

FL8672001

Revision 04 (2025-03-11)

APP-S8000

RELEASE NOTES

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Revision history			
No	Date (yyyy-mm-dd)	Author	Comments
00	2023-09-29	Resologi	App-s8000 2.1.0 release (reference version for Dainsy 4.0.3)
01	2024-02-27	Resologi	App-s8000 2.1.1 release (deprecated)
02	2024-03-17	Resologi	App-s8000 2.1.2 release (deprecated)
03	2024-03-25	Resologi	App-s8000 2.1.3 release (reference version for Dainsy 4.0.4)
04	2025-03-11	Resologi	App-s8000 2.1.5 release (reference version for Dainsy 4.1.0)

Documentary references	
No	Description
FL8658001	DAINSY Linux release notes

Terms and acronyms	
No	Description

Acronyms and icons



Warning



Necessary preliminary steps



Reference to operating principles



Procedure completed



Future article



Tip or recommendation

Understanding emphasis in the document

Example Representative of Linux or DAINSY technical terminology.

Example Represents a Linux command line.

Example Represents the content of a file or the result of a Linux command line.

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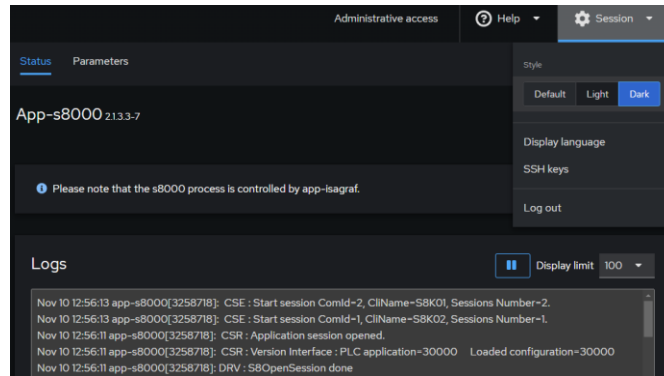
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1 APP-S8000 2.1.5

1.1 Feature updates

1.1.1 cockpit-dainsy#18 introduce the light/dark theme.

The cockpit panel can now be displayed in light or dark by selecting the style in the session menu.



1.1.2 dainsy#204 keep the firewall profile on uninstall.

When the application is removed, maintain its firewall profile on the system to avoid corrupting the firewall configuration.

1.1.3 dainsy#237 using the *dainsy* beaver historian feature.

Data published in the dictionary now uses the new historian functionality introduced in Daisy Beaver.

The screenshot shows a table titled 'History of app_s8000_refresh_per_sec'. The table has columns for Time, Value, Quality, Description, and Source. There are six rows of data, each with a 'Display limit' of 10. The data points are as follows:

Time	Value	Quality	Description	Source
2024-11-10T13:04:01.026Z	90	Good		app-s8000 2024-11-10T13:04:01.026Z
2024-11-10T13:04:00.026Z	89	Good		app-s8000 2024-11-10T13:04:00.026Z
2024-11-10T13:03:45.026Z	90	Good		app-s8000 2024-11-10T13:03:45.026Z
2024-11-10T13:03:43.026Z	89	Good		app-s8000 2024-11-10T13:03:43.026Z
2024-11-10T13:03:29.025Z	90	Good		app-s8000 2024-11-10T13:03:29.025Z
2024-11-10T13:03:27.025Z	89	Good		app-s8000 2024-11-10T13:03:27.025Z

2 APP-S8000 2.1.3

2.1 Feature updates

2.1.1 app-s8000#21 Fix small memory leak regression.

The implementation of the new S8000 statistics feature (*app-s8000#20*) introduced a small memory leak. This problem has been fixed.

3 APP-S8000 2.1.2

3.1 Feature updates

3.1.1 app-lib#18 Fix occasional mem allocation issue.

