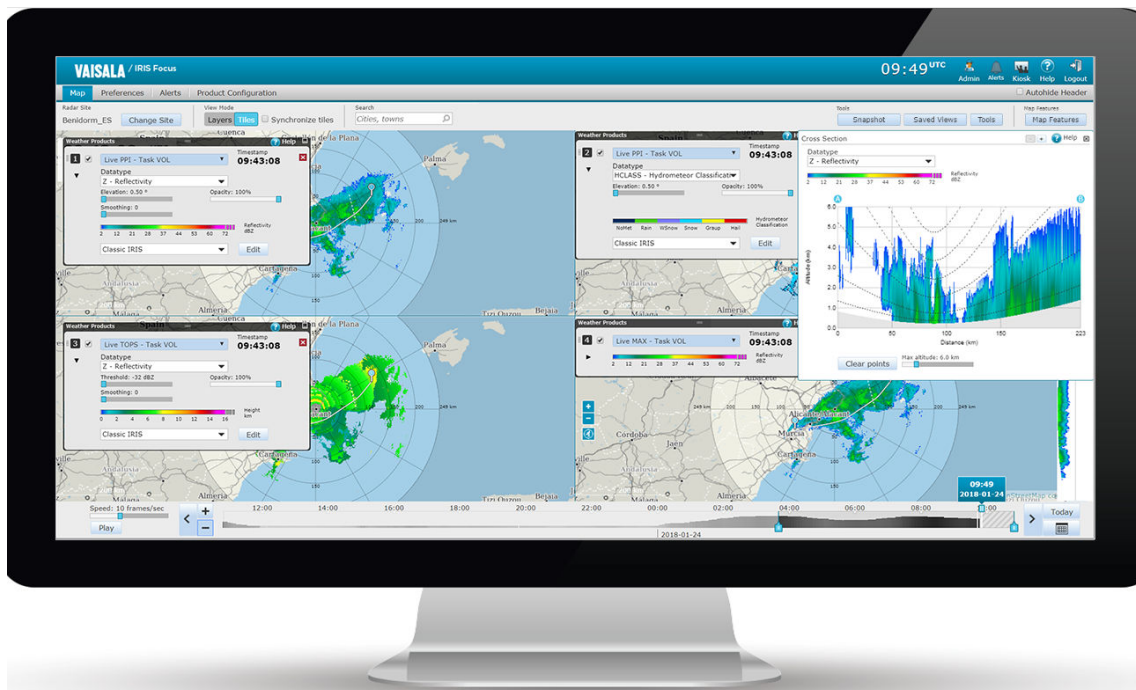


Release Notes

IRIS Focus
Version 5.0



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1. About This Document

1.1 Version Information

This document provides information on IRIS Focus releases.

Table 1 Document Versions

Document Code	Date	Description
M211904EN-E	December 2018	Fourth version of this document for IRIS Focus 5.0.
M211904EN-C	February 2018	Third version of this document for IRIS Focus 4.0.
M211904EN-B	March 2017	Second version of this document for IRIS Focus 3.0.
M211904EN-A	May 2016	First version of this document for IRIS Focus 2.1.

1.2 Related Documents

Table 2 Related Documents

Document Code	Name
M211850EN	<i>IRIS Focus Administrator Guide</i>
M211849EN	<i>IRIS Focus User Guide</i>
M211904EN	<i>IRIS Focus Release Notes</i>

1.3 Trademarks

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All other product or company names that may be mentioned in this publication are trade names, trademarks, or registered trademarks of their respective owners.

2. IRIS Focus 5.0 Release Notes

2.1 Release Notices

Vaisala is pleased to announce the release of IRIS Focus 5.0.

IRIS Focus supports current Internet Explorer®, Mozilla Firefox®, and Google Chrome™ browsers.

Upgrade to IRIS Focus 5.0

You can only upgrade IRIS Focus gradually, that is, one version at a time. You can only perform upgrade to IRIS Focus 5.0 from IRIS Focus 4.0. For upgrading instructions, see *IRIS Focus Administrator Guide*.



