Reissued: 11-Jul-16

Model: **Uz-A1**	Date: 22-Jan-10	No.: RD459001p

RTB Reissue

The items in ***bold italics*** have been added.

Subject: Firmware Release Note: Application			Prepared by: M. Yoneda
From: 2nd Tech Service Sect., MFP/Printer Tech Service Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Firmware)	☒ Tier 2

This RTB has been issued to announce the firmware release information for the **Application.**

Release Version	Version	Program No.	Effective Date	Availability of RFU
V02.05-00	***A3.01 P3.00 C3.05 K3.00***	***D4595160M***	***August 2016 production***	***Available***
V02.03-00	A3.01 P3.00 C3.03 K3.00	D4595160K	December 2014 production	Available
V02.02-00	A3.01 P3.00 C3.02 K3.00	D4595160J	February 2014 production	Available
V02.01-00	A3.00 P3.00 C3.01 K3.00	N/A	January 2014 production	Not Available
V02.00-00	A3.00 P3.00 C3.00 K3.00	D4595160G	October 2013 production	~~Available~~ Suspended
V01.24-00	A2.07 P2.03 C2.06 K2.03	D4595160F	June 2013 production	Available
V01.23-00	A2.07 P2.02 C2.06 K2.03	D4595160E	January 2013 production	Available
V01.22-00	A2.07 P2.02 C2.05 K2.03	D4595160D	March 2012 production	Available
V1.21-	A2.06	D4595160C_	Available for SD card and	Available

Reboot	P2.01_RE110373 C2.04_RA110285 K2.02_RE110373	RE110373	RFU	
V1.21-Samsung2	A2.06 P2.01_RA110081 C2.04_RA110285 K2.02	D4595160C_RA110285	Available for SD card and RFU	Available
V1.21-Call	A2.06 P2.01_RA110081 C2.04_RE100834 K2.02	D4595160C_RA110081	Available for SD card and RFU	Available
V1.21-Samsung	A2.06 P2.01 C2.04_RE100834 K2.02	D4595160C_RE100834	Available for SD card and RFU	Available
V01.21-00	A2.06 P2.01 C2.04 K2.02	D4595160C	December 2010 production	Available
~~V01.20-TC100210-01-TC100210~~	~~A2.05_01 P2.00_02 C2.03_02 K2.01~~	~~D4595160B_TC100210~~	~~Available for SD card and RFU~~ The release of this firmware version has been cancelled as a newer standard version (V01.21-00) has been released.	~~Available~~
V01.20-01	A2.05 P2.00 C2.03 K2.01	D4595160B	April 2010 production	Available
V01.15-00	A1.18 P1.12 C1.14 K1.04	D4595160A	1st Mass production	Not available

Note: Definition of Availability of RFU via @Remote
"Available": The firmware can be updated via RFU or SD card.
"Not available": The firmware can only be updated via SD card.

Release Version	Version	Modified Points or Symptom Corrected
V02.05-00	***A3.01 P3.00 C3.05 K3.00***	***Symptom corrected: RC Gate A cannot obtain counter data from the following Samsung devices: SY-P1, CM-P1, CM-C1 and CM-C2 *The above fix was first released in version v01.22.00, but has been released again as it was accidentally removed.***
V02.03-00	A3.01 P3.00 C3.03 K3.00	Symptom corrected: Same device information is sent more than twice with different IP address. Limitation:

