

USER MANUAL

RS-VIEWER

IN-SESSION ROOM VIEWER

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM

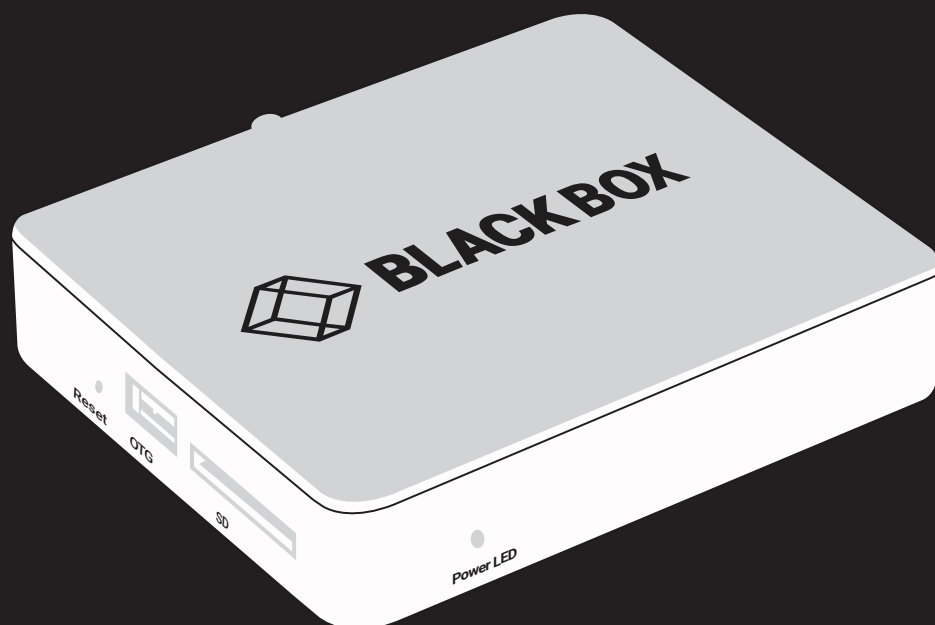


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CHAPTER 1: SPECIFICATIONS

SPECIFICATIONS: IN-SESSION ROOM VIEWER	
Connectors	(1) RJ-45, (1) HDMI, (1) USB 2.0, (1) USB 2.0 OTG, (1) 3.5mm Audio, (1) Antenna Male, (1) SD Card, (1) Barrel Plug
Display Type	HDMI output or display connection
Resolution	1920 x 1080p
Indicators	(1) Power LED
Interface	Reset Button
Power	5-VDC power input jack
Enclosure	Metal chassis, fanless
Installation	Desktop
Dimensions	4.64" H x 3.97" W x 0.99" D (11.8 x 10.1 x 2.52 cm); Protrudes 0.39" (0.1 cm)
Weight	1.1 lb. (0.5 kg)



CHAPTER 2: INTRODUCTION

2.1 DESCRIPTION

IN-SESSION is a meeting room reservation system. The IN-SESSION system touch panels (RS-TOUCH7-W, RS-TOUCH7-M, RS-TOUCH12-W, RS-TOUCH12-M) are installed in front of the entrance to the room and show its state. The RS-VIEWER unit makes it possible to join a large display that will show the states of several rooms at once, e.g. at receptions. The display connected to the RS-VIEWER unit shows the following information:

- ♦ Room name and information on occupancy. The state of the room is indicated by colors (green for a free room, red for an occupied room).
- ♦ If the room is free, the display shows the next meeting on the given day (if such a meeting is planned) and the period of time in which it will start.
- ♦ If the room is occupied, the display shows the subject of the meeting as well as its starting and ending times.
- ♦ If timeline mode is enabled, the display shows timeline with future meetings for few next hours.
- ♦ It is possible to show up to 14 rooms at once on the display. If more rooms need to be displayed, the list of rooms will scroll.
- ♦ Current date, time as well as the number of free and occupied rooms are shown on the display. It is also possible to add a company logo to the panel.

The IN-SESSION system cooperates with the following servers or services where the room calendars are saved:

- ♦ Microsoft Exchange Server 2007, 2010, 2013, 2016.
- ♦ Microsoft Office 365 subscription (any Business, Education, Enterprise or Government plan with support of resource/room mailboxes; home and personal plans are not supported).
- ♦ G Suite, formerly Google Apps for Work, subscription (Google Apps Free edition, also known as Standard edition, is not supported).

It is also possible to use the default applications of these services to make a reservation of a room (Outlook, web interface, mobile applications).

For easy administration of reservation system units, these units are linked to a group called reservation suite. Units connected to the same reservation suite share their settings so, for example, if you need to change the user account password, you can just do it on one panel and all the other ones within the same reservation suite will adopt the change automatically. The reservation suite can be managed in the following ways:

- ♦ Essential Setup: In this administration mode, you change the settings on any reservation suite unit, and settings shared within the Reservation Suite will be automatically applied to all units. Other settings (individual settings of each unit, e.g. language, display brightness, etc.) must be done on each unit separately. All reservation system units included in the Reservation Suite must be plugged into the same LAN. This guide describes the management of the RS-VIEWER unit through Essential Setup. If you want to use the RS-VIEWER unit with Essential Setup, there has to be at least one IN-SESSION panel through which you will set the respective room accounts.
- ♦ On-premises Administration: In this way, the entire reservation suite is centrally managed through the web interface of the RS-MODERATOR manager unit. The RS-MODERATOR unit must be plugged into the same LAN as the other units of the Reservation Suite. RS-MODERATOR also has other features, such as analytics and room utilization statistics. The procedure for setup using On-premises Administration is described in the RS-MODERATOR - On-premises Administration user manual.

CHAPTER 2: INTRODUCTION

2.2 NETWORK INFRASTRUCTURE AND OTHER HARDWARE REQUIREMENTS

For the proper functioning of the system it is necessary to ensure the following:

- ♦ Server access (Exchange Server, Office 365, G Suite) via HTTP (TCP port 80) and HTTPS (TCP port 443).
- ♦ NTP (Network Time Protocol) servers access (UDP port 123).
- ♦ Functional DNS servers.
- ♦ Correctly set time zones for all required accounts (i.e. rooms).
- ♦ This unit has to be connected to the same LAN as the other units of the IN-SESSION reservation suite.
- ♦ Display with HDMI input, which is capable to display signal with resolution FullHD (1920x1080 pixels).
- ♦ An open TCP port 80 (HTTP) and the server 443 (HTTPS) within the local network for the administration of IN-SESSION units via Admin Web.
- ♦ An open TCP port 53128 and UDP port 33333 within the local network for communication between IN-SESSION units. Communication between panels is encrypted using AES-256.
- ♦ An open UDP port 53 for communication with DNS server and for conversion of domain names to IP addresses.
- ♦ An open UDP ports 67 and 68 for communication with DHCP server and for IP address assignment, if DHCP is used.
- ♦ An open UDP port 1900. Opening this port is not mandatory, it is used to make the reservation system units visible in the Windows File Explorer. This port uses UPnP technology (Universal Plug and Play), which enables reservation system units in the file explorer to be made visible as other network devices. This technology must also be enabled on a given computer.
- ♦ An open proxy server port if a proxy server is used to access HTTPS servers.
- ♦ Access the upgrade server over HTTPS (TCP port 443). This access is not mandatory, it is used to update the firmware.
- ♦ Free LAN sockets on Ethernet switches for each RS-VIEWER unit.
- ♦ CAT5 or higher LAN cables leading from an Ethernet switch to the place where you want to install the RS-VIEWER unit.
- ♦ The network card of the RS-VIEWER unit supports speeds up to 1 Gbit/s. If you are using a faster LAN, set up ports intended for RS-VIEWER unit on your switch to auto negotiate or to 1 Gbit/s.
- ♦ IN-SESSION supports the following cryptographic standards for HTTPS access: SSL 3.0, TLS 1.0, TLS 1.1, TLS 1.2. Supported encrypting includes 3DES, AES-128 and AES-256.

