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Martello iQ

INSTALLATION AND UPGRADE GUIDE

RELEASE 2.11

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Installation and Upgrade Guide
Release 2.11 - May 13, 2021

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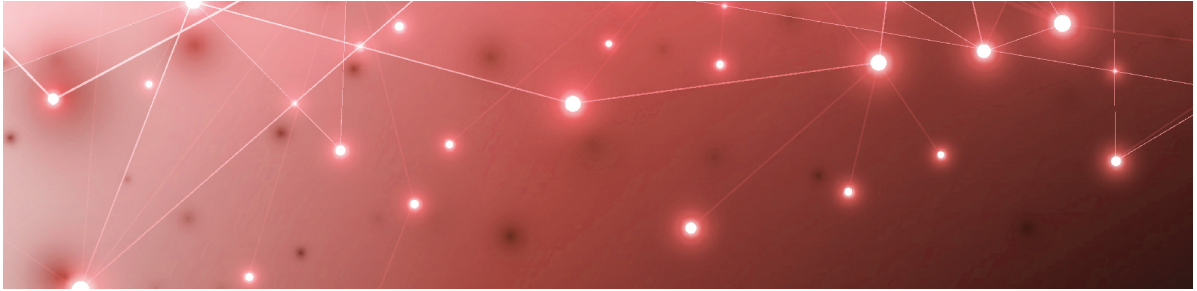
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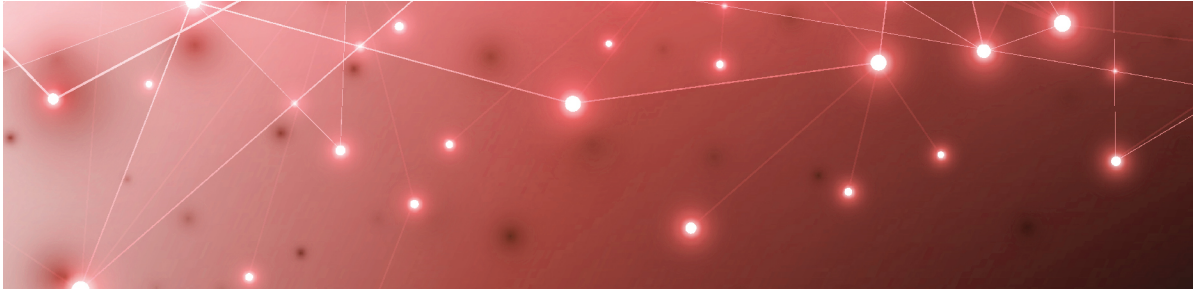
Introduction

Document Purpose and Intended Audience

This guide is intended to help you install Martello iQ or upgrade to Release 2.11. It contains information about the system requirements and the supported integrations.

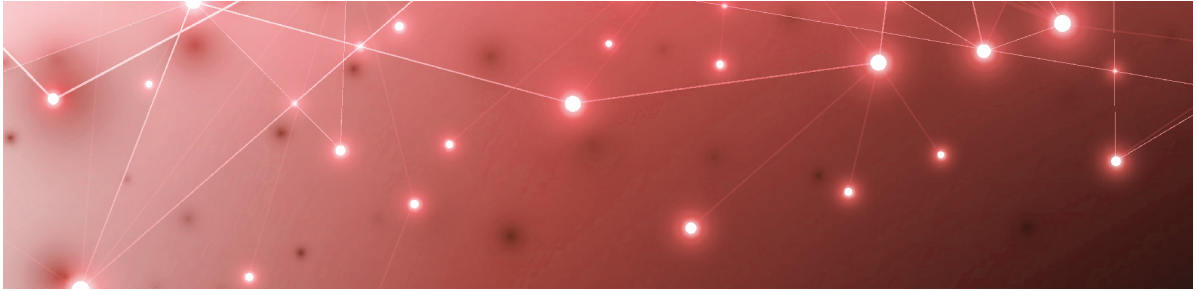
Revision History

Document Date	Description
May 13, 2021	Martello iQ Installation and Upgrade Guide, Release 2.11



About Martello iQ

Martello iQ is a powerful IT Operations Analytics solution that integrates all your existing monitoring tools, cloud platforms and ITSM systems. Martello iQ improves troubleshooting, decreases downtime and makes reporting easier. Using Elasticsearch, it can handle IT alerts in milliseconds, correlating them to help you understand the business impact and automate incident workflows. Straight out of the box, your teams can start to analyze data, streamline alerts and incident workflows and create business value dashboards.



Planning

The following sections provide information about the requirements that your system must meet before you can install or upgrade Martello iQ.

- "Server Requirements" on page 8
- "IIS Roles and Features" on page 9
- "Java" on page 10
- "SQL Database" on page 11
- "Elasticsearch" on page 11
- "Active Directory" on page 12
- "Firewall Access" on page 13
- "Supported Upgrade Paths" on page 14

Server Requirements

You can install Martello iQ on a Windows Server 2012 (or higher) running IIS 8.0 (or higher). We recommend that you use the latest available version of Windows Server. The server must be a member of an Active Directory domain, and Martello iQ must be installed by a Domain user with local Admin rights.

We recommend that you install Martello iQ on its own server. The following table lists the minimum requirements and recommendations for the server; however, the requirements depend on the number and size of your integrations. For deployments with more than 1 million components, please contact our IT-Ops Support Team at itops-support@martellotech.com.

Table 1: Server Requirements and Recommendations

Component	Minimum Requirement	Recommended
Processor	2 GHz or faster 4 cores	2 GHz or faster 6 cores
Memory	16 GB or greater, but not greater than 64 GB	20 GB or greater, but not greater than 64 GB
Available Server Disk Space (Program Files Directory)	10 GB per integration	50 GB or greater per integration
Available SQL Server Disk Space	100 MB	200 MB
.NET Framework	4.6.2 or higher	4.6.2 or higher



Note: To determine how much memory to assign to Elasticsearch, see the formula listed in ["Allocate Memory " on page 19](#).

IIS Roles and Features

The Martello iQ installer can add the roles and features needed for Martello iQ to function properly.

If you want to install the roles and features manually, add the roles and features listed in the table below to your Windows Server:

Table 2: Server Requirements and Recommendations

Web Server Components	Type
Roles	
Common	Default Document Static Content
Health and Diagnostics	HTTP Logging. Optional, but recommended for troubleshooting.
Security	Request Filtering Windows Authentication

Web Server Components	Type
Application Development	.NET Extensibility 4.5
	NET 4.5
	ISAPI Extensions
	ISAPI Filters
	WebSocket Protocol. Optional, but recommended.
Management Tools	IIS Management Console. We recommend that you install this on all IIS servers so you can manage them from a centralized Microsoft Management Console (MMC).
Features	
.NET Framework 4.6 Features	.NET Framework 4.6
	NET 4.5
	WCF Services: <ul style="list-style-type: none"> • HTTP Activation

In addition, ensure that you enable the following:

- Automatic start-up for the Windows Process Activation (WAS).
- World Wide Web Publishing (W3SVC) services.



Note: Martello iQ is installed as a new website with a self-signed certificate running on port 59212. You can change the port using the IIS Management Console under the bindings for the Martello iQ website.