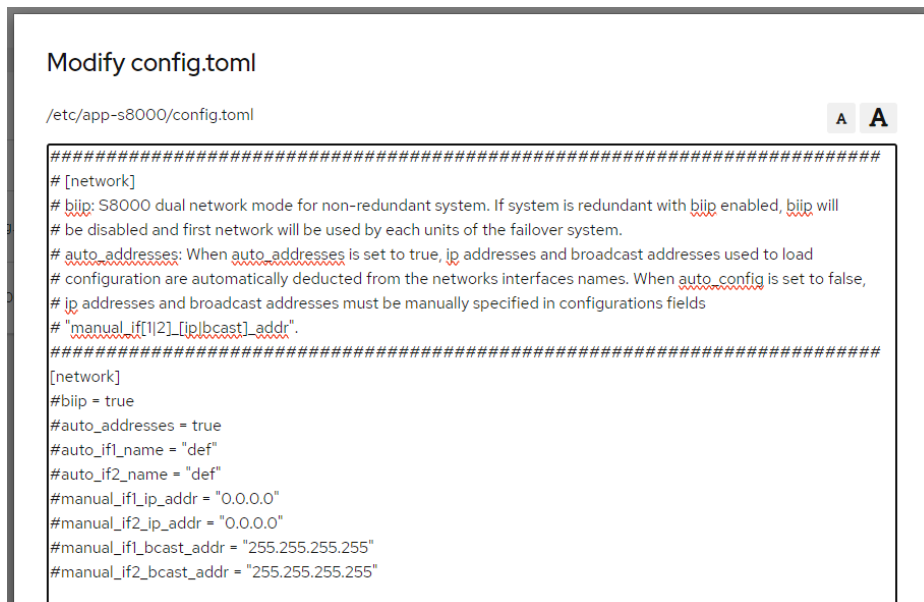
In some rare situations, the s8000 application may crash when starting, due to an invalid memory allocation of a field of the `config.toml` configuration file. This problem has been fixed.

4 APP-S8000 2.1.1

4.1 Feature updates

4.1.1 app-s8000#17 allow manual configuration of s8000 network parameters.

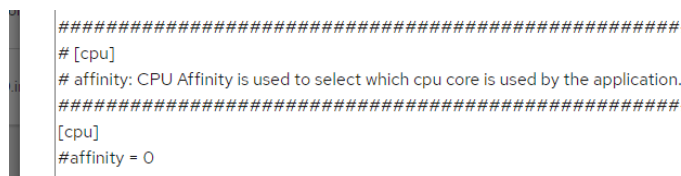
By default, at startup, app-s8000 automatically retrieves the IP addresses necessary for configuring requests to loaders using the name of the network interfaces. When a network is disconnected, app-s8000 can be no longer able to detect the corresponding address when it starts. To ensure that the addresses required for the operation of the loaders are always configured when the application starts, even when the network state is degraded, a manual configuration mode has been added. This mode allows the user to directly specify the addresses to use. The settings have been added to the configuration file `/etc/app-s8000/config.toml` under the `[network]` section.



```
Modify config.toml
/etc/app-s8000/config.toml
#####
# [network]
# biip: S8000 dual network mode for non-redundant system. If system is redundant with biip enabled, biip will
# be disabled and first network will be used by each units of the failover system.
# auto_addresses: When auto_addresses is set to true, ip addresses and broadcast addresses used to load
# configuration are automatically deducted from the networks interfaces names. When auto_config is set to false,
# ip addresses and broadcast addresses must be manually specified in configurations fields
# "manual_if[1|2]_ip|bcast1_addr".
#####
[network]
#biip = true
#auto_addresses = true
#auto_if1_name = "def"
#auto_if2_name = "def"
#manual_if1_ip_addr = "0.0.0.0"
#manual_if2_ip_addr = "0.0.0.0"
#manual_if1_bcast_addr = "255.255.255.255"
#manual_if2_bcast_addr = "255.255.255.255"
```

4.1.2 app-s8000#18 exposes the process priority configuration.