Model: **Uz-A1**	Date: 22-Jan-10	No.: RD459001p

		This firmware has an “auto reboot” function from V1.21-01_Reboot. If you shut down the Uz-A using the Web UI, the Uz-A will always reboot itself automatically (about 16 seconds later). To successfully shut down the Uz-A, do the shut down operation from the UI (or press the power button on the Uz-A), and then remove the power plug from outlet within 10 seconds.
V02.02-00	A3.01 P3.00 C3.02 K3.00	Symptom corrected: • Incorrect URLs for Auto Discovery and User Code Counter Acquisition are set at installation and Appliance replacement.
V02.01-00	A3.00 P3.00 C3.01 K3.00	Symptom corrected: • The model name of a device registered under RC Gate A may not appear on the Device List in the Center GUI (See RTB RD459014 for details). Note: This version was used temporarily (until V02.02-00 is released) and only on the production line.
V02.00-00	A3.00 C3.00 P3.00 K3.00	Other change: Correspondence to following environment 1. IPv6 2. Strengthen of security algorithms (Year 2010 Issues on Cryptographic Algorithms).
V01.24-00	A2.07 C2.06 P2.03 K2.03	Symptom corrected: Nothing is displayed on the LCD touch panel and the panel does not respond at all. Limitation: This firmware has an “auto reboot” function from V1.21-01_Reboot. If you shut down the RC Gate A using the Web UI, the RC Gate A will always reboot itself automatically (about 16 seconds later). To successfully shut down the RC Gate A, do the shut down operation from the UI (or press the power button on the RC Gate A), and then remove the power plug from outlet within 10 seconds.
V01.23-00	A2.07- C2.06- P2.02- K2.03	Symptom corrected: - Memory shortage on RFU. Until last version can not RFU lager that 16MB file. This version can RFU until 200MB. Limitation: This firmware has an “auto reboot” function from V1.21-01_Reboot. If you shut down the RC Gate A using the Web UI, the RC Gate A will always reboot itself automatically (about 16 seconds later). To successfully shut down the RC Gate A, do the shut down operation from the UI (or press the power button on the RC Gate A), and then remove the power plug from outlet within 10 seconds.

Model: **Uz-A1**	Date: 22-Jan-10	No.: RD459001p

V01.22-00	A2.07-P2.02-C2.05-K2.03	Symptom corrected: 1. RC Gate A suddenly disconnects. Note: - This fix only adds an auto-recovery system for when a sudden disconnect occurs. While it does not resolve the issue, it should prevent it from causing problems for users. (GFPR#RE11100010) - This fix was first included in V1.21-01_Reboot. 2. RC Gate A cannot obtain counter data from Samsung-produced devices. Affected models (devices): SY-P1, CM-P1, CM-C1 and CM-C2 Note: This fix was first included in V1.21-01_Samsung2. 3. Notifications for the following types of calls are sent every time RC Gate A is rebooted: Manual calls, auto calls, supply calls, alarm calls, notification of abnormal count, abnormal device ID, device FW update, device condition Note: This fix was first included in V1.21-01_Call. 4. Counter values cannot be obtained from devices whose counter data is in integer format (i.e. devices that use a Samsung controller). Note: - All other devices use the long data format. - This fix was first included in V1.21-Samsung. 5. Auto Discovery (AD) does not work. As a result, the meter click data (AD counter data) is not forwarded to the @Remote Center and reporting site. Note: This fix was first included in V1.20-01_AD. Limitation: This firmware has an “auto reboot” function from V1.21-01_Reboot. If you shut down the RC Gate A using the Web UI, the RC Gate A will always reboot itself automatically (about 16 seconds later). To successfully shut down the RC Gate A, do the shut down operation from the UI (or press the power button on the RC Gate A), and then remove the power plug from outlet within 10 seconds.
V1.21-Reboot	A2.06-P2.01_RE110373-C2.04_RA110285-K2.02_RE110373	Symptom corrected: 1. RC Gate A suddenly disconnects. Note: This fix only adds an auto-recovery system for when a sudden disconnect occurs. While it does not resolve the issue, it should prevent it from causing problems for users. 2. RC Gate A cannot obtain counter data from Samsung-

		produced devices. Affected models (devices): SY-P1, CM-P1, CM-C1 and CM-C2 Note: This fix was first included in V1.21-01_Samsung2. 3. Notifications for the following types of calls are sent every time RC Gate A is rebooted: Manual calls, auto calls, supply calls, alarm calls, notification of abnormal count, abnormal device ID, device FW update, device condition Note: This fix was first included in V1.21-01_Call. 4. Counter values cannot be obtained from devices whose counter data is in integer format (i.e. devices that use a Samsung controller). Note: - All other devices use the long data format. - This fix was first included in V1.21-Samsung. Limitation: This firmware has an "auto reboot" function from V1.21-01_Reboot. If you shut down the RC Gate A using the Web UI, the RC Gate A will always reboot itself automatically (about 16 seconds later). To successfully shut down the RC Gate A, do the shut down operation from the UI (or press the power button on the RC Gate A), and then remove the power plug from outlet within 10 seconds.
V1.21-Samsung2	A2.06-C2.04-P2.01_K2.02	Symptom corrected: 1. RC Gate A cannot obtain the counter data from Samsung-produced devices. Affected models (devices): SY-P1, CM-P1, CM-C1 and CM-C2 2. Notifications for the following types of calls are sent every time RC Gate A is rebooted: Manual calls, auto calls, supply calls, alarm calls, notification of abnormal count, notification of abnormal device ID, notification of updating device FW, notification of device condition Note: This correction was also applied to the V1.21-01_Call firmware. 3. Counter values cannot be obtained from devices whose counter data is provided in integer type format (i.e. devices that use a Samsung controller). Note: - All other devices use the long type data format. - This correction was also applied to the V1.21-Samsung firmware.
V1.21-Call	A2.06 P2.01_RA 110081	Symptom corrected: 1. Notifications for the following types of calls are sent every

