Broadway 3D Security System

QUICK START

Following steps describe the procedure of connecting to the Broadway 3D system for its configuring and administrating the database. All of the assembling steps and components specifications can be found in the Installation Manual.

1. Connect computing unit to another computer or laptop via local network or directly, using a patch-cord. Also before turning the system on it is recommended to connect a monitor to the computing unit in order to get proper tips during the enrollment process.
2. Launch any web-browser (Internet Explorer, Google Chrome, etc.) and enter the IP address of the Broadway 3D system (by default it is 192.168.124.1) in the address line and press Enter, you will get the Broadway Web Interface – BWI (FIG 1).
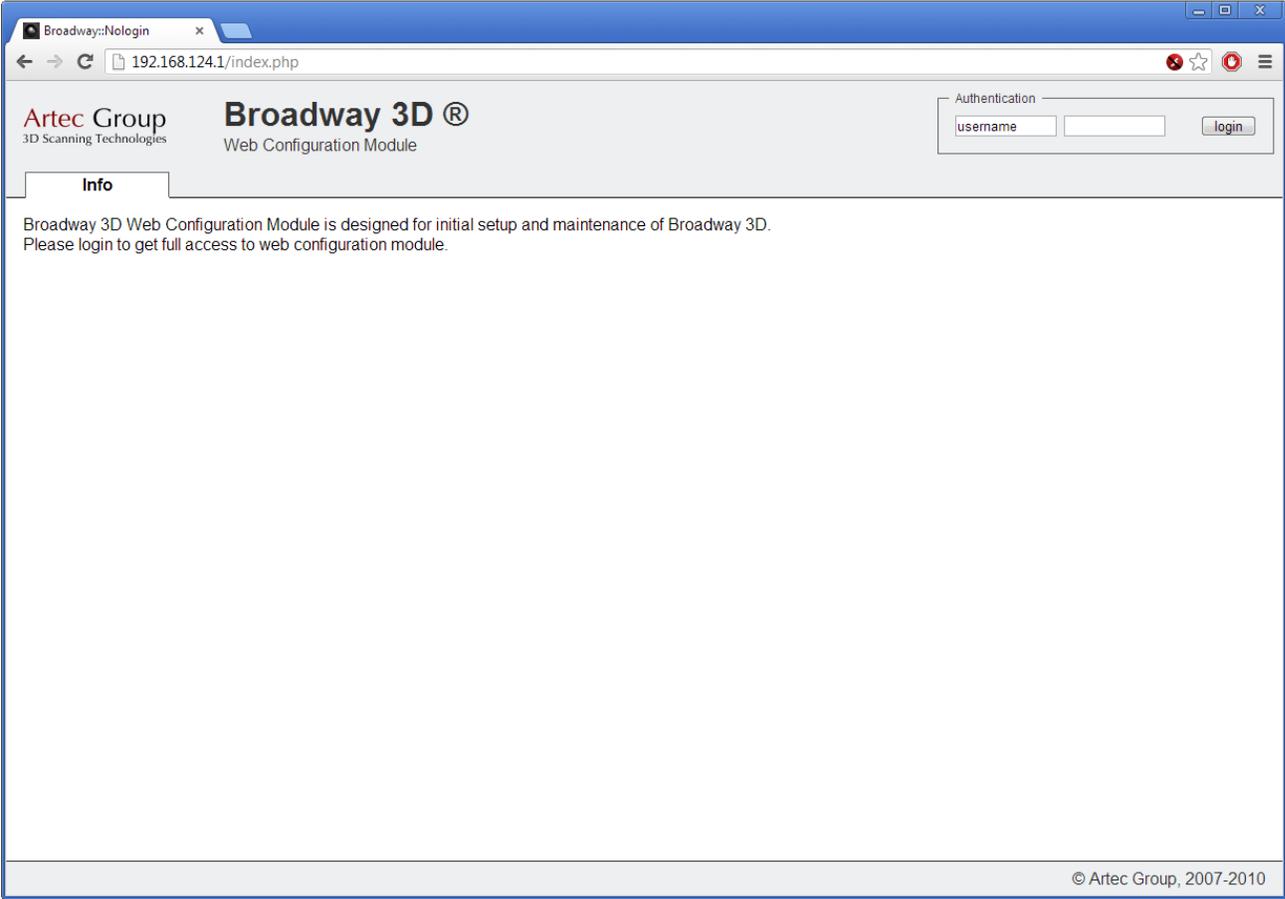

FIG 1. BWI (Broadway Web Interface).

