TECNIPLAST

DVC®
DIGITAL VENTILATED CAGE

Release Note
6.4.0

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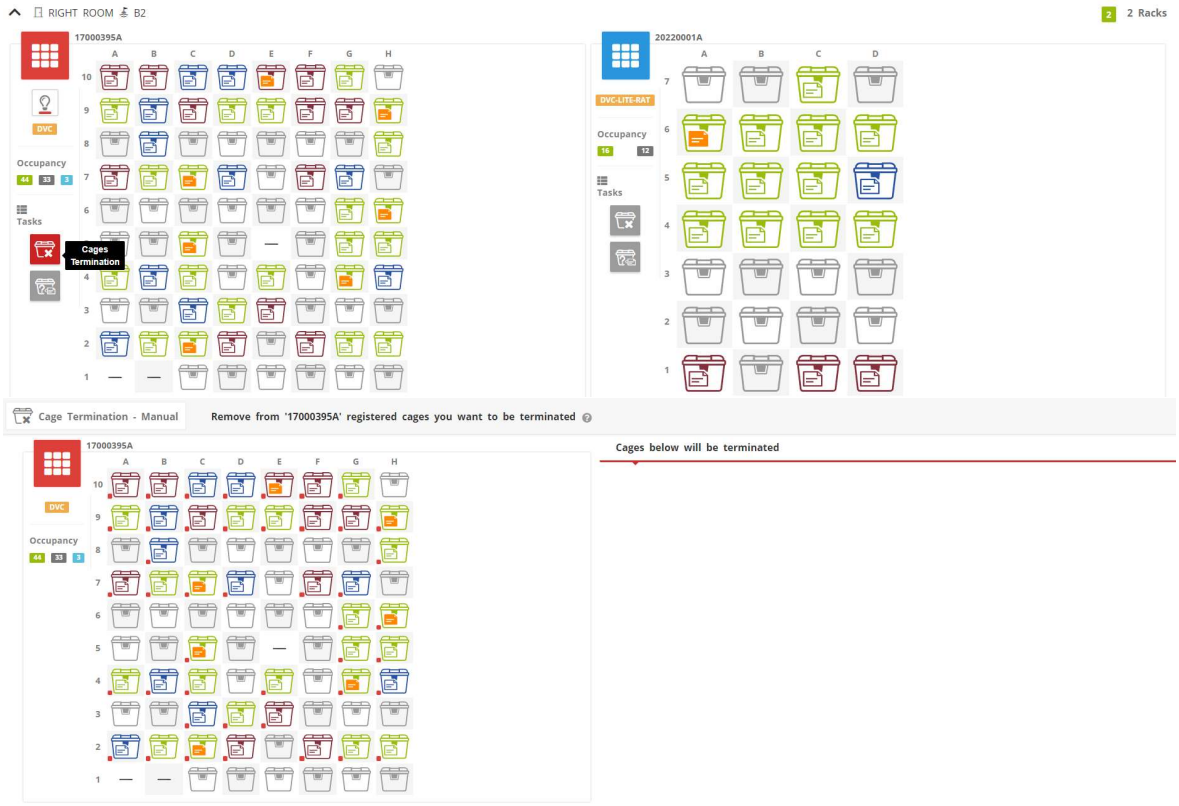
1 RELEASED FEATURES

This DVC® release 6.4.0 includes several features, enhancements and bug fixings. Some of these new features have been developed considering new devices officially released in production, such as the DVC® MASTER TOUCHSCREEN and the ELECTRONIC TOP HOLDER.

1.1 FEATURE #1 – CAGES THAT CAN BE TERMINATED.

When clicking the Cage Termination feature in the DVC® Operator Rack View, all cages that can potentially be terminated are illuminated on the DVC® Rack (AMS cages cannot be terminated by the DVC® but only by the AMS)



1.2 FEATURE #2 – LEAVE FEEDBACK TOO_CLEAN WITHOUT OPEN THE CAGE.

In this version 6.4,0, the USER can leave the Feedback Too Clean without needing to open the cage.