Model: **Uz-A1**	Date: 22-Jan-10	No.: RD459001p

	C2.04_RE 100834 K2.02	time RC Gate A is rebooted: Manual calls, auto calls, supply calls, alarm calls, notification of abnormal count, notification of abnormal device ID, notification of updating device FW, notification of device condition 2. Counter values cannot be obtained from devices whose counter data is provided in integer type format (i.e. devices that use a Samsung controller). Note: - All other devices use the long type data format. - This correction was also applied to the V1.21-Samsung firmware.
V1.21-Samsung	A2.06 P2.01 C2.04_RE 100834 K2.02	Symptoms corrected: Counter values cannot be obtained from devices whose counter data is provided in integer type format (i.e. devices that use a Samsung controller). Note: All other devices use the long type data format.
V01.21-00	A2.06 P2.01 C2.04 K2.02	Symptoms corrected: 1. Auto Discovery fails. (See RTBD459003a for the details.) 2. Machine search results are delayed. (See RTBD459003a for the details.) 3. SNMPv3 authentication data cannot be backed-up properly. 4. Device RFUs can be performed during time blocks that normally prohibit RFU. 5. The wrong IP address (127.0.0.1) is contained in the warm-up notification sent from RC Gate A when installed in a DHCP environment. 6. SC13311 (error when writing to the SSD log). 7. The Auto Discovery start times in RC Gate A and at the Center are off by one hour, due to an error in Summer Time control. 8. The model name sent from RC Gate A to the center (which does not contain the vendor name) does not match the model name sent by RC Gate nor the name received at the time of Auto Discovery. Other changes: 1. The collection of counter values for each individual user can now be disabled. (This can be done by setting the username to all blank characters, i.e. use no text in the username). 2. The proxy authentication protocol is now RFC compatible/compliant. Note: As a result of this change, RC Gate A no longer supports ISA2004 or digest authentication. 3. Symbols and other invalid characters cannot be included in registered user names.

Model: **Uz-A1**	Date: 22-Jan-10	No.: RD459001p

V01.20-TC100210-01-TC100210	A2.05_01 P2.00_02 C2.03_02 K2.01	Important: As soon as you install this firmware version, RC Gate A will no longer be CC certificate compliant. This is because this firmware version is not being released as a standard version, but rather as an individual countermeasure for this specific symptom. Symptom corrected: Auto Discovery (AD) does not work. As a result, the meter click data (AD counter data) is not forwarded to the @Remote Center and reporting site. Note: - This does not occur with managed data. If all devices are managed, the counter data is forwarded correctly. See RD459003 for details.
V01.20-01	A2.05 P2.00 C2.03 K2.01	Symptom corrected: 1. RC Gate "System Property load error", "Error code 4001", or other error is displayed on the Web GUI when two or more IP address change requests are made consecutively. 2. When performing a Device Search, the maximum range of Class A segments in the "START" and "END" addresses is now limited to 32. Ex) To search all devices within Class A, it is necessary to specify eight separate ranges: 133.1.x.x - 133.32.x.x 133.33.x.x - 133.64.x.x etc. 3. RC Gate A may stall if it receives an incorrect response from the Gateway while device registration using the Device Registration Wizard is in progress. 4. When performing a retry following a communication failure between the appliance and Gateway, a data discrepancy between the two locations and/or extra network traffic may occur (see "CR-064" in the RC Gate S Pro QMP database). 5. If the same SC occurs two or more times on an appliance within 24 hours, the second (and any following) SCs are filtered out, i.e. the center is not notified. Other changes 1. Supports the User Code Counter Capturing feature.
V01.15-00	A1.18 P1.12 C1.14 K1.04	1st Mass production

Model: Uz-A1 (RC Gate A)	Date: 28-July-10	No.: RD459002

Subject: Important Note on Log Settings			Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Firmware)	☒ Tier 2

Important Information About the Log Level Setting

Overview

It is strongly recommended to keep the **log level setting** for the RC Gate A at "**WARN**" (default) or "**INFO**" (and not "DEBUG" or "TRACE").