3. To get an access to the system enter username: **root** and password: **operation** in the upper-right corner of the window in Authentication fields (Figure 2) and press Enter (or <login> button).
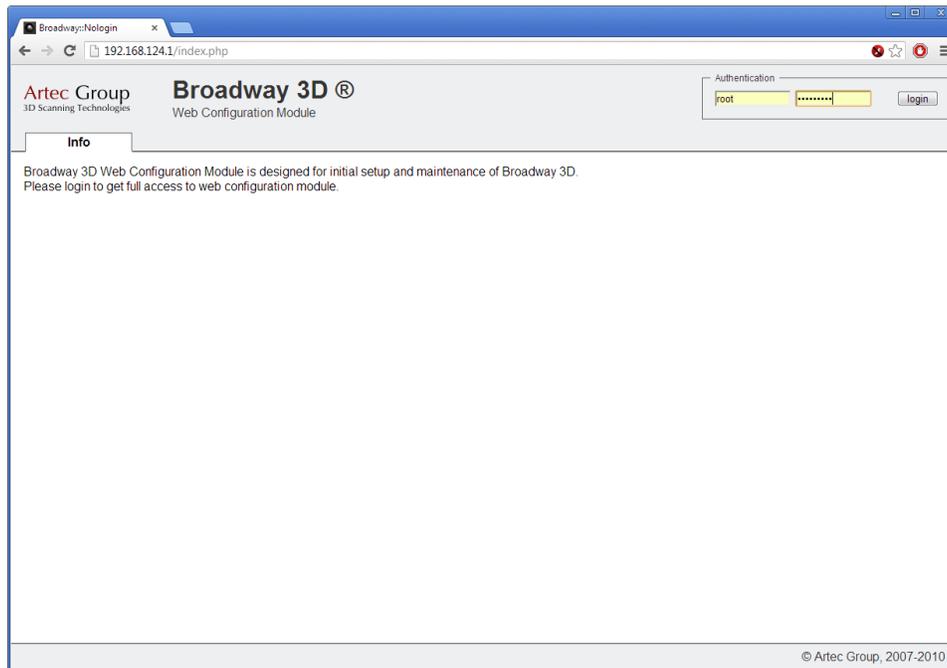

FIG 2. Entering username and password.

4. After successful authorization you will see **Info** page, showing current status of the system (Figure 3). Here you can see current Broadway 3D software version, the Uptime of the system (the time since last reboot), the current mode of the system and so on.
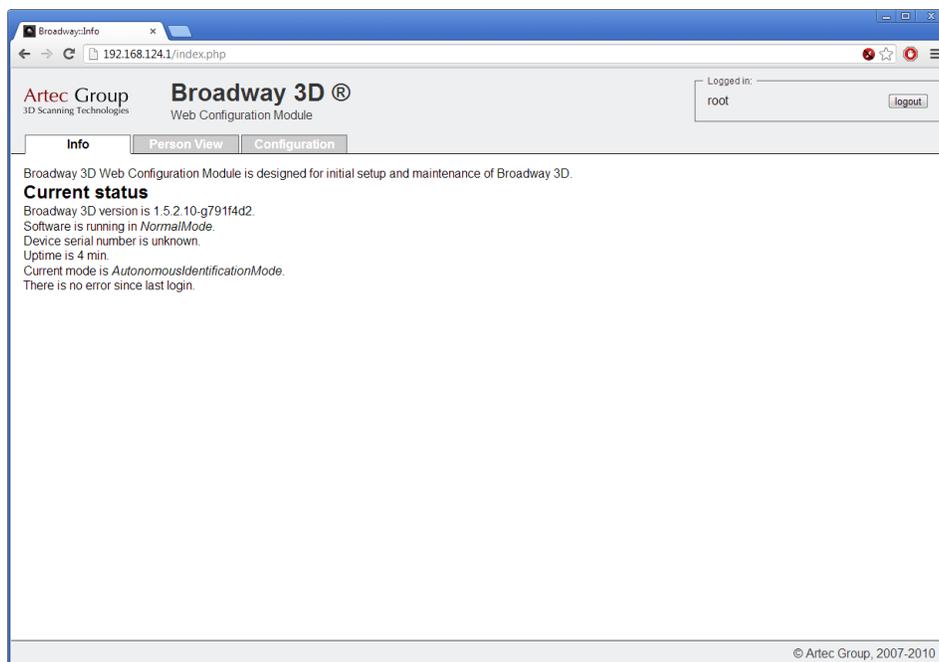

