RTCU Deployment Server

Version 6.00

Installation Manual

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Table of Contents

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Introduction

This document describes the RTCU Deployment Server (RDS). The RTCU Deployment Server is a lightweight and easy-to-install solution that runs on a 64-bit Microsoft Windows platform.
The RDS is used to simplify the task of upgrading firmware and/or applications in a large population of RTCU devices. The RDS also offers functionality to transfer user-defined files to the RTCU devices.
The RDS uses a TCP/IP network to allow remote access to RTCU devices connected to the RTCU Communication Hub.
The RDS leverages the background update feature available in the RTCU firmware for maximum flexibility.

Features:

- Uses the RTCU Communication Hub (RCH) to establish a connection to remote devices.
- It runs as a Windows service for automatic startup in server installations.
- Includes remote maintenance, diagnostic, and logging facilities.
- Upgrades firmware and application automatically according to user configuration.
- Upgrades can occur during the device's full operation.
  This unique feature minimizes downtime and the impact on the user.
- Failed upgrade attempts will automatically be resumed at the point of interruption.
  This unique feature will reduce the cost and time of upgrading.
- It can be either an automatic or application-driven decision when to switch to the new application or firmware. To switch to the new application or firmware, a device reset is required, which will interrupt operation for typically less than one minute.
- Up to 200 simultaneous upgrade sessions.
- Supports applications that use VPL upgrade notifications.
- Support for automatic programming of new factory-delivered devices.
- Scheduled upgrade.
- Support for upload of user-defined files to a device.
- Support for synchronization of files from user-defined directories to devices.
- Comprehensive logging and status features.
- Import from and export to comma-delimited files.
- Support for RTCU X32, NX32, and NX32L Execution Architecture.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

System Requirements

Operating system:	64-bit Microsoft Windows. Minimum: Microsoft Windows 7. Minimum: Windows Server 2008.
Memory (RAM):	Minimum 500 MB / Recommended: 1 GB. (Available for RDS).
Hard disk space:	Approx. 50MB @2000 devices, 40MB @500 devices.
Other:	Network card, TCP/IP network protocol. RTCU Communication Hub is recommended.

License

There are no limitations on the RDS itself, but the number of allowed clients will be enforced by the license policy of the RTCU Communication Hub.
The RTCU Communication Hub can be used with up to 25 clients (RTCU devices, the RDS, or PC software) in a trial version. However, if more clients are required, a license can be purchased from Logic IO (See the RTCU Communication Hub manual for more information).
Note that the RTCU Communication Hub only allows a single RDS instance to be connected.

RTCU Deployment Server API

All the functionality available in the RTCU Deployment Server Manager is available as an API for use in applications that require programmatic control of the RTCU Deployment Server.
For more information, please download the **RTCU Deployment Server API** package.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Installation and Setup

There are two installations for the RDS - "RTCU Deployment Server" and "RTCU Deployment Server Manager".

RTCU Deployment Server

This installation package includes the server and the control panel.
To install, run:
RTCU Deployment Server V6.00.msi

If a previous version of the RDS is already installed, it must be uninstalled before this new version of the RDS can be installed. The configuration and data of the previous version will be imported and used if present.

The installation process requires administrator privileges.

RTCU Deployment Server Manager

This installation package includes the manager application. This is the primary user interface for interacting with the RDS.
To install, run:
RTCU Deployment Server Manager V6.00.msi

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Using the RTCU Deployment Server for the first time

The first time the RDS is started, several steps must be completed before it is ready for use.

1. An operational and accessible RCH is required.
   Please obtain the following parameters from the RCH:
   IP address, port number, and key parameters. These are needed in step 2.

2. Configure the RDS. This is done with the Control Panel.

   First, type the RCH parameters from step 1 in on the Communication Hubs tab.

   Then, select the application path and the firmware path on the Configuration tab.
   It is vital to get this correct because this is where the RDS receives the application and firmware files.

   It is recommended to change the password for the RTCU Deployment Server Manager.

