system, those changes are reflected on the board in Martello iQ. The health state of the board is the same as the health state of the original group in the source system.
	Pin	This button pins the object to a new or existing board.
	Service	This button pins the object to a service.

Components

The Components tab displays all monitored components.

You can filter the components using the following options:

- **Types**—Filter based on the type of object. Each monitoring system uses its own terminology. For consistency, Martello iQ normalizes the monitored components into types, such as computers, websites, databases, and more. You can filter the components on this tab based on any of the available types.
- **Integration Types**—Filter based on the type of integration, such as Operations Manager or PRTG. This option lists all the supported integration types, not only the ones that you have configured.
- **Integrations**—Filter based on the names of the integrations that you have configured.
- **Hide Correlated Components**—This option is selected by default. When it is selected, the page displays the consolidated components but does not show the components that are correlated with them. Deselect this option to show all components.
- **Consolidation Rules**—Filter the list based on consolidation rules that apply to this type of component.
- **State**—Filter based on the health status of the component.

You can use the Ctrl and Shift keys to select multiple components on this tab. When you select a single component, the properties panel displays.

The following functions are available when you select a component:

Button	Function	Description
	Raw properties	Use the toggle to view raw properties from the original monitoring system.
	More Details	This button opens a page with details about the component. It contains the following tabs: • **Properties**—View the raw properties from the original monitoring system. • **Alerts**—View alerts related to the selected component. • **Explorer**—View a topology diagram that shows components and relationships. You can use the diagram to explore the group or service to see the hierarchy of objects. For more information about using the Explorer, see "Use the Components Explorer" on page 59. • **Incidents**—View incidents related to the selected component. • **Boards**—View boards that the component is a member of. • **Services**—View services that the component is a member of. • **Correlated Components**—This tab displays for consolidated components only. Use it to view a list of the components that are contained in the consolidated component. You can select a component to view its properties, such as the object type and the source system that is monitoring it.
	Action	This button provides access to the following options:

Button	Function	Description
	Incident Automation	This button opens a dialog box that allows you to configure incident automation for the selected computer. You must have integrated an ITSM system with Martello iQ to use this feature.
	Pin	This button pins the object to a new or existing board.
	Service	This button pins the object to a service.

Search Bar

The Search bar allows you to search the details or raw properties of each object, alert, and incident in Elasticsearch. When you use the Search bar, it returns results for each of the tabs on the page. As long as the search term remains in the Search bar, the tabs continue to display information based on that search term. Martello iQ highlights areas that match the search in yellow. If a search result is returned but not highlighted, that typically indicates that the searched item was found in the details or raw properties.

Unless you use a wild card, the search looks for the exact words that you enter. For example, searching SQL will not return SQLSVR01. For information about using search strings, see "Search Operators" on page 35

On the right side of the Search bar, there are three options:

- **Save**—Save a search.
- **Load**—Load a saved search.
- **X**—Clear the search.

Saved Searches

The Saved Searches tab allows you to customize searches and save your preferences. You can set filters for the search and select the tab where you want the results to display.

The Saved Searches tab includes several pre-defined searches:

- Contains 'SQL'
- Critical Alerts in Last 24h
- Critical Computers
- Critical Databases
- Critical Websites
- Exceptions and Errors
- Incidents Created in Last 24h

The saved search displays the number of objects, alerts, incidents or components that match your search criteria. You can click the information on the saved search to go directly to the data tab for that item.

Boards

Boards are a way to group objects from one or more monitoring systems. You can also create boards nested within boards. This allows you to model your IT environment in the way that best fits your needs. For example, you can create boards for locations, applications, or business units, and then divide these boards into sub-boards.

Services Overview

Use this page to add and monitor critical business services, such as your company's email, a licensing system, or a software build process. The page displays information about how the service impacts the following aspects of your business:

- End-User
- Application
- Infrastructure
- Supplier Services (other services that impact the current service)

For each business service that you configure, you can set service level objectives (SLO). The Services Overview page displays the percentage of availability over the period of time that you define in the SLO settings for the business service. An icon at the end of each row provides access to the following menu items:

- Configure—Provides the following options:
  - Service Details—View configuration details for the business service.
  - Service Level Objectives—Set the SLA goal, and the time period and business hours to use in SLA calculations.
  - Supplier Services—View or select supplier services that relate to the selected business service.
  - Incident Automation—If you have integrated an ITSM system with Martello iQ, you can automate the creation of incidents.
  - Notifications—Configure a notification that is triggered when a business service is shared, when its state changes, or when there is a new alert or new incident.
  - Manual State—Manually change the current state of the business service.
- Maintenance Mode—Schedule maintenance, or put the business service in maintenance mode immediately.
- Share—Make the business service available to users in a specific role.
- Remove—Delete the business service.

Settings

The Settings option on the main menu is available to Martello iQ administrators only.

The Settings page contains the following tabs:

- "Integrations" on page 21
- "Roles" on page 21
- "Agents" on page 21
- "General Settings" on page 21
- "Licensing" on page 22
- "Storage" on page 22
- "Consolidation Rules" on page 22

Integrations

Martello iQ can connect to several different monitoring and ITSM systems. You can connect to one or more of these systems on the Integrations tab. The integrations are categorized according to whether they are data systems or action systems.

Roles

Roles are used to control the access that a user has to boards, integrations, and business services. Users added to the Administrators role are considered Martello iQ administrators and have automatic access to all data, as well as application settings. The user who installed Martello iQ is added to the administrator's role by default.

You can add any user or group from Active Directory to a Martello iQ role.

Agents

There is always one active agent, which is called the local agent. For complex implementations of Martello iQ, you may require multiple remote agents to overcome network boundaries. For example, if you want to use a monitoring system installed on-premises and Martello iQ is running in Amazon Web Services, you can use the remote agent to communicate with Martello iQ in the cloud without any open inbound ports on-premises.

Use the Agents tab to download additional agents.

General Settings

Use this tab to configure the following options:

- **Scope Components By Boards and Services**—When a user accesses a board or service, the board or service may contain components from an integration that the user does not have permission to access. Administrators can configure whether users can view details about all components on a board, regardless of the source, or administrators can choose to limit the user to viewing data from specific integrations.

- **Saved Searches Visibility**—Administrators can control who can see and use saved searches. Use the toggle on this page to choose one of the following options:
  - Admin only
  - Everyone
- **Downtime**—Administrators can define which states are considered as downtime for the board SLA calculations.
- **Consent Messages**—Administrators can create messages that display in a banner at the bottom of the page. Users must accept the message to remove the banner. Administrators can multiple messages and can configure them to display for specific user roles.
- **Google Analytics**—Administrators can enable or disable Google Analytics. When this option is enabled, Google Analytics collects metrics that help us understand how you use the Martello iQ interface. We use this information to improve future versions of the product.

Licensing

Use this tab to view and update licenses.

Storage

Use this tab to control the number of days that Martello iQ retains data from its integrated source systems.

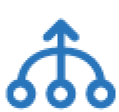
You can also use this tab to see the amount of data stored for each integration.

Consolidation Rules

Consolidation rules allow you to link together components that have common properties. This feature is helpful if you have components that are monitored by multiple integrations. Martello iQ can consolidate the components based on rules that you configure. It then displays them as a single component.

For example, if you have a computer that is monitored by SCOM, it may also be inventoried in the ServiceNow CMDB and have security-log data that is monitored by Splunk. Martello iQ models all of this data in a single object that you can monitor and manage.

The consolidated component displays as a separate component in Martello iQ. The interface lists Consolidation as the source system for these components because they are created by Martello iQ rather than retrieved from another monitoring system. The following icon is used throughout the interface to indicate a consolidated component:



The Consolidation Rules page is available when you log in as an administrator. It allows you to add rules that determine how components are consolidated. A table displays the all of the rules, and contains the following information:

- **Component Type**—When you create a consolidation rule, you assign the component type. When components are monitored by multiple source systems, they may be categorized as different types of components by each source system. When you consolidate the components in Martello iQ, you can choose how you want to categorize the new consolidated component. The following options are available:
    - Object
    - Group
    - Service
    - Computer
    - Database
    - Website
    - Virtual Machine

  The column displays the consolidation rules that are configured for each type of component.
- **Consolidated Components**—This column shows the number of consolidated components that Martello iQ has created for each component type.
- **Correlated Components**—This column shows the number of components that are associated with consolidated components.
- **Noise Reduction**—This column shows the reduction in the number of components to manage, as a result of consolidating them into a single component. The noise reduction is measured as a percentage.