Java

Martello iQ uses Elasticsearch to store the majority of its data. This allows it to retrieve information quickly. Elasticsearch requires Java JRE V8 (at least u131 or higher), Java JDK version 11, or Java JDK version 12.

We recommend that you use Amazon Corretto, a no-cost, production-ready distribution of the OpenJDK supported by Amazon. Amazon Corretto 11 is available at the following link:

<https://docs.aws.amazon.com/corretto/latest/corretto-11-ug/downloads-list.html>

Alternatively, you can download and install Oracle Java SE from the following link:

<https://www.oracle.com/technetwork/java/javase/downloads/index.html>

Please note that you may need a commercial license from Oracle to use Oracle Java SE.



Note: After you install a valid version of Java, ensure that the environment variable "JAVA_HOME" is correctly set.

SQL Database

Martello iQ stores configuration information in a SQL database. We recommend that you use SQL Server 2012 or higher. The server can be a locally running instance or an instance running in a cluster. Martello iQ is also compatible with SQL Express.

If you are evaluating the software or wish to use SQL Express, you can download it using the following link: <https://www.microsoft.com/en-us/download/details.aspx?id=55994>.

During the installation, you are prompted to enter the SQL instance and user credentials that have permission to create a database. This same user account is used as the app pool account for Martello iQ. After the installation is complete, you can adjust the account to a lower privilege level, as long as the account continues to have read/write permissions to the Martello iQ database.



Note: Martello iQ requires the collation of your SQL instance to be case insensitive.

Elasticsearch

Martello iQ requires Elasticsearch version 6.8. If Elasticsearch is not already installed, a single-node deployment is installed with Martello iQ. This single-node deployment is suitable for evaluations; however, as a best practice, we recommend that you deploy an Elasticsearch cluster instead of a single node. You must deploy an Elasticsearch cluster when the number of components from all your integrations exceeds 400,000.

Cluster Sizing

Follow the recommendations in the table below when you deploy Martello iQ with an Elasticsearch cluster.

Number of Components	Number of ES Nodes	iQ/ES Master Node	Data Node 1	Data Node 2
Less than 400,000	3	vCPU: 6 cores RAM: 24 GB	vCPU: 8 cores RAM: 24 GB SSD drives	vCPU: 8 cores RAM: 24 GB SSD drives
400,000 to 1 million	3	vCPU: 8 cores RAM: 32 GB	vCPU: 8 cores RAM: 32 GB SSD drives	vCPU: 8 cores RAM: 32 GB SSD drives
1 million to 3.5 million	3	vCPU: 8 cores RAM: 32 GB	vCPU: 10 cores RAM: 40 GB SSD drives	vCPU: 10 cores RAM: 40 GB SSD drives

For deployments with more than 3.5 million components, please contact our IT-Ops Support Team at itops-support@martellotech.com.

Active Directory

By default, Martello iQ queries the Global Catalog for available domain controllers and works with users and groups from all the domains in the forest.

To allow a user to target a specific Active Directory domain controller, you must edit the `Web.config` file. Add the following lines to the `<appSettings>` section:

```
<add key="ad.dc" value="" />
<add key="ad.user" value="" />
<add key="ad.password" value="" />
<add key="ad.domains" value="*" />

<add key="ad.scan_trusted_domains" value="false" />
<add key="ad.ignore_token_groups" value="true" />
```

If you use default values, the application reverts to the current Active Directory Forest settings.

```
<add key="ad.dc" value="<empty or Domain Controller>" />
```

```
<add key="ad.domains" value="<* or domains to query, separated by comma>" />
```

The parameter `scan_trusted_domains` tells Martello iQ to look for trusted domains in AD and is by default set to `false`.

The parameter `ignore_token_groups` tells Martello iQ to ignore retrieving AD User groups by token groups. It is `true` by default.

These two parameters can make Martello iQ slow if they are enabled.

Firewall Access

By default, Martello iQ is installed as a website running under port 59212. You can change the port number if you wish.

Each integration has its own requirements for access. Your firewall rules for outbound traffic must allow Martello iQ to communicate with the integrated system.

The following table lists the ports used by each monitoring system or ITSM that integrates with Martello iQ. Some systems allow you to customize the port.

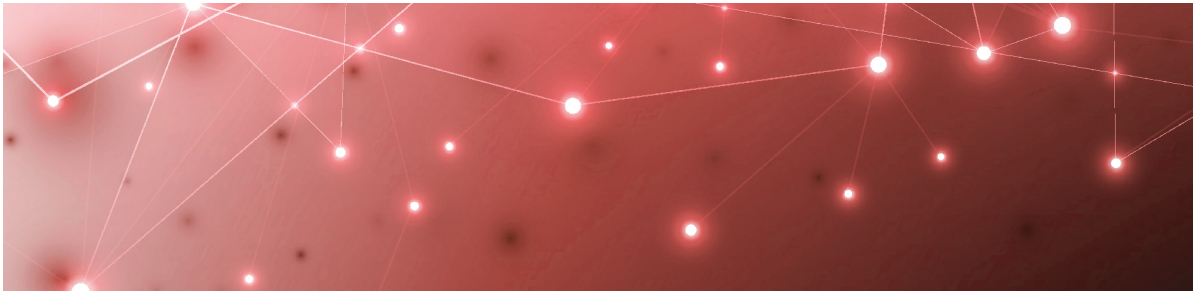
Table 3: Ports Required by Integrated Systems

Monitoring System or ITSM	Port
Amazon Web Services (AWS)	80 and 443
AppDynamics	443
CA APM	8081
Cherwell	80 or 443
Cisco Prime	80 or 443
Derdack Enterprise Alert	80 (default) configurable by the Martello iQ administrator using the following format: <server>:<port>
Ivanti Service Management (Powered by HEAT)	Service Management: 443 Cloud instance: 443 On-Premises: 80 or 443
Jira Software	443 (Default)

Monitoring System or ITSM	Port
Martello Gizmo	On-premises deployments: 80 (default but configurable) and 8080 (required for API access) Cloud-based deployments: 443 and 8443 (required for API access)
Microsoft Azure	443
Microsoft Office 365	443
Nagios Core and XI	443 or configured in the URL
PowerShell	No ports are needed. The PowerShell integration runs on the Martello iQ web server or on the Windows Server that a Martello iQ Remote Agent is running on.
PRTG	Customizable port
ServiceNow	443
SolarWinds	17778
Splunk	8000 and 8089
System Center Operations Manager	5724
TopDesk	443
VMware vCenter	443
WhatsUp Gold	1433 (Default SQL server port)
Zabbix	80 (Default)

Supported Upgrade Paths

You can upgrade to Martello iQ 2.11 from Release 2.9.x or 2.10.