   For more details about configuring the RDS with the control panel, see the Configuration chapter below.

3. Start the RDS. This is done with the Control Panel.

   Press the "Start RDS" button on the Status tab. The RDS service will be started, and its status will change from "Stopped" to "Running".

   After a while, the RCH information will change from "Not connected" to "Connected".
   If the text does not change within a few minutes, the RDS will be unable to find the RCH. The connection parameters might be wrong, or the network infrastructure is not configured to allow traffic to the RCH.
   For more details about checking the status of the RDS with the control panel, see the Status chapter below.

The system is now ready to create profiles and devices using the RTCU Deployment Server Manager application. Please refer to the on-line help for the Manager.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

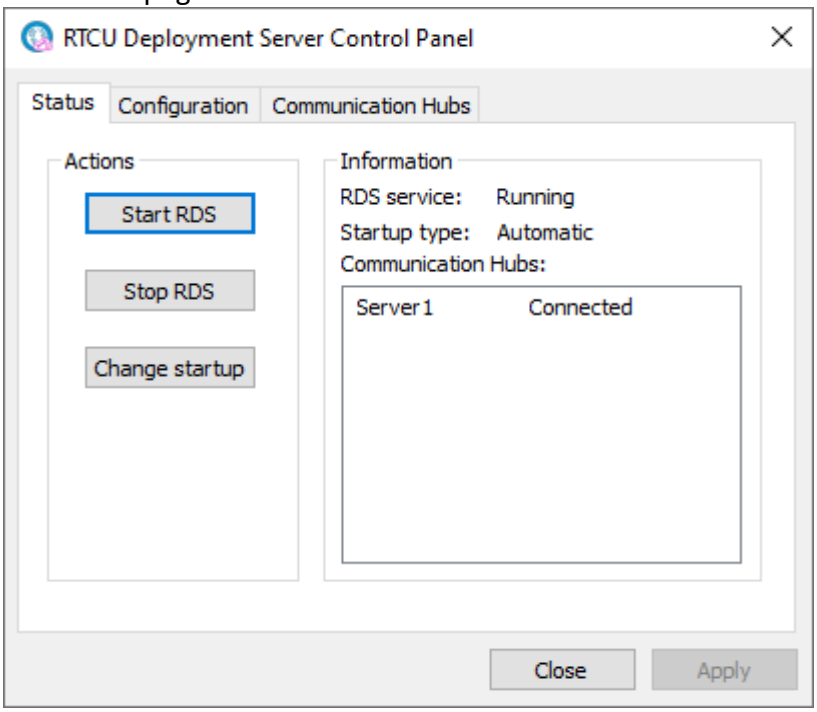
Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Control Panel

The Control Panel application is where the RDS service is managed.

Status

The status page is where the service status is monitored and changed.



The Actions group contains an option to change the status of the RDS service.
The actions supported are to start or stop the RDS service and to change the startup type.

The information group contains the status of the RDS service.
The items can have the following states:

RDS Service

Running	RDS service is started and running.
Stopping	RDS service is in the process of stopping.
Stopped	RDS service is not running.

Startup Type

Automatic	RDS service starts automatically with Windows.
Manual	RDS service must be started from the Control Panel.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Communication Hubs

This is a list that shows the names and connection status of all the RCH servers the RDS will connect to. The status can be one of the following:

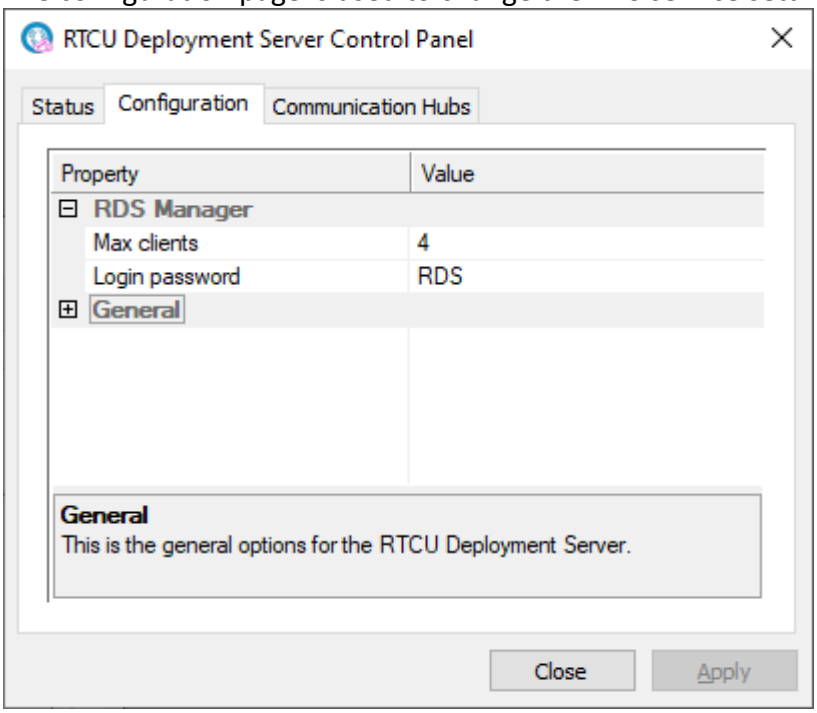
Not connected	RDS is not connected to the RCH.
Connected	RDS is connected to the RCH.
Unsupported	The RCH is not supported by the RDS.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Configuration

The configuration page is used to change the RDS service settings.

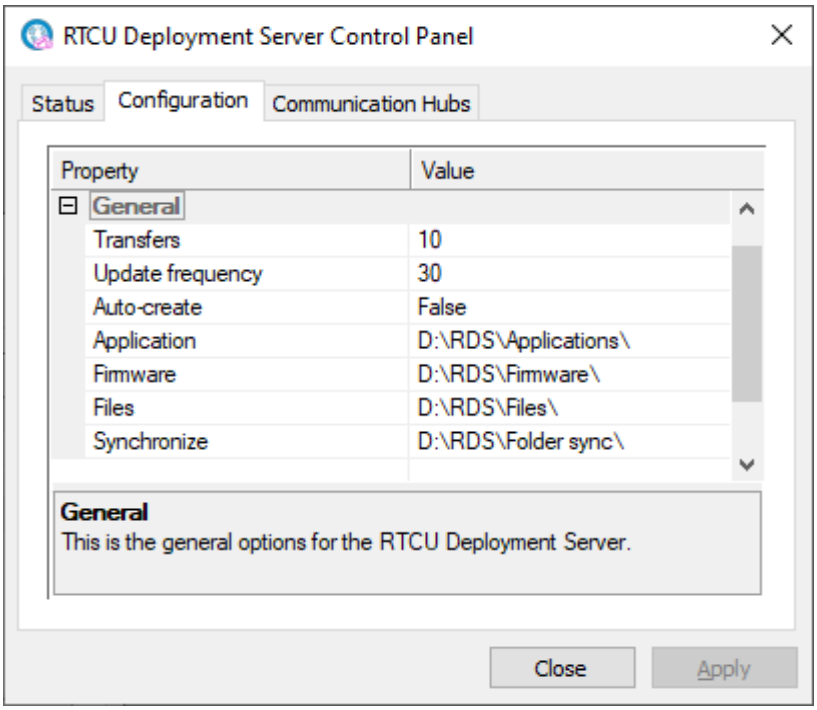


The Parameters for RTCU Deployment Server Manager have the Following Meanings.