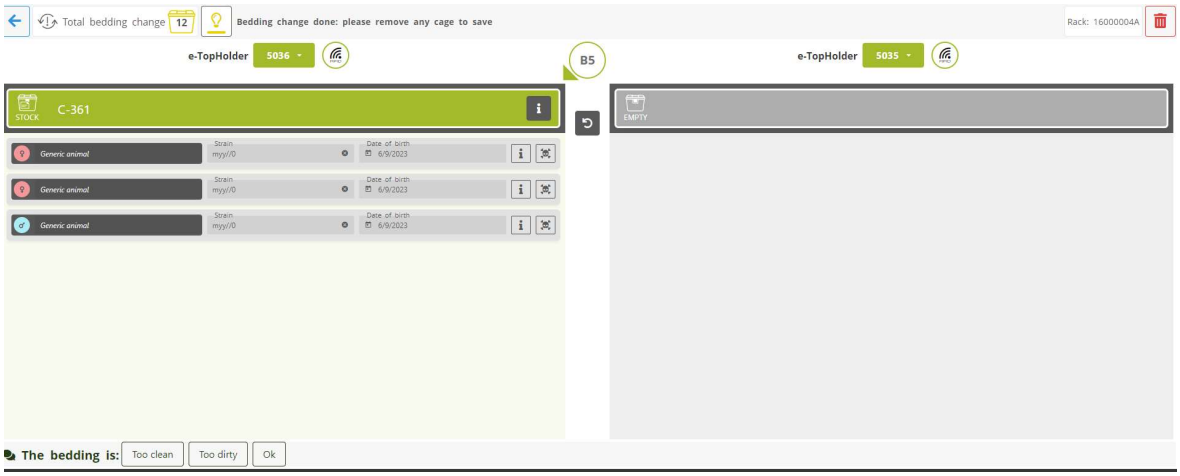
The workflow is the following:

1. Illuminate the cages that received a Bedding Task (Yellow LEDs)
2. Remove the first cage.
3. Evaluate the status of the Bedding. If too clean:
4. Re-insert the cage inside the rack.
5. Keep pressing for 2 seconds the capacitive button of the DVC® board.

On the Bedding Task Table, it will appear as "Can't Be done" (rejected).

1.3 FEATURE #3 – CARD LABEL SHOWS STRAIN DURING BEDDING TASKS.

During the Bedding Change task, if a Strain and the DoB are defined in the cage label, they are displayed during the task.



1.4 FEATURE #4 – FLOODING ALARMS ENABLED FOR NOT REGISTERED CAGES.

The Flooding alarm will be enabled for unregistered cages as well. This way, we cover some workflows that involve animal entries without cage registration that is performed at a later stage.

1.5 FEATURE #5 – DISABLE ALARMS FOR SPECIFIC CAGES.

With this new feature, the USER who has DVC® MASTER TOUCHSCREEN activated can turn alarms on or off for each cage (it has to be registered). This feature enhances the management of alarms differently from cage to cage.

By clicking on the section Alarms Management on the DVC® MASTER TOUCHSCREEN, the USER can access several Alarm types.
Selecting a specific Type of Alarm, the DVC® RACK will illuminate registered cages as GREEN or as RED, where:

GREEN = Alarm enabled
RED = Alarm disabled

By pressing the capacitive button of the DVC® board for 4 seconds, the status of the Alarms will be changed:

From Enabled to Disabled GREEN to RED
From Disabled to Enabled RED to GREEN.

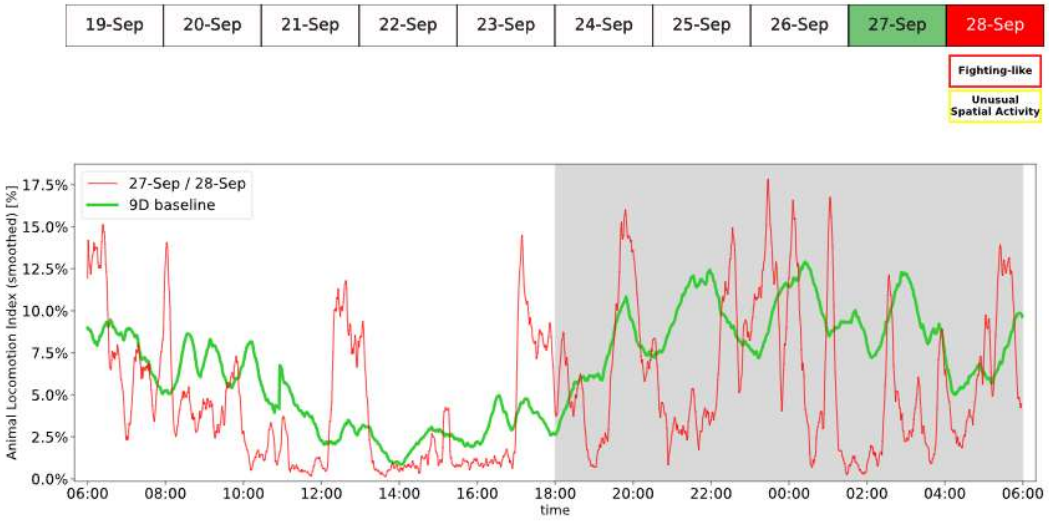
After that, a confirmation to save the changes will be shown on the DVC® MASTER TOUCHSCREEN.

