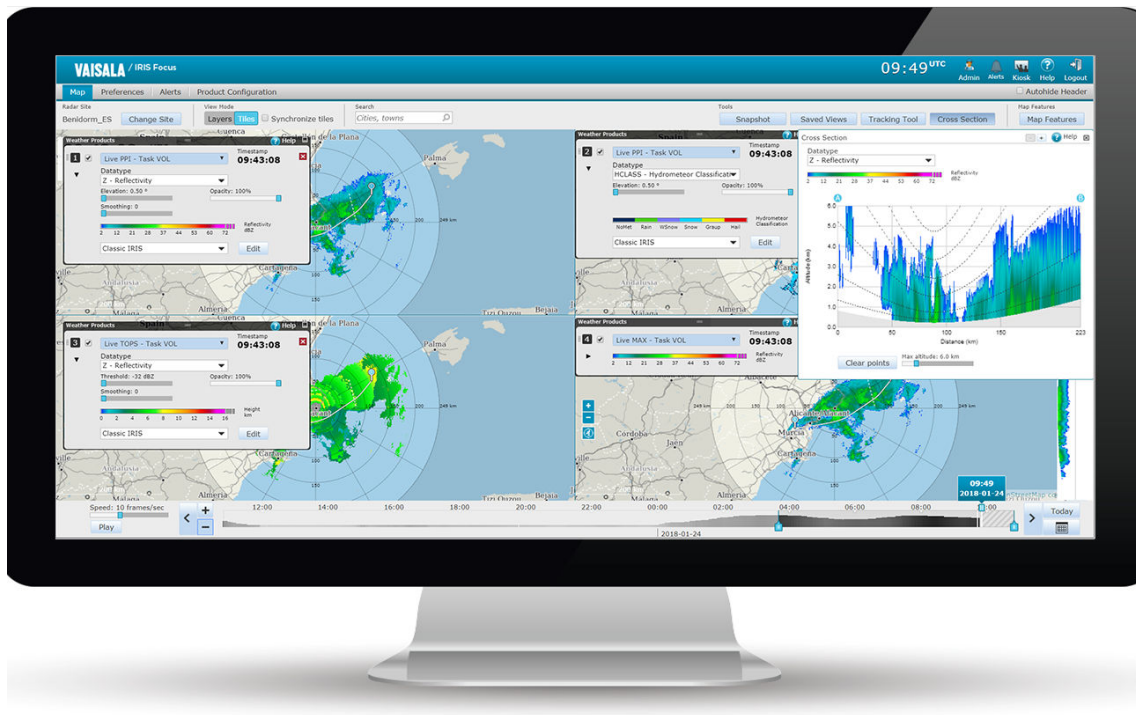


Release Notes

IRIS Focus
Version 4.0



PUBLISHED BY

Vaisala Oyj

Street address: Vanha Nurmijärventie 21, FI-01670 Vantaa, Finland

Mailing address: P.O. Box 26, FI-00421 Helsinki, Finland

Phone: +358 9 8949 1

Visit our Internet pages at www.vaisala.com.

© Vaisala 2018

No part of this manual may be reproduced, published or publicly displayed in any form or by any means, electronic or mechanical (including photocopying), nor may its contents be modified, translated, adapted, sold or disclosed to a third party without prior written permission of the copyright holder. Translated manuals and translated portions of multilingual documents are based on the original English versions. In ambiguous cases, the English versions are applicable, not the translations.

The contents of this manual are subject to change without prior notice.

Local rules and regulations may vary and they shall take precedence over the information contained in this manual. Vaisala makes no representations on this manual's compliance with

the local rules and regulations applicable at any given time, and hereby disclaims any and all responsibilities related thereto.

This manual does not create any legally binding obligations for Vaisala towards customers or end users. All legally binding obligations and agreements are included exclusively in the applicable supply contract or the General Conditions of Sale and General Conditions of Service of Vaisala.

This product contains software developed by Vaisala or third parties. Use of the software is governed by license terms and conditions included in the applicable supply contract or, in the absence of separate license terms and conditions, by the General License Conditions of Vaisala Group.

Table of Contents

1. About This Document	3
1.1 Version Information.....	3
1.2 Related Documents.....	3
1.3 Trademarks.....	3
2. IRIS Focus 4.0 Release Notes	5
2.1 Release Notices.....	5
2.2 Updates and Fixes.....	5
2.3 Known Issues.....	6
2.4 Installing IRIS Focus from a USB Stick.....	8
2.5 Preparing to Upgrade to IRIS Focus 4.0.....	9
2.6 Scheduling Image Exports from IRIS Focus.....	12
2.7 Notes on Using IRIS Focus.....	13
3. IRIS Focus 3.0 Release Notes	15
3.1 Release Notices.....	15
3.2 Updates and Fixes.....	15
3.3 Known Issues.....	16
4. IRIS Focus 2.1 Release Notes	19
4.1 Release Notices.....	19
4.2 Updates and Fixes.....	19
4.3 Known Issues.....	20
Technical Support	21
Warranty	21
Recycling	21

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-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

HydroClass™ is a trademark of Vaisala Oyj.

IRIS™ is a trademark of Vaisala Oyj.

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 4.0 Release Notes

2.1 Release Notices

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

The IRIS Focus web application can be accessed with the latest versions of 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.

2.2 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, you 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.

2.3 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.
The IRIS Focus web application can be accessed with the latest versions of 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.
For information on using the service, see [Scheduling Image Exports from IRIS Focus \(page 12\)](#).
- *IRIS Focus Administrator Guide* does not include complete instructions on installing IRIS Focus from a USB stick. For information, see [Installing IRIS Focus from a USB Stick \(page 8\)](#).
- 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. See [Preparing to Upgrade to IRIS Focus 4.0 \(page 9\)](#).