CAUTION! Vaisala recommends you back-up your system configuration before upgrading. Information in data manager is not backed-up during the upgrade. This means that after the upgrade, data showed in the previous version of IRIS Focus is no longer available. After some time, new data will be provided from the radars in your network through data manager. For information on adding historical data to your system, see *IRIS Focus Administrator Guide*.

Table 3 System Requirements

CentOS	IRIS Analysis/IRIS Radar
IRIS Focus 5.0 has been tested with CentOS 7.4, and is assumed to work with newer versions of the software.	IRIS Focus 5.0 requires IRIS Analysis/Radar 8.13.6 or later on the same network. Note that IRIS Analysis must not be visible to the public Internet.

2.2 Updates and Fixes

New Features

- *Weather events and alerts*

You can now define the weather event criteria for identifying significant weather events and alerts directly in IRIS Focus.

To receive alerts about significant weather, you can assign one or more sets of event criteria to an area of interest.

- *Areas of interest*
IRIS Focus 5.0 has further optimized our tools for assigning weather criteria to areas of interest.
You can create circular and polygon areas of interest.
After you assign configurable weather event criteria to an area, you will automatically receive alerts when weather events cross into that area. You can manage which areas are active one by one.
- *Pin places of interest*
You can add pins to the map to indicate points of interest. The pins provide useful reference points and labels.
- *Ruler Tool*
Select **Tools > Ruler Tool** to measure the distance between two points on the map with two simple clicks of the mouse.
- *Data flow monitoring*
IRIS Focus administrator can setup data flow alerts for monitoring the data to IRIS Focus. IRIS system provides a way of detecting the frequency of the product arrival.

Updates

- Introduction of the use of the *poweruser* role.
The specific functions for a user with this role are: creating global areas of interest, and creating event criteria, such as thunderstorm, shear, or lightning.
- For security reasons, the application software now only allows a single log in for each user. A single user can use several sessions in the same browser.
However, if another user uses the same login from a different IP, the logged user will be logged out.
- The **Cross Section**, **Tracking Tool**, and **Ruler Tool** are now grouped behind the **Tools** button.

Fixes

- Data Manager fixes:
 - 5535/6218 Sector scan and missing rays: Radar product generation does not support missing rays and sector scan are shown in the wrong azimuth angle.
 - 6227/6262/6263/6296/6552 Data manager housekeeping service:
 - Properly deleting unused volume_conf_to_source records
 - Paging to Data Manager's housekeeping service so that 1000 volumes are deleted at a time to avoid spike in heap space
 - Data Manager housekeeping speed improvement
 - Handle exception when data is deleted from the database accidentally
 - 6291/6293 RHI Hybrid RAW file management: RHI RAW data and Hybrid naming is causing errors in the data manager
 - 6290: There shall not exist a ray count dependency in data manager
- Image export:
 - 6143 Unexpected error caused by no available data in the present time
- Alerts
 - 5418 Unique name for Areas of Interest
 - 6580 Just events from the last 48h show on the UI

2.3 Known Issues



For troubleshooting information, see *IRIS Focus Administrator Guide*.

- 5408: Tile view does not work in kiosk mode
- 5660: The user interface uses UTC as the default timezone. If the user changes the timezone in the **Admin** panel, the new timezone is not displayed in the web user interface.
- 5704: Different radars in a composite can have the same task name but different sweeps.
The composite method uses the sweep ID so it assumes that all the tasks have the same elevations.
- 6216: If the IRIS Analysis machine that works as socket server is set in local time, the IRIS Analysis products are shown in the wrong time in IRIS Focus. Vaisala recommends the user to setup the whole network in UTC time.
- 6382: Data manager is not able to read the IRIS RAW products generated from `odim_HDF5` files that do not contain all the required parameters.
- 6666: The events and alerts feature provides information in metric units throughout the configuration and display process.
- 6680: When the restart service of the web application is used, the application sometimes does not have time to change the settings properly. You must add a delay by running the following commands:

```
systemctl stop vaisala-radarsw-webapp
```

Wait approximately 15 seconds and then run:

```
systemctl start vaisala-radarsw-webapp
```