Maximum clients	The maximum number of manager clients or RDS API clients that the RDS will accept simultaneously. RDS supports from 1 to 10 clients. The default is 4.
Login password	Access password for the RDS. Used by the manager client to connect to the RDS. Note: the access password is case-sensitive.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com



The Parameters for General have the Following Meanings

Transfers	Number of RTCU devices that the RDS can update simultaneously. The RDS supports from 1 to 200 transfers. Default is 10.
Update frequency	The update frequency in minutes when the RDS will automatically update all devices that is not up to date. An update will also be initiated automatically at the boot-up time of a device. The RDS support from 5 to 1440 minutes. The default is 30 minutes.
Auto-create	Enables/disables auto-creation of devices when they connect for the first time.
Application	The directory where the RDS expects the application files to be located. Only the application files found here are presented to the manager client when working with profiles. Please note that all subdirectories will be included when searching for application files.
Firmware	The directory where the RDS expects the firmware files to be located. Only the firmware files found here are presented to the manager client when working with profiles. Please note that all subdirectories will be included when searching for firmware files.
Files	The directory where the RDS expects generic files to be located. Only the files found here are presented to the manager client when working with profiles. Only files that are in the 8.3 format will be accepted. Please note that all subdirectories will be included when searching for files.

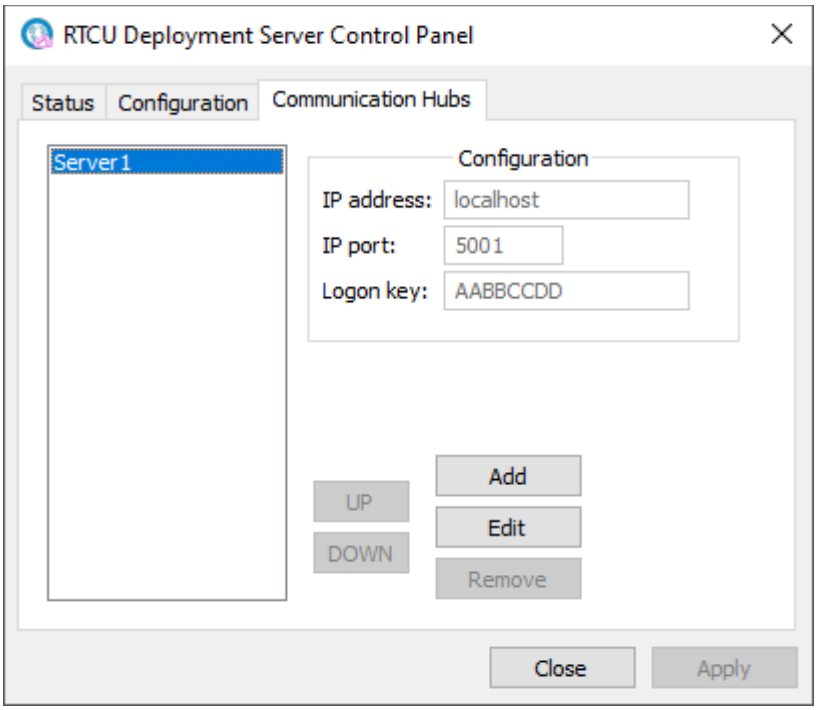
Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Synchronize	The directory where the RDS expects the sub-directories for directory synchronization to be located.

Press the "Apply" button to use the new configuration.
Please note that the RDS must be restarted after the configuration has been changed.

Communication Hubs
The Communication Hub page manages the list of servers to which the RDS will connect.



On the left side of the page is a list of the RCH servers to which the RDS will connect.
The configuration group shows information about the selected RCH.

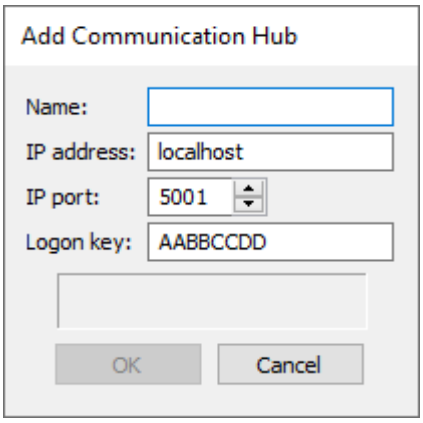
IP address	IP address of the RCH.
IP port	IP port of the RCH.
Logon key	Access key for the RCH.

