# Ruckus Wireless™ SmartCell Insight™ Version 2.2

## Release Notes

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# SCI 2.2 Introduction

This document provides release information on SmartCell Insight (SCI) Release 2.2.

SmartCell Insight (SCI) is a Big Data analytics and reporting engine that provides deep visibility into the performance and operational statistics of your Ruckus Wireless WiFi infrastructure.

This document provides release information about the SCI features with notes on known issues, caveats, and workarounds.

**NOTE:** Refer to the previous release notes for previously documented enhancements, resolved issues, caveats and limitations.

Additional documentation on SCI 2.2, including the SCI Installation Guide, and SCI User Guide can be found at: `https://support.ruckuswireless.com/`

## Upgrading To This Version

**Upgrade from SCI version 2.x to 2.2**: If SCI version 2.x is connected to the Internet navgiate to **Admin** > **Status & Update** to upgrade to SCI version 2.2. If SCI version 2.x is not connected to the Internet, SCI 2.2 will be a fresh install.

**Upgrade from SCI version 1.x.series to 2.x**: SCI version 2.2 is a fresh install when upgrading from SCI 1.x series. There is no direct upgrade path from SCI 1.x series. Refer to data migration section -

## Supported Controller and AP Firmware Builds

This section lists the controller and AP firmware builds supported by SCI in this release.

SCI supports the following controller and AP firmware builds in this release. If you are running a build not included in this list, please update your controller/AP firmware to a supported build before connecting to SCI as a data source.

### ZoneDirector

- ZD branch 9.5.3.0, build 45 and above
- All ZD branches starting from 9.7.0.0 and above

### SmartZone (SmartZone and SmartCell Gateway)

**NOTE:** As of release 3.1.1, all Ruckus controller products previously called "RuckOS" is now called "SmartZone" controllers. Therefore, the following applies to existing RuckOS products, which is called "SmartZone" (SmartZone 100, SmartCell Gateway 200 and Virtual SmartZone).

- SmartZone branch 2.1.1.0, build 126 and above

- SmartZone branch 2.1.2.0, build 96 and above
- SmartZone branch 2.1.3.0, build 20 and above
- All SmartZone branches starting 2.5.0.0 and above

**SmartZone Access Points**

- SZ AP FW branch 2.1.1.0, build 106 and above
- SmartZone branch 2.1.1.0, build 106 and above
- SmartZone branch 2.1.2.0, build 110 and above
- SmartZone branch 2.1.3.0, build 10 and above
- All SmartZone Access Point branches starting 2.5.0.0 and above

# New Features and Enhancements

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This section lists the new features and enhancements in this release.

## New Features

- Introduced **Demo Node**, a new node type, which has lower resource and memory requirements (4 vCPU & 16G RAM).

- Removed support license validity check during trial period. Now users can upgrade SCI seamlessly during the trial period.

- Additional dimension added to Clients Report and Data Explorer (Clients, Sessions): Client IP

- Added domains to filter hierarchy.

- Support for local upgrades. Users can now upgrade even if SCI is not connected to the Internet.

- Support for SZ redundancy and HA. If SCI cannot reach the first SZ, it can be configured to connect to another SZ in the cluster.

- Support for KVM image

- Support for self-service data migration from 1.4 to 2.x.

## Enhancements

- Lazy loading of filters to improve responsiveness

- Resource optimiztions

- Upgraded to Imply 1.3.0

- Performance increase in session summary indexing by changing the index time from first connection to disconnect time.

# Resolved Issues

This section lists previously known issues that have been resolved in this release.

- Resolved an issue where saved filters was not loading on selecting a schedule (since version 2.0).

- Resolved an issue where secondary volume more than 2TB was not available for use (since version 2.0).

- Resolved an issue where filters on exported PDFs was wrongly showing **All** though there were selected filters (since version 2.0).
- Resolved an issue where logged in users from other sessions remained logged in even after a password change (since version 2.0).

- Resolved an issue where the log option **Load More**" in the Spark user interface was not working (since version 2.1).

- Resolved an issue where data collection stops due to the Imply container running out of disk space. The fix does a scheduled cleanup of log files. [ER–4595]

# Caveats, Limitations and Known Issues

This section lists the caveats, limitations and known issues in this release, along with workarounds if applicable.

### Airtime Utilization Statistics from ZoneDirector

- All versions of ZD below 9.13 have a known issue whereby the airtime utilization percentages can be above 100%.

  **Workaround**  Ruckus Wireless recommends that you update ZD to version 9.13 or later to resolve this issue.

### Saved Filters in Schedules

- Selecting a schedule loads the saved filters, but does not preserve the currently selected filters.
- Saved filters created prior to version 2.2 will not be loaded when a schedule is selected.

# Migration from SCI 1.x

This section describes how you migrate existing data from SCI 1.x to SCI 2.2

As SCI 2.2 is built on a different software stack from SCI 1.x series, if there is a need to migrate existing data from SCI 1.x to SCI 2.2, a full migration of raw data files with complete re-aggregation of data sources is required. However, do note that data migration is not necessary for the upgrade from SCI 1.x to SCI 2.2. Before you start migration, ensure that you have the following pre-requisites and setup.