FIG 3. Info page

5. Open page **Person View** to see the database of the system (Figure 4). For the first start of the system the database is empty. **Persons per page** allows to change the number of the persons displayed per one page (default is **10**). **Persons without 3D**, if enabled, filters the list of a persons and shows only those templates that do not have a 3D data assigned (a person is not enrolled). The **Search** field allows to search a person by its name (or a part of the name). The <**Clear**> button disables all filters and shows the whole database.
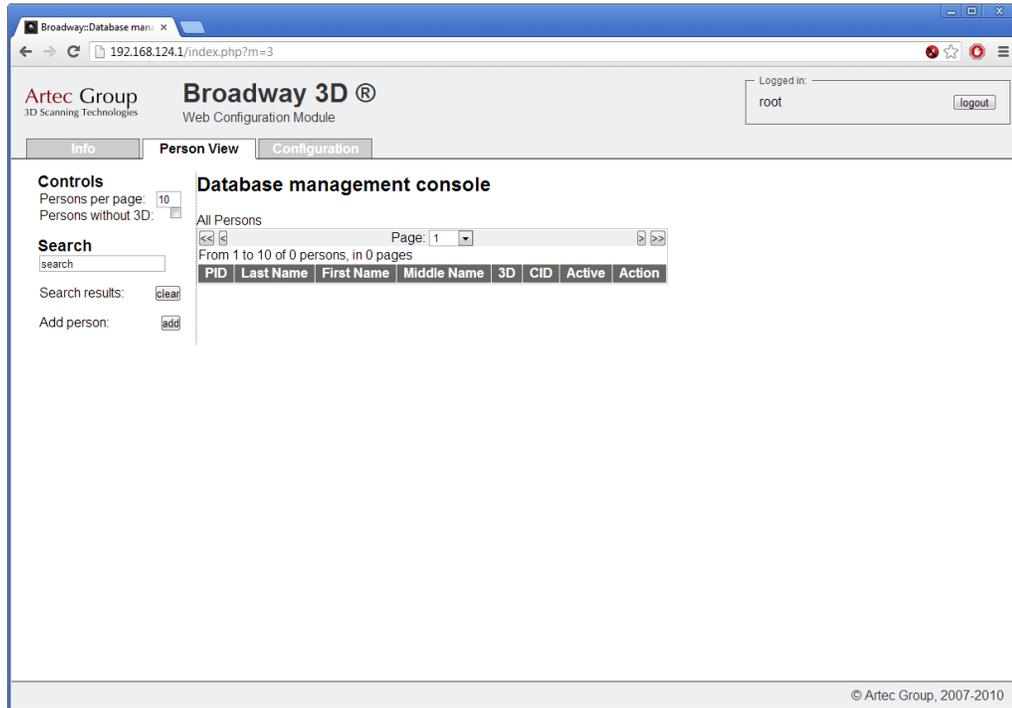

FIG 4. **Person View** page.

6. Press <**add**> to create new template and fulfill appropriate fields with user's information (Figure 5).
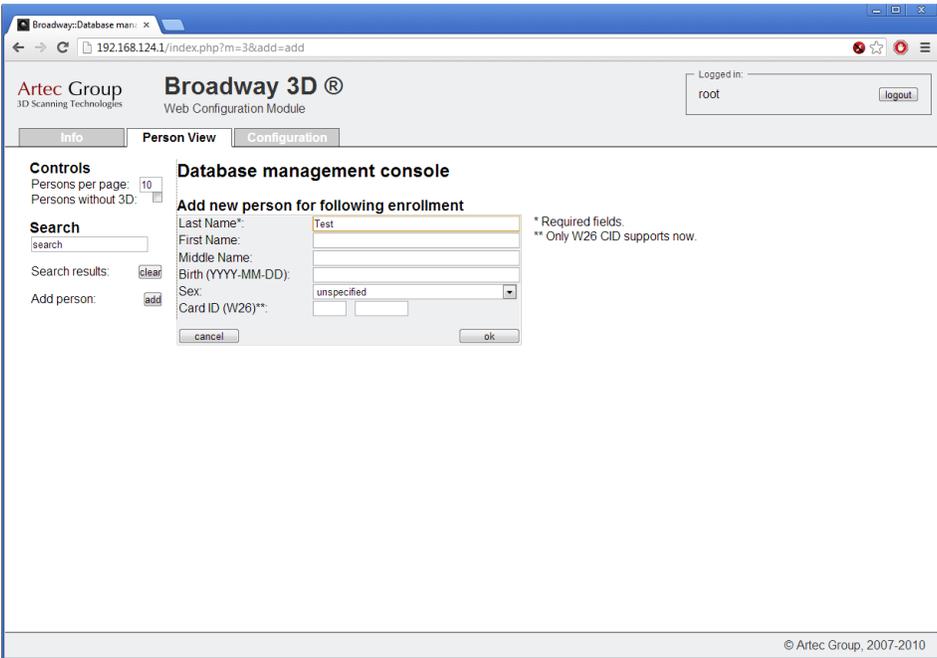

FIG 5. Creating new template.