A parameter has been added to the configuration file `/etc/app-s8000/config.toml` under the `[sched]` section so that the user can configure the real-time priority of the process. It is recommended to leave the default value unless you have a very specific need.



```
#####
# [cpu]
# affinity: CPU Affinity is used to select which cpu core is used by the application.
#####
[cpu]
#affinity = 0
```

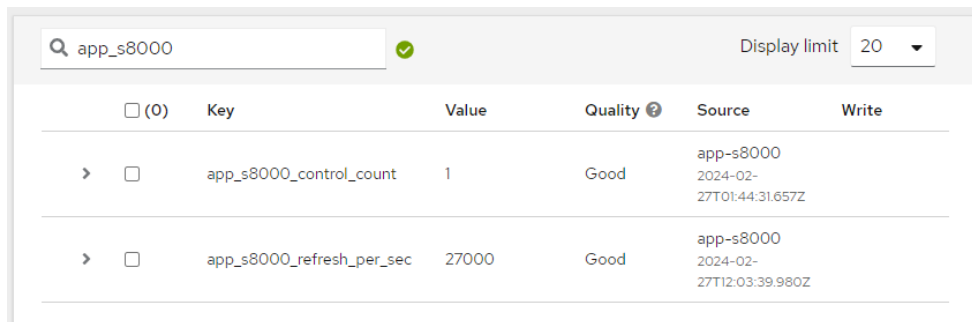

4.1.3 app-s8000#19 performance improvements for large configurations

Several significant improvements have been made in this release to increase the overall performance of the S8000 for configurations using up to 63 clients and up to 36 refresh tables, with many state changes per second. Among others:

- Acceleration of the network processing cycle (200ms to 20ms).
- Increased size of messaging queues for network and application management.
- Reduced wait times in tasks.
- Rewrote the timer management system.

4.1.4 app-s8000#20 new performance statistics variables

The app-s8000 application now publishes statistics variables in the dictionary to indicate to the user the level of server performance. The `app_s8000_refresh_per_sec` variable indicates the number of variables updated every second and on which clients are subscribed. The `app_s8000_control_count` variable indicates the cumulative number of controls sent by clients.



<input type="checkbox"/> (0)	Key	Value	Quality	Source	Write
<input type="checkbox"/>	app_s8000_control_count	1	Good	app-s8000 2024-02-27T01:44:31.657Z	
<input type="checkbox"/>	app_s8000_refresh_per_sec	27000	Good	app-s8000 2024-02-27T12:03:39.980Z	

4.1.5 dainsy#211 minimize the impact of application updates on user settings.

During an application update, the settings file `/etc/app-s8000/config.toml` could be overwritten by a new version if its original content was changed between the old application package and the new application package. To prevent the user from losing their settings, a mechanism has been implemented to prevent this from happening. The user can now create additional `toml` files in the `/etc/app-s8000/config.toml.d` directory. These files are processed in alphabetical order after the main file is loaded and are not erased or overwritten when updating the application.

Note: this feature is currently not used by cockpit and must be operated with command line interface.

5 APP-S8000 2.1.0

5.1 Feature updates

5.1.1 app-s8000#13 fixed application crash when loader does not respond to requests.