Check that no security programs or functions (such as firewalls, proxy servers, domains, etc.) block straight HTTP/HTTPS communication between the IN-SESSION units and servers with room calendars.

CHAPTER 2: INTRODUCTION

2.3 SETTINGS

This document explains how to join the RS-VIEWER unit to the existing reservation suite and how to set it up. The procedure for creating a reservation suite and for setting up specific types of servers is described in the following documents:

- ◆ IN-SESSION Room Scheduler user manual or RS-MODERATOR user manual
- ◆ IN-SESSION Room Scheduler - Setup Guide - Microsoft Exchange Server
- ◆ IN-SESSION Room Scheduler - Setup Guide - Microsoft Office 365
- ◆ IN-SESSION Room Scheduler - Setup Guide - G Suite

To set the RS-VIEWER unit using **Essential Setup**, you need to:

- ◆ Prepare accounts on the specific server using the guides above.
- ◆ Configure the IN-SESSION panels (RS-TOUCH7-W, RS-TOUCH7-M, RS-TOUCH12-W, RS-TOUCH12-M) using the guides above.
- ◆ Configure the RS-VIEWER unit using this guide.

To set the RS-VIEWER unit using **On-premises Administration**, you need to:

- ◆ Prepare accounts on the specific server using the guides above.
- ◆ Create reservation suite configuration using RS-MODERATOR Admin Web.
- ◆ Configure reservation suite using RS-MODERATOR user manual.
- ◆ Add RS-VIEWER to the list of reservation suite units in the RS-MODERATOR and configure it using the
- ◆ RS-MODERATOR user manual.
- ◆ Join the RS-VIEWER unit to the reservation suite using this manual.



CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

The RS-VIEWER unit is set using the Admin Web pages. There you can do the following:

- ♦ Joining the unit to the reservation suite
- ♦ IP settings
- ♦ Firmware upgrade

If you use the Essential Setup, you can also use the Admin Web pages to set the following features:

- ♦ Choosing which rooms will be shown on the display
- ♦ Inserting a company logo
- ♦ Date and time settings
- ♦ Setting up the display parameters (language, format of date and time, etc.)
- ♦ Uploading G Suite certificate. This is described in the document IN-SESSION Room Scheduler Setup Guide: Google Apps for Work (GSuite). If you use Microsoft Office 365 or Microsoft Exchange Server, this option is not relevant.

The Admin Web pages are available in the English language only.

3.1 ACCESSING ADMIN WEB

To access the Admin Web of IN-SESSION units you need a computer with an internet browser. The computer must be connected to the same LAN network as the IN-SESSION units. The Admin Web pages can be opened in one of the following ways:

- ♦ Option 1: After the first switching of the unit, the following screen will appear on the connected display:

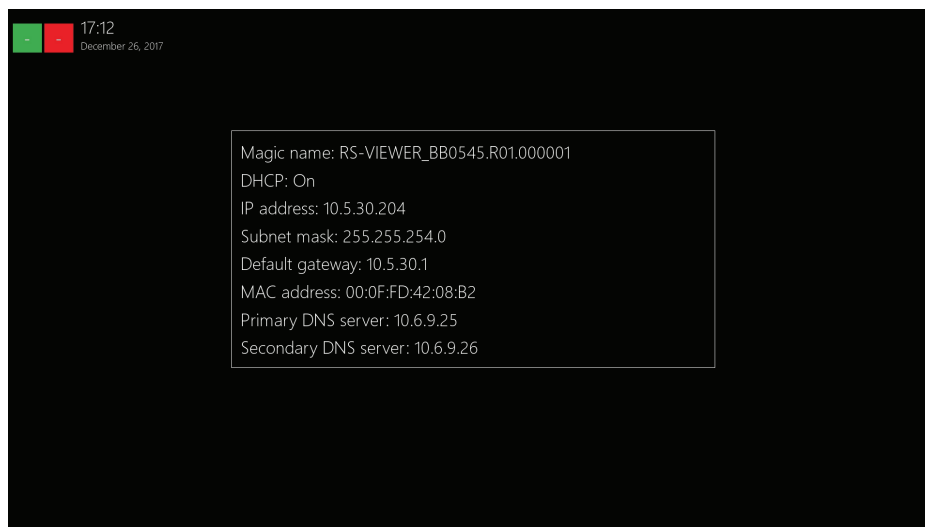


FIGURE 3-1. INITIAL SWITCHING SCREEN

In the default setting, the unit is enabled to get the IP address and DNS servers using the DHCP of your network. In the “IP address” line, the current IP address is shown. Check whether the IP address, gateway and DNS servers correspond to your network. In the “DHCP” item, you can check whether the IP address has been acquired through DHCP (On) or not (Off). If the setting is not suitable for you, it can be changed later—for description how to do this see the IP Settings chapter. Run the Internet browser on your PC and type in the RS-VIEWER unit IP address.

CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

- Option 2: Run File Explorer on your computer and select “Network” in the left part of the screen. On the right you will see a list of devices found in your network. The units of the IN-SESSION systems can be found in the section “Other devices.” If you double-click the desired IN-SESSION unit, the internet browser will start running, the unit IP address will be entered automatically and the Admin Web of the given unit will open in the browser. To enable your computer to find the IN-SESSION units, network identification has to be switched in your computer. To do this in Windows 10, go to Start / Settings / Network & Internet. Then select Wi-Fi (if your computer has a wireless connection to the network) or Ethernet (if your computer is connected through a cable) in the left half of the screen. If you are connected by cable, click on your network connection in the right part. If you are using Wi-Fi, click on the item “Advanced options” below the list of available Wi-Fi networks. Then set the item “Make this PC discoverable” to “On.”

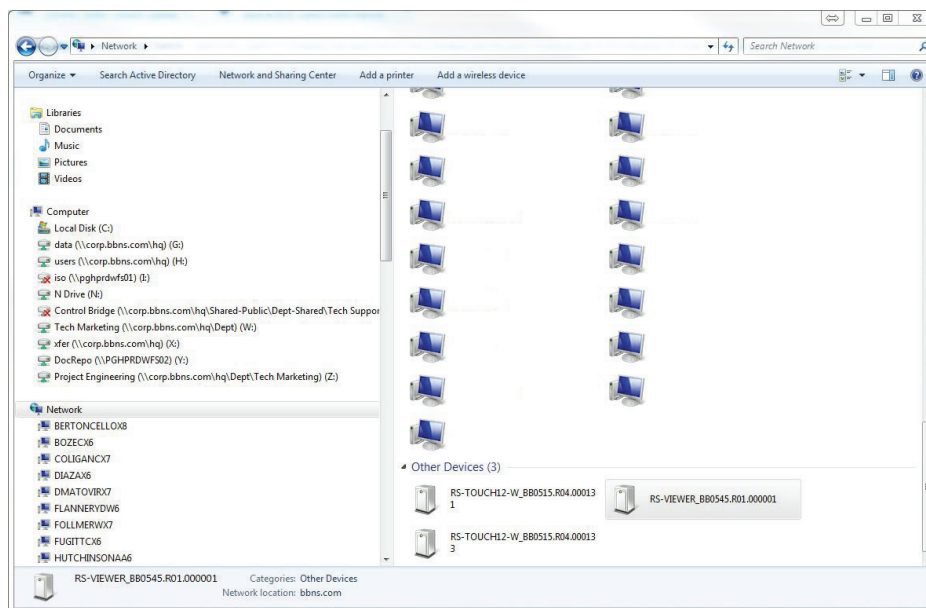


FIGURE 3-2. NETWORK LIST OF DEVICES SCREEN

3.2 LOGIN

If the RS-VIEWER unit is joined to the reservation suite, you need to log in to gain access to Admin Web. Enter the reservation suite password where indicated and click on “Login” (Note that the password entry is case sensitive). This takes you to the Admin Web setup pages. If the RS-VIEWER unit is not joined to the reservation suite, there is no need to log in and you find yourselves right on the setup pages. If you want to change the IP address setting, continue according to the info in the chapter IP Settings. If not, proceed to the next chapter.