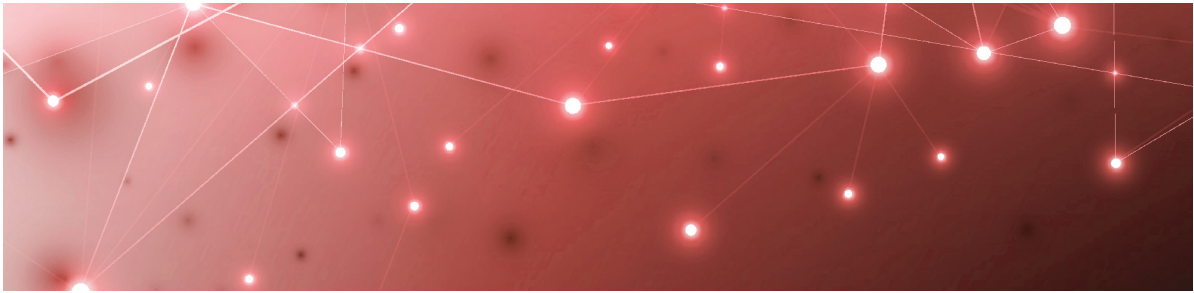


Installation Process

When you install Martello iQ, the process that you follow depends on whether you are deploying Martello iQ with an Elasticsearch cluster, or with a single Elasticsearch node. The following table lists the tasks for each type of deployment. Complete the tasks in the order listed for your deployment.

Task	Description
Deploy Martello iQ with an Elasticsearch Cluster	
"Configure Elasticsearch " on page 17	Configure the Elasticsearch cluster on Windows servers. Complete all of the tasks in this chapter before you install Martello iQ and connect it to the Elasticsearch cluster.
<ul style="list-style-type: none">• "Set up the Cluster" on page 17• "Allocate Memory " on page 19• "Test the Configuration" on page 19• "Configure the Index Template" on page 20	
"Install Martello iQ" on page 22	
"Configure Connections" on page 24	
"Install Remote Agents" on page 25	
"Add a License Key" on page 26	Optional. Install a remote agent only if the source system is not accessible from the Martello iQ web server.
Deploy Martello iQ with a Single Elasticsearch Node	

Task	Description
"Install Martello iQ" on page 22	Install a new instance of Martello iQ.
"Install Remote Agents" on page 25	Optional. Install a remote agent only if the source system is not accessible from the Martello iQ web server.
"Add a License Key" on page 26	Activate the license.
"Allocate Memory " on page 19	Assign additional memory in Elasticsearch.



Configure Elasticsearch

Complete the tasks in the table below to configure an Elasticsearch cluster on Windows servers. Ensure that you complete these tasks before you connect Martello iQ to the Elasticsearch cluster.

If you are using Linux servers, contact our support team for more information.

Task	Description
"Set up the Cluster" on page 17	Install Elasticsearch and configure the names and IP addresses of the nodes.
"Allocate Memory " on page 19	Assign additional memory to Elasticsearch.
"Test the Configuration" on page 19	Verify that you can connect to each node in the cluster, and that the cluster is properly configured.
"Configure the Index Template" on page 20	Create a template for the Elasticsearch index.

**Note:**

In an Elasticsearch cluster, each node must be able to accept connections from the other nodes in the cluster. For this reason, we recommend that you enable authentication using X-Pack, which is pre-installed with Elasticsearch. For information about X-Pack, see the following URL:

<https://www.elastic.co/what-is/open-x-pack>

Set up the Cluster

Use this procedure to install Elasticsearch and configure the names and IP addresses of the nodes. This procedure is for deploying Elasticsearch on

Windows servers. If you are using Linux servers, contact our support team for more information.

Before you Begin

Ensure that you have the following software available:

- **Java or Amazon Corretto**—Elasticsearch requires Java JRE V8 (at least u131 or higher), Java JDK version 11, or Java JDK version 12. Alternatively, you can use Amazon Corretto v11. Corretto is the recommended option and is available at the following URL: <https://docs.aws.amazon.com/corretto/latest/corretto-11-ug/downloads-list.html>
- **Elasticsearch 6.8.1**—The `Elasticsearch-6.8.1.exe` is included in the Martello iQ installer file.
- **Notepad++**—To edit configuration files. You can also use Notepad running in administrator mode.

1. Install Java JRE or Amazon Corretto v11.
2. Run the `Elasticsearch-6.8.1.exe` on each node in the cluster. We recommend that you install the file on the SSD drive because all data will be stored in the installation location.
3. To create the cluster, edit the `Elasticsearch.yml` file on each node in the cluster.

If this is a new installation, the default location of the file is

```
%programfiles%\Elasticsearch\elasticsearch\config\elasticsearch.yml.
```

If this is an upgrade, the default location of the file is

```
%programfiles%\Savision\Elasticsearch\elasticsearch\config\elasticsearch.yml.
```

Configure the following parameters:

- `cluster.name`—This parameter is located in the Cluster section of the file. Assign a name for your cluster that will be used on all nodes.
 - `node.name`—This parameter is located in the Node section of the file. Assign a unique name for each node in the cluster.
 - `discovery.zen.ping.unicast.hosts`—This parameter is located in the Discovery section of the file. Enter the IP address of each of the nodes.
 - `network.host`—This parameter needs to be set to bind the cluster to an external IP address. We recommend using 0.0.0.0 and enabling authentication using X-Pack security.
4. Optional. If you want to integrate more than 64 source systems with Martello iQ, add the following parameter to the `Elasticsearch.yml` file on each node in the cluster, and then restart the service:
 - `http.max_initial_line_length: 128kb`

Next Steps

- ["Allocate Memory " on page 19](#)

Allocate Memory

Use this procedure to assign additional memory to Elasticsearch by changing the heap space values. The heap space controls the amount of memory that Elasticsearch uses.

Before you Begin

Ensure that you have Notepad++ to edit configuration files. You can also use Notepad running in administrator mode.

Whether you are deploying a single node or an Elasticsearch cluster, you need to determine the amount of heap space to assign.

- **Single nodes or data nodes**—Use the following formula:
Total (Total Windows memory - 4 GB for Windows processes) /2. Round down the total. For example, if the server has 40 GB of memory, the calculation is $40 - 4 = 36$. $36 / 2 = 18$. The heap space required is 18 GB.
- **Master node**—No calculation is needed. This node requires 4 GB.

1. Open the `jvm.options` file on each node.
The file is located where you installed Elasticsearch. The default location is:
`Program Files\Elasticsearch\elasticsearch\config\jvm.options`.
2. Edit the following parameters on each node:
 - `XmsXXg`—This parameter represents the initial size of total heap space. For example, the default value is 2 GB and is represented as `# -Xms2g`.
 - `XmxXXg`—This parameter represents the maximum size of total heap space. For example, the default value is 2 GB and is represented as `# -Xmx2g`.

Allocate 4GB to the master node, and allocate the amount you calculated for the data nodes. Ensure that you set the same value for both parameters.
3. After you have changed the values, save the file.
4. From **Services**, stop and restart the Elasticsearch service.

Next Steps

If you are deploying Martello iQ with an Elasticsearch cluster, proceed to ["Test the Configuration" on page 19](#).

If you are deploying Martello iQ with a single Elasticsearch node, no further steps are needed.

Test the Configuration

Use this procedure to verify that you can connect to each node in the cluster, and that the cluster is properly configured.

1. Open a browser and ensure that you can connect to each node in the cluster at `http://<IP_Address>:9200`.

2. Verify that the node name and the cluster name are set, as shown in the following example:

Next Steps

- ["Configure the Index Template" on page 20](#)

Configure the Index Template

Use this procedure to create a template for the Elasticsearch index.