7. Press <**ok**> button to finish. The system returns into the **Person View** page with new line appeared (Figure 6). The line will be highlighted in red until any 3D biometrical data will be assigned to that template.
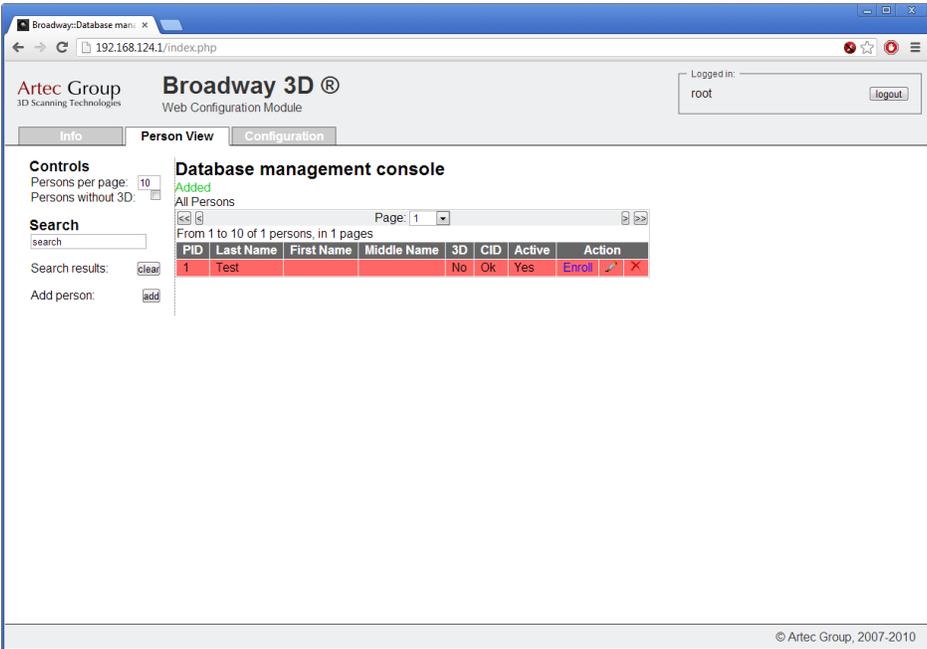

FIG 6. New template without 3D data.

8. Ask a person to stand before the 3D camera at the distance 0,8…1,0 meters. During the enrollment process a person must stay still with a calm face, do not move, do not talk or smile, and look at the green flashing arrow when it appears. Also any kind of glasses must be taken away for the enrollment process, and if a person has any kind of forelock that covers the face it must be taken away (for example hold it by hand) to show maximum clear face as it possible. Following these advises will give maximum performance and speed during the recognition.
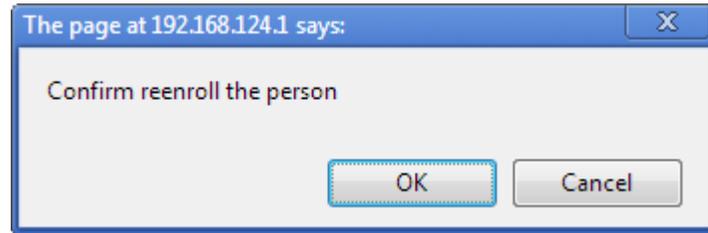

FIG 7. Enrollment confirmation window.

9. Press <**Enroll**>. When a person will be ready press <**OK**> on a confirmation window (Figure 7). The system will switch to the enrollment mode and if a person is standing at the distance of 0,8…1,0 meters then green arrow will flash and capturing of the biometrical data of a person will start, otherwise flashing red cross will appear and the monitor connected to the computing unit will give tips either to step ahead or step back.

10. When the enrollment process will be successfully completed (the process will take several seconds) green arrow will stop flashing for a moment, captured model of a face will appear at the monitor, connected to the computing unit, and in the BWI green text **Enrollment added** will be displayed (Figure 8).
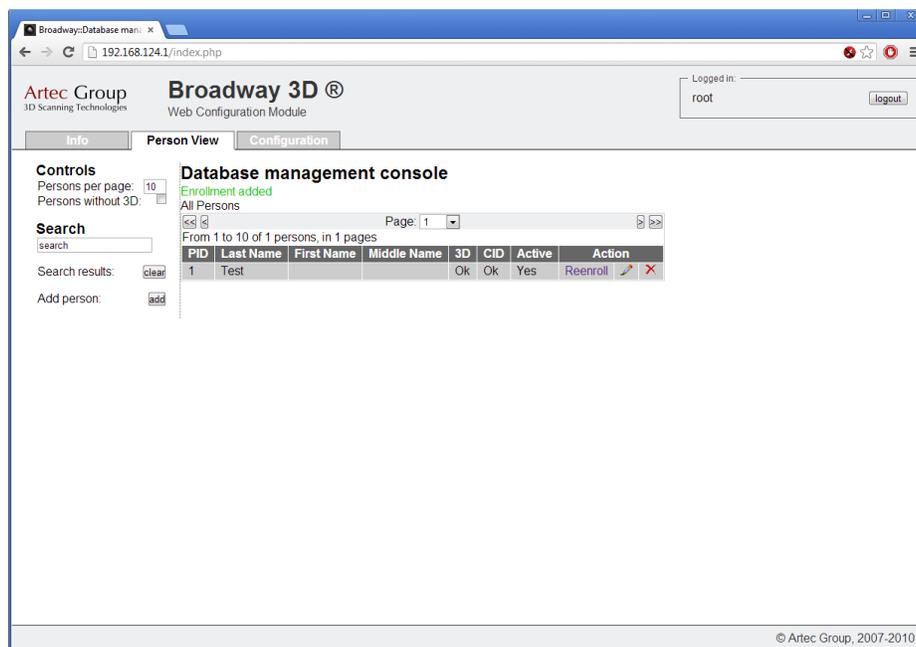