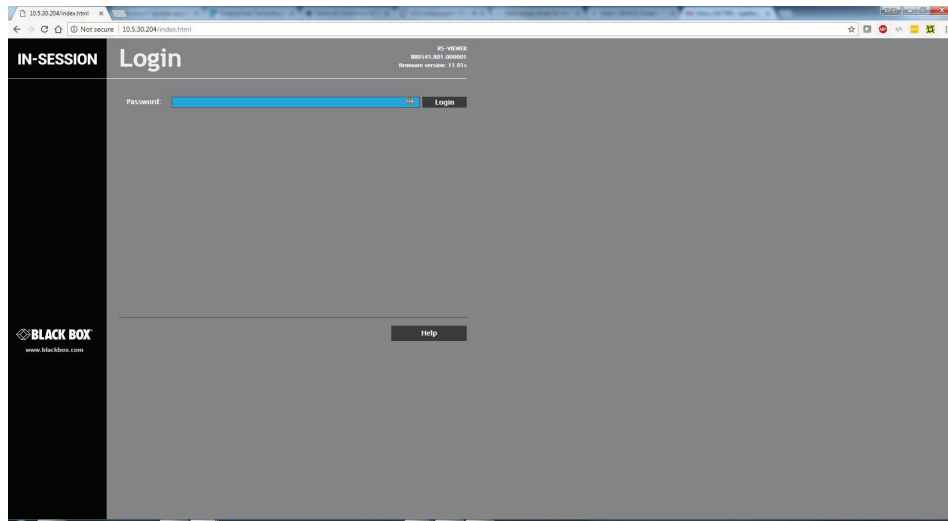


FIGURE 3-3. LOGIN SCREEN

3.3 JOINING THE UNIT TO THE RESERVATION SUITE

First you need to join the RS-VIEWER unit to the existing reservation suite. In the left menu, select “Reservation suite” and then click on “Join to existing suite.”

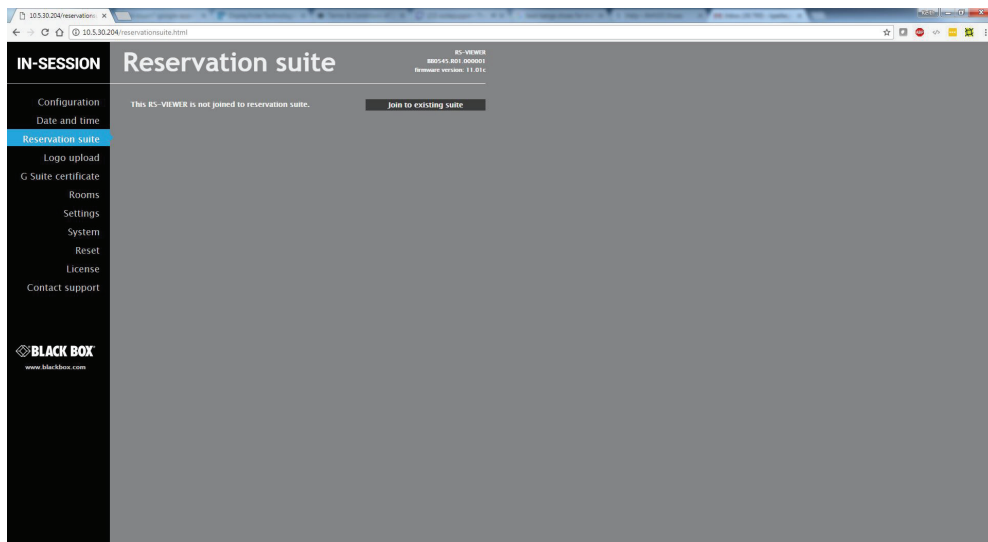


FIGURE 3-4. JOIN EXISTING RESERVATION SUITE SCREEN

Now decide which reservation suite you want to join (if you run more than one suite) and click “Join,” or you can search again for available reservation suites by clicking “Search again.”

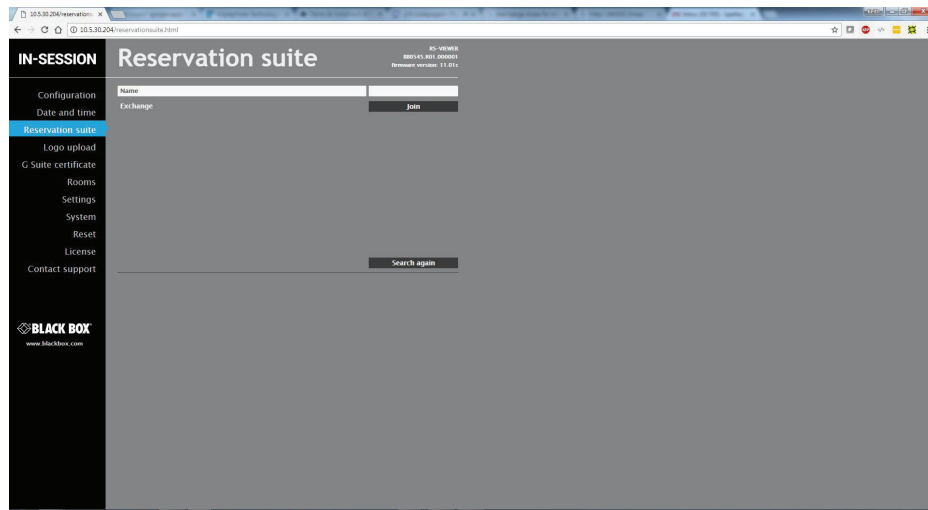


FIGURE 3-5. SEARCH FOR RESERVATION SUITE SCREEN

In the field indicated, enter the password you have chosen when creating the reservation suite. Then join the RS-VIEWER unit to the selected reservation suite.