This is because:

- The log level setting should only be set to "TRACE" or "DEBUG" in order to perform special problem analyses.
- With the "TRACE" or "DEBUG" settings, it takes the RC Gate longer to perform device searches and regular functions (see **Table 1**). This can shorten the lifetime of the SD card. Also, the log data is erased after only 6 minutes (see **Table 2**).

Details

As shown in Table 1, when the log level is set to "TRACE" or "DEBUG", it takes RC Gate longer to perform device searches as well as regular functions. The increased access can reduce the lifetime of the SD card.

Table 1: Time required to complete regular and device search tasks (min:sec)

No.	Log Level setting	Regular tasks			Device search
		Counter data Acquisition	Regular device information acquisition	Device connect check	Search time
1	**WARN**	**8:57**	**15:05**	**1:41**	**2:10**
2	**INFO**	**11:30**	**18:46**	**5:16**	**2:40**
3	**DEBUG**	**18:23**	**24:15**	**6:52**	**4:10**
4	**TRACE**	**19:27**	**25:31**	**7:13**	**5:00**

Note: If 100 devices are registered under an RC Gate A, and the log level is set to "WARN", it only takes 8:57 to acquire the counter data. If the level is set to "TRACE", is takes more than twice as long (19:27). If 1000 devices are registered, this difference may be larger, and may affect the daily sending of the device data to the center.

Table 2: Log data preservation period

No.	Log Level setting	Regular tasks		Device search
		Hourly rate of log file size (KB)	Log data preservation period (Ave.)	Log file size when searching 100 devices (KB)
1	WARN	152	About 6 days	46
2	INFO	440	About 3 days	1166
3	DEBUG	27000	About 6 min.	2616
4	TRACE	27000	About 6 min.	3111

Note: When a setting of "WARN" is selected (default), the log data is kept for about six days. However, when "TRACE" is selected, the log data can only be kept for about six minutes. Therefore, with a setting of "TRACE", valuable log data may be erased that could have been used for problem analysis.

Appendix: Testing conditions

The results described above were obtained through tests performed under the following conditions.

Regular tasks

	Testing Environment	Default Value
RC Gate A Firmware	A2.05-C2.03-P2.00-K2.01 (D4595160B)	-
Device Registration	100 units	-
Regular Device Information Acquisition Interval	1 hour	12 hours
Counter Data Acquisition Interval	1 hour	12 hours
Device Connect Check Interval	1 hour	12 hours
Periodical Polling	1 minute	1 hour

Device search

	Testing environment	Default Value
RC Gate A Firmware	A2.05-C2.03-P2.00-K2.01 (D4595160B)	-
Number of Devices	100 units	-
Periodical Polling	1 minute	1 hour
Remarks	Search Range: 200IP (Include 100 x @Remote Devices)	

Reissued:22-Sept-10

Model: Uz-A1 (RC Gate A)	Date: 25-August-10	No.: RD459003a

RTB Reissue

The items in ***bold italics*** were corrected or added.

Subject: A failure with Auto Discovery			Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

Symptom

AD (Auto Discovery) counter data is not forwarded to the @Remote Center or Reporting Site.

Note:

- The data is forwarded correctly for managed devices.
- AD stops during network discovery, and it takes a long time for the process to complete.
- Some devices are not discovered during AD.