FIG 8. BWI screenshot after successful enrollment.

11. The Broadway 3D system will return to the recognition mode automatically and when any person will appear in the field of view of the 3D camera the Broadway 3D system will start to capture biometrical information of person's face, rebuild the 3D model and compare it with the existing 3D templates at the database. If the match is found (means the similarity score between captured 3D model and any template in the database is higher than the threshold) the result will be displayed on the monitor, connected to the computing unit, and 3D camera will indicate green light. If the match is not found (means the similarity score between captured 3D model and all of the models stored in the database is lower than the threshold) then the Broadway 3D system will continue to flash and search the match until it will be found or the face of a person will be away from the field of view.

12. Figure 9 shows the **Configuration** page, section **General**.

    The **Autonomous mode** allows changing the mode of the system between **Verification** and **Identification**.

    - The **Verification** mode works with any another identifier (e.g. access card) and provides the 1:1 (one-to-one) comparison, in other words when a person presents the access card to a card reader connected to the B3D controller via the Wiegand interface, the Broadway 3D system verifies if biometrical facial data of that person in front of the 3D camera is match with a template that is assigned to the presented card.

    - The **Identification** mode works only with faces and provides the 1:N (one-to-many) comparison, in other words the Broadway 3D system captures the biometrical facial data of a person and searches for the match within the whole amount of templates in the database.

    - The **Threshold** represents some kind of system's accuracy during the recognition for each mode. To be recognized a person's face should be similar to any template in the database with score more than entered number. The Threshold can be changed for each mode individually.

    The **Database Host** and **Database Settings** specify the database that is being used during the operation of the system.

    Local – the current Broadway 3D system uses the database on its computing unit. In this case the **User** name is **bss** and the **Password** is **bss**.

    Remote – the Broadway 3D system uses the remote database that can be stored on another Broadway 3D computing unit, in this case the **IP Address** of that Broadway 3D system should be entered and the **User** name would be **admin**, the **Password** – **bss**. There is a possibility to use any MySQL database on any computer or laptop, in this case use an appropriate IP address and login information.

    After making any changes at this page press **Apply And Restart** button. It will save entered settings and restart the Broadway 3D system. Otherwise no changes will be stored.
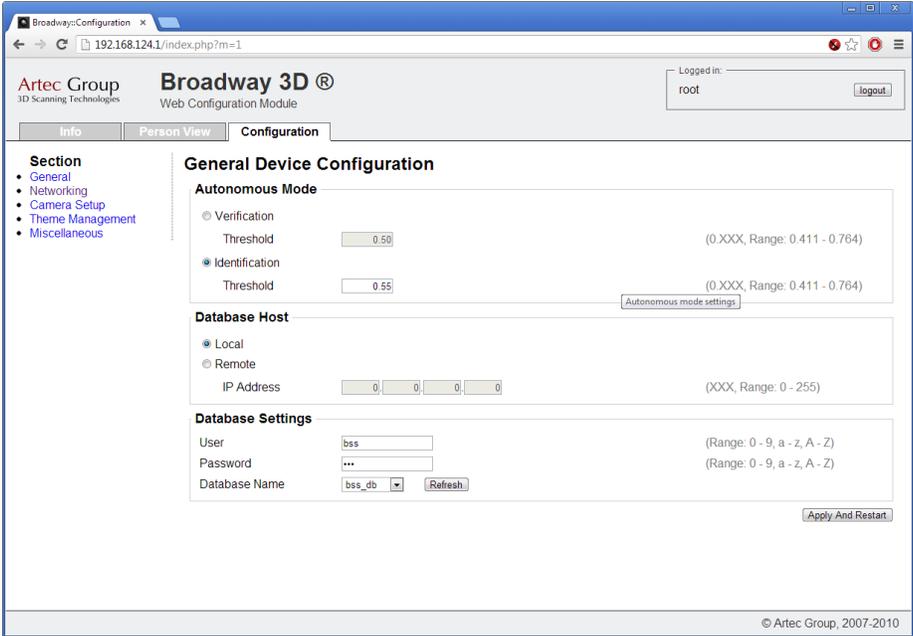
FIG 9. **Configuration** page section **General**

Figure 10 shows **Network Configuration** section. The IP address of the current Broadway 3D system can be changed here.