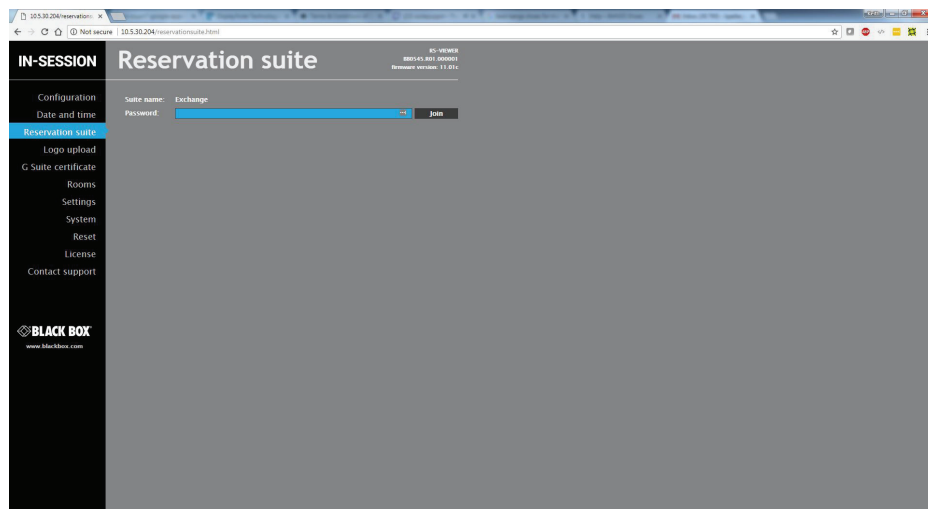


FIGURE 3-6. JOIN SELECTED RESERVATION SUITE SCREEN

After joining the system, the following page will come up. This is where you can, if needed, disconnect the unit from the reservation suite by clicking on “Leave suite,”

CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

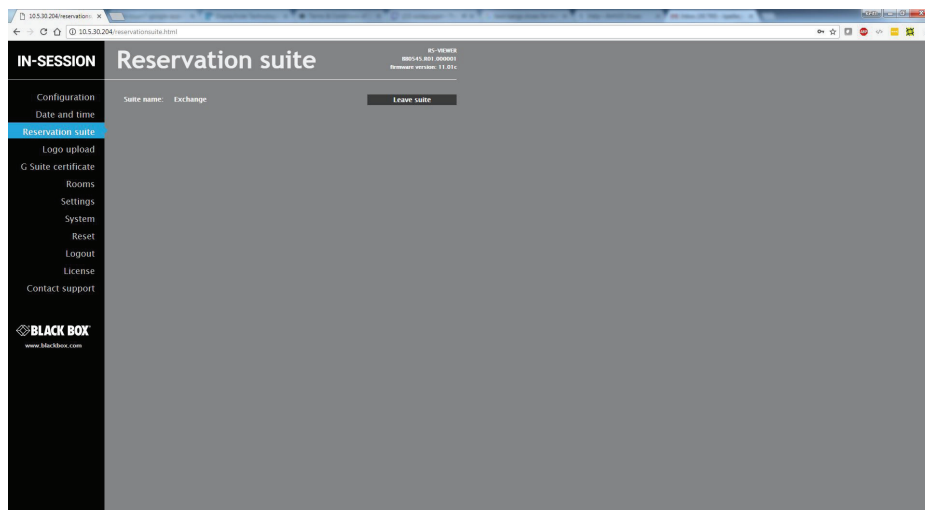


FIGURE 3-7. DISCONNECT FROM RESERVATION SUITE SCREEN

3.4 IP SETTINGS

Using the Admin Web, you can change the IP settings. In the left menu, choose “Configuration.” If you choose “Identification,” you can change the “Magic name,” which is the unique name of a unit used in communication between reservation suite units. It is factory-set and in most cases needs not be changed. If you do need to change it, you have to make sure the new name is unique within the given local network.

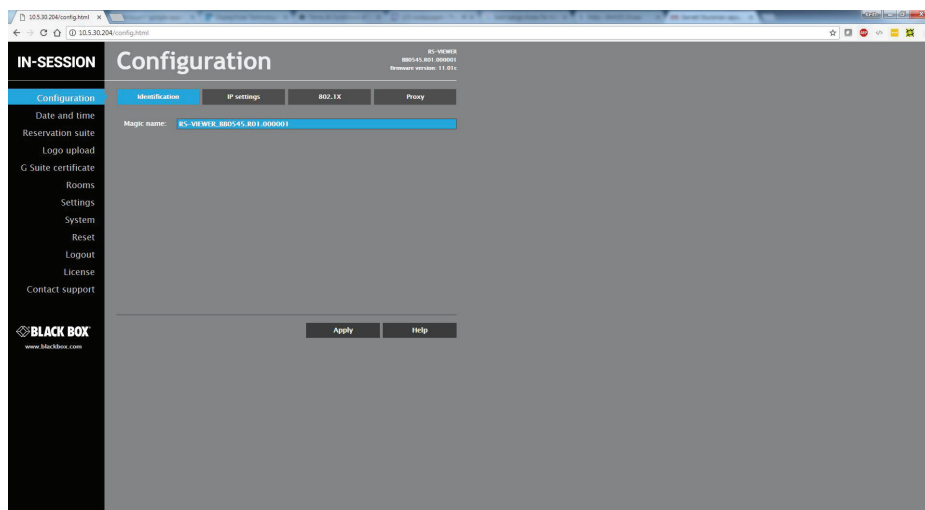


FIGURE 3-8. CHANGE MAGIC NAME SCREEN SCREEN

All changes made through the Admin Web have to be confirmed by pressing the Apply button before leaving the page, otherwise changes will not be saved.

To change IP addresses, select “IP settings” on the top of the screen. The currently used setting is displayed in the upper part of the page.

By checking the box “Use DHCP to obtain IP address,” you enable automatic assignment of an IP address through the DHCP server.

CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

By checking the box “Use DHCP to obtain DNS server address,” you enable automatic setting of DNS server addresses through DHCP. If you do not enable the automatic assignment of DNS server addresses, you need to set them in the bars “Primary DNS server” or “Secondary DNS server.”

You can also enter the IP address, the subnet mask, the default gateway as well as the primary and secondary server DNS of your network.

If the assignment of IP address through DHCP is enabled, the entered setting of the IP address, mask etc. is taken as the alternate configuration, i.e. configuration used in case the DHCP server is not available. If you are not using DHCP to assign the IP address, all items (IP address, subnet mask, default gateway and the primary and secondary DNS servers) have to be set for your network.

To save changes, press the “Apply” button.

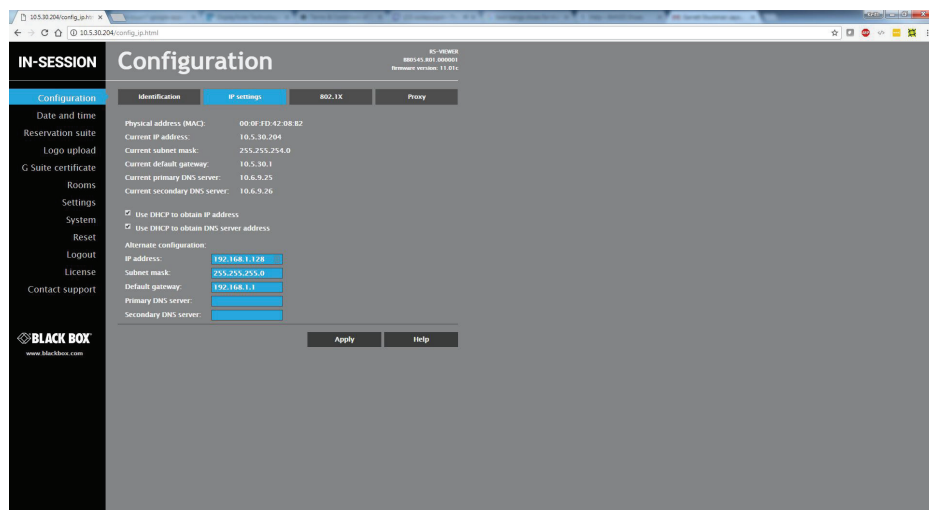


FIGURE 3-9. CHANGE IP SETTINGS SCREEN

In changing the IP settings, you need to reset the RS-VIEWER unit. Confirm the changes in the setup by clicking “Yes” on the next page. This will also initiate the reset.