1.6 FEATURE #6 – NWC EMAIL AND ALARMS NOTIFICATION FOR RESEARCHERS

Users assigned as cage owner, with a valid email address previously set will receive the Daily Report email with the NWC tasks created and alarms notification for those cages belonging to them

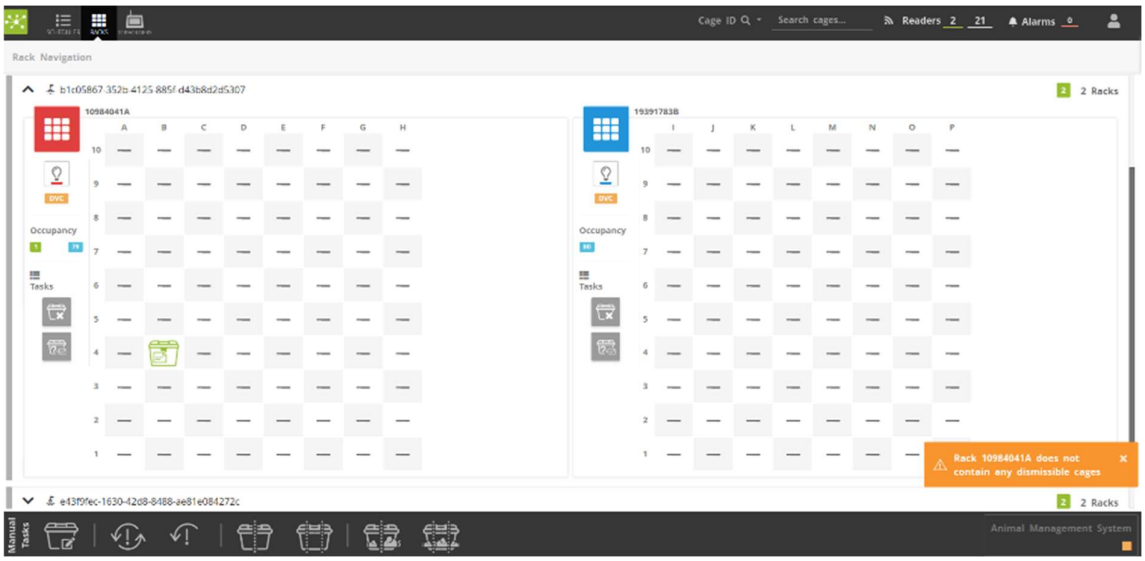
1.7 FEATURE #7 – FIGHTING EVALUATION DURING NWC TASK

The DVC® version 6.4.0 includes a new algorithm for the NWC evaluations: the Fighting-Like algorithm.