- The installation command for IRIS Focus 5.0 is now:
 - a. Change to the `/Focus_install` directory.
 - b. Run the IRIS Focus installation script:

```
/Focus_install/Vaisala-IRIS-Focus-v5.0.0--68/rsw-installer --offline --
gis-db-dump vaisala-iris-maps-v2 --terrain-dir vaisala-iris-terrain-v2 -
s <hostname or IP of IRIS Analysis socket server>
```

- The instructions in *IRIS Focus Administrator Guide* on making a manual back-up and restoring from a back-up are incomplete. See:
 - [Making a Manual Back-up \(page 8\)](#)
 - [Restoring from Backup \(page 9\)](#)

2.4 Notes on Using IRIS Focus

Viewing Radar Data

- The minimum screen resolution for viewing IRIS Focus is 1400 x 1050.
- In some cases, there may be missing or broken live radar products.
- In some cases, the lightning layer may be empty or missing.
- The image export service screen resolution maximum value is 3000 pixels in both axes.

Browsers

- If you use **Remember Password** in your browser and login in first as a user and then as an admin, you may get an error message when you edit the user settings for other users.
Despite the error message, your updates are saved in the system.
- Hardware acceleration may cause Firefox to crash with multiple products selected.
To avoid the problem, in the Firefox menu select **Options > Advanced > Browsing** and uncheck **Use hardware acceleration when available**.

2.5 Making a Manual Back-up

1. Login as **root**.
2. Run: **`/usr/vaisala/radarsw/backup/bin/do-backups`**
3. Check that new files are created in the following directories:

```
/srv/vaisala/radarsw/backup/configuration/radarsw-configuration-  
<timestamp>.tar.gz
```

```
/srv/vaisala/radarsw/backup/database/database-wx-<timestamp>.gz
```

```
/srv/vaisala/radarsw/backup/database/database-vsp-<timestamp>.gz
```

Each backup file includes a timestamp in the format:

```
radarsw-configuration-2018-09-05T06-48-26.tar.gz
```

2.6 Restoring from Backup

- ▶ 1. Login as **root**.
2. Stop the Monit service:

```
systemctl stop monit.service
```

3. Stop the IRIS Focus web application:

```
systemctl stop vaisala-radarsw-webapp.service
```

4. (Optional) Run the backup script:
/usr/vaisala/radarsw/backup/bin/do-backups
 - a. Copy the current configuration files to a remote host.
 - b. Copy the resulting configuration file to your own machine: */srv/vaisala/radarsw/backup/configuration/radarsw-configuration-2018-10-12T09-42-18.tar.gz*
5. Copy the current database passwords from */etc/vaisala/radarsw/configuration/vsoweb-override.ini*.
Save them in a text file for [step 12](#).

```
[DATASOURCE]
datasource.password = xsGzN3ZK6kMqvaH6dzJQqAg1KwTMLnJL

[VSP_DATASOURCE]
datasource.password = AgbBWtR0XqDh64DgklkK6XqLXsnQP08U
```

6. Copy the current Data Manager password from */etc/vaisala/radarsw/data-manager/data-manager-override.properties*.

```
/etc/vaisala/radarsw/data-manager/data-manager-override.properties
spring.datasource.password = bFKNUQ5fvFMfmsU3vWP3CEYJHVTu0J2Z
```

Save it in a text file for [step 12](#).

7. Drop the current database with the `rsw-db-tool` utility:

```
rsw-db-tool drop-db
```

8. Recreate an empty database:

```
rsw-db-tool create-db
```

9. Switch to the database user account **postgres**:

```
su - postgres
```

10. Copy your backup files back to the Focus server and restore the database contents by reading the file contents into the standard output stream and inserting them in the IRIS Focus databases:

```
gzip --decompress --to-stdout /radarsw-database-vsp-2018-10-12T07-54-50.gz  
| psql vsp_v1  
gzip --decompress --to-stdout /radarsw-database-wx-2018-10-12T07-54-50.gz  
| psql wxdb2
```

11. Exit the postgres user shell:

```
exit
```

12. Using the passwords you stored in [step 5](#) and [step 6](#), replace the database passwords in these files:

```
/etc/vaisala/radarsw/configuration/vsoweb-override.ini  
/etc/vaisala/radarsw/data-manager/data-manager-override.properties
```

13. Start the IRIS Focus web application:

```
systemctl start vaisala-radarsw-webapp.service
```

14. Start the Monit service:

```
systemctl start monit.service
```

3. IRIS Focus 4.0 Release Notes

3.1 Release Notices

Vaisala is pleased to announce the release of IRIS Focus 4.0.