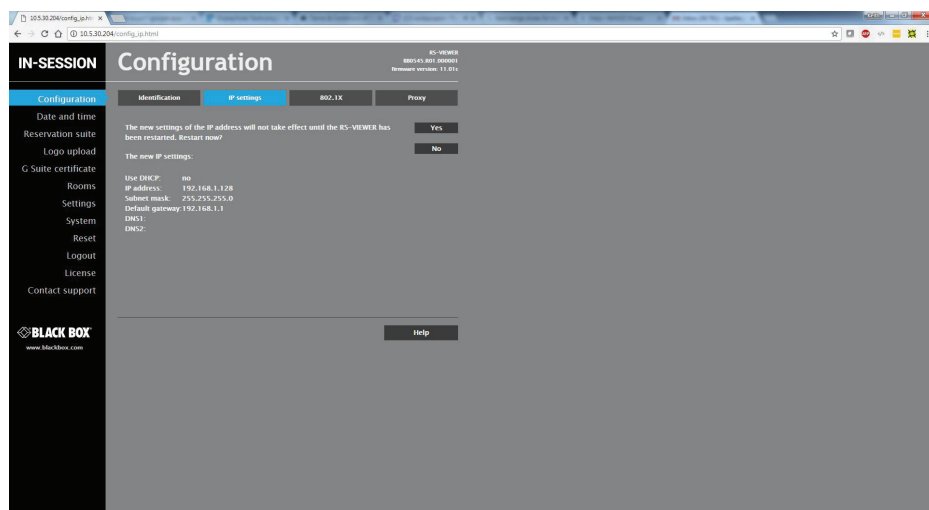


FIGURE 3-10. RESET THE UNIT

If your LAN is secured using 802.1X, select the “802.1X” tab at the top. Supported authentication methods are MD5 and TLS.

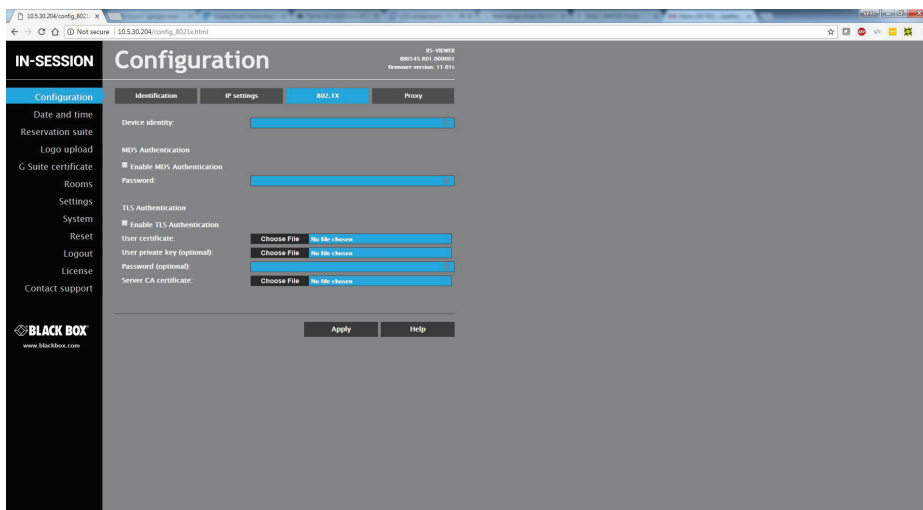


FIGURE 3-11. 802.1X TAB

Type “Device identity” in the appropriate box.

If you are using MD5 authentication, check the appropriate checkbox and enter the password for MD5 authentication.

If you are using TLS authentication using certificate, check the appropriate checkbox. Then tap the “Choose file” button next to “User certificate,” select the user certificate file and upload it. The following certificate types are supported: PKCS #12 and x509 (PEM, DER). You can also upload a private key file if the private key is not part of the user certificate. If the user certificate or private key is encrypted, enter the password to decrypt it in the “Password (optional)” box.

In the CA certificate entry, upload the Radius server CA Certificate.

Click “Apply” to save the changes.

If the proxy server is mandatory to access HTTPS servers on your network, select the “Proxy” tab on the top. Enter Address and Port of the proxy server. If the proxy server requires authentication, enter the credentials for the proxy server in the “Login” and “Password.” Finish the settings by tapping “Apply + Restart.” The panel will now restart and the new IP settings will be used.

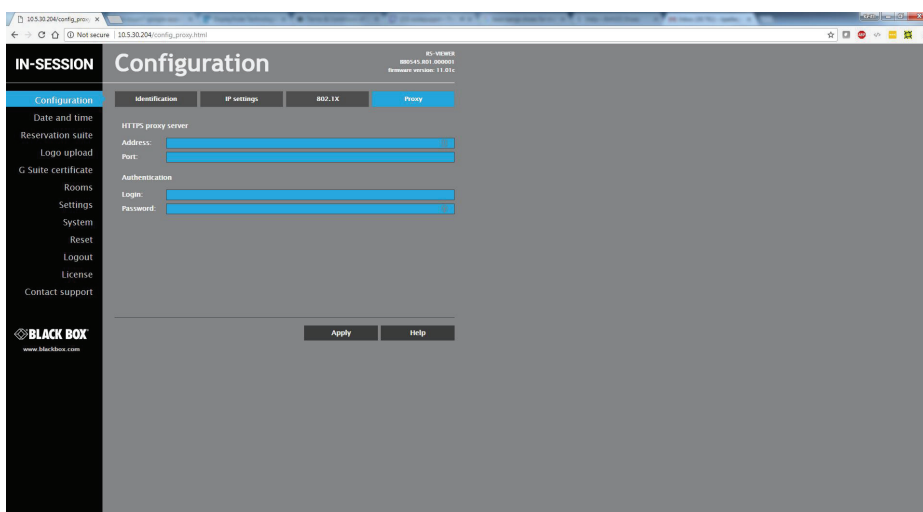


FIGURE 3-12. PROXY TAB

CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

Enter Address and Port of the proxy server. If the proxy server requires authentication, enter the credentials for the proxy server in “Login” and “Password.” Click “Apply” to save the changes.

3.5 DATE AND TIME SETTINGS

If you need to set the time of the unit, choose “Date and time” in the left half. To set the current time, click on “Current date and time” in the upper part of the screen. The current date, time and time zone are shown on the “Current time” line. The applicable boxes can be selected to enter changes to the:

- ♦ date: day/month/year
- ♦ time: hour/minute/second

Be sure to click the “Apply” button for any changes to become effective.

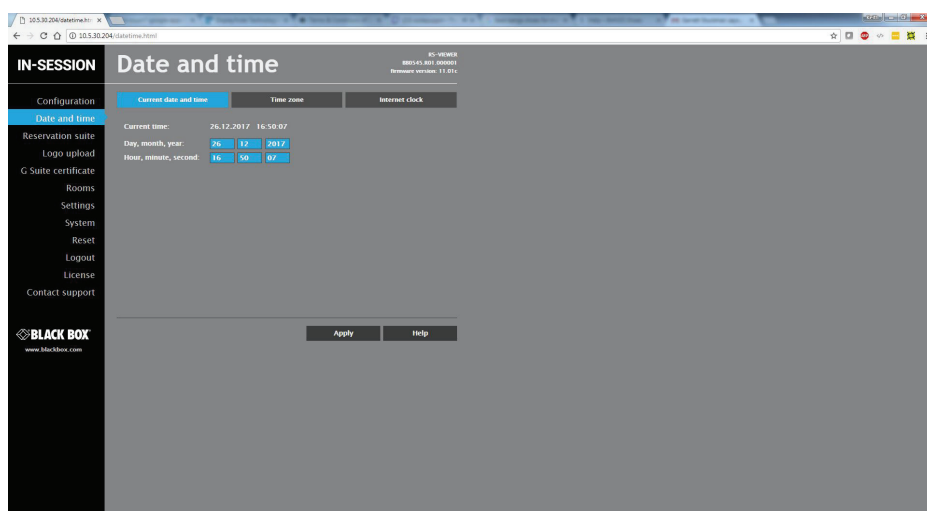


FIGURE 3-13. CURRENT DATE AND TIME SCREEN

To set the time zone, choose “Time zone” in the upper part of the screen. The current date, time and time zone are shown on the “Current time” line. The Time zone box can be selected to enter changes to the time zone. Be sure to click the “Apply” button for any changes to become effective.