1.8 FEATURE #8 – AMS CAGES CANNOT BE TERMINATED FROM THE DVC®.

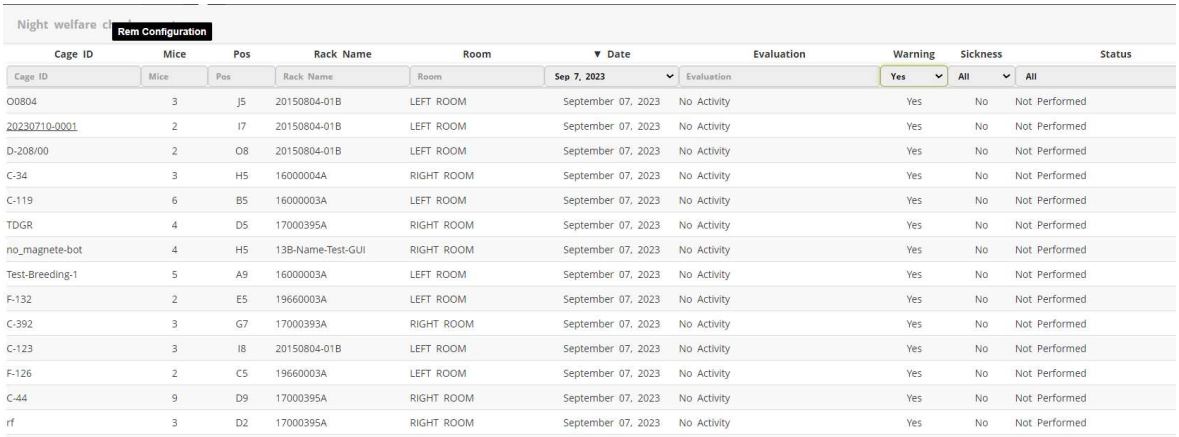
If a cage has been created as an AMS cage, it cannot be terminated by the DVC®, but it has to be terminated by the AMS, which will automatically update the corresponding cage in the DVC® system.



2 ENHANCEMENTS

2.1 ENHANCEMENT #1 - NWC LOGBOOK 'NOT PERFORMED' INSTEAD OF 'UNDONE'.

In the NWC table, the status of the task has been modified from "undone" to "not performed" in case this is not performed within the assigned day.


Night welfare c

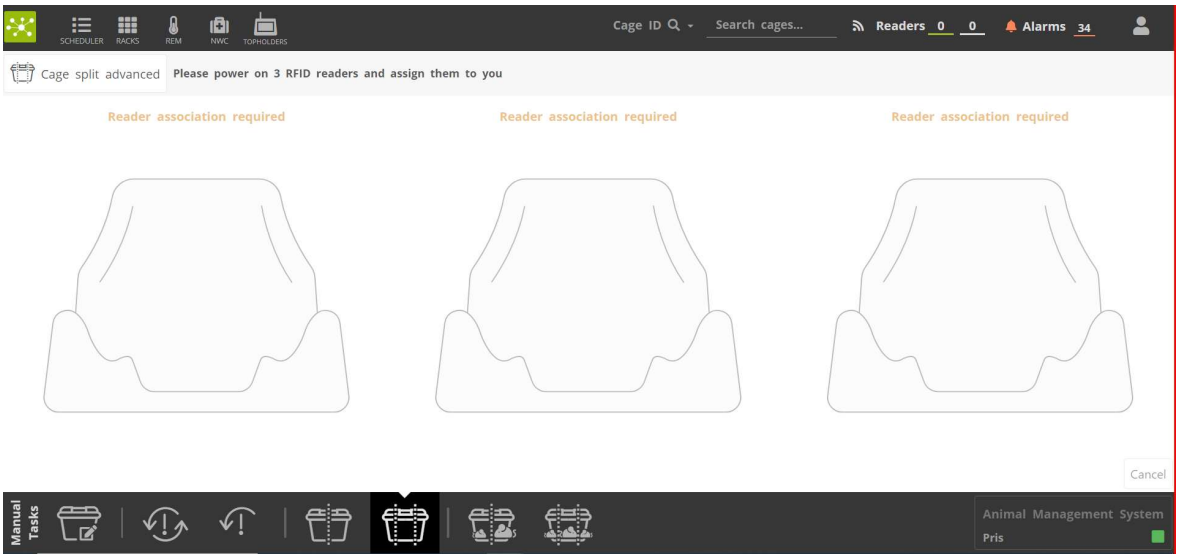
Rem Configuration

Cage ID	Mice	Pos	Rack Name	Room	▼ Date	Evaluation	Warning	Sickness	Status
Cage ID	Mice	Pos	Rack Name	Room	Sep 7, 2023	Evaluation	Yes	All	All
O0804	3	J5	20150804-01B	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
20230710-0001	2	I7	20150804-01B	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
D-208/00	2	O8	20150804-01B	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
C-34	3	H5	16000004A	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
C-119	6	B5	16000003A	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
TDGR	4	D5	17000395A	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
no_magnete-bot	4	H5	13B-Name-Test-GUI	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
Test-Breeding-1	5	A9	16000003A	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
F-132	2	E5	19660003A	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
C-392	3	G7	17000393A	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
C-123	3	I8	20150804-01B	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
F-126	2	C5	19660003A	LEFT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
C-44	9	D9	17000395A	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed
rf	3	D2	17000395A	RIGHT ROOM	September 07, 2023	No Activity	Yes	No	Not Performed

2.2 ENHANCEMENT #2 - READER LAYOUT ON OPERATOR INTERFACE

The graphical placement for the DVC® Readers on the DVC® Operator User Interface during Split Advanced and /or Weaning Advanced tasks will be as follows.