- **Automatic (DHCP)** – the IP address assigned by DHCP server (router) automatically
- **Manual** – the IP address assigned manually
- **Event Listeners** – the IP addresses of the computers that will receive the UDP messages of the Broadway 3D events
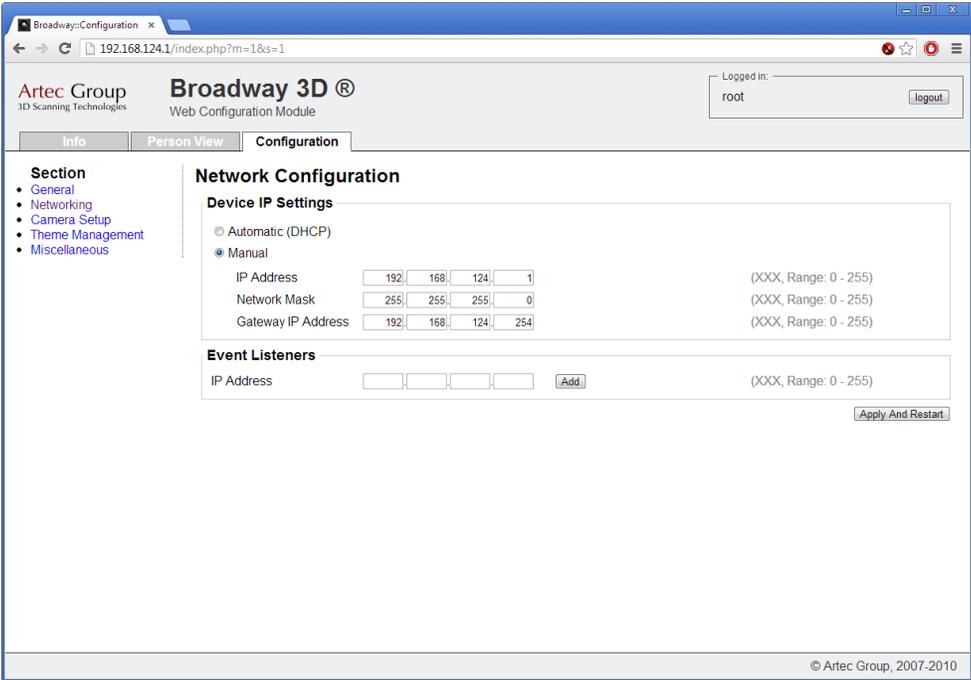

FIG 10. Network Configuration page.

13. Camera configuration section is obsoleted (Figure 11); no settings are available for changing.
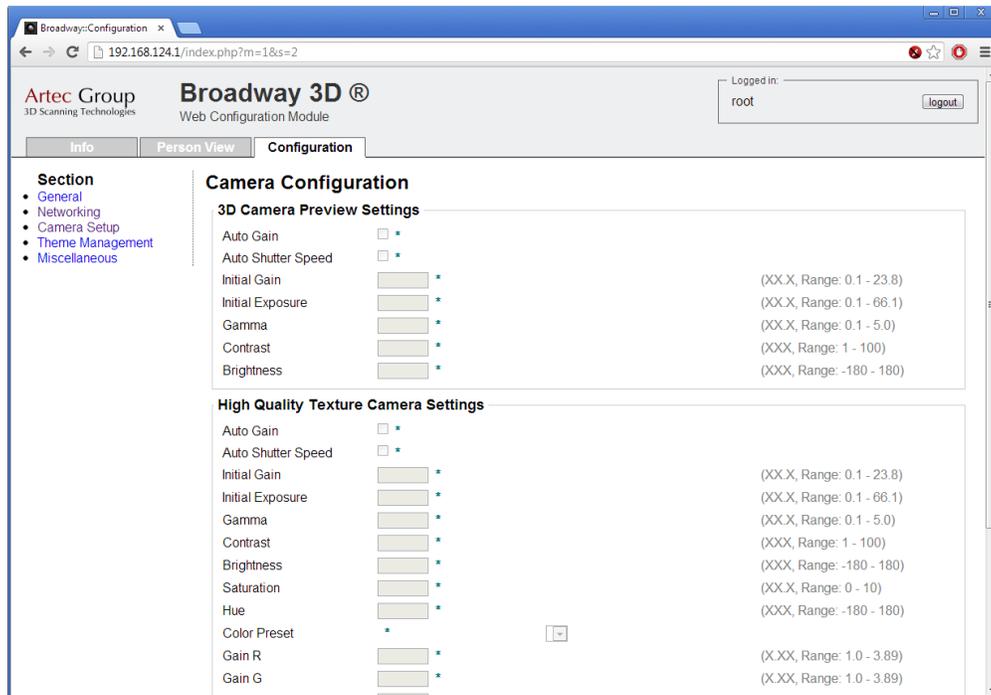

FIG 11. Camera setup section (outdated).