CHAPTER 3: BASIC CONFIGURATION OF THE RS-VIEWER

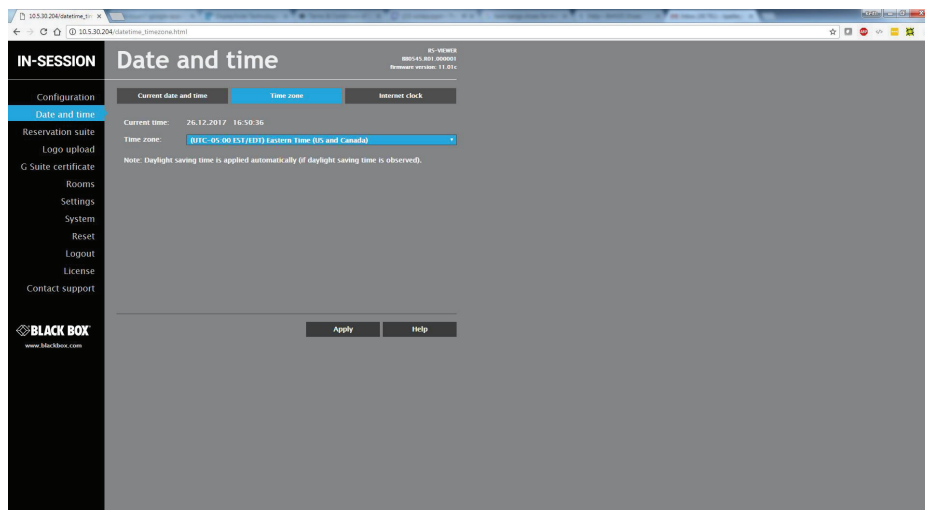


FIGURE 3-14. TIME ZONE TAB

The RS-VIEWER unit requires automatic synchronization of its clock with the internet (NTP) servers. If you want to change the setting of the internet time servers, select “Internet clock.” Here you can change the names or IP addresses of the primary NTP server and the secondary NTP server. The default setting of the servers is “time.nist.gov” and “tak.cesnet.cz”. Be sure to click the “Apply” button for any changes to become effective.

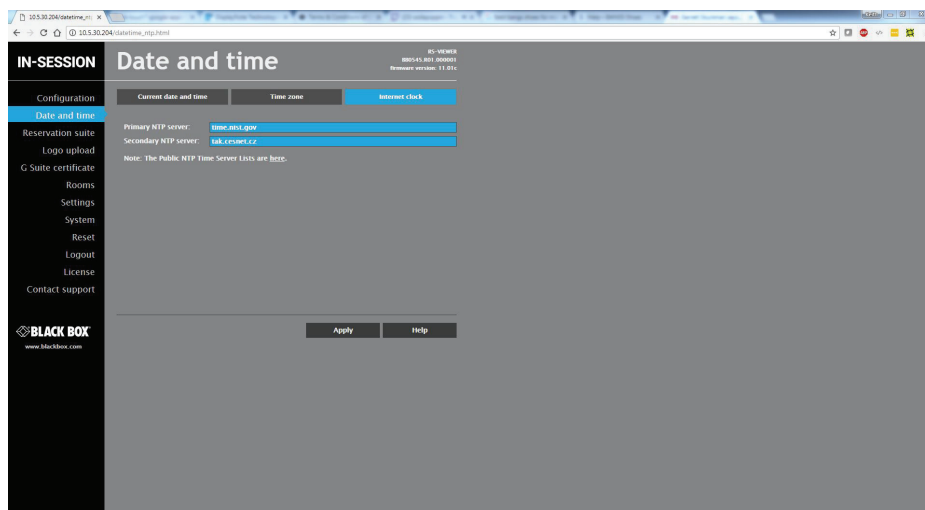


FIGURE 3-15. INTERNET CLOCK TAB

If you are using the RS-VIEWER Essential Setup, continue with the settings using this guide. The procedure for setup using RS-MODERATOR On-premises Administration is described in the RS-MODERATOR user manual.

CHAPTER 4: RS-VIEWER ESSENTIAL SETUP

4.1 CHOOSING THE ROOMS TO BE DISPLAYED

Now you can specify in the unit which rooms will be shown on the connected display. In the left menu, choose “Rooms.” On this page, you find a list of all the rooms in the given reservation suite. In the “Shown” column, use a checkmark to indicate for each room whether it will be displayed or not.

All changes made in the Admin Web have to be confirmed by pressing the “Apply” button before leaving the page, otherwise they will not be saved.

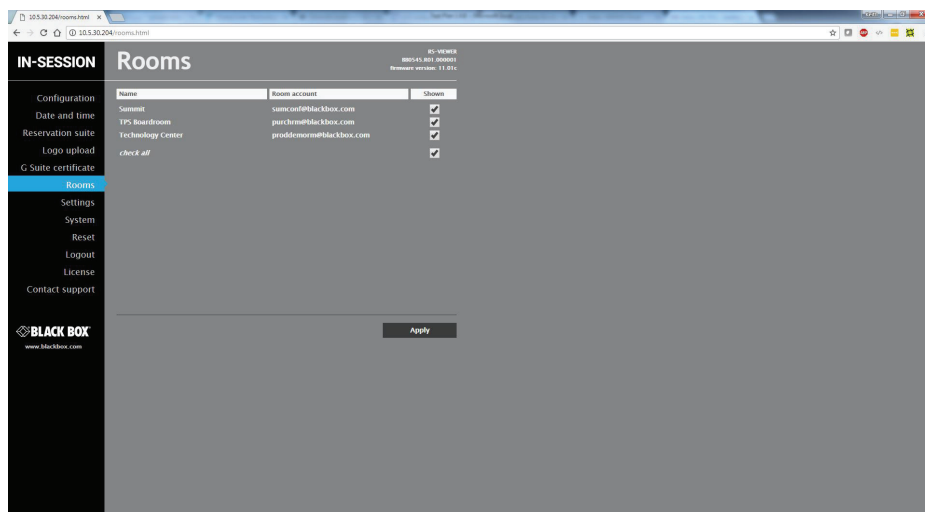


FIGURE 4-1 ROOMS SCREEN

4.2 INSERTING THE COMPANY LOGO

The RS-VIEWER unit enables the user to insert a company logo in the upper right corner of the screen. The logo is inserted in the PNG (Portable Network Graphics) format. The design supports the transparency feature (alpha channel). Use the following sizes for the logo:

TYPE	RECOMMENDED HEIGHT	MAXIMUM HEIGHT	MAXIMUM WIDTH
Your Logo	100 pixels	120 pixels	1000 pixels

In the left column in the browser, select “Logo upload” and then click on “Choose file.” The standard dialogue window for the opening of files will come up. In your computer, select a PNG file with the logo. When done, click the “Upload” button.