1st	Reader associated	Position LEFT
2nd	Reader associated	Position CENTER
3rd	Reader associated	Position RIGHT



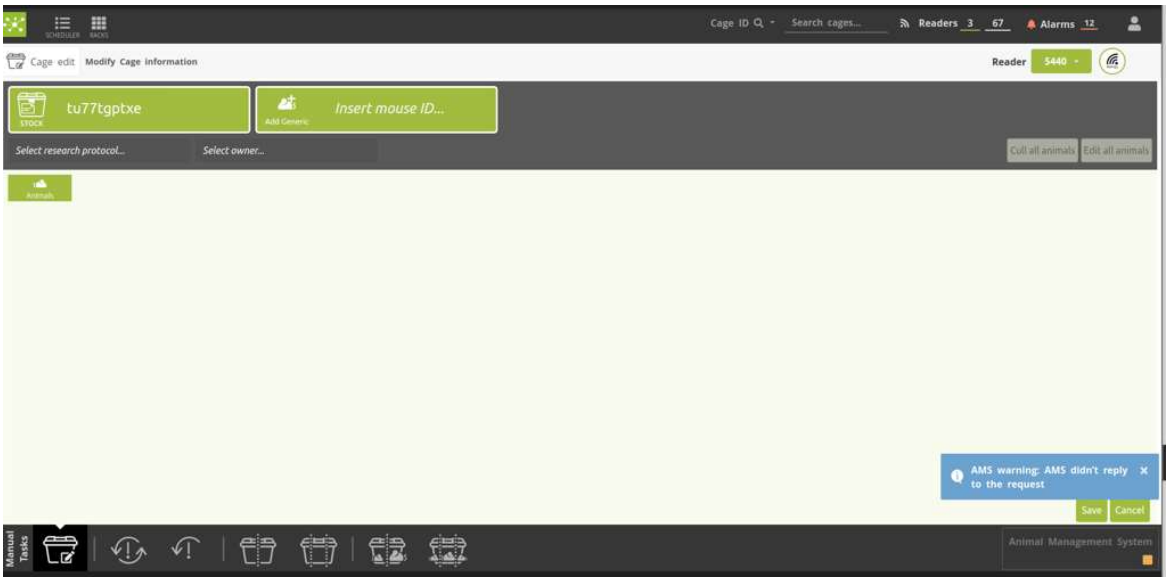
2.3 ENHANCEMENT #3 - SPLIT/WEANING 2 CAGES IN ADVANCED MODE.

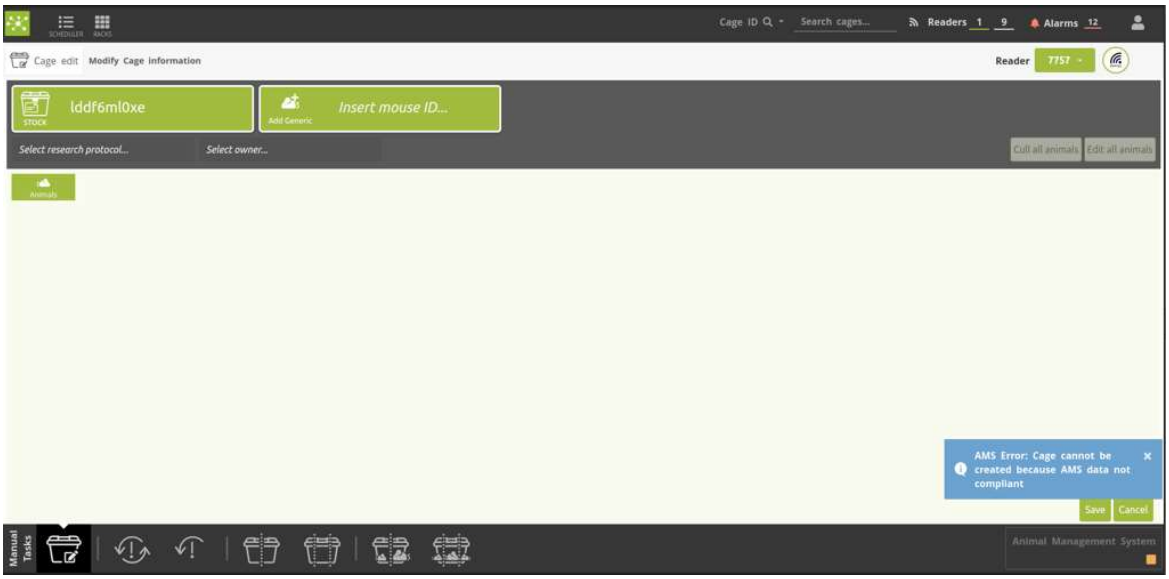
If the User is performing a Split or Weaning Advance task and wants to move the animals using only two cages (and not three), they can do so without moving to the Standard Split/weaning Cage task
This wasn't possible in the previous version.