IRIS Focus supports current Internet Explorer®, Mozilla Firefox®, and Google Chrome™ browsers.

Upgrade to IRIS Focus 4.0

Upgrading from a previous version of IRIS Focus should be fairly straightforward. For upgrading instructions, see *IRIS Focus Administrator Guide*.

Vaisala recommends you back-up your system configuration before upgrading.



When upgrading from IRIS Focus 3.0 to IRIS Focus 4.0, no license reactivation is required. Please disregard the instructions about license reactivation in *IRIS Focus Administrator Guide*.

CentOS

IRIS Focus 4.0 has been tested with CentOS 7.1, 7.3, and 7.4.

IRIS Analysis/Radar

IRIS Focus 4.0 requires IRIS Analysis/Radar 8.13.6 or later on the same network.

Note that IRIS Analysis must not be visible to the public Internet.

3.2 Updates and Fixes

New Features

- *Composites*
Create on-demand and pre-defined composites of weather radar data from multiple radar sites. This means you can increase or limit the coverage area of a single radar site dynamically just by adding or removing radar sites from the current view.
- *View historical data*
Import historical radar data for visualization and analysis.
- *Zoomable timeline*
Check histograms to quickly and easily find historical weather events and reduce the time used to search through large amounts of weather data.
Use the zoomable timeline to easily visualize and animate current, nowcasted, or historical data.

- *Save views*
Save your frequently used views so they are available each time you log in to IRIS Focus.
You can get straight to work, without the hassle of managing browser bookmarks or recreating live product, view, or zoom, or tool settings from previous sessions.
- *Share weather information*
Take a snapshot or schedule an image export to share interesting weather events on, for example, your website.

Updates

- *CentOS hardening security scripts*
- *Uninstall script*
Use this procedure to recover from a failed installation that is stuck in a state where it cannot be resumed.

Fixes

- Data Manager now supports hybrid tasks
- RAW Hybrid tasks with missing moment were not displayed in IRIS Focus. This has now been fixed.

3.3 Known Issues



For troubleshooting information, see *IRIS Focus Administrator Guide*.

- 5704: Different radars in a composite can have the same task name but different sweeps.
The composite feature uses radar sites that have the same task name. Because it uses the sweep ID index, if the elevations sweeps are not the same, when using **PPI**, the composite is made using different elevation data.
- 5535: Radar product generation does not support missing rays.
When there are missing rays in a product, the rays are entered sequentially from true north onwards, which results in a sector instead of a complete scan.
- 5660: The user interface uses UTC as the default timezone. If the user changes the timezone in the **Admin** panel, the new timezone is not displayed in the Web user interface.
- 5666: IRIS Focus does not support using the Microsoft Edge browser. Site selection does not work in Microsoft Edge browser.
IRIS Focus supports current Internet Explorer®, Mozilla Firefox®, and Google Chrome™ browsers.
- When removing all data from the site selector and pressing **OK**, the map displays latest created map view.
- *IRIS Focus Administrator Guide* does not include instructions on the image export service.

- *IRIS Focus Administrator Guide* does not include complete instructions on installing IRIS Focus from a USB stick.
- Yum upgrade due to CentOS hardening security scripts

Upgrade to IRIS Focus - Partitioning

Before upgrading to IRIS Focus 4.0 according to the instructions in *IRIS Focus Administrator Guide*, you must update the partitions in CentOS.

Upgrade to IRIS Focus - Data Handling

After an IRIS Focus upgrade, data showed in the previous version of IRIS Focus is no longer available.

After some time, new data will be provided from the radars in your network through data manager.

For information on adding historical data to your system, see *IRIS Focus Administrator Guide*.

Upgrade to IRIS Focus 4.0 - Troubleshooting

If the correct CentOS base repository is unavailable, the `./rsw-upgrade` script fails with an error message.