Before you Begin

Ensure that you have Curl to run the scripts in this procedure. It is available at the following URL:

<https://curl.haxx.se/download.html>

1. Open up a Windows administrator command prompt and change the folder to `c:\curl\bin`.
2. Run the following four commands and ensure that after each one, you receive the acknowledgement: `true`.

```
curl -XPUT "localhost:9200/_template/template_async_alerts?pretty" -H "Content-Type: application/json" -d '{"index_patterns":["savisioniq_alerts_*"], "settings":{"index":{"number_of_shards": 5, "number_of_replicas": 1, "translog":{"durability": "async"}}}}'
```

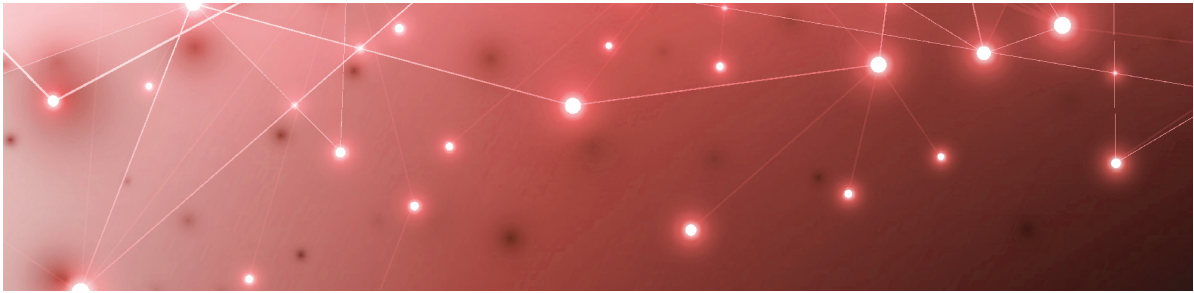
```
curl -XPUT "localhost:9200/_template/template_async_components?pretty" -H "Content-Type: application/json" -d '{"index_patterns":["savisioniq_components_*"], "settings":{"index":{"number_of_shards": 5, "number_of_replicas": 1, "translog":{"durability": "async"}}}}'
```

```
curl -XPUT "localhost:9200/_template/template_async_relationships?pretty" -H "Content-Type: application/json" -d '{"index_patterns":["savisioniq_component_relationships_*"], "settings":{"index":{"number_of_shards": 5, "number_of_replicas": 1, "translog":{"durability": "async"}}}}'
```

```
curl -XPUT "localhost:9200/_template/template_async_incidents?pretty" -H "Content-Type: application/json" -d '{"index_patterns":["savisioniq_incidents_*"], "settings":{"index":{"number_of_shards": 5, "number_of_replicas": 1, "translog":{"durability": "async"}}}}'
```

Next Steps

- ["Install Martello iQ" on page 22](#)



Install or Upgrade Martello iQ

Use the procedures in this section to install or upgrade Martello iQ.

Before you Begin

- Ensure that your system meets all the prerequisites listed in ["Planning " on page 8](#).
- Download the installation package from our website at: <https://www.martellotech.com/downloads>

The installation package contains the following installers:

- Martello iQ-2.11.0.exe
- Martello iQ Agent-2.11.0.exe
- Elasticsearch-6.8.1.exe—This file is included in the installation package but is not required if you are upgrading from Release 2.6.2 or higher.

After you download the installation package, complete the following tasks:

Task	Description
Choose one of the following options: <ul style="list-style-type: none">• "Install Martello iQ" on page 22• "Upgrade Martello iQ" on page 23	Install a new instance of Martello iQ, or upgrade an existing instance.
"Configure Connections" on page 24	Use this procedure only if you are deploying Martello iQ in an Elasticsearch cluster. This procedure sets the connection strings in Martello iQ with the IP addresses of the data nodes in the Elasticsearch cluster.
"Install Remote Agents" on page 25	Optional. Install a remote agent only if the source system is not accessible from the Martello iQ web server.

Task	Description
"Add a License Key" on page 26	Activate the license.

Install Martello iQ

Use the following procedure to install Martello iQ. You must be a domain user with local administration privileges to complete this procedure.

If you are deploying Martello iQ with an Elasticsearch cluster, perform this procedure on the master node.

Before you Begin

Martello iQ needs to access information that is stored on the SQL server. You can use a full SQL server, or you can use SQL Server Express. Before you begin, ensure that you have the server instance and the credentials for the SQL server that is used to store this metadata.

- For an SQL server, the default instance name is <SQL Server host name or IP Address>. The non-default instance name is <SQL Server host name or IP Address>\<instance name>.
- For SQL Server Express, the default instance name is <SQL Server host name or IP Address>\SQLExpress. The non-default instance name is <SQL Server host name or IP Address>\<instance name>.

If you do not have a full SQL server, the Martello iQ installer provides a link to SQL Server Express. If you are using this option, ensure that you record the connection string that SQL Express generates; you will need this connection string during the installation process. The connection string uses the following format: <machine_name>\SQLExpress. Ensure that Windows updates are installed and there are no pending reboots.

1. Right-click the `Martello iQ-2.11.0.exe` file and select **Run As Administrator**.
2. Click **Next** at the welcome screen.
3. Click on **I accept the agreement** and then click **Next**.
4. Optional. Select **Enable Google Analytics** to help us understand how we can improve the application. Click **Next**.
5. On the **Connect to SQL Server** page, enter the SQL server instance as well as the credentials of a user that has rights to create the database.



Note:

If you do not have a SQL Server, you can click on **Install SQL Server Express** to install the express version of SQL Server. This option is useful if you have a small environment or would like to use Martello iQ for demonstration or evaluation purposes. When you choose this option, you can de-select the following features:



SQL Server Replication and SQL Client Connectivity SDK.

6. Click **Verify**. When the credentials are verified, click **Next**.
7. Select the destination where you want to install Martello iQ and click **Next**.
8. Optional. Click on **Create a desktop shortcut** and click **Next**.
9. If Elasticsearch is not already installed on this server, the Elasticsearch installer launches. When the Welcome to the Elasticsearch Setup Wizard displays, click **Next**.
10. Click **I accept the agreement** and click **Next**.
11. Select the destination where you want to install Elasticsearch and click **Next**.
12. When the Elasticsearch installation is complete, click **Finish**.
Martello iQ continues its installation. It verifies the IIS Roles and Features and adds any requirements that are missing.
13. When the installation is complete, click **Finish**.
Martello iQ launches.

Next Steps

To complete the installation, perform the following procedures:

- Optional. Perform the procedure ["Install Remote Agents" on page 25](#) only if the source system is not accessible from the Martello iQ web server.
- To activate the installation, perform the procedure ["Add a License Key" on page 26](#)

Upgrade Martello iQ

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

- ["Understand the Upgrade Process" on page 23](#)
- ["Upgrade the Software" on page 24](#)

Understand the Upgrade Process

The Martello iQ installer supports an in-place upgrade. If you made manual changes to the `web.config` file, those changes are preserved during an in-place upgrade. If you choose to uninstall and reinstall the software, instead of performing an in-place upgrade, any manual changes that you made in the `web.config` file are lost when you install the new version. In addition, uninstalling and reinstalling the software will not remove any data from the SQL server and Elasticsearch data stores.