Help

The Help page provides version information and contains the following tabs:

- **Resources**—This tab provides links to the Technical Documentation, the Knowledge Base, and the Online User Group.
- **Support**—This tab provides a link to open a support ticket and provides information about how to contact technical support.
- **About**—This tab provides a high-level description of Martello iQ.

CHAPTER 4

Getting Started

Use the information in the following sections to set up Martello iQ and to learn about the ways you can use it to manage data from your monitoring systems and ITSM tools.

- "Initial Setup" on page 24
- "Examples" on page 24

Initial Setup

Complete the following tasks:

- "Add a License Key" on page 69
- "Add an Integration" on page 32

After the integration is complete and data is populated in Martello iQ, review the examples to learn how you can use the product to organize data and manage alerts and incidents. See "Examples" on page 24.

Examples

Martello iQ can organize data from source systems in two ways: boards and business services.

Boards are a way of organizing groups of objects from one or more monitoring systems.

Business services provide a more structured presentation than boards. They organize data according to perspectives that show how the health and performance of components impacts different aspects of your business. The perspectives are:

- End User
- Application
- Infrastructure
- Supplier Services

The following sections provide an example of each method:

Section	Description
"Example 1: Create a Board" on page 25	Create boards when you want to customize how you want to model data.
"Example 2: Create a Business Service" on page 27	Create business services when you want to view your data from the perspectives defined by ITIL.

Example 1: Create a Board

Boards allow you to group together objects that are monitored by different systems. For example, a board can contain a Linux computer monitored by PRTG, virtual machines monitored by SolarWinds, and a Microsoft Windows computer monitored by Microsoft SCOM.

You can create boards that meet your specific business needs. If you have multiple sites or multiple data centers, you can a create board for each location. You can also create boards for different types of users.

This example demonstrates how to create a board that allows an operator to monitor a data center. Use the task list below to navigate through the example.

Task List

- "Add a New Board" on page 25
- "Pin Objects to the Board" on page 26
- "Add Rules" on page 26
- "Add Exclusions" on page 27
- "Share the Board" on page 27
- "Related Tasks" on page 27

Add a New Board

This example shows how to create a board for a data center.

1. From the main menu, select **Boards**.
2. Click the **Add** icon at the bottom right corner.
3. Enter a name for the board: `Data Center Ottawa`.
4. Choose the way that you want the health status reported for the board:
   - Worst-case
   - Best-case
   - Percentage-based
     If you chose percentage-based, enter a percentage.
5. Click **Create**.

Pin Objects to the Board

In this example, the data center contains Windows Server Groups. The procedure below describes how to add one or more Windows Server Groups to the data center board.

1. Click the main menu and select **Home**.
2. Search for an object and select it on the related tab. In this example, enter `Windows` in the Search bar and press Enter.
3. When the results display, click the **Groups & Services** tab.
4. Filter the list by clicking the **Types** drop-down and selecting **Groups**. Select a Windows group. You can use the Ctrl and Shift keys to select multiple groups to pin to the board.
5. Click the **Action** button and then click the **Pin** button.
6. Select the board from the dialog box. In this example, you would select the Ottawa Data Center board.

Add Rules

So far, this example has shown how to manually pin objects to your board. This procedure demonstrates how to dynamically add objects to your board using rules.

You can use a saved search as a rule. To create a new rule, simply create a saved search and pin it to your board. This procedure shows you how to create a rule that searches for Microsoft System Center Operations Manager (SCOM) computers in the same IP address range and adds them to your board.

Note: Saved searches that contain alerts or incidents cannot be used as rules.

1. From the main menu, select **Home**.
2. Enter a search term in the **Search bar** and press Enter to begin the search. In this example, enter the following search string: `source.scom.IP\ Address:192.168.178.*`
3. Filter the search results. For this example, select Computers and Virtual Machines.
4. Click **Save** and enter the following information in the dialog box:
   - Name your search item.
   - Target Tabs—Select **Computers**.
5. Click **Save & Add Rule**.
6. Select **Add Rule to Board**.
7. Select the Data Center Ottawa board and click **Pin It**.
   A status message indicates that the rule has been added. Click the link to navigate to the board.

Add Exclusions

After you add rules to your board, you can refine the rule using exclusions.

The previous procedure demonstrated how to use rules to automatically add computers within the same IP address range to a board. However, the rule may add some computers that you want to exclude from the board. For example, some computers may be test machines that you do not want to display on a production board. This procedure shows you how to exclude objects from the rule and prevent them from being automatically added to the board.

1. Review the board where you added the rule. The **Members** tab displays by default. If the search results included an object that you do not want included on this board, click the icon in the upper corner of the object and click **Remove**.
2. Click **OK** to confirm the removal.
   The object is moved to the Exclusions tab.
3. Optional. If you want to reinstate the object, click the **Exclusions** tab.
4. Click the **Action** button and click **Remove Exclusion**.
5. Click **OK** to confirm the change.

Share the Board

In this example, the data center board is shared with operators.

1. Open the board that you created.
2. Click the **Action** button and click the **Share** icon.
3. Select a group of users to share the service with; in this example, choose Operators.
4. Click **Share**.

Related Tasks

This example demonstrated how to configure and share a board. After you configure a board, you can perform any of the following tasks:

- "Configure Automatic Notifications" on page 54
- "Configure Incident Automation" on page 61
- "Schedule Maintenance Mode for a Board or Business Service" on page 52

Example 2: Create a Business Service

Martello iQ can organize data from source systems in two ways: boards and business services. Business services provide a more structured presentation than boards, and they allow you to view perspectives that focus on how the health and performance of components impacts different aspects of your business. Business services allow you to view information from the following perspectives:

- End User
- Application

- Infrastructure
- Supplier Services (other services that impact the current service)

The Service Overview page also shows the uptime for each business service.

Create business services when you want to view your data from multiple perspectives. Organizing network objects according to multiple perspectives helps provide targeted, relevant information. For example, a server may host several applications and therefore run agents that are not relevant to your business service. If you are monitoring the entire server and an unrelated agent triggers a critical issue, you receive alerts even though your application is in a healthy state. Creating business services allows you to focus on the components that are relevant to a critical service and to receive alerts that impact that service specifically.

This example demonstrates how to create a business service for Skype for Business. Use the task list below to navigate through the example.

Task List

- "Add a New Business Service" on page 28
- "Configure SLO for a Business Service" on page 28
- "Pin objects to the Business Service" on page 29
- "Add Rules" on page 29
- "Add Exclusions" on page 30
- "Share the Business Service" on page 30
- "Related Tasks" on page 31

Add a New Business Service

This example shows you how to configure a business service for Skype for Business.

1. From the main menu, select **Services Overview.**
2. Click the **Add** button.
3. Enter a name and description for your business service. For this example, enter `Skype for Business`.
4. Choose the perspectives that you want to use to calculate the health status for the business service:
   - End user
   - Application
   - Infrastructure

   The health status is reported based on a worst-state basis for the perspective. For this example, the choice depends on whether Skype for Business is hosted in the Cloud, or whether it is installed on-premises. For a cloud instance, you can monitor the SLA from the end user perspective only. If it is installed on-premises, you can use all of the perspectives.
5. Click **Create**.

Configure SLO for a Business Service

Set service level objectives (SLO) for each business service that you configure.

1. From the main menu, select **Services Overview**.
2. Select a business service.
   The business service opens.
3. Click the **Action** button and then click the **Configure SLO Settings** button.
4. Enter the following information in the dialog box:
   - **Set an SLA Goal**—Enter the percentage of availability that the service requires. You can enter a percentage with up to three decimal places.
   - **Set a time period**—Select whether you want the SLA calculated over a day, a week, or a month.
   - **Set a time zone**—Select the time zone to use for calculations.
   - **Toggle**—Use the toggle to control whether any downtime that occurs in a 24-hour period impacts your SLA calculations, or whether only downtime that occurs during business hours is used in your SLA calculations. If you choose to use business hours only, define the hours and days.
5. Click **Save**.

Pin objects to the Business Service

You can pin objects to your business service from a saved search or from the search results displayed on the tabs on the Home page. This example shows how to search and pin items related to Skype for Business.