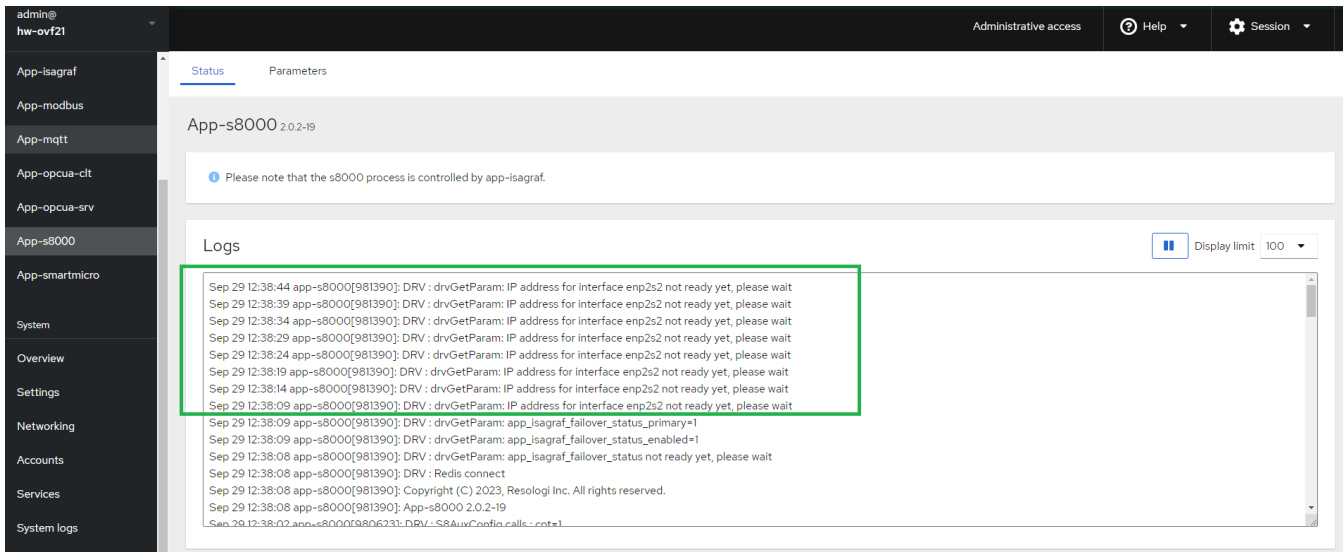
When the s8000 server is booting, it periodically makes "request to loader" to the addresses configured in the cs8000.ini file. When the loaders do not respond, the server remains in the loading phase and during this period, if s8000 clients exist and are operational, they attempt to open a session on the server, which in turn denies them access. In this scenario, sessions are opened/closed continuously on the server. After a certain amount of time (random varying from a few minutes to several hours), the s8000 driver fails an operation and gets stuck in its process and becomes "zombie". This behavior has been fixed.

5.1.2 app-s8000#14 insufficient time to connect to the isagraf application.

When app-s8000 starts, it attempts to connect to available isagraf resources. Since the dainsy 4.0.2 delivery, an evolution has been introduced in app-isagraf to monitor the state of the CPU and delay its launch to a more convenient time. However, this launch can be delayed. App-s8000 now take this additional delay in consideration.

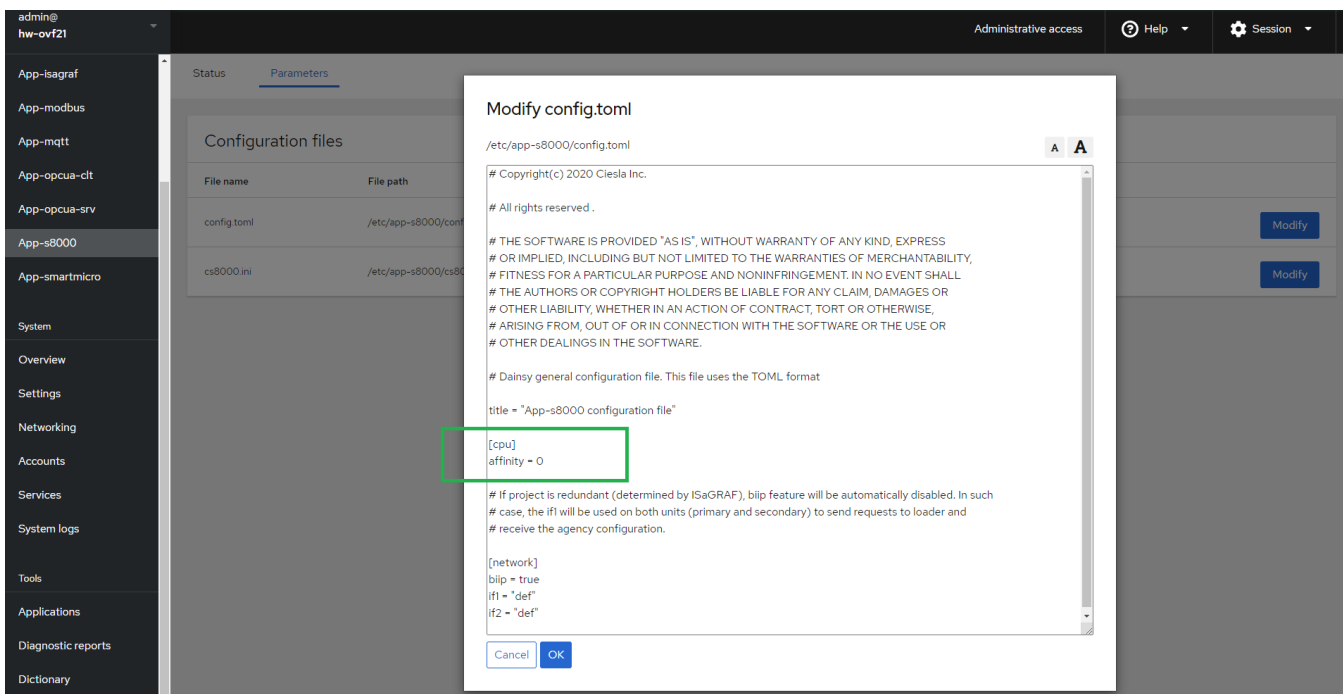
5.1.3 app-s8000#15 invalid reading of network addresses.