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
```

2.4 Installing IRIS Focus from a USB Stick

The IRIS Focus installation USB contains the following file structure:

```
Focus_install
-----vaisala-iris-maps-v2
-----vaisala-iris-terrain-v2
-----Vaisala_IRIS_installer-4.0.tar
-----documentation
```

To install IRIS Focus from the USB stick, you must copy the files to the CentOS server and prepare the files for installation.

- ▶ 1. After reboot, log in as **root**.
2. Insert the USB stick.
If it is already plugged-in, remove and re-insert the stick.
3. In the pop-up dialog, select **Open With Files**.
4. Right -click a blank area and select **Open in Terminal**.
5. In the terminal, type **pwd** and press **ENTER**.
The result is usually `/run/media/root/IRIS`.
6. Copy the *Focus_install* directory to the Centos server:

```
mkdir /Focus_install
cp -r /run/media/root/IRIS/Focus_install/* /Focus_install
```

7. Change to the */Focus_install* directory and unpack the tar file:

```
cd /Focus_install
tar -xvf Vaisala_IRIS_installer-4.0.tar
```

8. Change to the `/Focus_install/vaisala-iris-terrain-v2` directory:

```
cd/Focus_install/vaisala-iris-terrain-v2
```

- a. Join the fileparts:

```
cat vaisala-iris-terrain-v2-part* > vaisala-iris-terrain-v2.zip
```

- b. Unzip the resulting terrain zip file:

```
unzip vaisala-iris-terrain-v2.zip
```

- c. Remove the extra files:

```
rm -rf vaisala-iris-terrain-v2-part*  
rm -rf vaisala-iris-terrain-v2.zip
```

9. Run the IRIS Focus installation script:

2.5 Preparing to Upgrade to IRIS Focus 4.0

- ▶ 1. Verify the size of your `/srv` and `/var` partitions:

```
df -h | grep /srv  
df -h | grep /var
```



Take note of the displayed disk sizes.
For example `/srv = 900G`, `/var = 30G`

2. Back up `/srv`:

- a. Log in as **root**.
- b. Change directory:

```
cd /home
```

- c. Make sure that there is enough space on `/home` for the contents of `/srv`.
- d. If needed, clear space on a partition or mount a separate hard disk to make the backup.
- e. Compress the `/srv` directory into a `tar` file. c

```
tar -zcvf srv.tar /srv
```

3. Stop services:

```
systemctl stop monit; systemctl stop vaisala-radarsw-*
```

The following services are stopped:

```
{webapp, warn-reader, scan-http-service, scan-updater-service, nowcast-server, geoserver}
```

4. Unmount the filesystem on the `/srv` partition:

```
umount <srv-mount-point>
```

Run the command **`lvs | grep /srv`** to show the mountpoint for `/srv`. For example `/dev/centos/srv`.

5. Remove the `/srv` logical volume:

```
lvremove <srv-mount-point>
```

6. Create a new `/srv` logical volume:

```
lvcreate -L 830G -n srv <volume group name>
```

Replace 830 G with an amount 75 GB less than the original `/srv` value. The `<volume group name>` is, for example `centos` in `/dev/centos/srv <srv-mount-point>`.

- a. Select `y` to wipe the `xtfs` signature.

7. Create `xtfs` filesystem on the newly created volume:

```
mkfs.xfs <srv-mount-point>
```

8. Mount the filesystem:

```
mount <srv-mount-point> /srv9
```

9. Put the files back to `/srv`:

```
tar -xf srv.tar -C /
```

10. Increase the `/var` volume:

```
lvextend -L70G <srv-mount-point-of-var>
```

For example: `/dev/centos/var`

11. Increase the file system on `/var`:

```
xfs_growfs /var
```

This increases the file system to the maximum space available on volume.

12. Verify that the partitions have the desired sizes:

```
df -h
```

- Restart the following services:

```
systemctl start monit
systemctl start vaisala-radarsw-*
```

2.6 Scheduling Image Exports from IRIS Focus

If you want to share interesting weather events on, for example, your website, use a **REST POST** method to schedule image exports from IRIS Focus saved views.

- In the IRIS Focus **Map** view, set-up the view you want to save. For example, you can save the settings for:
 - Weather Products**
 - Map tools such as the cross-section and tracking tools
 - Zoom level
- Select **Saved Views > Save**.
- Name the view and select **Save**. The new view is added to the **Saved Views** list for your future use.
- Configure your web server to access the IRIS Focus image export service:

```
@Request: POST <your IRIS Focus URL>/imageExport/getImage
@Produces: "image/png"
```

5. Configure the following parameters:

username

IRIS Focus user name for the image export user.



For security reasons, Vaisala recommends that you configure a specific user for exporting images or encrypt your login details.

password

IRIS Focus password the image export user.

time

Note that the time must be in the following format:

2018-01-18T17:55:23.000Z

widthPx

Width of the exported image, in pixels.

heightPx

Height of the exported image, in pixels.

savedViewName

The name of the saved view you created in [step 3](#).

savedViewUser

Optional value. Used if you configure a specific user for exporting images (recommended).

2.7 Notes on Using IRIS Focus

Viewing Radar Data

- Nowcasting of **MAX** products is not supported.
- In some cases, there may be missing or broken live radar products.
- In some cases, the lightning layer may be empty or missing.

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**.

3. IRIS Focus 3.0 Release Notes

3.1 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.

3.2 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.

3.3 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
```


4. IRIS Focus 2.1 Release Notes

4.1 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.

4.2 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
Live **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 live **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.

4.3 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.

VAISALA

www.vaisala.com