1. In the **Search** bar, enter a search term to locate objects that are related to the end-user perspective. For example:
   - Enter `ping` to find a ping test provided by an APM, such as Nagios; select the item.
2. Click the **Action** button and click the **Pin to Service** icon.
3. Select the business service from the list; use the search feature if needed.
4. Select the **End User** perspective and click **Pin It**.
5. Use the **Search** bar to locate objects that are related to other perspectives and pin them to the business service. For example:
   - **End-User** perspective—Monitor the login form on the Skype for Business web portal, using synthetic transactions from System Center Operations Manager.
   - **Application** perspective—Search for Active Directory (AD) domains and AD domain controllers.
   - **Infrastructure** perspective—Search for the computer where Active Directory is installed.
   - **Supplier Services** perspective—Search for the DNS server.

Add Rules

So far, this example has shown how to manually pin objects to your business service. This procedure demonstrates how to dynamically add objects to your business service using rules.

You can use a saved search as a rule. To create a new rule, simply create a saved search and pin it to your business service.

> **Note:** Saved searches that contain alerts or incidents cannot be used as rules.

From the main menu, select **Home**.

1. Enter a search term in the **Search bar** and press Enter to begin the search. In this example, enter `source.scom.FullName:Microsoft.LS.2015.Service.ApplicationServer` in the Search bar.
2. Click **Save** and enter the following information in the dialog box:
   - Name your search item—In this example, name the search "Application Servers."
   - Target Tabs—Select one the following tab: Computers.
3. Click **Save & Add Rule**.
4. Select **Add Rule to Service**.
5. Select the Skype for Business service and the Application perspective.
6. Click **Pin It**.
   A status message indicates that the rule has been added. Click the link to navigate to the business service.

Add Exclusions

After you add rules to your business service, you can refine the rule using exclusions.

In this example, the rule returns a list of application servers. Assume that one of the application servers always has a critical status, which is a known issue and does not affect the actual Skype for Business service. In this case, you can exclude that single application server.

1. Review the perspective where you added the rule. If the search results included an object that you do not want included in this business service, click the icon in the upper corner of the object and click **Remove**.
2. Click **OK** to confirm the removal.
   The object is moved to the Exclusions tab.
3. Optional. If you want to reinstate the object, click the **Exclusions** tab.
4. Click the **Action** button and click **Remove Exclusion**.
5. Click **OK** to confirm the change.

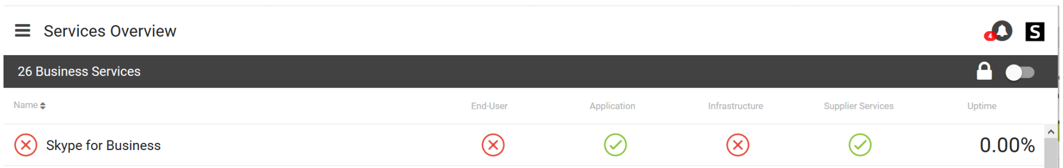
Share the Business Service

You can share a business service with users in specific roles. For example, you can share a business service with support desk operators.

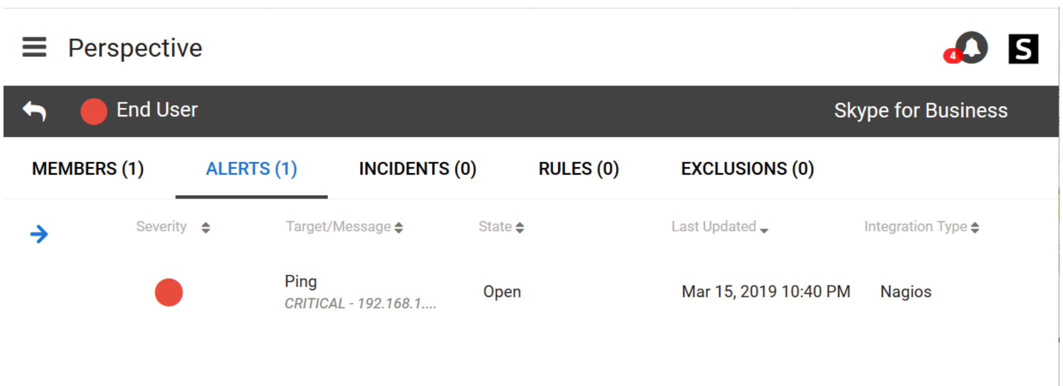
1. Open the service that you created.

2. Click the **Action** button and click the **Share** icon.
3. Select a group of users to share the service with.
4. Click **Share**.

In this example, the service is shared with operators. Operators can see immediately that Skype for Business users are impacted and that the problem is related to the infrastructure:



When the operators view the Alerts for the End-User perspective, they see that the ping has failed because the host is unresponsive:



Related Tasks

This example demonstrated how to configure and share a business service. After you configure a business service, you can perform any of the following tasks:

- "Configure Automatic Notifications" on page 54
- "Configure Incident Automation" on page 61
- "Schedule Maintenance Mode for a Board or Business Service" on page 52

CHAPTER 5

Configuring Integrations

Use the information in this section to complete the following tasks:

Task	Description
"Add an Integration" on page 32	Integrate your monitoring systems with Martello iQ.
"Test an Integration" on page 33	Ensure that monitoring systems are communicating successfully with Martello iQ.
"Download a Remote Agent" on page 33	Optional. Martello iQ has a default remote agent; however, complex integrations may require additional remote agents.
"Import Live Maps Services" on page 33	Optional. If you use Savision Live Maps, you can import the business services you have created into Martello iQ. You can also import pre-defined services from Live Maps.

Add an Integration

You must be a Martello iQ administrator to perform this procedure. The user permissions in the source system are also important, because those permissions determine the access that Martello iQ has to the source system. If the user in the source system does not have sufficient permissions, some data may not be visible in Martello iQ and some functionality—such as the ability to close an alert—may not work.

Before you Begin

Ensure that you have information about how to access the monitoring system. The information required varies depending on the monitoring system. For example, you may need user names and passwords, tenant IDs or client IDs, or URLs where the monitoring system is installed. For a complete list of the information needed, see the *Martello iQ Installation and Upgrade Guide*.

1. From the main menu, select **Settings**.
   The Integrations tab displays the currently installed integrations.

2. Click the **Add** button at the bottom of the page.
3. Select a monitoring system from the dialog box.
4. Enter the information required for the monitoring system.
5. Click **Save**.

Test an Integration

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
   The Integrations tab displays the currently installed integrations.
2. Select an integration and click the **Test Integration** button.
   A banner displays at the top of the screen to indicate the status.

Download a Remote Agent

A remote agent is needed when it is not possible to connect to the source system from the Martello iQ web server due to network boundaries. For example, you may need a remote agent because of firewall restrictions or because you authenticate users against a remote Active Directory.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
2. Click the **Agents** tab.
3. Click the **Download Agent** button.
   A dialog box displays.
4. Click **Save** to download the AgentInstaller.zip file.
5. Unzip the file on the Windows server where you want to install the remote agent and execute the command file.
   The command file installs the remote agent using the correct Martello iQ web server settings and registers with Martello iQ automatically.

Import Live Maps Services

1. From the main menu, select **Home**.
2. Select the **Groups & Services** tab.
3. Select a service from a SCOM deployment that has Live Maps installed. The service should have the following raw property: Is Live Maps Service Imported.
4. Click the **Action** button.
5. Click the **Import Live Maps Service** icon.
6. Select the service you want to import and click **OK**.

CHAPTER 6

Organizing Monitored Data

Use the information in this section to complete the following tasks:

Task	Description
"Perform a Search" on page 35	Search for objects, alerts, or incidents, and save your searches.
"Consolidate Components" on page 39	Consolidate components so that they display as a single object when you view them in Martello iQ.
"Create a Board" on page 41	Create boards when you want to group data from one or more monitoring systems.
"Create Sub-Boards" on page 42	Optional. Create sub-boards when you want to add child boards to a parent board.
"Create a Synced Board" on page 42	Optional. Create a board that is synced with the source system. The members of the board and the health state are determined by the source system and are not configurable in Martello iQ.
"Create a Business Service" on page 43	Optional. Create business services when you want to monitor critical services, such as email or order entry, according to the following categories: end user, application, infrastructure, or supplier services.
"Configure SLO for a Business Service" on page 44	Optional. For each business service that you configure, you can set service level objectives (SLO). You can set the SLA goal, as well as the time period and business hours to use in SLA calculations. If you do not want to set SLOs for each business service, you can use the default settings provided by Martello iQ.