When DAINSY Linux starts and the network cards configured for use with the s8000 are not yet operational, the IP address read by app-s8000 at its startup for the usage of the configuration loader is invalid. To resolve the situation, app-s8000 will wait until a valid IP address is found before starting the driver.



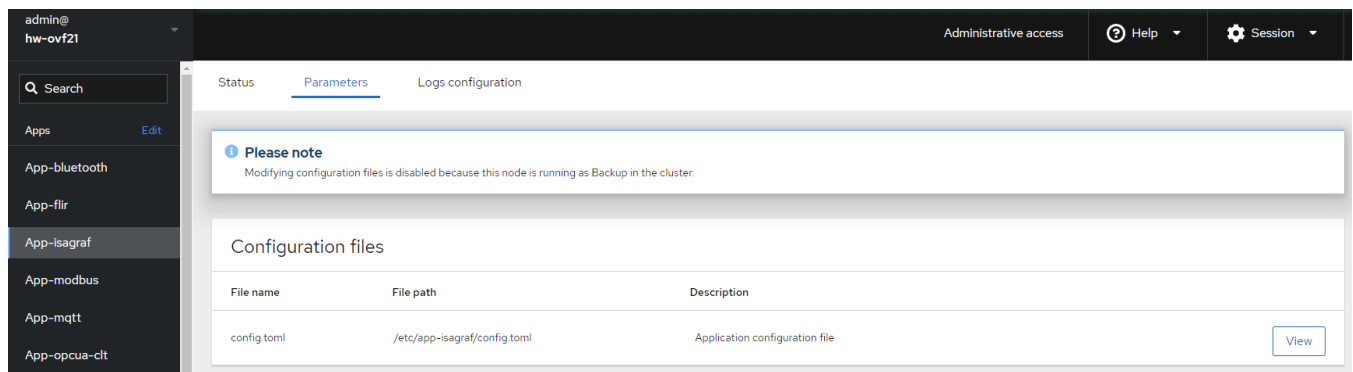
5.1.4 app-isagraf#16 limit the application to run on a single CPU core.

The s8000 protocol is a very old protocol that was not designed with knowledge of new technologies such as multi-core processors and hyper-threading technology. This results in poorly controlled behaviors depending on the equipment used for its operation. To protect the application, a parameter has been added in the configuration to allow the user to choose a single CPU core to use.