This release of Martello iQ requires Elasticsearch version 6.8. The Martello iQ installer package contains an installer for Elasticsearch that upgrades an Elasticsearch node from 5.6. or 6.5 to 6.8. If Elasticsearch is installed on the same machine as Martello iQ, the Martello iQ installer executes the Elasticsearch installer

automatically. In the case of an Elasticsearch cluster, you must execute the Elasticsearch installer on all Elasticsearch nodes before you install Martello iQ.

If you are upgrading from release 2.5.x to 2.11, Martello iQ reindexes all savisioniq_* indices in Elasticsearch after the installation. This process can take several hours. During that time, the indices being processed are not accessible and no data from those indices is visible in Martello iQ.

Upgrade the Software

Use the following procedure to upgrade Martello iQ.

Before you Begin

- Backup any PowerShell scripts from the PSScripts folder.
- Stop the app pool. The app pool automatically restarts after the upgrade is complete.
- View the current binding information on the Martello iQ website, making note of ports, SSL certificates, and host name information. You may need to restore some of these settings after the upgrade.

•

1. Right-click the `Martello iQ-2.11.0.exe` file and select **Run As Administrator**.
2. Click **Next** at the welcome screen.
3. Click on **I accept the agreement** and then click **Next**.
4. Optional. Select **Enable Google Analytics** to help us understand how we can improve the application. Click **Next**.
5. Select the destination where you want to install Martello iQ and click **Next**.
6. Optional. Click on **Create a desktop shortcut** and click **Next**.
Martello iQ continues its installation. It verifies the IIS Roles and Features and adds any requirements that are missing.
7. When the installation is complete, click **Finish**.
Martello iQ launches.

Next Steps

To complete the upgrade, perform the following procedures:

- Optional. Perform the procedure ["Install Remote Agents" on page 25](#) only if the source system is not accessible from the Martello iQ web server.
- To activate the installation, perform the procedure ["Add a License Key" on page 26](#)

Configure Connections

Perform this procedure only if you are deploying Martello iQ with an Elasticsearch cluster. This procedure explains how to configure the connections between nodes in the cluster. Perform this procedure on the server where Martello iQ is installed.

Before you Begin

Ensure that you have Notepad++ to edit configuration files. You can also use Notepad running in administrator mode.

1. Open the `web.config` file.
If this is a new installation, the default location for this file is
`%programfiles%/Martello/Martello iQ/web.config`
If this is an upgrade, the default location for this file is
`%programfiles%/Savision/Savision iQ/web.config`
2. In the `connectionStrings` section, edit the "defaultElasticSearchConnection" settings to include the IP addresses of the data nodes as shown in the following example:

```
<connectionStrings>
<clear />
<add name="defaultSqlConnection" connectionString="Data Source=SV-
IQ-LG\SQLEXPRESS; Initial Catalog=Savision_iQ; Integrated
Security=true; Connection Timeout=30"
providerName="System.Data.SqlClient" />
<add name="defaultElasticSearchConnection"
connectionString=
"Nodes=http://10.20.6.31:9200,http://10.20.6.33:9200" />
<add name="elmah" connectionString="data
source=~/Logs/ErrorLog.db" />
</connectionStrings>
```

If you have enabled authentication using X-Pack, ensure that you include the username and password when you edit the connection strings, as shown in the following example:

```
<add name="defaultElasticSearchConnection"
connectionString=
"Nodes=http://10.20.6.31:9200,http://10.20.6.33:9200,
Username=iquser, Password=secret" />
```

Install Remote Agents

When you install Martello iQ, it will install an agent locally on the server. For most installations the local agent is all that is needed. In some cases, you may need to install a remote agent to access certain systems you want Martello iQ to integrate with. For example, you need to install a remote agent when the source system is not accessible from the Martello iQ web server.

The remote agent installs as a Windows service.

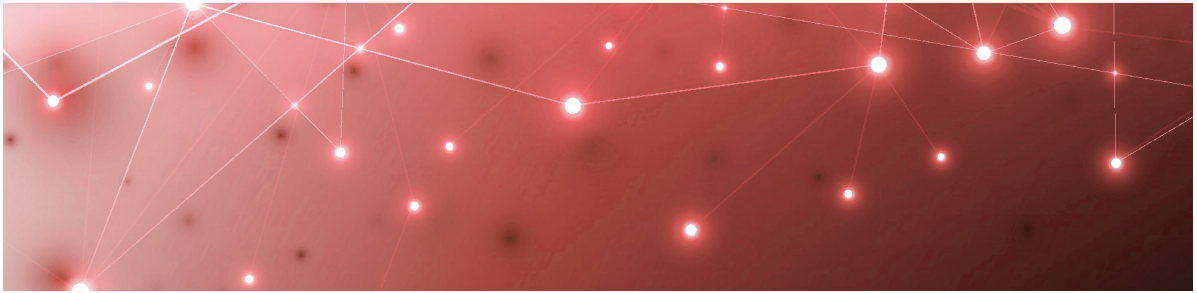
1. From the remote computer, open your browser and log into Martello iQ.
2. From the main menu, select **Settings > Agents**.

3. Click the **Download Agent** icon in the bottom corner of the page.
The AgentInstaller.zip file downloads.
4. Extract the files.
There are two files: Martello iQ Agent-2.11.0.exe and Setup.cmd.
5. Choose one of the following options:
 - Double-click the Setup.cmd to launch the installer with the Martello iQ web server URL pre-populated.
 - Right-click on Martello iQ Agent-2.11.0.exe and select **Run As Administrator**.
6. Click **Next** on the welcome screen.
7. Select **I accept the agreement** and click **Next**.
8. Enter the URL of the Martello iQ web server, as well as your Martello iQ Administrator credentials; click **Verify**.
9. Enter the destination where you want to install the agent and click **Next**.
10. Click **Finish** when the installation is complete.
After a few moments, the remote agent is listed as an available agent in Martello iQ.

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**.



Configure Integrations

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

- Collect the information that you need for your integrations; review ["Required Information" on page 27](#)
- ["Add an Integration" on page 27](#)

Add an Integration

Use this procedure to integrate a monitoring system with Martello iQ.

Before you Begin

- For a list of the information required by each integration, see ["Required Information" on page 27](#).

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**.

Required Information

Before you add an integration, ensure that you have all of the information required to access the monitoring system. The information required varies depending on the monitoring system that you are connecting to.

The user permissions in the source system are 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.

Use the links below to find a list of the information required for each integration.