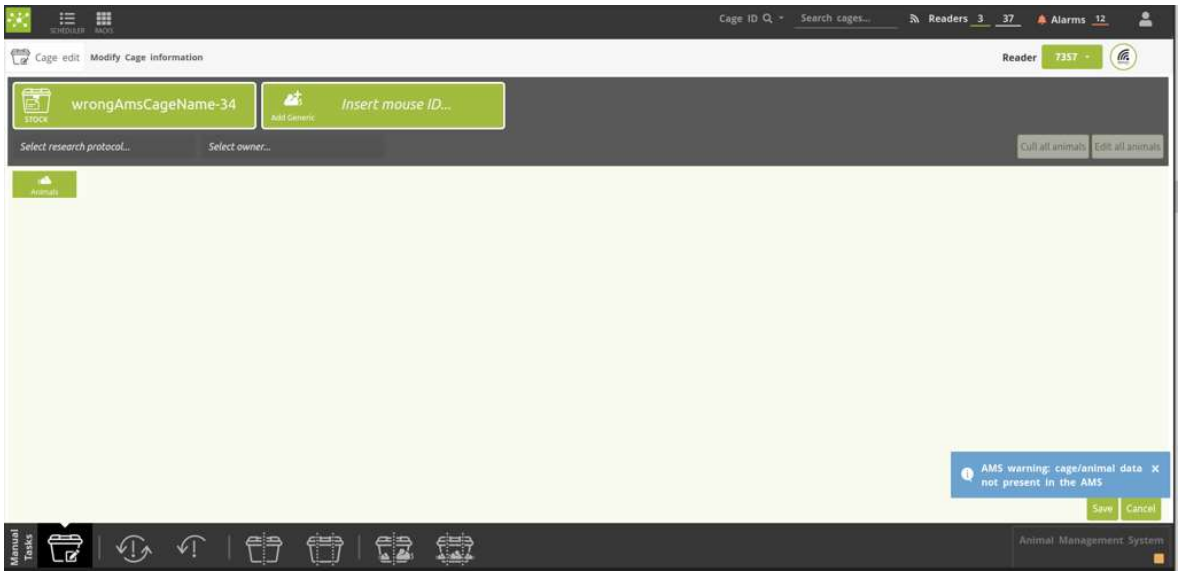
2.4 ENHANCEMENT #4 - INFO ERROR MESSAGES WITH AMS INTEGRATION.

In case of errors during the creation of an AMS cage, the USER receives a clear message explaining the reason for the failed cage creation task.
The reasons can be multiple, for instance:

- AMS didn't reply to the request.
- AMS data are not "compliant" with the integration (wrong messages from the AMS).
- Cage (or animal) data are not present in the AMS database.
- There is a configuration error.