CHAPTER 4: RS-VIEWER ESSENTIAL SETUP

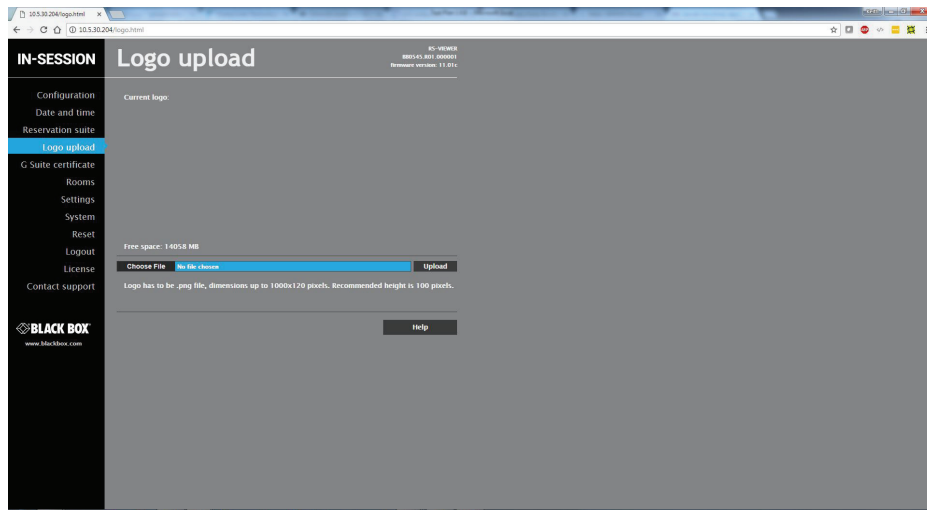


FIGURE 4-2. SELECT A PNG FILE WITH LOGO TO UPLOAD

After the logo is uploaded, the following screen is shown. Here you can check the logo—at this moment it is shown both on the website and on the display. If you want to delete the logo, click “Delete logo.” If you want to change the logo, upload the new logo as described on the previous page.

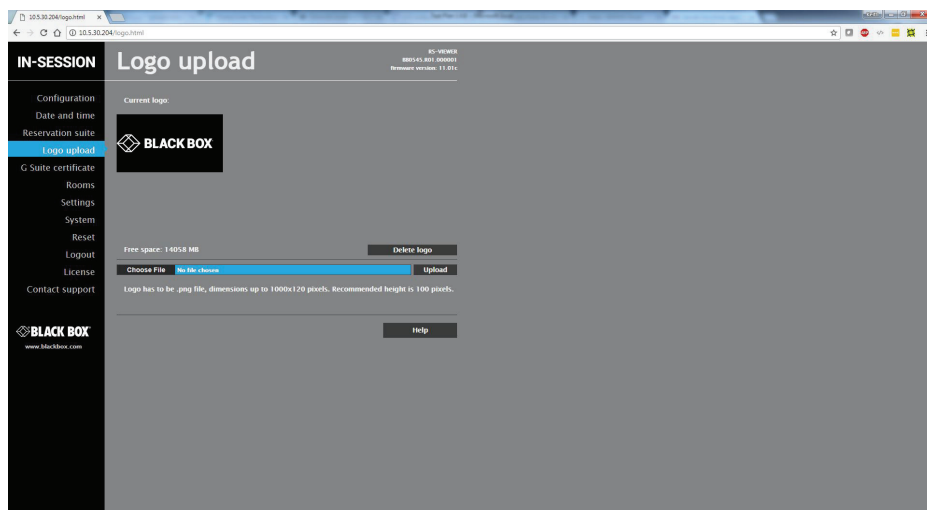


FIGURE 4-3. LOGO UPLOADED SCREEN

CHAPTER 4: RS-VIEWER ESSENTIAL SETUP

4.3 DISPLAY SETTINGS

For more detailed room display settings, choose the item “Settings” in the left menu.

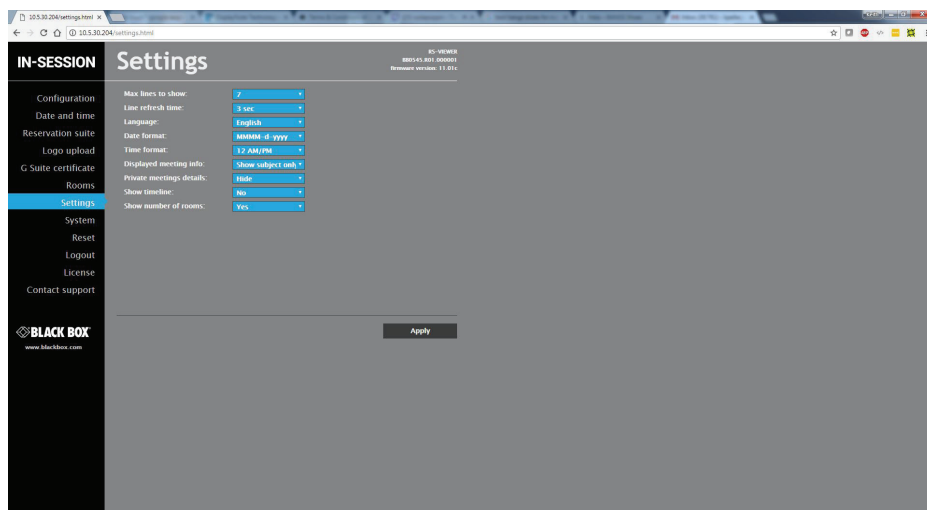


FIGURE 4-4. DISPLAY SETTINGS SCREEN

It offers the following options:

- ◆ Max lines to show: this indicates the maximum number of rooms (lines) shown on the display. The number has to be within the range 7–14. If you wish to display more rooms, the list of rooms will scroll.
- ◆ Line refresh time: if the list of rooms scrolls, here you can set the interval for which the scrolling will stop between two shifts by one line. The options are 3, 5, 7, 10, 15 and 20 seconds.
- ◆ Language: here you can set the language in which the room list will be shown on the display.
- ◆ Date format: here you can set the desired format of date. Options include MMMM-d-yyyy (e.g. March 4, 2017) or d-MMMM-yyyy (e.g. 4 March 2017).
- ◆ Time format: here you can choose whether you want time to be shown in the 24-hour format or the 12-hour format (12 AM/PM).
- ◆ Displayed meeting info: here you can set how meeting information is displayed on the panel. You can choose to view both the subject and the organizer, only the subject or only the organizer. The default option is to display both the subject and the organizer.
- ◆ Private meeting details: planned meetings can be marked as private in the calendar. In this item you can select whether in meetings marked this way the full description and details will be shown (the “Show” option) or whether people will see only the indication “Private meeting” (the “Hide” option). You can also select “Hide except current meeting”. In this case, details will be shown only for the current or the immediately following private meeting whereas details of other planned private meetings will be hidden. The default value is “Hide.”
- ◆ Show timeline: the display may show either just the current or next meeting (the “No” option), or a timeline with current and future meetings may also be displayed (the “Yes” option). The default value is “No.”
- ◆ Show number of rooms: here you can set whether the total number of free and occupied rooms will be displayed in the upper left corner of the screen. The default value is “Yes.”

2	1	17:12 December 26, 2017
Summit	Janet Stragand	17:00 - 17:30
Technology Center	Free	
TPS Boardroom	Free	

FIGURE 4-5. FREE AND OCCUPIED ROOMS SCREEN

A display showing the current or next meeting and total number of free and occupied rooms.

Summit	17:00 - 17:30							
Technology Center	Free							
TPS Boardroom	Free							

FIGURE 4-6. CURRENT OR NEXT MEETING AND FREE AND OCCUPIED ROOMS SCREEN

A display showing the current or next meeting and timeline, total number of rooms is not allowed.

To save changes, press the "Apply" button before leaving.