- "Amazon Web Services " on page 28
- "AppDynamics" on page 29
- "Azure" on page 30
- "Azure Insights" on page 31
- "BMC Remedy IT Service Management Suite" on page 32
- "CA Application Performance Management" on page 33
- "Cherwell" on page 34
- "Cisco Prime" on page 34
- "Derdack Enterprise Alert" on page 35
- "Email Notification" on page 36
- "Google Cloud Platform" on page 36
- "Icinga2" on page 37
- "Ivanti Service Management" on page 38
- "Jira Software" on page 39
- "Martello API" on page 39
- "Martello Gizmo" on page 40
- "Microsoft System Center Operations Manager " on page 41
- "Mitel Performance Analytics" on page 42
- "Nagios Core and Xi" on page 42
- "Office 365" on page 45
- "PowerShell" on page 47
- "PRTG Network Monitor" on page 48
- "ServiceNow" on page 48
- "Solar Winds" on page 49
- "Splunk" on page 50
- "TOPdesk" on page 51
- "VMware vCenter" on page 52
- "WhatsUp Gold" on page 53
- "Zabbix" on page 53

Amazon Web Services

You must configure permissions in Amazon Web Services (AWS) before you can integrate it with Martello iQ. The permissions must be assigned to the account that is used to access Martello iQ. To assign these permissions, Martello provides a permissions policy that you can copy into AWS. For instructions, see the following Knowledge Base article: <https://support.martellotech.com/knowledgeBase/9521026>

Configure the following properties when you integrate AWS with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote Agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Region	The region determines the URL used.
Access Key	—
Secret Access Key	—
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

AppDynamics

Configure the following properties when you integrate AppDynamics with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	Required.
Tenant Account Name	The AppDynamics tenant account name.
Username	A user in the account
Password	The password for the account.
Collect infrastructure events	Select the checkbox to enable.

Property	Description
Collect application events	Select the checkbox to enable.
Collect policy violation events	Select the checkbox to enable.
Calculate service availability health by worse case roll-up	Select the checkbox to enable.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Optional Event Types

In Martello iQ, you can select which events are collected. To simplify the types of events in Martello iQ, we define them into three types:

- Infrastructure
- Application
- Policy violation

You can read more details about event types on the [AppDynamics Events Reference](#) page.

Azure

Before you Begin

Before Martello iQ can integrate with Microsoft Azure, you must complete setup tasks in Azure. For more information, see the following Martello Knowledge Base article:

<https://support.martellotech.com/knowledgeBase/9443244>

Configure the following properties when you integrate Microsoft Azure with Martello iQ:

Property	Description
Azure Environment	Port 443
Tenant ID	Use the information provided in the Tenant ID properties in Microsoft Azure.

Property	Description
Subscription ID	Use the information provided in the enterprise application in Microsoft Azure. If you have multiple subscriptions, you can enter all of the IDs in this field, separated by commas. If you want to integrate all of your Azure subscriptions, you can leave this field blank and Martello iQ will automatically integrate all of the subscriptions that are available in your tenant at the time of the integration.
Client ID	Use the information provided in the application registration in Microsoft Azure.
Client Secret	This information is part of the application registration in Microsoft Azure.
Agents	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Azure Insights

You must complete setup tasks on Azure Insights before you can integrate it with Martello iQ. For more information, see the following Martello Knowledge Base article:

<https://support.martellotech.com/knowledgeBase/9362697>

Configure the following properties when you integrate Azure Monitor with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.

Property	Description
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Tenant ID	Use the information provided in the Tenant ID properties in Azure Monitor.
Client ID	Use the information provided in the application registration in Azure Monitor.
Client Secret Key	This information is part of the application registration in Azure Monitor.
Subscription IDs	Use the information provided in the enterprise application in Azure Monitor. If you have multiple subscriptions, you can enter all of the IDs in this field, separated by commas. If you want to integrate all of your Azure subscriptions, you can leave this field blank and Martello iQ will automatically integrate all of the subscriptions that are available in your tenant at the time of the integration.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

BMC Remedy IT Service Management Suite

Configure the following properties when you integrate BMC Remedy with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL to Mid-Tier Server	The server that facilitates the web console and the REST API.

Property	Description
URL to Action Request (AR) System API	The server that facilitates the web services. You must enable the API in your BMC Remedy environment.
AR Server Name	Find the name using the registry key HKLM\SOFTWARE\Remedy\ARServer\ServerNameList
Dataset ID	The BMC Remedy environment includes multiple datasets. To collect information from more than one dataset, enter the IDs separated by a comma.
Username	A user in the account
Password	The password for the account.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

CA Application Performance Management

Configure the following properties when you integrate CA Application Performance Management (CA AMP) with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server that will communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	The URL to the rest API endpoint. Port 8081 is the default.
Username	A user in the account
Password	The password for the account.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Cherwell

Configure the following properties when you integrate Cherwell with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agents	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	Default ports are 80 for HTTP or 443 HTTPS.
Authentication Mode	OAuth2 authentication is not currently available.
Client ID	Refer to the Cherwell website to obtain a Client ID for Martello iQ. https://cherwellsupport.com/
Username	A user in the account
Password	The password for the account.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.



Note: Due to a limitation of the Cherwell API, the timezone of the Martello iQ Server/Agent must be the same as the Cherwell server.

Cisco Prime

Configure the following properties when you integrate Cisco Prime with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.

Property	Description
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	—
Username	A user in the account
Password	The password for the account.
API Version	Use the highest version available for your Cisco Prime version.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Derdack Enterprise Alert

Configure the following properties when you integrate Derdack Enterprise Alert with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Server	The hostname, FQDN or IP address of the Derdack server.
Use SSL	Optional.
Username	A user in the account.
Password	The password for the user.
Response URL	URL that can be used to navigate from Derdack Enterprise Alert to Martello iQ.

Email Notification

Configure the following properties when you integrate Email Notification with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
From Email	The sending email address.
SMTP Server	The address of the SMTP server.
Port	The port to access the server
Username	The username for the email account.
Password	The password for the account.
Enable SSL	Optional.
Send emails as HTML	Optional.

Google Cloud Platform

You must complete setup tasks on Google Cloud Platform (GCP) before you can integrate it with Martello iQ. For more information, see the following Martello Knowledge Base article:

<https://support.martellotech.com/knowledgeBase/9362640>.

Configure the following properties when you integrate GCP with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.

Property	Description
Integration file	<p>Select the JSON file that you stored on the Martello iQ server.</p> <p>If you do not see the file in the drop-down list, ensure that you copied it to the correct folder, and then refresh iQ in your browser:</p> <p>If this is a new installation, the path is %InstallPath%\Martello\Martello iQ\Integrations\GoogleCloudCompute</p> <p>If this is an upgrade, the path is %InstallPath%\Savision\Savision iQ\Integrations\GoogleCloudCompute</p>
Webhook Listener URL	<p>Enter the URL, including the port number, of the Webhook Listener in the following format: https://<Server>:<Port></p> <p>Example: https://webhook.martello.com:59213</p>
Webhook Listener Username	Enter the same Username that you specified during the Webhook Listener setup.
Webhook Listener Password	Enter the same Password that you specified during the Webhook Listener setup.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Icinga2

Configure the following properties when you integrate Icinga2 with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.