Cage ID
Search cages...
Readers 3 67
Alarms 12
Cage edit
Modify Cage information
Reader 5440
tu77tgptxe
Insert mouse ID...
Select research protocol...
Select owner...
Cull all animals
Edit all animals
Animals
AMS warning: AMS didn't reply to the request
Save
Cancel
Manual Tasks
Animal Management System


Cage ID
Search cages...
Readers 1 9
Alarms 12
Cage edit
Modify Cage information
Reader 7757
lddf6ml0xe
Insert mouse ID...
Select research protocol...
Select owner...
Cull all animals
Edit all animals
Animals
AMS Error: Cage cannot be created because AMS data not compliant
Save
Cancel
Manual Tasks
Animal Management System

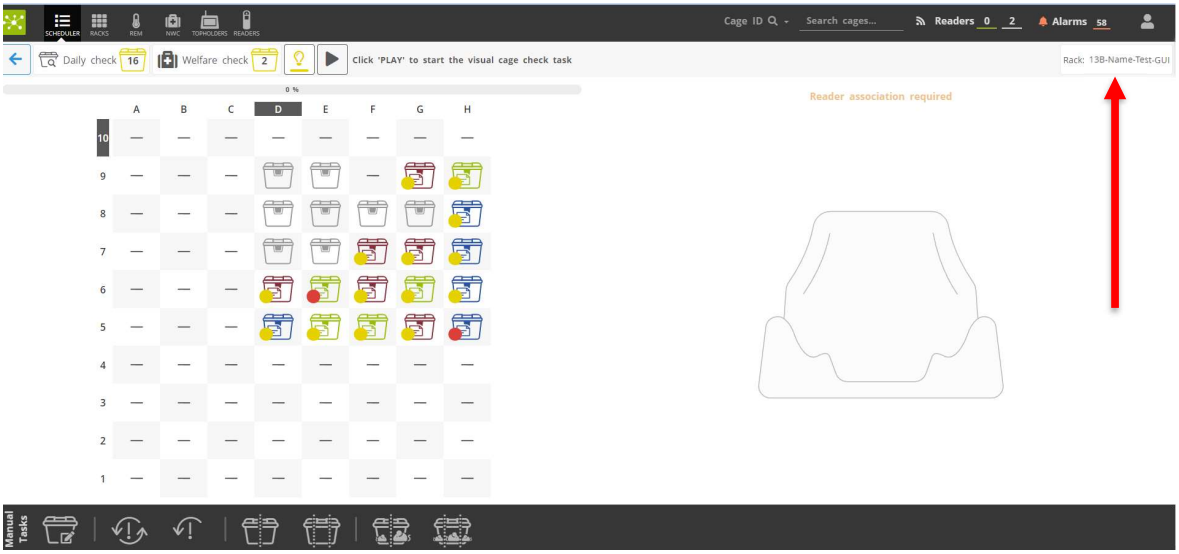


2.5 ENHANCEMENT # 5 - AMS API'S.

With this new release 6.4.0 we covered most of the different potential workflows about DVC-AMS integration with new designed APIs. Thanks to this flexibility, with the integration, the DVC® can follow your standard workflows depending if you register a cage by assigning a cage ID or you simply register the animals.
Please refer to us to discuss the different ones available.

2.6 ENHANCEMENT # 6 - RACK NAME INSTEAD OF SERIAL DURING TASKS

During the DVC® TASKS (Daily, Welfare, Bedding), the rack name (set by the USER in the workplace) is displayed instead of the rack serial number (provided by Tecniplast).



2.7 ENHANCEMENT # 7 – CAGE WITHOUT RFID TAG

Sometimes after a Cage insertion in the DVC® Rack, the DVC® system raised up an alarm “Cage without RFID TAG”. In the 99,9% of the cases, this was not a real alarm since the cage had a valid RFID TAG on the Cage Top.
We improved the reliability of the reading by implementing a multiple reading.

3 BUG FIX

This section refers to “user-visible” application bugs that have been fixed by the current release. Some potential bugs refer to the overall infrastructure that are not here reported because “invisible” to the final User unless these are not critical bugs affecting the overall workflow.

3.1 BUG FIX #1 - READERS KEEP ASSOCIATED WHEN THE USER’S LAPTOP IS DISCONNECTED FROM NETWORK.

In the previous versions, the DVC® Readers remained associated when the User's laptop lost network connection.
This fact caused the Readers to be unavailable to other DVC® users, even when the original ones were not actively being used anymore.
This behaviour has been improved with this version 6.4.0.

3.2 BUG FIX #2 - REM DATA COLLECTION

When we upgraded your DVC® system to the version 6.3.0 you lost the opportunity to retrieve historical data produced by the REM device.
With this new version, all historical data are back and correctly available again.