Task	Description
"Pin Objects to a Board or Business Service" on page 45	Add components to an existing board or business service.
"Configure Rules" on page 46	Optional. Use rules to dynamically add objects to a board or business service.
"Configure Exclusions" on page 47	Optional. Use exclusions in conjunction with rules to refine the scope of objects that are dynamically added to a board or business service.

Perform a Search

The Search bar allows you to search the details or raw properties of each component, alert, and incident. When you enter a search term, Martello iQ returns results on all tabs, not only on the currently selected tab. If you have any filters enabled on the tabs, the search results are filtered as well. As long as the search term remains in the Search bar, the tabs continue to display information based on that search term.

Martello iQ highlights areas that match the search in yellow. If a search result is returned but no data is highlighted in the main window, that typically indicates that the searched item was found in the details or raw properties. You can view the raw data by selecting the component and clicking the **More Details** button.

Before you Begin

- Click **X** to clear any existing searches.
- Review "Search Operators" on page 35

1. From the main menu, select **Home**.
2. Choose one of the following options:
    - Enter a search term in the **Search** bar and press **Enter** to begin the search.
    - Click **Load** and select a **Saved Search** from the list.
3. If you entered a search term:
    - Click **Save** if you use this search term frequently.
    - Click **X** to clear the search.

Search Operators

You can use any of the following terms to include or exclude results from your search:

- AND
- NOT

- OR
- TO

Martello iQ performs a text search. Some characters are reserved. You cannot search for the following characters unless they are in quotes as part of a search:

```
+ − = && || > < ! ( ) { } [ ] ^ ” ~ * ? : \ /
```

Searches are not case-sensitive, unless you are searching on field name. For example, you may want to search on alerts where the Priority field is set to High. In the case of field names, you must use the proper case and formatting to target a field. You can verify the proper name and case of a field by hovering your mouse over the field name. If the field name has a space in it, such as “IP Address,” you must enter an escape character (\) in the search to represent the space.

Because the field names are related to the source system, you need to specify the integration type in your search. The format is:

```
source.<integration>. <field name>: <search term>
```

For example, to search for SCOM alerts with a Priority of High, use the following search string: `source.scom.Priority:HIGH`

The following table lists the names to use when you specify an integration in your search:

Integration	Search Term
Amazon Web Services	aws Example: `source.aws.RegionDisplayName:"US West"`
AppDynamics	AppDynamics Example: `source.AppDynamics.entryPointType:ASP_DOTNET`
BMC Remedy	BMCRemedy `source.BMCRemedy.ClassId:BMC_COMPUTERSYSTEM`
CA Application Performance Management	caapm Example: `source.caapm.manModCurrStatus:1`
Cherwell	cherwell Example: `source.cherwell.next\ Status:Retired`

Integration	Search Term
Cisco Prime	ciscoPrime Example: `source.ciscoPrime.ipAddress:192.168.31.45`
Icinga2	nagios Example: `source.nagios.display_name:HTTP`
Ivanti Service Management	ivanti Example: `source.ivanti.Status:Production`
Jira Software	jira Example: `source.jira.fields.Issue\ Type.name:"Bug"`
Martello Gizmo	gizmo Example: `source.Gizmo.appAlias:Teams`
Microsoft Azure	azure Example: `source.azure.state:stopped`
Microsoft Azure Insights	azureMonitor Example: `source.azureMonitor.Name:"High CPU"`
Microsoft Office 365	Office365 Example: `source.Office365.FeatureName:Access`
Microsoft System Center Operations Manager (SCOM)	scom Example: `source.scom.Display\ Name:test`

Integration	Search Term
Nagios Core and Xi	nagios Example: `source.nagios.display_name:HTTP`
PRTG Network Monitor	prtg Example: `source.prtg.Host:*.savision.int`
ServiceNow	serviceNow Example: `source.serviceNow.number:INC0010021`
Solar Winds	solarWinds Example: `source.solarWinds.IPAddress:192.168.1.100`
Splunk	Splunk Example: `source.Splunk.Name:"First Alert"`
TopDesk	topdesk Example: `source.topdesk.number:"M1812 178"`
VMware vCenter	vMwarevCenter Example: `source.vMwarevCenter.hostId:"host-24"`
WhatsUp Gold	whatsupgold Example: `source.whatsupgold.DeviceId:28`
Zabbix	zabbix Example: `source.zabbix.host:VMhost01`

Examples

The following table provides examples of how to use search terms:

Search Term	Results	Notes
sql	ms-sql SQL-svr01	Shows only those results where sql is a word by itself. For example, this search does not find: sqlsvr01 or Devsql
sql	ms-sql sqlsrv01	The asterisk (*) searches for results where the letters sql or SQL exist in any raw property field.
dc?3	dc03 dc13 DCX3	The question mark (?) is a single character wild card.
[192.168.1.101 TO 192.168.1.120]	Any IP address in the specified range.	This syntax is a way to find a range of components.
[dc02 TO dc10]	Any object within the specified range, such as DC05, DC06.	You can search on ranges that are not numerical.
iq AND "Hard Disk"	Returns any results that contain both search terms.	If both terms are not found, then the search will not return any results.
iq OR "Hard Disk"	Returns results that contain either term.	—
iq AND ("Hard Disk" OR NTFS)	Returns results that have IQ and either Hard Disk or NTFS	You can use parentheses ( ) to group certain parts of you query together.

Consolidate Components

Use this procedure to configure consolidation rules. Consolidation rules are a way to link together components that have common properties. This feature is helpful if you have components that are monitored by multiple source systems. Martello iQ can consolidate the components based on the rules you configure, and then display them as a single component.

When you consolidate components, Martello iQ creates a new component that represents all of the components it contains. Because the consolidated component is created within Martello iQ, the interface lists Consolidation as the source system for the component. You assign a component type to the new consolidated component.

Martello iQ can search object properties provided by the source systems and identify components to consolidate based on based on an exact match, a partial match, or on whole words. You need to specify the type of match to use when you configure a consolidation rule.

- **Exact match**—Use an exact match when the properties of the objects have the same values in the source system. For example, if both of the source systems have an IP Address field that stores one IPv4 address, the fields will have an exact match.
- **Partial match**—Use a partial match when the source systems store information differently. For example, if one source system has an IP Address field that stores one IPv4 address, but another source system has an IP Address field that stores both an IPv4 and an IPv6 address, the fileds will have a partial match.
- **Whole word match**—Use a whole word match when a partial match returns too many results. For example, a rule based on matching a property such as "Computer 1" will include results such as Computer-1, Computer-10, and Computer-11. In cases where a partial match does not provide the correct results, use a whole word match.

1. From the main menu, select **Settings** and click the **Consolidation Rules** tab.
2. Click the expansion icon next to the type of component that you want to make.
3. Click **Add Rule**.
4. To define the rule, enter the following information:

Field	Description
Rule Name	Enter a name for the rule
Description	Enter a description of the rule.
Field Mappings	
Integration Type	Select the source system from the drop-down list.
Field Name	Select the field in the source system to base the consolidation on.
Match Type	When Martello iQ searches the specified field, it can match components based on an exact match, partial match, or whole words. Select the type of matching to use.

5. Optional. Click **Add A Property** to add another rule.
6. If you create multiple rules, click the arrows next to the integration type to assign a higher or lower priority to the field mapping.

When Martello iQ consolidates components, it begins with the first mapping in the list. Any components that are consolidated as a result of the first mapping are not considered when Martello iQ applies the next mapping in the list.

7. Click **Save**.
8. Click the **Action** button and then click the **Start Consolidation** icon.
9. Click **Ok**.

Create a Board

Boards are a way of organizing groups of objects from one or more monitoring systems. Use the following procedures to create a new board. For suggestions about how to use boards, see "Example 1: Create a Board" on page 25.

There are two ways to create boards. Choose one of the following options:

- "Create a New Board" on page 41 and then search for objects and pin them at a later time.
- Search for an object and "Create a Board from Search Results" on page 42.

> **Tip:**
> When you create a board, Martello iQ creates a URL for it. The URL is based on how you are connected to Martello iQ at the time that you create the board. For example, if you connect to Martello iQ through localhost, the URL is based on the localhost address. We recommend that when you create a new board, you access Martello iQ in the same way that all users access typically the application. This practice ensures that the URL of the board is accessible to other users when it is shared. For example, if you configure automatic notifications, the board URL is included in the message sent to recipients.