Property	Description
Server	The server Icinga2 is installed on.
Port	The port to access the server.
Secure Connection (HTTPS)	Select the checkbox to use HTTPS.
Username	A user in the account
Password	The password for the account.
Base URL	The URL used to open the Icinga2 web console from Martello iQ.
Host URL	URL used to retrieve the data.
Service URL	URL that is used to navigate from Martello iQ to Icinga2 from a service component.
Host Group URL	URL that is used to navigate from Martello iQ to Icinga2 from a host component.
Service Group URL	URL that is used to navigate from Martello iQ to Icinga2 from a service group component.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Ivanti Service Management

Configure the following properties when you integrate Ivanti Service Management with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	Include the port access to the instance, typically 80 or 443.

Property	Description
Username	A user in the account.
Password	The password for the account.
On-Premises	Optional.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Jira Software

Configure the following properties when you integrate Jira Software with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	The default port is 8080
Type	Martello iQ supports Jira on-premises.
Username	A user in the account
Password	The password for the account.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Martello API

This entry is not an active integration. It uses an API endpoint on the Elasticsearch server to push data into Martello iQ. This approach allows you to use the same filters that are use for the data from other integrations.

Configure the following properties when you integrate the Martello API with Martello iQ:

Property	Description
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

For more information about the API, refer to the Martello iQ REST API Guide, available on the Martello documentation site at the following URL:

<https://martellotech.com/documentation/martello-iq/>



Note: This is not an active integration. This approach uses an API endpoint on the Elasticsearch server to push data into Martello iQ.

Martello Gizmo

If you are integrating Martello Gizmo 2.1 with Martello iQ, ensure that you enable the Gizmo API using the instructions provided in the following Knowledge Base article:

<https://help.gizmo.gsx.com/knowledge-base/how-to/how-to-enable-the-gizmo-api/>

If you are using Martello Gizmo 2.2 or higher, you do not need to enable the API; it is enabled by default.

Configure the following properties when you integrate Gizmo with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.

Property	Description
Server URL	<p>URL of the Gizmo instance API.</p> <p>For Gizmo 2.1 integrations, an example URL is <code>http://<servername>:8080/api/v1/robotmanager</code>.</p> <p>For Gizmo 2.2 and higher, an example URL is <code>http://<servername>/api/v1/robotmanager</code>.</p>
(Domain)\User Name	Administrative credentials for the account.
Password	The password for the account.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Microsoft System Center Operations Manager

Configure the following properties when you integrate Microsoft System Center Operations Manager (SCOM) with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Management Server	Port 5724.
Username	A SCOM username.
Password	The password for the SCOM account.
URL	Optional. URL to Live Maps Portal.
Load component states directly from SQL Server?	Select the checkbox to enable this function.
Load relationships per object?	Select the checkbox to enable this function.

Property	Description
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Mitel Performance Analytics

Configure the following properties when you integrate Mitel Performance Analytics (MPA) with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
MPA URL	The URL of the MPA instance.
Login	The email address used to access the account.
Password	The password for the account.
Container GUID	Optional. The GUID of the container in MPA.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Nagios Core and Xi

Before you Begin

The Nagios integration supports two modes. Select one of the following modes and complete the prerequisites before you add the integration in Martello iQ:

- ["Nagios Core API Mode" on page 44](#): Martello iQ pulls data from Nagios using the JSON API shipped with Nagios since release 4.0.7.
- ["Martello API Mode" on page 45](#): Martello iQ communicates with Nagios using the custom CGI endpoint shipped with Martello iQ.

The Nagios integration allows Martello iQ to interface with the majority of the current Nagios distributions, such as Nagios Core, Nagios Xi, Icinga, Check_MK, Shinken.



Tip: For Nagios Core and Xi, you must install the CGI script if you want to use the Acknowledge Alerts feature. For the other Nagios forks, like Shinken or Check_MK, the Martello API Mode—including the installation of the CGI scripts—is required. The CGI scripts require the LiveStatus module to be installed.

Configure the following properties when you integrate Nagios Core and Xi with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Nagios API	Choose one of the APIs.
Server	The server Nagios is installed on.
Port	The port to access the server.
Secure Connection (HTTPS)	Optional.
Username	The username used to authenticate with Nagios.
Password	Password used to authenticate with Nagios.
Martello iQ Endpoint URL	URL used to retrieve the data when you choose the Martello API mode.
Base URL	The URL used to open the Nagios web console from Martello iQ.
Host URL	URL used to retrieve the data when you choose the Martello API mode.
Service URL	URL that is used to navigate from Martello iQ to Nagios from a service component.
Host Group URL	URL that is used to navigate from Martello iQ to Nagios from a host component.

Property	Description
Service Group URL	URL that is used to navigate from Martello iQ to Nagios from a service group component.
Discovery Interval	Required. How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	Required. How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Nagios Core API Mode

Core API mode has the following requirements:

- Nagios Core 4.0.7 and up
- Python 2.7+ with modules cgi, cgitb, JSON installed
- Nagios must be configured to allow external commands. In your `nagios.cfg`, ensure the following settings have the required values:
 - `check_external_commands = 1` to enable external commands.
 - `command_check_interval = -1` to check for external commands as often as possible.
- Restart Nagios after you make the changes listed above.

CGI Script Installation

Copy the `savisioniq.cgi` script located in the Martello iQ installation folder. If this is a new installation, the directory is `%programfiles%\Martello iQ\Integrations\Nagios\Core Api\savisioniq.cgi`. If this is an upgrade, the directory is `%programfiles%\Savision iQ\Integrations\Nagios\Core Api\savisioniq.cgi`. Copy the script into the Nagios `cgi-bin` folder. On Nagios Core 4 and up the folder is `/usr/local/nagios/sbin`. Other Nagios installations maybe different.

Make sure that the `savisioniq.cgi` CGI Script is executable and associated with the user and group that is allowed to run Nagios. On Nagios Core 4 the user and group are **nagios**.

```
sudo chmod +x /usr/local/nagios/sbin/savisioniq.cgi
```

```
sudo chown nagios:nagios /usr/local/nagios/sbin/savisioniq.cgi
```

Configuration

Open the `savisioniq.cgi` script with an editor and change the following parameters to match your current Nagios configuration:

- **command_file** has to be set to the same value as **command_file** in your `nagios.cfg` (by default `/usr/local/nagios/var/rw/nagios.cmd`).
- **status_file** has to be set to the same value as **status_file** in your `nagios.cfg`.

Martello API Mode

Martello API mode has the following requirements:

- Python 2.7+ with modules cgi, cgiitb, JSON installed.
- Any Nagios distribution that supports MK_LiveStatus.

If MK_Livestatus is not installed, you can install it manually. Refer to this article for more information: http://mathias-kettner.com/checkmk_livestatus.html.

The recommended MK_LiveStatus version is 1.4.0p34

CGI Script Installation

Copy the `savisioniq.cgi` script and the `livestatus.py` module from the Martello iQ installation folder. If this is a new installation, the directory is

`%programfiles%\Martello iQ\Integrations\Nagios\Savision Api`. If this is an upgrade, the directory is `%programfiles%\Savision iQ\Integrations\Nagios\Savision Api`. Copy the script and the module into the Nagios `cgi-bin` folder. On Nagios Core 4 and up the folder is `/usr/local/nagios/sbin`. Other Nagios installations may be different.