3.3 BUG FIX #3 - READER ASSOCIATION NOT CORRECTLY DISPLAYED ON TABLET.

In some cases where the User was using the tablet, the association of the readers was not displayed correctly. This would be due to the low resolution of the Tablet or due to the different browser features. This has been resolved.

3.4 BUG FIX #4 – CLOSE WRONG POSITION ALARM

The button CLOSE alarm to acknowledge the Wrong Cage Position alarm was not functional from the DVC® WORKPLACE alarm list. – Picture 1

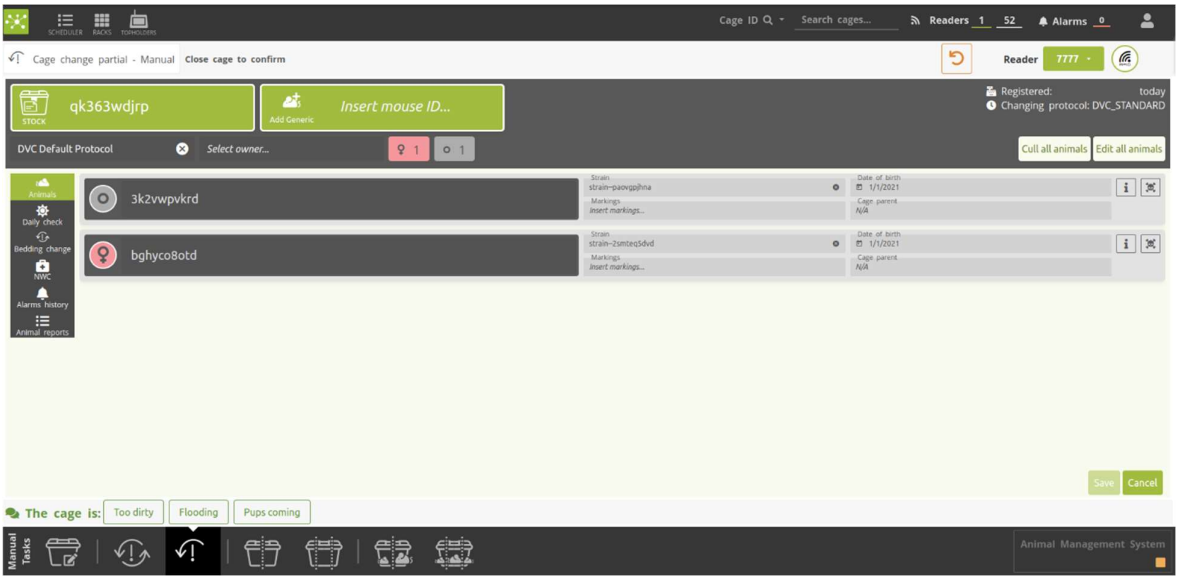
In version DVC® 6.4.0 it has been fixed.

Picture 2

3.5 BUG FIX #6 – FEEDBACKS MANUAL BEDDING TASK.

In the previous versions, the feedback during a manual bedding change were erroneously deleted. They are now back as follow:

TOO_DIRTY – PUPS COMING - FLOODING



3.6 BUG FIX #7 – DOB DATE MOVES TO THE DAY BEFORE.

In some facilities, depending on the time zone, when entering the date of birth, the system always set the previous day. This bug has been fixed in the current version.

4 KNOWN OPEN BUGS

4.1 KNOWN BUG #1 – FLOODING ALARM NOT NOTIFIED BY EMAIL TO THE RESEARCHER

Any alarm raised by the cage is sent by email to the cage owner (if set). Flooding alarm is not notified by email to Researchers (if set as cage owners). This bug will be fixed in the next version.

4.2 KNOWN BUG #2 – UNEXPECTED ACTIVITY AND FLOODING ALARM ON SIDE B APPEARS ON SIDE A

(Only) In the DVC® workplace interface, the unexpected activity alarm raised on a cage placed on the side B of a double sided DVC® Rack is erroneously displayed with the side A coordinates. This bug will be fixed in the next version.

4.3 KNOWN ISSUE #3 – "This animal already exists."

If the User presses Enter just immediately after the animal id insertion, sometimes, the DVC® shows the message "This animal Already Exists".
This bug will be fixed in the next version.

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