CHAPTER 5: OTHER SETTINGS OF THE RS-VIEWER UNIT

5.1 UPGRADING FIRMWARE

To upload more recent firmware to the RS-VIEWER unit, select the item “System” in the left column and then click on “Firmware” in the upper part of the screen. If your computer network is connected to the internet, you can check the availability of newer firmware by clicking the button “Check for a new firmware.” The IN-SESSION unit verifies whether newer firmware is available on the Black Box website. It will be downloaded to the touch panel when automatically installed.

To download firmware files into your computer, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com.

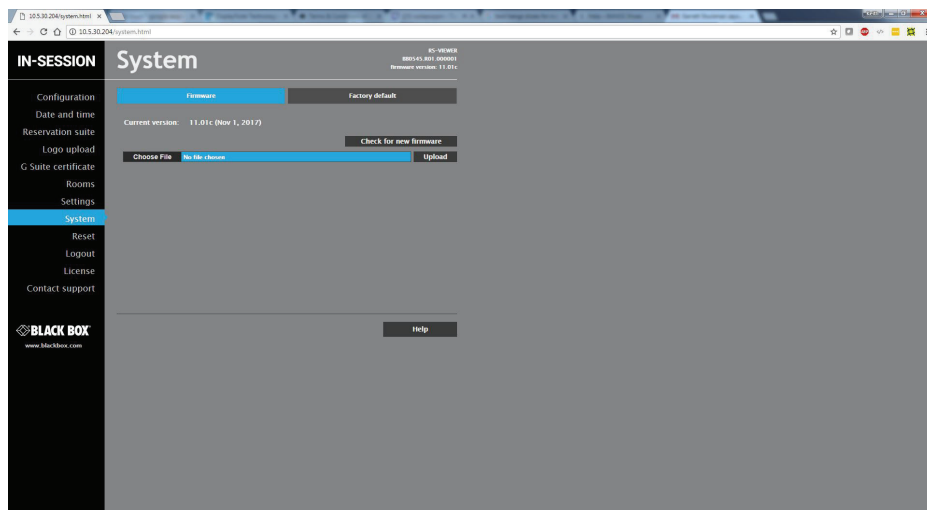


FIGURE 5-1. UPLOAD FIRMWARE SCREEN

After the file with new firmware is uploaded into the unit, an upgrade screen will come up. Apply new firmware by clicking “Update.” The firmware upgrade takes about one minute and then the unit restarts. If upgrade has been successful, an “Update Successful” screen will come up.

CHAPTER 5: OTHER SETTINGS OF THE RS-VIEWER UNIT

5.2 RESET

If you need to reset the unit, choose “Reset” in the left menu and then click “Reset” in the right part of the screen.

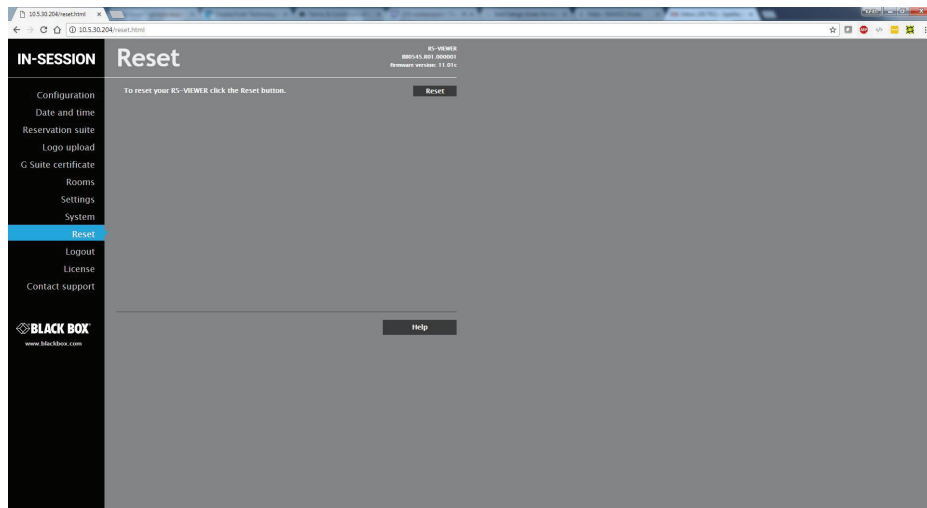


FIGURE 5-2. RESET SCREEN

5.3 FACTORY DEFAULT

If you need to put the RS-VIEWER unit into the factory default mode, delete all user settings and leave the reservation suite, choose “System” in the left menu, then “Factory default” in the upper part, and then click the button “Set factory default.”.Confirm the deletion by pressing the “Yes” button or cancel it by pressing the “Cancel” button.

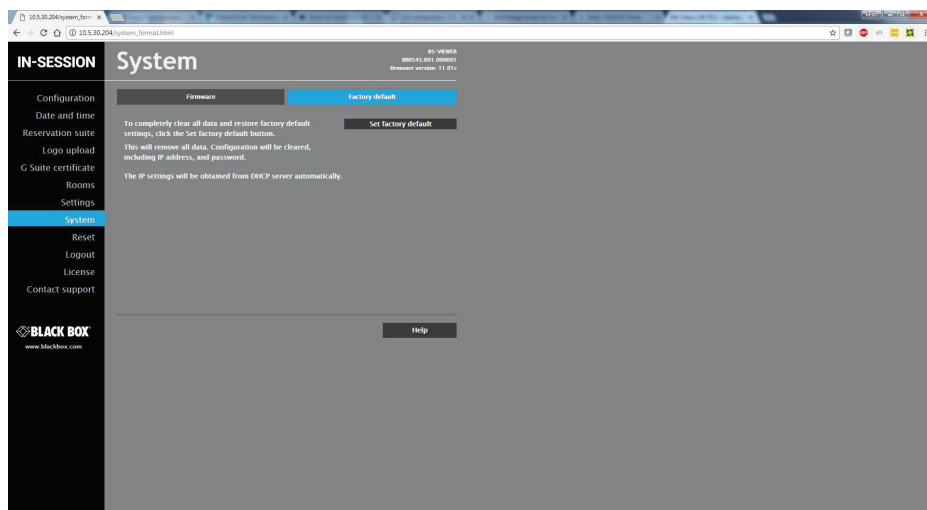


FIGURE 5-3. SYSTEM SCREEN, FACTORY DEFAULT TAB

CHAPTER 5: OTHER SETTINGS OF THE RS-VIEWER UNIT

If you choose "License" in the left menu, you will see a page describing the EULA software license. Selecting "Contact support" enables you to send an email message to Black Box Technical Support through the email program in your computer.



CHAPTER 6: TECHNICAL SUPPORT

6.1 CONTACTING BLACK BOX

If you determine that your RS-VIEWER is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- ♦ the nature and duration of the problem.
- ♦ when the problem occurs.
- ♦ the components involved in the problem.
- ♦ any particular application that, when used, appears to create the problem or make it worse.

6.2 SHIPPING AND PACKAGING

If you need to transport or ship your RS-VIEWER:

- ♦ Package it carefully. We recommend that you use the original container.
- ♦ If you are returning the unit, make sure you include everything you received with it. Before you ship for return or repair, contact Black Box to get a Return Authorization (RA) number.



APPENDIX A: REGULATORY INFORMATION

A.1 FCC STATEMENT

This equipment has been found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Shielded cables must be used with this equipment to maintain compliance with radio frequency energy emission regulations and ensure a suitably high level of immunity to electromagnetic disturbances.

All power supplies are certified to the relevant major international safety standards.



APPENDIX A: REGULATORY INFORMATION

A.2 NOM STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico debe ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

APPENDIX B: DISCLAIMER/TRADEMARKS

B.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

B.2 TRADEMARKS USED IN THIS MANUAL

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1.877.877.2269