Create a New Board

1. From the main menu, select **Boards**.
2. Click the **Add** icon at the bottom right corner.
3. Enter a name for the board.
4. Choose the way that you want the health status reported for the board:
    - Worst-case
    - Best-case
    - Percentage-based
      If you chose percentage-based, enter a percentage.
5. Click **Create**.

Create a Board from Search Results

1. Click the main menu and select **Home**.
2. Select a saved search or search for an object and select it on the related tab.
3. Click the **Action** button and then click the **Pin** button.
4. In the dialog box, click **Create a Board**.
5. Enter a name for the board.
6. Choose the way that you want the health status reported for the board:
   - Worst-case
   - Best-case
   - Percentage-based
     If you chose percentage-based, enter a percentage.
7. Click **Create**.

Create Sub-Boards

1. From the main menu, select **Boards**.
2. Find the board that you want to assign as sub-board and click the icon in the top corner.
3. Click **Actions** and select **Pin**.
4. Select a board from the list. If needed, use the **Filter** field to search for a board.

Create a Synced Board

Create a board that is synced with the source system. The members of the board and the health state are determined by the source system and are not configurable in Martello iQ. If members are added or deleted in the source system, or if the health state changes in the source system, the board in Martello iQ automatically updates.

1. Click the main menu and select **Home**.
2. Select a saved search or search for an object and select it on the **Groups & Services** tab.
3. Click the **Action** button and then click the button to create a synced board.
   A dialog box prompts you to confirm that you want to create a board from the selected group.
4. Click **OK**.
5. Optional. To view the source system, click .

Tip: To create multiple synced boards at once, use the Ctrl or Shift keys when you select groups or services. Martello iQ creates one synced board for each group or service that you selected.

Create a Business Service

Business services are a way of organizing data about critical business services from one or more monitoring systems. Business services allow you to view information about critical business services, such as email or order entry, according to the following categories: end user, application, infrastructure, or supplier services.

Use the following procedures to create a new business service. For suggestions about how to use business services, see "Example 2: Create a Business Service" on page 27.

There are two ways to create business services. Choose one of the following options:

- "Create a New Business Service" on page 43 and then search for objects and pin them at a later time.
- Search for an object and "Create a Business Service from Search Results" on page 44.

Tip:

When you create a business service, Martello iQ creates a URL for it. The URL is based on how you are connected to Martello iQ at the time that you create the business service. For example, if you connect to Martello iQ through localhost, the URL is based on the localhost address. We recommend that when you create a new board, you access Martello iQ in the same way that all users access typically the application. This practice ensures that the URL of the business service is accessible to other users when it is shared. For example, if you configure automatic notifications, the business service URL is included in the message sent to recipients.

Create a New Business Service

1. From the main menu, select **Services Overview**.
2. Click the **Add** button.
3. Enter a name and description for the business service.
4. Choose the perspective that you want to use to calculate the health status for the business service:
   - End user
   - Application
   - Infrastructure

   The health status is reported based on a worst-state basis for the perspective.
5. Click **Create**.

Create a Business Service from Search Results

1. Click the main menu and select **Home**.
2. Select a saved search or search for an object and select it on the related tab.
3. Click the **Action** button and then click the **Pin to Service** button.
4. In the dialog box, select the **Create a Service** tab.
5. Select a perspective for the object: End User, Application, or Infrastructure.
6. Enter a name and description for the business service.
7. Choose the perspective that you want to use to calculate the health status for the business service:
    - End user
    - Application
    - Infrastructure

    The health status is reported based on a worst-state basis for the perspective.
8. Click **Create**.

> **Tip:** You can edit the name, description, and health roll-up setting for a business service from the **Services Overview** page. Click the icon at the end of the entry for the business service and select **Details**.

Configure SLO for a Business Service

Set service level objectives (SLO) for each business service that you configure. This procedure explains how to set the SLA goal, as well as the time period and business hours to use in SLA calculations. To configure the health states that you want to include in downtime calculations, see "Configure SLA Reporting" on page 63.

If you do not want to set the SLO for each business service, you can use the default settings provided by Martello iQ. The default settings are as followings:

- The SLA goal is 99%.
- The week begins on the first day of the week configured for your server, which varies according to your location. For example, in some countries, the first day of the week is Monday, while in other countries it is Sunday.
- The time zone is based on the local time of the web server.
- The time period for the calculation is one month.
- Business hours and days are disabled; availability is calculated over a 24-hour period, 7 days a week.

If you edit the SLO settings after you initially configure them, or change the components included in the business service, the SLA calculations are updated for the time period since the change was made. Calculations are not made retroactively.

1. From the main menu, select **Services Overview**.

2. Select a business service.
   The business service opens.
3. Click the **Action** button and then click the **Configure SLO Settings** button.
4. Enter the following information in the dialog box:
   - **Set an SLA Goal**—Enter the percentage of availability that the service requires. You can enter a percentage with up to three decimal places.
   - **Set a time period**—Select whether you want the SLA calculated over a day, a week, or a month.
   - **Set a time zone**—Select the time zone to use for calculations.
   - **Toggle**—Use the toggle to control whether any downtime that occurs in a 24-hour period impacts your SLA calculations, or whether only downtime that occurs during business hours is used in your SLA calculations. If you choose to use business hours only, define the hours and days.
5. Click **Save**.

> **Tip:** You can also set the service level objectives without opening the business service. From the **Services Overview** page, click the icon at the end of the entry for the business service and select **Configure SLO Settings**.

Pin Objects to a Board or Business Service

Use this procedure to add objects to an existing board or business service.

1. Click the main menu and select **Home**.
2. Search for an object. When the results display, select one of the following tabs: **Computers**, **Groups & Services**, or **Components**.
3. Select an object in the list. If needed, filter the list using the options on the left side of the page.
4. Click the **Action** button and choose one of the following options:
   - To pin the object to a board, click the **Pin** button and select a board from the list.
   - To pin the object to a business service, click the **Service** button and select a business service from the list. Choose a perspective and click **Pin It**.

> **Tip:**
> You can add a supplier service to a business service without performing a search. Choose one of the following options:
> - From the main menu, select **Services Overview**. Click the icon at the end of the entry for the business service and

select **Supplier Services**. In the dialog box, select the supplier services that relate to the selected business service.

- From the **Services Overview** page, open the business service and click the **Action** button. Click **Edit Supplier Services** and select the supplier services that relate to the selected business service.

Configure Rules

Use this procedure to dynamically add objects to a board or business service using rules. You can use any saved search as a rule.

There are two ways to create a rule. Choose one of the following options:

- "Create a New Rule" on page 46
- "Create a Rule from an Existing Saved Search" on page 47

Create a New Rule

1. From the main menu, select **Home**.
2. Enter a search term in the **Search bar** and press Enter to begin the search.
3. Filter the search results if necessary.
4. Click **Save** and enter the following information in the dialog box:
   - Name your search.
   - Select the target tab for the object: Computers, Groups & Services, or Components.
5. Click **Save & Add Rule**.
6. Choose one of the following options:
   - To apply this rule to a board, select **Add Rule to Board** and select a board from the list.
   - To apply this rule to a business service, select **Add Rule to Service** and select a service from the list, then choose a perspective.
7. Click **Pin It**.
   A status message indicates that the rule has been added. Click the link to navigate to the board or service.

Create a Rule from an Existing Saved Search

1. From the main menu, select **Home**.
2. Select the **Saved Searches** tab and select a saved search.
3. Click the icon in the top corner of the search and select one of the following options:
    - Click **Add Rule to Service** and select a service from the list. Choose a perspective and click **Pin It**.
    - Click **Add Rule to Board** and select a board from the list.

   A status message indicates that the rule has been added. Click the link to navigate to the board or service.

Configure Exclusions

You can configure exclusions after you add a rule to a board or business service. Exclusions are a way of refining rules.

1. Review the board or the perspective in a business service where you added a rule. If the search results included an object that you do not want, click the icon in the upper corner of the object and click **Remove**.
2. Click **OK** to confirm the removal.
   The object is moved to the Exclusions tab.
3. Optional. If you want to reinstate the object, click the **Exclusions** tab.
4. Click the **Action** button and click **Remove Exclusion**.
5. Click **OK** to confirm the change.