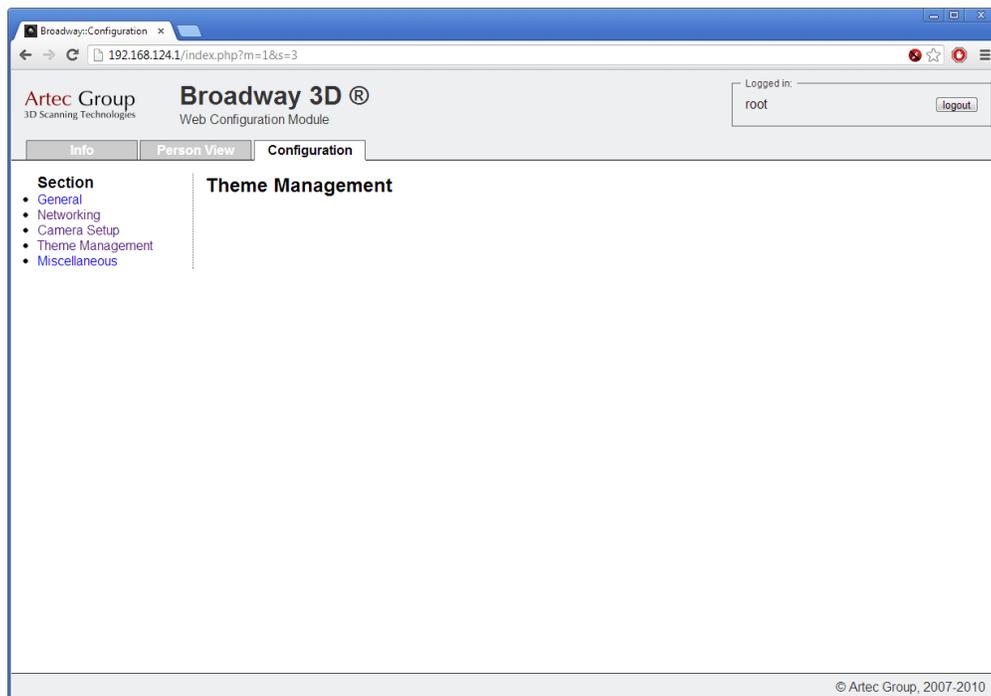14. **Theme management** section is empty and has nothing to change (Figure 12).

FIG 12. Theme management section (empty).