The RDS will only listen for manager clients connecting to the first RCH of the list.

Pressing the 'Add' button will make the "Add Communication Hub" dialog appear.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

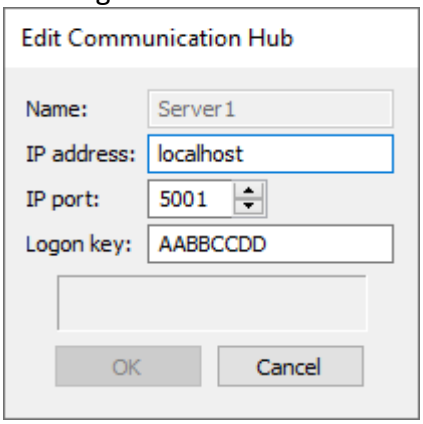
Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com



Name	The name of the RCH.
IP address	IP address of the RCH.
IP port	IP port of the RCH.
Logon key	Access key for the RCH.

The text area just above the buttons will show any errors in the configuration.

Pressing the 'Edit' button will make the "Edit Communication Hub" dialog appear.



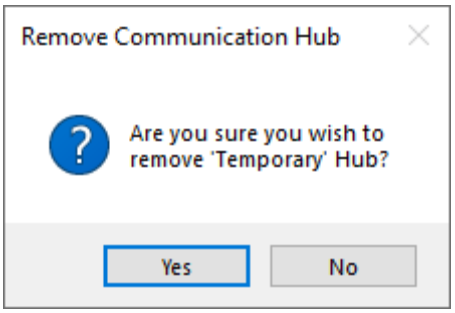
Name	The name of the RCH.
IP address	IP address of the RCH.
IP port	IP port of the RCH.
Logon key	Access key for the RCH.

The text area just above the buttons will show any errors in the configuration.

Pressing the 'Remove' button will remove the selected server.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com



Pressing the "Up" and "Down" buttons will move the selected server one position up or down depending on the button pressed.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com

Automatic Setup of Factory-Delivered Devices

The pre-programmed application in an RTCU device, delivered by Logic IO, will automatically connect to the cellular network and wait for a configuration SMS that will enable the device to connect to the RCH. When the device connects to the RCH, the RDS will upgrade it to the firmware and application specified in the profile. Please note that the PIN code of the SIM card must be disabled.
The configuration SMS message must be according to the following format:

#KEY=52544355
This command is required because it identifies the SMS message as a genuine configuration SMS. It must be the first command in the SMS.

#GPRS=<apn>,<aut>
This command sets the TCP/IP parameters.
<apn> The APN that the devices should use to connect to the cellular network.
<aut> The PPP authentication types:
0 - None
1 - PAP
2 - CHAP
3 - PAP/CHAP
For <aut>, please use 3 (PAP/CHAP). This will work for all modern devices.

#GW=<ip>,<port>,<key>
This command sets the RCH parameters.
<ip> The IP address of the RCH.
<port> The port the device will use to connect to the RCH.
<key> The key (password) the device should use to connect to the RCH.

#GWP=<mca>,<msr>,<rto>,<afrq>
This command sets the advanced Communication Hub parameters. This command is optional.
<mca> Maximum number of connection attempts before cellular link reconnects.
<msr> Maximum number of send-request attempts before send fails.
<rto> Time waiting for a response in seconds.
<afrq> Frequency for sending self-transactions in seconds.

#CFM=1
If this command is included, the RTCU will send a confirmation SMS to confirm receipt of the configuration.

For example, an SMS message could look like this:
#KEY=52544355#GPRS=internet,3#GW=rtcu.dk,5001,AABBCCDD#GWP=3,3,30,360.

Logic IO Aps
Holmboes Allé 14
8700 Horsens
Denmark

Ph: (+45) 7625 0210
Fax: (+45) 7625 0211
Email: support@logicio.com
www.logicio.com