CHAPTER 7

Configuring Views

Use the information in this section to complete the following tasks:

Task	Description
"Select the Data View" on page 48	Select how you want to view boards.
"View Data in NOC Mode" on page 49	Display boards or business services in a NOC view, where the status colour fills the entire board.
"Configure the Layout" on page 49	Change the order of the columns on pages that display data in tabular format.

Select the Data View

You can configure how you want the boards to display information.

1. From the main menu, select **Boards**.
2. From the drop-down list on the upper right side of the page, select one of the following options:
    - **Pie chart**—Displays the health status of individual objects within the board, shown in pie chart form.
    - **Heat map**—In non-NOC mode, displays tiles of colour that indicate the health status of individual objects within the board, as well as the overall health status of the board. In NOC mode, the background colour indicates the health status of the board as a whole.
    - **Alerts**—Displays the total number of alerts for all the objects, plus the Mean Time To Resolution (MTTR).
    - **Incidents**—Displays the total number of incidents related to the components plus the MTTR.
    - **Uptime**—Displays the uptime percentage of the board, calculated over the last 7 days.

View Data in NOC Mode

By default, each board or business service shows the health roll-up of the board, as well as the health of the underlying objects. Use this procedure when you prefer a NOC view, where the status colour fills the entire board.

1. From the main menu, select one of the following options:
    - **Boards**
    - **Services Overview**
2. Use the toggle on the upper right side of the page to select one of the following options:
    - **NOC mode**—The colour that indicates the overall health status displays as the background of the board or business service.
    - **Non-NOC mode**—Non-NOC mode shows the overall health status of the board, as well as the health state of the individual components pinned to the board. This view displays up to 100 individual objects. If the board has more than 100 objects pinned to it, Martello iQ displays 100 tiles that represent the health states as a percentage. For example, if 30% of the objects are in a critical state, the view shows 30 tiles as critical.

Configure the Layout

Use this procedure to change the order of the columns on pages where the data is displayed in table form. Examples include:

- The Services Overview page.
- Tabs such as Computers, Alerts, Incidents, Groups & Services, and Components, or Rules and Exclusions.

1. Select the page or tab for which you want to configure display options.
2. Click the Sort icon.
3. Click the arrows to change the order of the columns.
4. Click **Save**.

CHAPTER 8

Managing Health and Performance Data

Use the information in this section to complete the following tasks:

Task	Description
"Change the State of a Board or Service" on page 51	Manually change the state of a board.
"Place a Board or Business Service in Maintenance Mode" on page 51	Place a board or business service in maintenance mode when you want to temporarily suppress state changes, notifications and incident automation steps.
"Share a Board or Business Service" on page 53	Give a specified group of users access to a board or business service.
"Locate Critical Issues" on page 53	Find critical issues on boards or groups and services.
"Configure Automatic Notifications" on page 54	Configure a notification that is triggered when a board or business service is shared, when its state changes, or when there is a new alert or new incident.
"View and Save SLA Availability Data" on page 55	View SLA performance data for a business service and generate a PDF report.
"Exclude Component Outages from SLA Calculations" on page 56	Select one or more components that contributed to downtime and exclude them from SLA calculations.
"Filter Boards" on page 56	Filter the view to easily find boards on the Boards page.
"Search for Boards" on page 57	Enter search criteria to quickly find boards.

Task	Description
"Use the Board Explorer" on page 57	View a topology diagram that allows you to view components and explore related components.
"Use the Groups and Services Explorer" on page 58	View a topology diagram that allows you to view groups and services and their related components.
"Use the Components Explorer" on page 59	View a topology diagram that allows you to view components and their relationships.

Change the State of a Board or Service

You can manually change the state of a board.

1. From the main menu, select one of the following options:
    - **Boards**
    - **Services Overview**
2. Select a board or a business service.
3. Click the **Action** button and then click the **Manual State** button.
   A dialog box displays.
4. Select a state from the drop-down list and click **Update**.

Tip: You can also change the state of a board without opening the board. From the **Boards** page, click the icon in the top corner of the board and select **Edit > Manual State**. Select a state from the drop-down list and click **Update**.

Place a Board or Business Service in Maintenance Mode

Place a board or business service in maintenance mode when you want to temporarily suppress state changes, notifications and incident automation steps.

Choose one of the following options:

- "Place a Board or Business Service in Maintenance Mode Immediately" on page 51
- "Schedule Maintenance Mode for a Board or Business Service" on page 52

Place a Board or Business Service in Maintenance Mode Immediately

1. From the main menu, select one of the following options:

- **Boards**
- **Services Overview**

2. Select a board or a business service.
3. Click the **Action** button and then click the **Start Maintenance Now** button.
   A banner indicates that the board was placed in maintenance mode.

> **Tip:** You can also place a board in maintenance mode without opening the board. From the **Boards** page, click the icon in the top corner of the board that you want to place in maintenance mode and select **Maintenance Mode > Start Maintenance Now**.

Schedule Maintenance Mode for a Board or Business Service

1. From the main menu, select one of the following options:
   - **Boards**
   - **Services Overview**
2. Select a board or a business service.
3. Click the **Action** button and then click the **Schedule Maintenance Mode** button.
   A dialog box displays.
4. To schedule a maintenance period, enter the following information:

Field	Description
Recurrence Interval	Choose one of the following: • Once • Daily • Weekly • Monthly
Duration	
Start Time	Enter a start time
End Time	Choose one of the following options: • Set a duration (in minutes) for the maintenance period. • Enter a specific time for the maintenance period to end.
Schedule Start and Expiration	
Timezone	Select a timezone from the drop-down list.

Field	Description
Effective Date	Select a start date for the maintenance period.
Expiry Date	Select an end date for the maintenance period. For Daily, Weekly, or Monthly schedules only.

5. Click **Save**.

> **Tip:** You can disable a scheduled maintenance period by using the toggle at the top of the Maintenance Mode dialog box.

Share a Board or Business Service

Use this procedure when you want to give a specified group of users access to a board or a business service.

1. From the main menu, select one of the following options:
   - **Boards**
   - **Services Overview**
2. Select a board or a business service.
3. Click the **Action** button and then click the **Share** icon.
   A dialog box displays a list of roles.
4. Select a role (a group of users) to share the board with.
5. Click **Share**.

> **Tip:** You can also share a board without opening the board. From the **Boards** page, click the icon in the top corner of the board select **Actions > Share.**. Select a role from the list and click **Share**.

Locate Critical Issues

You can use the Explorer to locate critical issues in your network.

1. Choose one of the following options:
   - From the main menu, select **Boards**. Open a board and click the **Explorer** tab.
   - From the main menu, select **Home**. Click **Groups & Services** and select a group or service. Click the **More Details** icon and then select the **Explorer** tab.

  - From the main menu, select **Home**. Click **Components** and select an object. Click the **More Details** icon and then select the **Explorer** tab.

2. Click the **Action** button and click the **Critical Issue Locator** icon.
   The diagram expands, if needed, to show critical issues. Click on the item to display detailed information.

Configure Automatic Notifications

You can configure a notification that is triggered when a board or business service is shared, when its state changes, or when there is a new alert or new incident.

You can send notifications to email recipients or to a PowerShell script. The option to send notifications to a PowerShell script gives you the flexibility to configure a range of actions in response to the notification. For example, you can send notifications to a PowerShell script that generates an SMS message. If you choose to send notifications to a PowerShell script, Martello iQ sends the following data:

- [String] $notificationtrigger
- [String] $destinationemails
- [String] $destinationphone
- [String] $destinationaccount
- [String] $userrole
- [Int32] $userroleid
- [String] $affecteditemkey
- [String] $affecteditemname
- [String] $affecteditemtype
- [String] $message
- [String] $title
- [String] $severity
- [DateTime] $timestamp
- [String] $details
- [String] $url

Before you Begin

- You must have added an integration for email notifications or for PowerShell to use this feature.
- If you are configuring a notification to trigger a PowerShell script, ensure that you copy the script to the **Martello iQ > PSScripts** folder.

1. From the main menu, select one of the following options:
   - **Boards**
   - **Services Overview**
2. Select a board or a business service.
3. Click the **Action** button and then click the **Notification Settings** button.
   A dialog box displays.