Make sure that the `savisioniq.cgi` CGI Script is executable and associated to the user and group that is allowed to run Nagios. On Nagios Core 4 the user and group are **nagios**.

```
sudo chmod +x /usr/local/nagios/sbin/savisioniq.cgi
```

```
sudo chown nagios:nagios /usr/local/nagios/sbin/savisioniq.cgi
```

Configuration

Enable the LiveStatus TCP Unix socket. By default, it is set to localhost, port 6557.

Open the `savisioniq.cgi` script with an editor and find the LiveStatus connection properties and change them to match your current LiveStatus configuration:

```
cmk_livestatus_nagios_server = "localhost"
```

```
cmk_livestatus_tcp_port = 6557
```

Office 365

Use the information in this section to configure an integration with Microsoft Office 365.



Note: Service incidents and events from Office365 display as alerts in Martello iQ. The health state and alert severity is based on the service incident status.

Before you Begin

You must create and register an application in the Azure Active Directory so that Martello iQ can connect with the Microsoft Office 365 Service Communications API and collect the data from it. The tenant admin needs to consent to the application's permissions.

Perform the following steps:

1. Open a RDP session to your Martello iQ machine.
2. Open the PowerShell command line as an administrator.
3. Execute the PowerShell script located in
`%Savision%\Integrations\Office365\Register-ApplicationInAzure.ps1`.
To execute the script, provide the following:
 - Username
 - Password
 - Name for the connector



Note: The name for the connector has to be the same as the name of the integration in Martello iQ—this is necessary when you unregister the application.

4. Copy the script output. It contains the Client ID, Client Secret Key, Application Name, and Link for the tenant admin.
5. Share the link from the script with a Microsoft 365 tenant administrator.
6. The tenant admin receives a permissions request form. Click **Accept**.

Configure the following properties when you integrate Microsoft Office 365 with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Tenant ID	Required.
Client ID	A user in the account
Client Secret Key	The password for the account.

Property	Description
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Uninstall

1. Delete the integration in Savision iQ.



Note: Copy the name of the integration since you will need it for the script.

2. Open a Savision iQ machine.
3. Open the PowerShell command line as an administrator.
4. Execute a PowerShell script located in
`%Savision%\Integrations\Office365\ UnregisterFromAzure_{Name of the integration}.ps1.`
 The script deletes the registered application in the Azure Active Directory.
5. Delete the script.

PowerShell

Configure the following properties when you integrate PowerShell with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Username	User credentials to use used as the "Run As Account"
Password	The password for the account.
Script	Select a PowerShell script from the drop-down menu. Scripts are available in the menu after you copy them to the Martello iQ > PSScripts folder.

PRTG Network Monitor

Configure the following properties when you integrate PRTG Network Monitor with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	Default ports are 80 or 443.
Username	The login name of a PRTG administrator user.
Password	The password for a PRTG administrator user.
Roll-up worst sensor state to components and groups	Optional. By default, PRTG does not roll-up the worst sensor state. When you enable this option, Martello iQ calculates the states of the devices and groups based on the worst state of the related sensors.
Minimum number of items per request	This field controls the requests that Martello iQ sends to PRTG. The default value is 2000 items per request. You can set the value higher to have the PRTG server send larger, less frequent responses to Martello iQ. If the request times out before the PRTG server can respond with the number of requested items, you can lower the value.
Request delay in milliseconds	The interval between requests sent from Martello iQ to the PRTG server. The default value is 1000 milliseconds.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

ServiceNow

Before you Begin

Configure your ServiceNow instance to work with Martello iQ:

- Install the Martello iQ ServiceNow app in your instance of ServiceNow.

- Create a user with the following roles:
 - x_savis_iq.Martello iQ Role
 - itil
 - itil_admin
 - personalize_choices
- Specify port 443 for Port Access to the Instance.
- Install the Martello iQ application from the ServiceNow app store at <https://store.servicenow.com/>.

Configure the following properties in Martello iQ when you add the ServiceNow integration:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Instance Address	Use port 443 to connect to your ServiceNow instance.
Username	Enter the credentials for the user you created.
Password	The password for the user.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Solar Winds

Configure the following properties when you integrate Solar Winds with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.

Property	Description
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Server Name	Port 17778 access to the SolarWinds Server.
Connection Type	Possible values are HTTPS or NET TCP. If you choose NET TCP, set the FQDN of the SolarWinds server in the web.config file or in the Savision.UnityiQ.Agent.exe.config file in the case the integration is hosted by a remote agent.
Username	Administrative credentials for the account.
Password	The password for the account.
URL	URL to Orion.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.



Note: We use the SolarWinds Information Service (SWIS) to load data from SolarWinds Orion:

(<https://github.com/solarwinds/OrionSDK/wiki/About-SWIS>)

Splunk

Configure the following properties when you integrate Splunk with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
Management URL with a port	Default Port: 8089

Property	Description
Web URL with a port	Default Port: 8000
Username	The user of the account.
Password	The password for the account.
To add default Splunk alert rules	Check to enable.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

TOPdesk

Configure the following properties when you integrate TOPdesk with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	Default ports are 80 or 443.
Username	<p>Choose one of the following options for authentication:</p> <ul style="list-style-type: none"> • Use an operator account that has privileges to access the API. The account cannot be an administrator account. • Use an application password. <p>Martello recommends that you use an application password for better performance.</p>
Password	<p>The password for the Operator account or the application password. If you are using an application password, ensure that you select Using application-based authentication.</p>

Property	Description
Mandatory Fields for Incident Creation	Use the drop-down list to select the mandatory fields to include when Martello iQ creates an incident in TOPdesk.
Using application-based authentication	Select the checkbox if you are using an application password instead of an operator account.
Load asset data	Select the checkbox to enable.
Cache asset data	Select the checkbox to enable.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

VMware vCenter

Configure the following properties when you integrate VMware vCenter with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
vCenter Server	Port 443 access to your vCenter Server.
Username	A user in the account
Password	The password for the account.
Use Single Sign-on (SSO)	Optional.
SSO Endpoint override	Configure the URL to the SSO endpoint.
vSphere Client Type	Select which web client is used to navigate from Martello iQ to VMware vCenter.
vSphere Client URL	The URL to the VMware vCenter web client.

Property	Description
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

WhatsUp Gold

Configure the following properties when you integrate WhatsUp Gold with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
SQL Server	SQL Server instance the WhatsUp database is on.
Use SQL Authentication	Optional.
User	Enter a user that has read permissions on the WhatsUp database.
Password	The password for the user account.
Console URL	URL to the web console of WhatsUp Gold. This URL is used to navigate from Martello iQ to WhatsUp Gold.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.

Zabbix

Configure the following properties when you integrate Zabbix with Martello iQ:

Property	Description
Source	Read-only. The name of the source system.

Property	Description
Agent	Select a server to communicate with the source system. This can be the Martello iQ web server or a machine that has a Martello iQ Remote agent installed on it.
Name	Provide a name for the integration; this name displays on the Martello iQ interface.
URL	URL to the endpoint where <code>api_jsonrpc.php</code> is located.
Username	A user in the account
Password	The password for the account.
Discovery Interval	How often the objects are loaded from the integrated system. The default is 3600 seconds.
Operation Interval	How often health states, alerts, and/or incidents are collected. The default is 120 seconds.



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