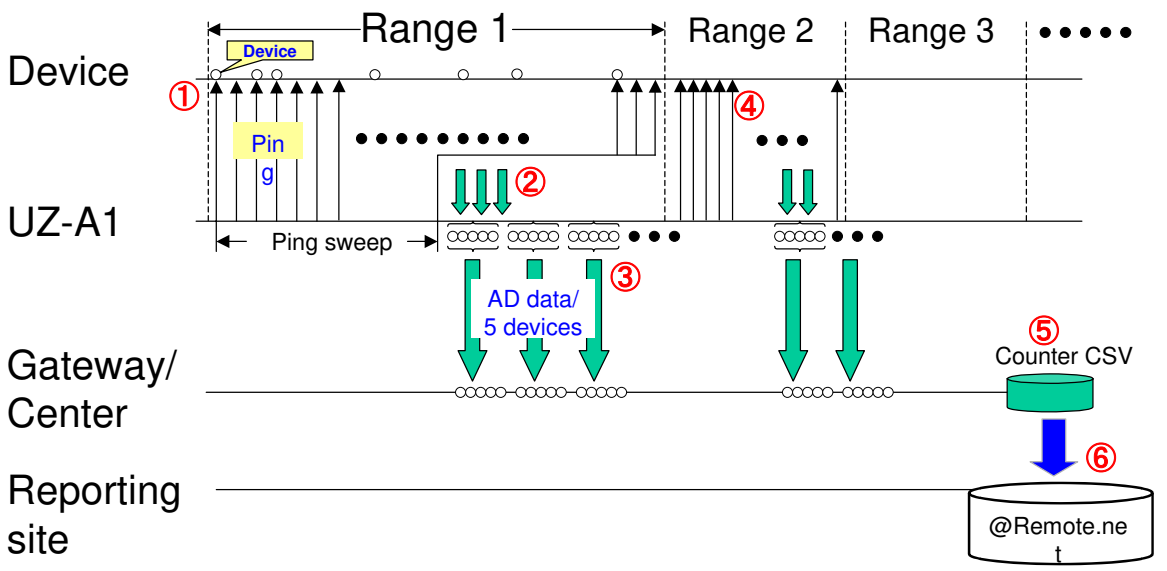
Cause

1. Hourly polling is performed during a ping sweep. As a result, the ping does not function normally (it may stop temporarily).

   Note: If SNMP is used for device discovery instead of a ping sweep, the symptom does not occur.

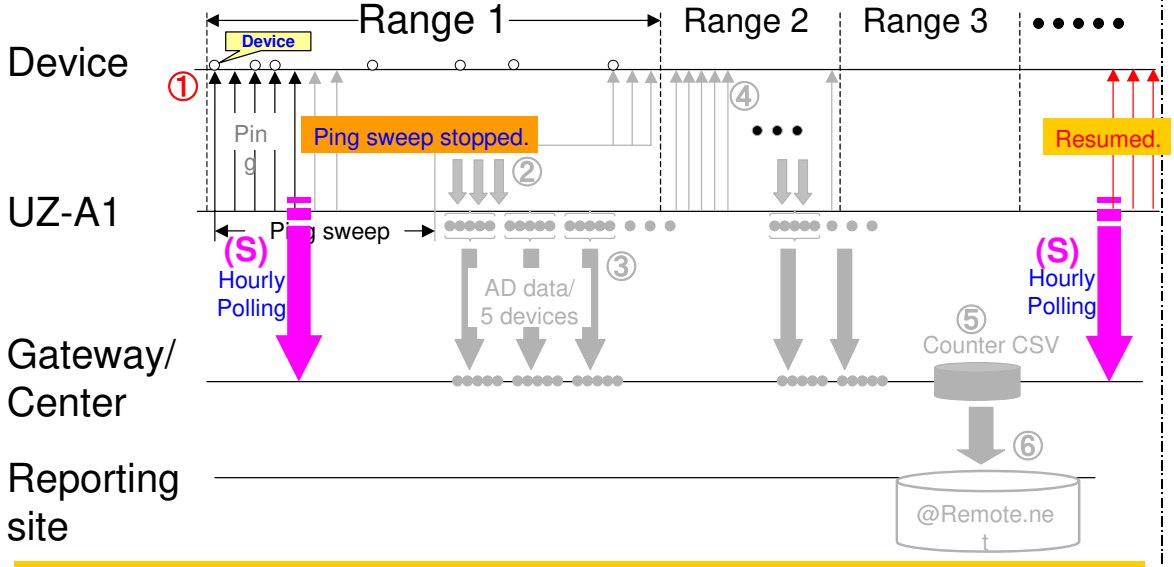
Model: Uz-A1 (RC Gate A)	Date: 25-August-10	No.: RD459003a

AD - Normal process



① Uz-A1 sends a ping to all IP addresses within Range 1 (ping sweep).
② After completing the ping sweep, Uz-A1 requests the AD counter data from each device found.
③ Uz-A1 sends five device's worth of AD data as one package to the center, and repeats this for all devices found.
④ Uz-A1 performs the same process for the next range.
⑤ The center generates the counter CSV file using the collected AD data.
⑥ The center forwards the CSV file to the reporting site.