4. Select an option from the **Trigger** drop-down list.
5. Select an option from the **Action** drop-down list:
    - Email Notification
    - PowerShell script—Select a PowerShell script from the drop-down menu.
6. Click **+** to add the notification.
7. Select the **Recipient List** tab.
   The option to Notify All Recipients is enabled by default.
8. To send notifications to specific recipients, click the slider to disable the default and select recipients from the list.
   If you want to send notifications by email and no address is configured for the selected user, see "Add an Email Address for a User" on page 67.
9. Click **Save**.

> **Tip:** You can also configure automatic notifications for a board without opening the board. From the **Boards** page, click the icon in the top corner of the board and select **Edit > Notifications**. Configure the options as described in the procedure above.

View and Save SLA Availability Data

Use this procedure to view SLA availability data for a business service and generate a PDF report. If you edited the SLO settings after you initially configure them, or changed the components in the business service, ensure that you reload the page to see updated data.

1. From the main menu, select **Services Overview**.
2. Select a business service and click the **SLA** tab.
   The SLA tab displays the following information:
    - **Summary**—Shows the following information about the current SLA status:
        - The availability of the service as a percentage of the SLA goal.
        - The SLA goal.
        - The amount uptime, in hours, during the specified time period.
        - The targeted amount of uptime, in hours, during the specified time period.
    - **Timeline**—shows the daily status for the selected time period. The SLA goal displays as a line, and bar graphs show the daily status in comparison to the SLA goal. You can hover over the bar graph to see hourly information.
    - **Components Impacting SLA**—A list of the components that have impacted the SLA during the period shown in the graph. The list shows the duration of the impact, the name of the component, the perspective, the start and end time of the impact, and the source integration.

3. Optional. To save SLA data in a PDF, click the **Action** icon and click the **PDF** button.

> **Tip:**
> You can also view the SLA report in Kibana. For information about how to import the SLA report into Kibana, see the following Martello Knowledge Base article:
>
> https://support.martellotech.com/knowledgeBase/9870461

Related Topics

- To specify how downtime is calculated, see "Configure SLA Reporting" on page 63.
- To configure service level objectives, see "Configure SLO for a Business Service" on page 44.
- To exclude components and recalculate SLA information, see "Exclude Component Outages from SLA Calculations" on page 56.

Exclude Component Outages from SLA Calculations

Use this procedure to select one or more outages that contributed to downtime and exclude them from SLA calculations. For example, if a component was out of service due to maintenance, but maintenance mode was not scheduled, you can choose that specific outage and exclude it from the SLA calculations.

1. From the main menu, select **Services Overview**.
2. Select a business service and click the **SLA** tab.
3. On the **SLA** tab, review the **Components Impacting SLA** table and locate the entry that you want to exclude.
4. Expand the entry, select the check box, and click **Exclude**.
5. In the dialog box, add a note and click **Save**.
   The SLA calculations update automatically.

Filter Boards

Use this procedure to easily find boards on the Boards page.

1. From the main menu, select **Boards**.
2. Click the arrow on the left side of the screen to display the **Filter** panel.
3. Select the filtering options:
   - **Exclude Child Boards**—When you select the option to exclude child boards, Martello iQ displays top-level boards only. Boards that roll up their health state to a higher-level board are not shown.
   - **Board States**—Filter the list based on the state of the board. Select one or more states.

4. Click **Filter**.

Search for Boards

Use this procedure to quickly search for a board.

1. From the main menu, select **Boards**.
2. Click the **Search** button.
3. Enter the search term.
4. Sort and filter the results by selecting any of the following options:
   - **Sort By**—List the search results according to the board state or the board name.
   - **Board States**—Filter the results based on the state of the board. Select one or more states.
   - **Health Rollup Types**—Filter the results based on the type of health rollup configured for the board. Select one or more rollup types.
   - **Incident Automation**—Filter the results based on whether incident automation is enabled for the board.

Use the Board Explorer

1. From the main menu, select **Boards**.
2. Open a board and click the **Explorer** tab.
3. Perform any of the following tasks:

Button	Function/Task	Description
—	Change the layout	Drag nodes/items to change how they are displayed.
—	View object information	Hover over the item to see its name. Click on the item/object to open a details pane.
	Action	This button provides access to the following options:
	Save	Save all changes that you made to the layout of the topology diagram.
	Get All Nodes	Expand nested boards and display the nodes in a tree diagram.

Button	Function/Task	Description
	Center	Center the diagram on the page.
	Revert Network	Revert the diagram to its default display.
	Critical Issue Locator	Show critical issues. The diagram expands, if needed, to show the location of critical issues.
	Refresh Explorer Data	Refresh the data shown in the diagram.

Use the Groups and Services Explorer

1. From the main menu, select **Home**.
2. Select the **Groups & Services** tab.
3. Select a group or service and click the **More Details** icon.
   A new page displays.
4. Click the **Explorer** tab.
5. Perform any of the following tasks:

Button	Function/Task	Description
—	Change the layout	Drag nodes/items to change how they are displayed.
—	View object information	Hover over the item to see its name. Click on the item/object to open a details pane.
	Action	This button provides access to the following options:
	Save	Save all changes that you made to the layout of the topology diagram.
	Get All Nodes	Expand nested groups and display the nodes in a tree diagram.

Button	Function/Task	Description
	Center	Center the diagram on the page.
	Revert Network	Revert the diagram to its default display.
	Critical Issue Locator	Show critical issues. The diagram expands, if needed, to show the location of critical issues.
	Refresh Explorer Data	Refresh the data shown in the diagram.

Use the Components Explorer

1. From the main menu, select **Home**.
2. Select the **Components** tab.
3. Select a group or service and click the **More Details** icon.
   A new page displays.
4. Click the **Explorer** tab.
5. Perform any of the following tasks:

Button	Function/Task	Description
—	Change the layout	Drag nodes/items to change how they are displayed.
—	View object information	Hover over the item to see its name. Click on the item/object to open a details pane.
	Action	This button provides access to the following options:
	Save	Save all changes that you made to the layout of the topology diagram.
	Get All Nodes	Expand nested groups and display the nodes in a tree diagram.

Button	Function/Task	Description
	Center	Center the diagram on the page.
	Revert Network	Revert the diagram to its default display.
	Critical Issue Locator	Show critical issues. The diagram expands, if needed, to show the location of critical issues.
	Refresh Explorer Data	Refresh the data shown in the diagram.

CHAPTER 9

Managing Incidents and Reporting

Use the information in this section to complete the following tasks:

Task	Description
"Configure Incident Automation" on page 61	If you have integrated an ITSM system with Martello iQ, you can automate the creation of incidents.
"Link an Alert to an Existing Incident" on page 62	Link an alert on a board or business service to an existing incident in your ITSM system.
"Create a New Incident for an Alert" on page 62	Create new incident in your ITSM system for an alert that is reported on a board or business service.
"Resolve an Alert" on page 63	When an alert on a board or business service has been resolved, you can close the incident in your ITSM system from within Martello iQ.
"Configure SLA Reporting" on page 63	Configure the health states that you want to include in downtime calculations.

Configure Incident Automation

Use this procedure to automate the creation of incidents in your ITSM system. When you enable this feature, Martello iQ creates an incident for every new alert raised. If you have existing alerts, you can manually create an incident from the Martello iQ interface; see "Link an Alert to an Existing Incident" on page 62.

1. From the main menu, select one of the following options:
   - **Boards**
   - **Services Overview**
2. Select a board or a business service.
3. Click the **Action** button and then click the **Configure Incident Automation** button.

A dialog box displays.

4. Enter information for the **Incident Creation Properties** and **Incident Workflow Properties**. The information required depends on the ITSM system that is integrated with Martello iQ.
5. By default, Martello iQ resolves all alerts when the incident is closed. You can deselect this option if desired.
6. Click **Create**.

Tip: You can also configure incident automation from a Saved Search or from the Boards page. Click the icon in the upper corner of the Saved Search or Board and select **Configure Incident Automation**. Enter the properties for incident creation and incident workflow.

Link an Alert to an Existing Incident

Use this procedure to link an alert on a board or business service to an existing incident in your ITSM system.

1. From the main menu, perform one of the following steps:
    - Select **Home** and click the **Alerts** tab.
    - Select **Boards**. Open a board and select the **Alerts** tab.
    - Select **Services Overview**. Open a business service and select the **Alerts** tab.
2. From the **Alerts** tab, select an alert.
   A window opens to show the alert details.
3. Click the **Action** button and click the **Link** button.
4. Select an ITSM system as the **Source**.
5. Select an incident from the list. Use the search function if needed.
6. By default, Martello iQ resolves all alerts when the incident is closed. You can deselect this option if desired.
7. Click **Link**.
   A message confirms that the alert has been successfully linked.

