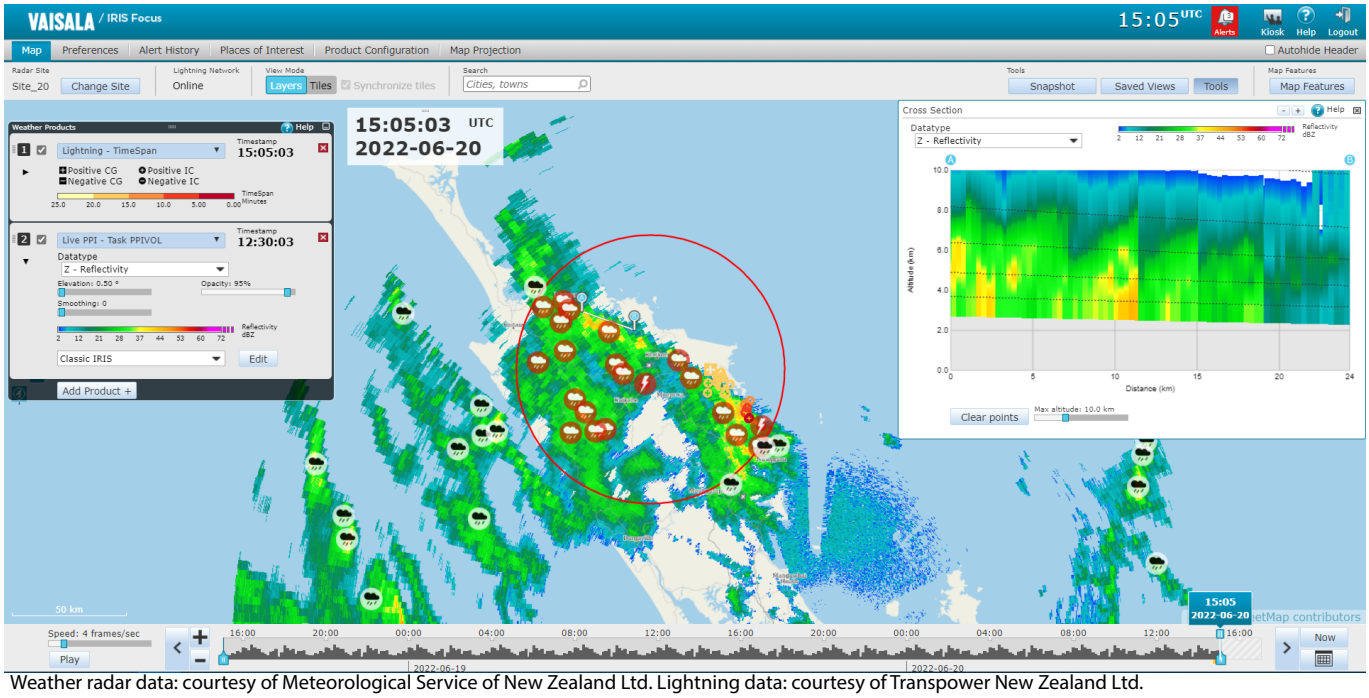
VAISALA

IRIS Focus

Remote Sensing Application Software



Weather radar data: courtesy of Meteorological Service of New Zealand Ltd. Lightning data: courtesy of Transpower New Zealand Ltd.

Features

- Web-based application
- Easy-to-configure events and alerts
- On-demand data analytics and visualization
- Tested and audited with the latest security standards

IRIS Focus Remote Sensing Software provides a rich set of unique tools for viewing and analyzing your weather data from various sources: weather radars, scanning wind lidars, and lightning networks. IRIS Focus helps you better mitigate weather hazards, such as storms, wind shears, turbulence, and precipitation, for making quicker and sharper decisions.

IRIS Focus weather products

Weather products are analytics and graphical representations of the data captured by remote sensing devices. The products are either on-demand products generated by IRIS Focus, or pre-processed by IRIS Analysis or TLP (Total Lightning Processor).

The on-demand products are generated live, and they are user-configurable to provide tailored outputs and meaningful visualizations.

You can combine data from several remote sensing devices into composites to provide an expanded area of coverage.

Integrated weather data visualization

Integrated data from various sources enables you to better understand weather hazards for more accurate weather monitoring and forecasting. The map view can be customized by adding WMS layers (Web Map Service) from external sources, such as satellite images or external radar networks.