Symptom occurrence: Cause 1



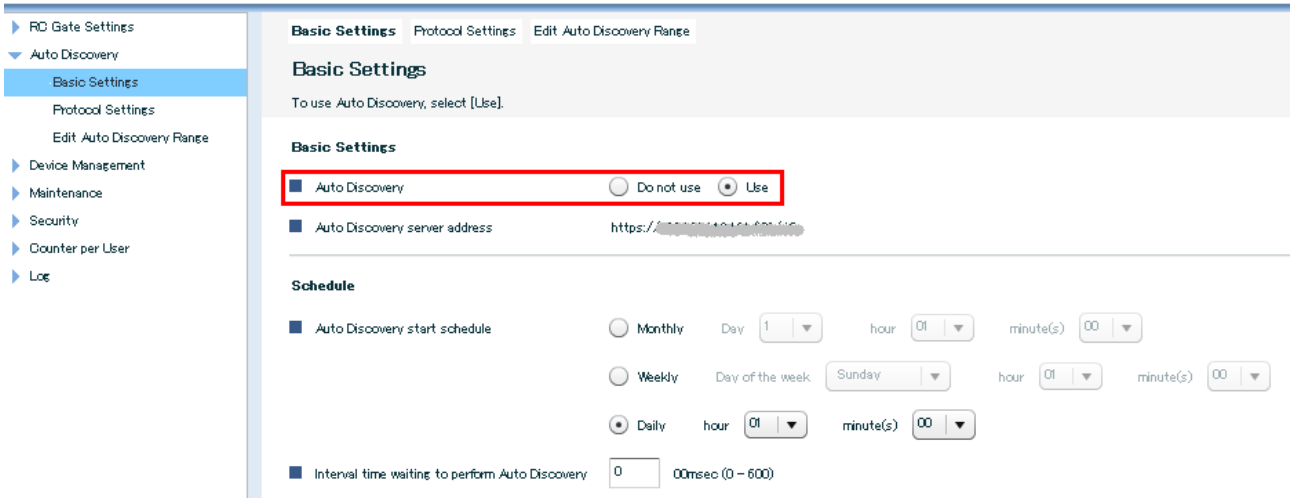
① Uz-A1 sends a ping to all IP addresses within Range 1 (ping sweep).
(S) Hourly polling is performed (Uz-A1 to Gateway/Center).

AD stops (ping sweep stops), which in turn stops operations #2-6. Sometimes, the ping sweep resumes when hourly polling is performed later.