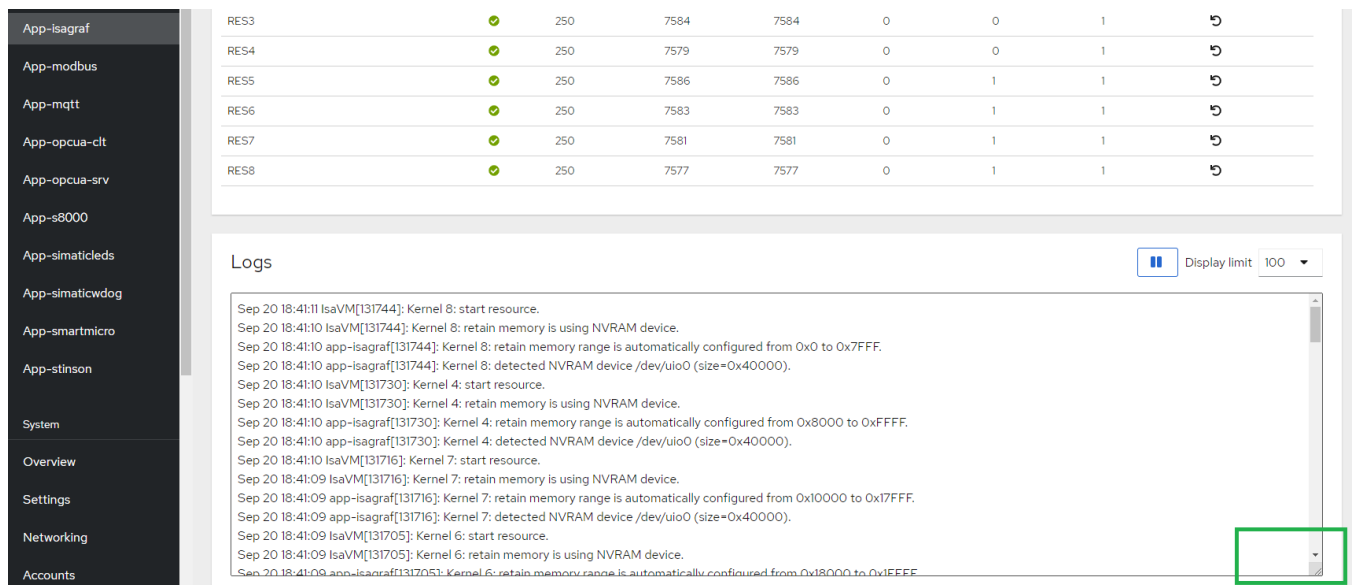
5.1.5 cockpit-app-base#21 does not allow modification of configuration files from the backup unit.

Modification of configuration files is now prohibited on the backup unit of a redundant system because the modification conflicts with the *cluster-sync* synchronization tool.



5.1.6 cockpit-app-base#24 allow resizing of logs section.

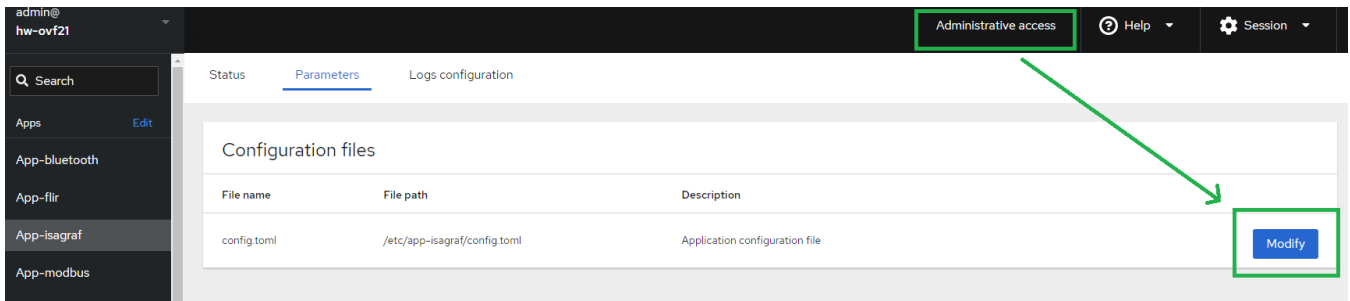
The user can now extend the size of the logs section.



5.1.7 cockpit-app-base#25 manages configuration files permissions.

File access security is now enforced according to the following policies.

- Reading files is always allowed for members of the `grp-config` security group or by super-users who have activated cockpit administrative mode.
- Modification of files deployed in the `/config` folder is allowed for members of the `grp-config` security group or by super-users who have activated cockpit administrative mode.
- Modification of files deployed in other folders is allowed by supers-users who have activated cockpit administrative mode.



5.1.8 dainsy#185 use of control groups (v2) by the creation of dedicated slice for the application.

With the release of DAINSY 4.0.3, the use of control groups is now possible and allows better sharing of machine resources between the installed applications. App-isagraf is now identified in a dedicated slice under the "app" tree and will have guaranteed access to resources according to the distribution established by the DAINSY policy.

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