NOTE: **We have tested this self-service migration feature to the best of our ability, however,it is highly dependent on the environment and the SCI 1.x setup, so we might not have covered all cases. If you have issues during migration, please contact Ruckus Wireless Support at** https://support.ruckuswireless.com/contact-us**.**

NOTE: **The migration process can take several hours per month of data, based on data volume and time span**.

NOTE: **Migration of data from SCI 1.4 is currently supported only for Smart Zone(SZ) data**.

## Prerequisites

Before you start migration, ensure that you have the following prerequisites

1. SCI 1.4 is installed. Earlier versions of SCI 1.x should first be upgraded to SCI 1.4 before starting the migration process.
2. SCI 2.2 is installed.
3. SCI 2.2 requires a higher storage capacity - 4 times higher than the raw data in SCI 1.x version in order to be fault tolerant. Adequate storage requirements are necessary before you begin migration.
4. **Optional**: You can add more data nodes to the SCI 2.2 cluster if you want the migration to be faster.

NOTES:

• Application report is not supported in SCI 1.x version.
• Time required for migration is dependent on the number of controllers, number of APs, number of days of data to be migrated, and the server resources allocated to the migration cluster.

# Preparation to Migrate Data

Follow the steps below as a preparation to migrate data from a fresh 1.4 installation.

1. Check if data exists on the disk. The following command list all the systems.

```
ls /opt/ruckuswireless/sci/datalake
```

2. If step 1 lists the systems, then skip this step and go to Step 3. Only if the output is **No such file or directory**, copy data from SCI 1.4 HDFS (Hadoop Distributed File System) to the disk by running the following commands.

```
mkdir /opt/ruckuswireless/sci/datalake
```

```
/opt/hadoop/bin/hadoop fs -copyToLocal /DataLake/<System-name>/
/opt/ruckuswireless/sci/datalake/
```

3. Login to SCI-1.4 VM and prepare data by running the following commands.

```
cd /opt/ruckuswireless/sci
```

```
tar cf sci1data.tar datalake/<system-name>
```

4. Login to SCI-2.2 VM and copy data from SCI-1.4 VM by running the following commands.

```
mkdir /storage/hdfs-namenode/logs/migration
```

```
scp <SCI-1.4 host>:/opt/ruckuswireless/sci/sci1data.tar
/storage/hdfs-namenode/logs/migration/
```

```
cd /storage/hdfs-namenode/logs/migration/; tar xf sci1data.tar
```

```
sudo docker exec -t hdfs-namenode hdfs dfs -mkdir /DataLake
```

```
sudo docker exec -t hdfs-namenode hdfs dfs -copyFromLocal
/usr/local/hadoop/logs/migration/datalake/<system-name> /DataLake
```

# Migration Procedure

Follow the steps below to successfully migrate from SCI 1.x to SCI 2.2.

1. Add the system to SCI 2.2

   • Add the Controller credentials on **https://<SCI 2 .2 Host> /admin/settings** if not added already

2. Define the data to be migrated

- SSH into the SCI 2.2 VM and run the following command with the System-name (as shown in SCI 1.4 reports) ) and SCI 2.2 Host (IP address or hostname).

```
sudo mkdir /storage/rsa-master/logs/migration
```

```
nohup sudo docker exec -t rsa-master sh /sci1list.sh <SCI 1.4
System Name> <SCI 2.2 Host> &
```

- After the above step is completed, all the dates for which data is available for migration from SCI 1.4, will be listed in the file **/storage/rsa-master/logs/migration/dates.txt** in the form of a data directory URL.
  1. **Optional**: If you wish to migrate data only for a select period, delete the lines from this file for dates which do not have to be migrated. For example, if the system has data from 2014 to 2016 and only 2016 data is required, then all the lines containing "/2014/" and "/2015/" should be deleted from the file.

3. Migrate the data

   NOTE: **If you already have a running instance of SCI 2.x, which is collecting data for the system, do delete the overlapping dates from the *dates.txt* file before proceeding with the migration. Otherwise, there will be duplicated data for the overlapping period.**

   - Once the *dates.txt* file is ready, run the following command to start the data migration.

```
sudo docker exec -t rsa-master sed -e '/crontab -r/s/^/#/g' -i
 migrate.sh
```

```
nohup sudo docker exec -t rsa-master sh /migrate.sh <SCI 2.2
System Name> <SCI 2.2 Host> &
```

### Monitor the migration process

To monitor the progress of the migration job, view the log file **/storage/rsa-master/logs/migration/spark.stdout**. Detailed spark logs are available at **https://< SCI 2.2 VM IP:58080/** and indexing logs at **https://< SCI 2.2 VM IP>:58090**

The migration process can take several hours per month of data, based on data volume and time span.

To verify that the migration has completed successfully, review the following:

- The last line of the log file (**/storage/rsa-master/logs/migration/spark.stdout**) should read as **Completed Migration**.
- Indexing logs have no entries in **Running Tasks**
- Data is available in SCI 2.2 reports.