Events and alerts

IRIS Focus provides real-time alerts for significant weather events on user-defined areas of interest. You can view alert information on the web UI, in the Alert history list, or through an API.

Nowcasting

The radar-based nowcasting performs advection calculations on motion data from radar products to predict weather movement and severity up to 2 hours into the future.

The Lightning Threat Zone product tracks storm cells using lightning data, and displays areas threatened by lightning 60 minutes into the future.

Monitoring the data flow and quality

You can monitor the weather radar data flow through technical alerts, and visualize the quality of the lightning network with the Network Health product.

Technical data

Weather products

Product name	Description	On-demand product
Basic products		
BASE	Echo Base	✓
BEAM	Antenna Beam Pattern	
CAPPI	Constant Altitude PPI	✓
HMAX	Height of Maximum Intensity Product	
RHI	Range Height Indicator	
Layer	Layer averages calculation	
MAX	Maximum data	✓
MLHGT	Melting Level Height	
MVF	Motion Vector Field	
PPI	Plan Position Indicator	✓
RTI	Range Time Indicator	✓
THICK	Echo Thickness	✓
TOPS	Echo Tops Map	✓
Wind products		
SHEAR	Wind Shear	
SLINE	Shear Line (frontal boundary)	
Turbulence	Variance of Doppler velocities (for lidar only)	✓
VAD	Velocity Azimuth Display	
VVP	Velocity Volume Processing	
WIND	Wind Speed and Direction	
Hydrology products		
CATCH	Precipitation accumulation	
GAGE	Reports from rain gage sensors	
RAIN1	Hourly Rain Accumulation	
RAIN-N	N-Hour Rain Accumulation	
SRI	Surface Rainfall Intensity	
VIL	Vertically Integrated Liquid	
Lightning products		
Lightning Storm Intensity	Storm intensity	✓
Lightning Threat Zone	Storm cell tracking	✓
Network Health	Lightning network performance	✓
TimeSpan	Lightning event evolution	✓

Network requirements

Communication from IRIS Analysis and the TLP to IRIS Focus		
Network data transfer	>100 Mbit/s (1000 Mbit/s recommended)	
Communication from IRIS Focus to IRIS Analysis and the TLP		
Single user (1 seat)	Network data transfer	> 650 kbit/s
	Latency	~150 ms
Multiple simultaneous users	Per seat	> 0.5 Mbit/s
	20 seats	> 14 Mbit/s

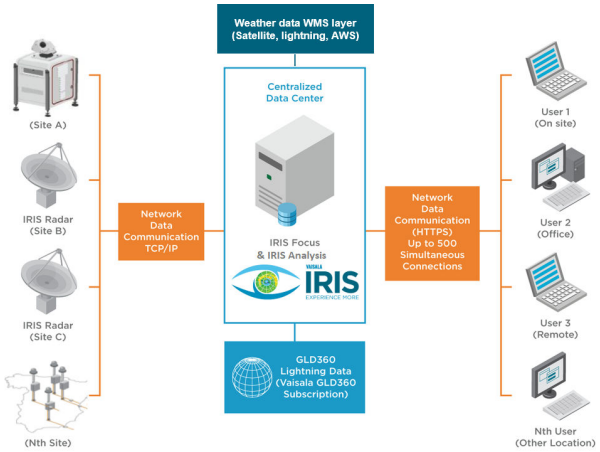
Hardware requirements

Minimum	Recommended[1)]
• Modern 4-core CPU (Intel Xeon E5 series or similar) • 32 GB RAM • 1 TB HDD • 1400 x 1050 minimum screen resolution	• Modern 8-core CPU (Intel Xeon E5 series or similar) • 64 GB RAM • 2x 1 SAS TB HDD in RAID 1 configuration • 1920 x 1200 screen resolution

1) *The pre-installed IRIS Focus system delivery option uses the Dell PowerEdge R450 rack server unit, which meets the recommended hardware setup.*

Software requirements

Operating system	AlmaLinux 9.3
IRIS Analysis	IRIS 8.13.6 or later
TLP	TLP 1.2.7 or later
Browser	IRIS Focus supports current Microsoft Edge®, Mozilla Firefox®, and Google Chrome™ browsers.



IRIS Focus in Remote Sensing Networks

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