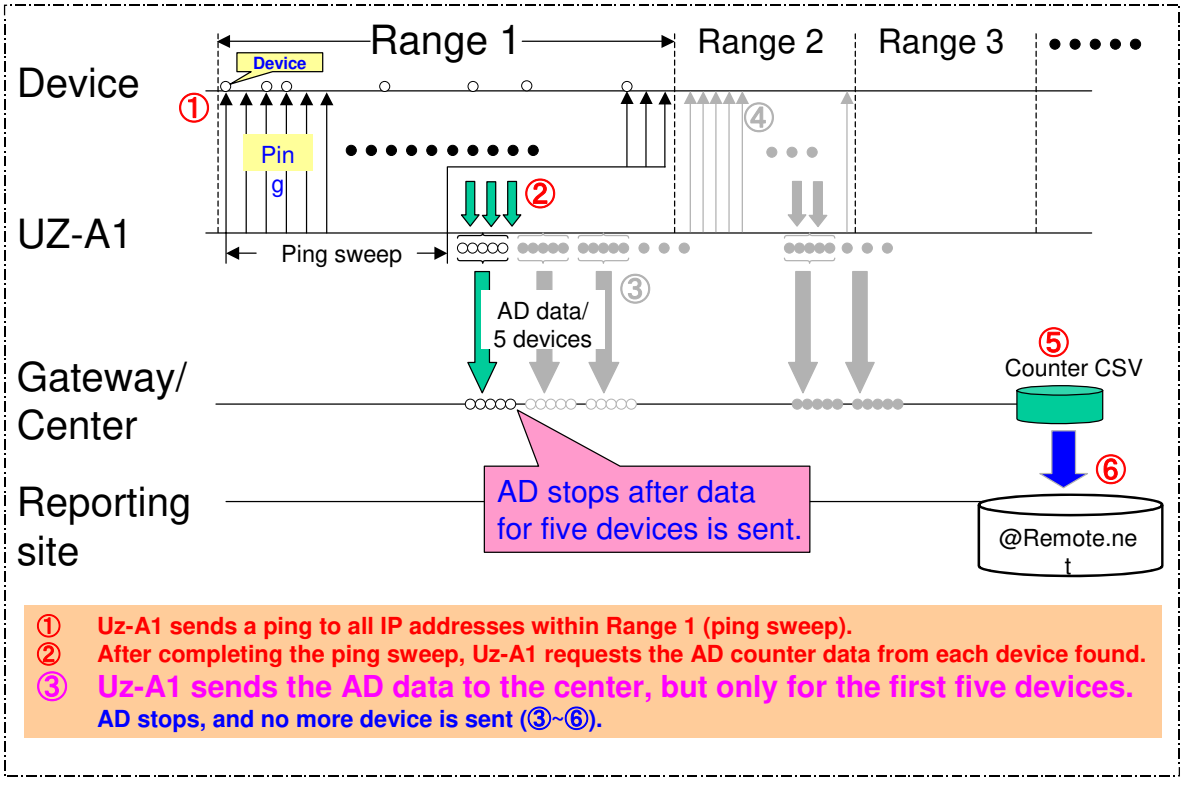
Model: Uz-A1 (RC Gate A)	Date: 25-August-10	No.: RD459003a

2. In the Uz-A1 GUI, the AD setting is changed to “Use”, then to “Do not use”, and finally back to “Use”. Under these conditions, only five devices are discovered.

Note: This condition can be cleared temporarily by turning the power OFF/ON.



Symptom occurrence: Cause 2



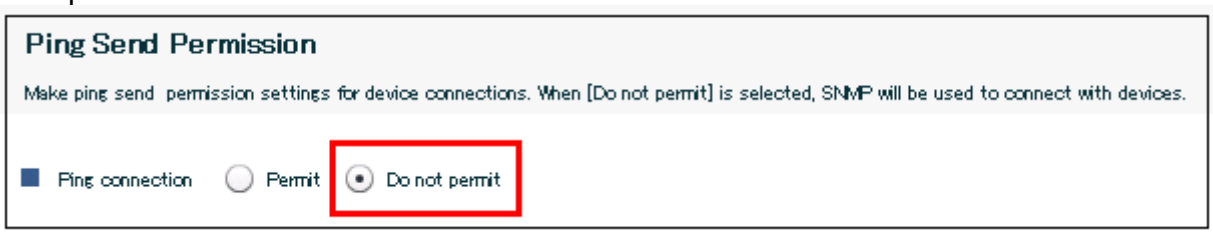
① **Uz-A1 sends a ping to all IP addresses within Range 1 (ping sweep).**
② **After completing the ping sweep, Uz-A1 requests the AD counter data from each device found.**
③ **Uz-A1 sends the AD data to the center, but only for the first five devices.**
AD stops, and no more device is sent (③~⑥).

Model: Uz-A1 (RC Gate A)	Date: 25-August-10	No.: RD459003a

Action

Temporary countermeasure

1. For Cause #1:
Set the ping send permission to “Do not permit”. In other words, do not use a ping sweep as the device search method.



2. For Cause #2:
Turn the power of the RC Gate A OFF and then ON again.

Permanent countermeasure

The following firmware has been modified and released:

A2.05.01, C2.03.02, P2.00.02, K2.01

Note:
- See RTB RD459001b for details.
- You can update the firmware via RFU or by overwriting the firmware files on the SD card directly.

Reissued:08-Feb-11

Model: Uz-A1 (RC Gate A)	Date: 01-Feb-11	No.: RD459004a

The items with a line drawn through them have been deleted.

Subject: A failure with Capturing Counter Data (Samsung Models)			Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

Symptom

RC Gate A cannot obtain the counter data from Samsung-produced devices.