If it fails with the `--online` upgrade, check your internet connection and your yum repository settings.

1. If it fails with the `--offline` upgrade, check that you have mounted the correct ISO. You must mount the ISO provided to you:

```
CentOS-7-x86_64-Everything-1611.iso
```

The 7.3 ISO image provides the required installation packages that are otherwise fetched from the Online CentOS repository. Using the 7.3 ISO during the installation does not upgrade your system to Centos 7.3.

2. For both `--online` and `--offline` upgrades, check your yum repositories:
 - a. Run: **yum repolist enabled**
 - b. Check that the output contains a line similar to the following:

```
repo id          repo name        status
base/7/x86_64    CentOS-7 - Base  9,007
```


4. IRIS Focus 3.0 Release Notes

4.1 Release Notices

Vaisala is pleased to announce the release of IRIS Focus 3.0.

Upgrade to IRIS Focus 3.0

Upgrading from a previous version of IRIS Focus should be fairly straightforward.

Vaisala recommends you back-up your system configuration before upgrading.

CentOS

IRIS Focus 3.0 has been tested with CentOS 7.1 and CentOS 7.3. We expect IRIS Focus to also work with later versions of CentOS 7.x.

IRIS Analysis/Radar

IRIS Focus 3.0 requires IRIS Analysis/Radar 8.13.6 or later on the same network.

Note that IRIS Analysis must not be visible to the public Internet.

4.2 Updates and Fixes

New Features

- *Nowcasting* is an automatic short term forecasting feature, providing a visual indication of the precipitation behavior hours in advance. Raster radar products can be nowcasted easily and interactively.
Nowcasting performs advection calculations on motion data from radar products to predict weather movement and severity up to, for example, 2 hours in the future.
- *Weather events and alerts* reduce the visual clutter and helps in focusing on the hazardous weather events. It also provides alerts based on freely adjustable conditions to the geographical areas you care about most.

Updates

Release 3.0 adds one new live product to IRIS Focus.

Live radar products are generated on-demand from raw volume data in the IRIS Focus server to provide accurate representations of weather conditions.

Release 3.0 adds one new live product to IRIS Focus. Live **MAX** shows the echo height and intensity in a report of maximum data, for example, reflectivity.

You can use **MAX** when observing areas of severe weather, for example, from the surface to the troposphere, in the layer below the melting level, or in the layer above the melting level.

4.3 Known Issues

- 4259: RAW hybrid tasks with missing moments are not displayed in IRIS Focus.
- 4799: Upgrade from 2.0 to 3.0 fails
The fix is to manually remove the Postgres 9.2 packages before installing 2.0.0. This has been fixed in 2.1.0. See below.
- There is no nowcasting of **MAX** products in this release.
- In some cases, there may be missing or broken live radar products.
- In some cases, the lightning layer may be empty.
- In some cases, the lightning layer may be missing.
- If you use **Remember Password** in your browser and login in first as a user and then as an admin, you may get an error message when you edit the user settings for other users. Despite the error message, your updates are saved in the system.
- Hardware acceleration may cause Firefox to crash with multiple products selected.
To avoid the problem, in the Firefox menu select **Options > Advanced > Browsing** and uncheck **Use hardware acceleration when available**.

Upgrade to IRIS Focus 3.0

When upgrading to version 3.0.0, depending on whether you are installing on a system with internet connection, you must include one of the following flags in the `rsw-upgrade` script:

- `--online`
- `--offline`

Upgrade to IRIS Focus 3.0 - Troubleshooting

If the correct CentOS base repository is unavailable, the `./rsw-upgrade` script fails with an error message.

If it fails with the `--online` upgrade, check your internet connection and your `yum` repository settings.

1. If it fails with the `--offline` upgrade, check that you have mounted the correct ISO. You must mount the ISO provided to you:

```
CentOS-7-x86_64-Everything-1611.iso
```

The 7.3 ISO image provides the required installation packages that are otherwise fetched from the Online CentOS repository. Using the 7.3 ISO during the installation does not upgrade your system to Centos 7.3.