15. The last page **Miscellaneous** (Figure 13) holds a **Reboot** button that can be used in order to reboot a system. To update a calibration (license) file at the computing unit press **Choose file** button, in the appeared window specify a file that needed to be uploaded and open it (Figure 15), then press Upload button. If the upload process completes successfully, **Previously uploading succeeded** information will appear (Figure 15). Please reboot the system in order to finish the procedure.
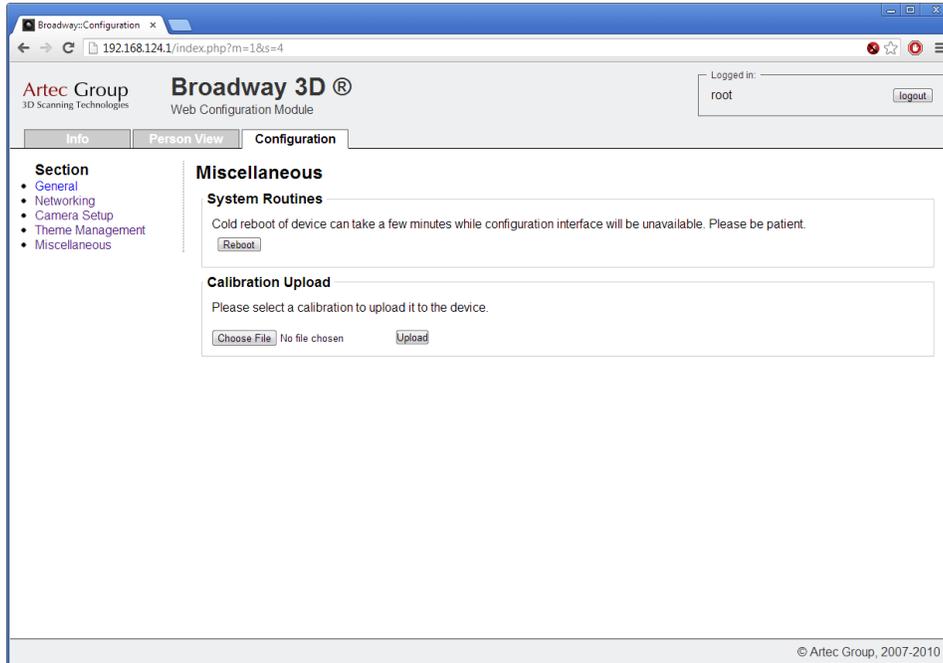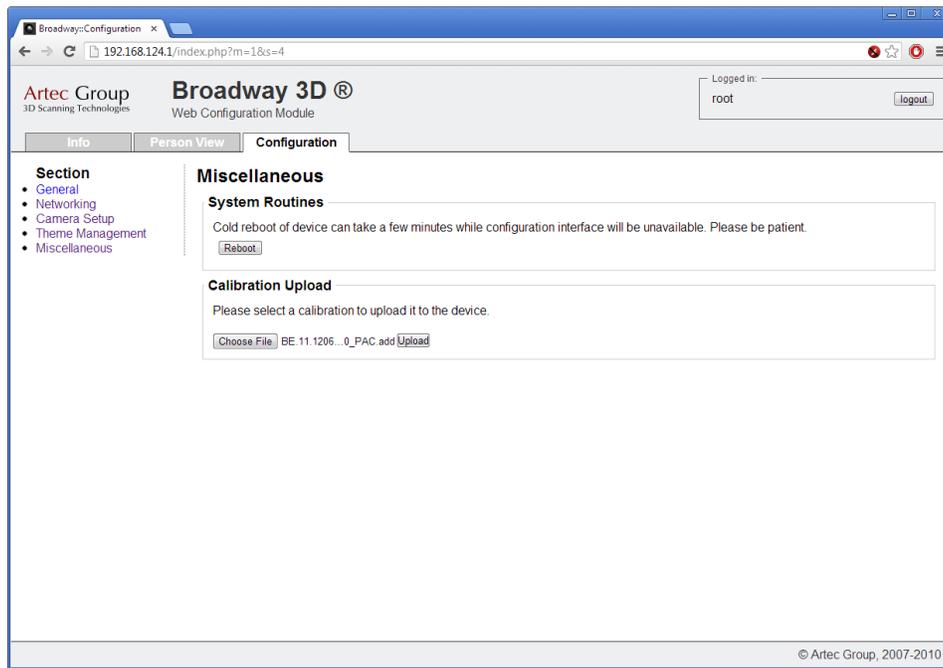

FIG 13. Miscellaneous section.

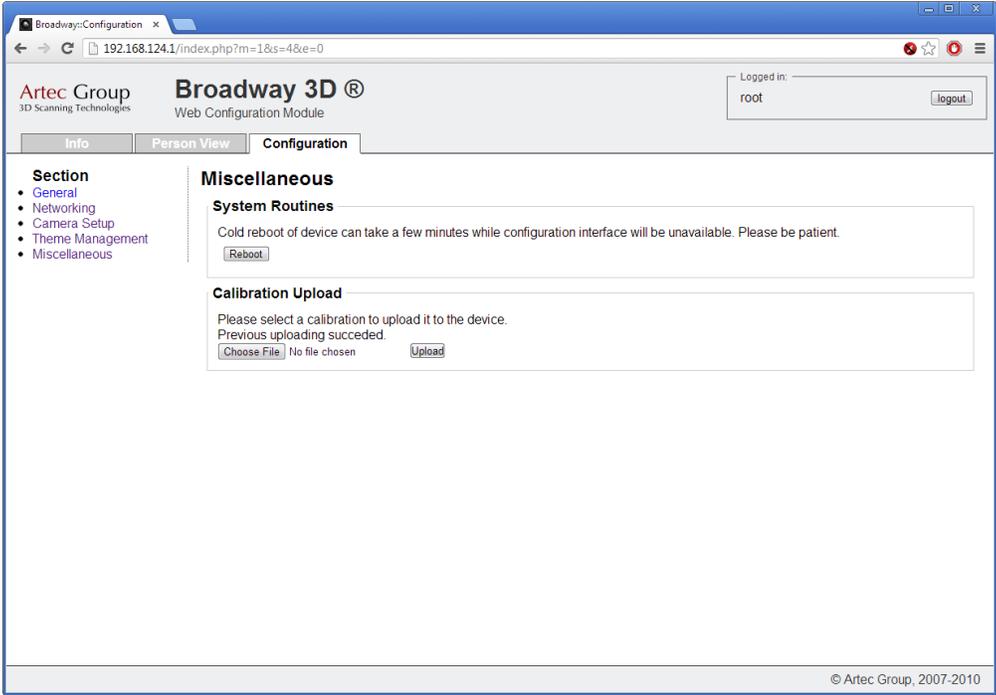FIG 14. Miscellaneous section. The calibration (license) file has been chosen.

FIG 15. Miscellaneous section. Successful calibration upload.