Create a New Incident for an Alert

Use this procedure when you want to create new incident in your ITSM system for an alert that is reported on a board or business service.

If you configured incident automation, Martello iQ creates an incident and you do not need to perform this procedure.

1. From the main menu, perform one of the following steps:
    - Select **Home** and click the **Alerts** tab.
    - Select **Boards**. Open a board and select the **Alerts** tab.

- Select **Services Overview**. Open a business service and select the **Alerts** tab.

2. From the **Alerts** tab, select an alert.
   A window opens to show the alert details.
3. Click the **Action** icon and click the **New Incident** button.
4. Select an ITSM system as the **Source**.
5. Complete the fields for the incident. The information required depends on the ITSM system that is integrated with Martello iQ.
6. By default, Martello iQ resolves all alerts when the incident is closed. You can deselect this option if desired.
7. Click **Create**.
   A message confirms that the alert has been successfully linked.

Resolve an Alert

Use this procedure when an alert on a board or business service has been resolved and you want to close the incident in your ITSM system from within Martello iQ.

1. From the main menu, perform one of the following steps:
   - Select **Home** and click the **Alerts** tab.
   - Select **Boards**. Open a board and select the **Alerts** tab.
   - Select **Services Overview**. Open a business service and select the **Alerts** tab.
2. From the **Alerts** tab, select an alert.
   A window opens to show the alert details.
3. Click the **Action** icon and click the **Resolve** button.
   A message displays to confirm that the alert is resolved.

Configure SLA Reporting

Use this procedure to configure the health states that you want to include in downtime calculations. You must be an administrator to perform this procedure.

1. From the main menu, select **Settings > General Settings**.
2. In the **Downtime** section, select the states that you want to include in downtime reporting.

Related Topics

- To configure service level objectives, see "Configure SLO for a Business Service" on page 44.
- To see SLA performance, see "View and Save SLA Availability Data" on page 55.

CHAPTER 10

Managing Users

User permissions in Martello iQ are based on roles. Martello iQ includes two default roles:

- **Administrators**—Users assigned to this role have read-write access to everything in Martello iQ.
- **Operators**—Users assigned to this role have access to any integrations, boards, and business services that the administrator provisions for the role.

Administrators can create additional roles, and can further refine permissions by scoping the extent of information that users can access.

Use the information in this section to complete the following tasks:

Task	Description
"Create a Role" on page 65	Create roles for the different types of users in your organization.
"Assign Users to Roles" on page 65	Assign users to a specific role.
"Add Integrations to a Role" on page 65	Manage the integrations that can be viewed by users in different roles.
"Add Boards or Business Services to a Role" on page 66	Manage how users in different roles can access boards and business services.
"Scope User Access" on page 66	When a user accesses a board or service, the board or service may contain components from an integration that the user does not have permission to access. Configure whether the user can view all information on a board, regardless of the source, or limit the user to viewing data from specified integrations. The scope setting is global, and applies to all roles that are defined in Martello iQ.

Task	Description
"Add an Email Address for a User" on page 67	Add an email address for a user that can be used for notifications.
"Create a Consent Message" on page 67	Create a custom message that displays in a banner at the bottom of the page. Users must accept the message to remove the banner.
"Configure Access to Saved Searches" on page 67	Control who can see and use saved searches.

Create a Role

Use this procedure to create roles for the different types of users in your organization. You can use roles to manage access to data and functionality in Martello iQ.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
2. Click the **Roles** tab.
3. Click the **Add** button.
4. Enter a name for the role and click **Create**.

Assign Users to Roles

Use this procedure to assign users to a specific role.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
2. Click the **Roles** tab.
3. Select a role from the list.
4. Click the **Add** button.
5. Enter the name of the user you want to add and click **Search**.
   A list displays.
6. Select the user and click **Add**.

Add Integrations to a Role

Use this procedure to manage the integrations that can be viewed by users in different roles.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
2. Click the **Roles** tab and select a role.
   A new page displays.
3. Click a role and select **Integrations**.

4. Click the **Add** button.
5. Select an integration from the list and click **Add**.
6. Optional. If you want users in this role to have read-only access to the integration, select the **Read-only** box.

Add Boards or Business Services to a Role

Use this procedure to allow users in a specified role to access boards and business services.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings**.
2. Click the **Roles** tab and select a role.
   A new page displays.
3. Select one of the following options:
   - Boards
   - Business Services
4. Click the **Add** button
5. Select one or more boards or business services from the list and click **Add**.
6. Optional. If you want users in this role to have read-only access to the board or business service, select the **Read-only** box.

Scope User Access

You can refine roles by specifying the extent—or the scope—of information that users can access. The scope setting is global, and applies to all roles that are defined in Martello iQ.

When you configure roles, you specify the integrations and the boards and services that users assigned to the role can access. However, boards and services may display components that are monitored by an integration that is not configured for a specific role. You can use the scope setting to determine whether:

- Users can view details about all components on a board, regardless of the source.
- Users are limited to viewing data from specified integrations.

1. From the main menu, select **Settings > General Settings**.
2. In the **Scope Components By Boards and Services** section, select one of the following options:
   - **Scope by source**—Users are restricted to viewing components from integrations they have access to.
   - **Scope by boards and services**—Users can view details about all components on a board or service, even if the component is from an integration that they do not have access to. Detailed information includes properties, related alerts, and incidents.

Related Topics

- To manage the integrations that users can access, see "Add Integrations to a Role" on page 65.
- To manage the boards and business services that users can access, see "Add Boards or Business Services to a Role" on page 66.

Add an Email Address for a User

Use this procedure to add an email address that can be used to send notifications to a user.

1. From the main menu, select **Settings**.
2. Click the **Roles** tab.
3. Select a role to see a list of users.
4. Click the **Edit** button next to the user name and enter an email address.
5. Click the check mark to save the change.

Create a Consent Message

Use this procedure to add a message that displays in a banner at the bottom of the page. You can customize the message according to user roles. Users must accept the message to remove the banner.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings > General Settings**.
2. In the **Consent Messages** section, click the **Add** button.
3. Configure the following settings:
    - **Title**—Enter a descriptive title for the message.
    - **Roles**—Use the list to select the types of users who will see the message.
    - **Message**—Enter the text of your message.
    - **Disable background**—Select this option to require the user to accept the message before using the interface.
    - **Show every session**—Select this option to show the message every time the user accesses Martello iQ.
4. Click **Save**.

Configure Access to Saved Searches

Use this procedure to control who can see and use saved searches.

You must be an administrator to perform this procedure.

1. From the main menu, select **Settings > General Settings**.

2. In the **Saved Searches Visibility** section, select one of the following options:
    - Admin only
    - Everyone

CHAPTER 11

Managing Licensing

Use the information in this section to complete the following tasks:

Task	Description
"Add a License Key" on page 69	Activate a license.
"View License Information" on page 69	View information about your license, such as the expiry date.

Add a License Key

After you purchase a license, the support team sends you an email with the license key attached in a text file. Use this procedure to activate the license.

1. From the main menu, select **Settings**.
2. Click the **Licensing** tab.
3. Click the **Add License** button.
4. Paste your license key in the dialog box and click **Activate**.

View License Information

Use this procedure to view information about your license, such as:

- The type of license you have.
- The number of integrations supported for that license.
- The number of integrations currently configured.
- The expiry date.

1. From the main menu, select **Settings**.
2. Click the **Licensing** tab.
3. Click on a license to view details.

CHAPTER 12

Managing Storage

Use the information in this section to complete the following tasks:

Task	Description
"Configure Storage Options" on page 70	Configure the length of time that data is stored in Martello iQ.
"View Storage" on page 70	See the amount of storage spaced used by each integration.

Configure Storage Options

Use this procedure to configure the length of time that data is stored in Martello iQ.

1. From the main menu, select **Settings**.
2. Click the **Storage** tab.
3. Under **Storage Retention**, enter the number of days that you want to retain data.
4. Click **Save**.

View Storage

Use this procedure to see the amount of storage spaced used by each integration.

1. From the main menu, select **Settings**.
2. Click the **Storage** tab.
3. Review the list of integrations to see the amount of data stored for each one. The total storage used is shown at the bottom of the list.