2. For both `--online` and `--offline` upgrades, check your `yum` repositories:
 - a. Run: **`yum repolist enabled`**
 - b. Check that the output contains a line similar to the following:

```

repo id          repo name        status
base/7/x86_64   CentOS-7 - Base 9,007

```

Upgrading from IRIS Focus 2.0 to 3.0

1. Run: **`yum list installed | grep postgres`**

The result is, for example:

```

postgresql.x86_64          9.2.15-1.el7_2
@updates
postgresql-docs.x86_64    9.2.15-1.el7_2
@updates
postgresql-libs.x86_64    9.2.15-1.el7_2
@updates
postgresql-server.x86_64  9.2.15-1.el7_2
@updates
postgresql94.x86_64       9.4.5-1PGDG.rhel7
@radarsw
postgresql94-contrib.x86_64 9.4.5-1PGDG.rhel7
@radarsw
postgresql94-libs.x86_64   9.4.5-1PGDG.rhel7
@radarsw
postgresql94-server.x86_64 9.4.5-1PGDG.rhel7
@radarsw

```

2. For every line which does NOT include 94 run: **`yum remove [package name]`**
For example:

```
yum remove postgresql.x86_64
```


5. IRIS Focus 2.1 Release Notes

5.1 Release Notices

Vaisala is pleased to announce the release of IRIS Focus 2.1.

Upgrade to IRIS Focus 2.1

Upgrading from a previous version of IRIS Focus should be fairly straightforward. For upgrading instructions, see *IRIS Focus Administrator Guide*.

Vaisala recommends you back-up your system configuration before upgrading.

CentOS

IRIS Focus 2.1 has been tested with CentOS 7.1. We expect IRIS Focus to also work with later versions of CentOS 7.x.

IRIS Analysis/Radar

IRIS Focus 2.1 requires IRIS Analysis/Radar 8.13.6 or later on the same network.

5.2 Updates and Fixes

Updates

Release 2.1 adds a number of new live products to IRIS Focus.

On-demand radar products displayed in IRIS Focus receive raw data from the IRIS back-end.

IRIS Focus 2.1 includes the following new live products:

- Live TOPS
TOPS displays the detected signal echoes above the value defined in the **Threshold** (dBZ), which usually measures the top of the precipitation area or cloud cover.
- Live BASE
BASE displays the base level of detected signal echoes, which usually reflects the bottom of the cloud base or precipitation area.
- Live THICK
THICK is the radar-indicated cloud cover thickness of an area of precipitation.
THICK calculates the difference between the **BASE** and **TOPS** products.

Fixes

- 2771: CAPPI height and related settings are not preserved when switching sites
- 3559: Backup filenames are inconsistent
- 2734: *Vaisala-radar-sw-geoserver* package resets disk state
- 2730: Color scale unreadable when using Aviation units
- Setting values are retained after upgrading from IRIS Focus 2.0 to IRIS Focus 2.1.

5.3 Known Issues



For troubleshooting information, see *IRIS Focus Administrator Guide*.

- In some cases, there may be missing or broken live radar products.
- In some cases, the lightning layer may be empty.
- In some cases, the lightning layer may be missing.
- If you use **Remember Password** in your browser and login in first as a user and then as an admin, you may get an error message when you edit the user settings for other users. Despite the error message, your updates are saved in the system.
- Hardware acceleration may cause Firefox to crash with multiple products selected. To avoid the problem, in the Firefox menu select **Options > Advanced > Browsing** and uncheck **Use hardware acceleration when available**.

Technical Support



Contact Vaisala technical support at helpdesk@vaisala.com. Provide at least the following supporting information:

- Product name, model, and serial number
- Name and location of the installation site
- Name and contact information of a technical person who can provide further information on the problem

For more information, see www.vaisala.com/support.

Warranty

For standard warranty terms and conditions, see www.vaisala.com/warranty.

Please observe that any such warranty may not be valid in case of damage due to normal wear and tear, exceptional operating conditions, negligent handling or installation, or unauthorized modifications. Please see the applicable supply contract or Conditions of Sale for details of the warranty for each product.

Recycling



Recycle all applicable material.



Follow the statutory regulations for disposing of the product and packaging.

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