Note:

- This is only known to occur when Samsung models CV-P1, SY-P1, and CM-2 are used with **RC Gate A**. This does not occur with RC Gate.
- The occurrence of this symptom has not been confirmed on Samsung models CM-C1 and CM-P1.

Cause

RC Gate A was designed to support “long” type data, but the Samsung models mentioned above use data in “integer” type format.

Note: Ricoh models and all other OEM brand models use “long” type data.

Action

Update the firmware to the following version~~ at the next service visit:~~

A2.06, C2.04-RE100834, P2.01, K2.02

Note:

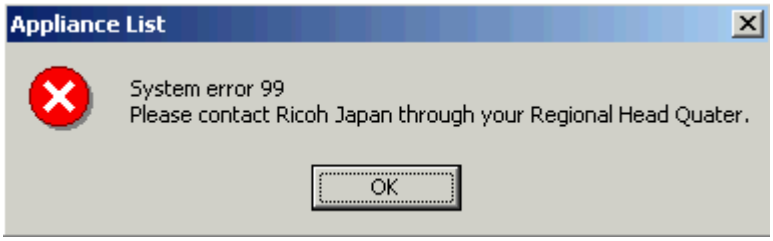
- For details, see RTBRD459001e.
- You can update the firmware via RFU, or by overwriting the firmware files on the SD card directly.

Model: Uz-A1 (RC Gate A)	Date: 17-Feb-11	No.: RD459005

Subject: Regstration error with RC Gate A			Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

Symptom

"System error 99" appears when an @Remote Center operator clicks on an appliance listed in the Appliance List of the Center GUI.



Cause

In rare cases, not all of the setting information needed for registration can be sent from the RC Gate A to the Gateway/@Remote Center.

Note: This can happen, for example, if the connection between the RC Gate A and @Remote Center is broken just after the RC Gate A registration procedure is performed.

Action

1. To avoid this symptom:
   Whenever you finish performing the RC Gate A registration procedure, confirm that registration was successful, and then do a Service Test Call.

   Note:
   - Service Test Calls are performed from the RC Gate A UI (Maintenance Menu). For the procedure, see the Field Service Manual.
   - Doing a Service Test Call will ensure that the @Remote Center receives all of the setting information.

2. If the symptom occurs:
   System Error 99 cannot be cleared in the field, so please request your supervisor to contact IT/S in Japan.

Model: Uz-A1 (RC Gate A)	Date: 02-May-11	No.: RD459006

Subject: Incorrect Info on Toner Email Alert			Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

Symptom

Notifications for the following types of calls are sent every time RC Gate A is rebooted:

Manual calls, auto calls, supply calls, alarm calls, notification of abnormal count, notification of abnormal device ID, notification of updating device FW, notification of device condition

Note: This symptom only occurs with RC Gate A, and not with RC Gate or RC Gate S Pro. This is because of the difference in DB architecture.

Cause

The call information stored in the RC Gate A SD card cannot be deleted if it was written between the time that RC Gate A received the call and the time it notified the Gateway. As a result, the call notification is triggered every time RC Gate A is rebooted.

Note: If the symptom happens more than once on the same RC Gate A, the call data is overwritten.

Solution

Temporary Solution:
Replace the RC Gate A (i.e., A to A replacement).

Permanent Solution:
Update the firmware to the following version. Do this by overwriting the firmware files on the SD card directly, or via an RFU.

A2.06, C2.04-RE100834, P2.01-RA110081, K2.02

Note:
- For details, see RTB RD459001f.
- This symptom happens on only RC Gate A, not RC Gate and RC Gate S Pro. (difference of DB architecture)

Reissued:10-Aug-11

Model: Uz-A1 (RC Gate A)	Date: 13-Jul-11	No.: RD459007a

RTB Reissue

The items in ***bold italics*** were corrected or added.

Subject: A failure with Capturing Counter Data (Samsung Models)	Prepared by: T. Takahashi
From: : Innovation Planning Sec. S S Innovation Dep.	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

Symptom

RC Gate A cannot obtain the counter data from Samsung-produced devices.

Note: RC Gate A returns an error to this effect after receiving a MIB communication from the affected Samsung devices.

Affected models (devices): SY-P1, CM-P1, CM-C1 and CM-C2

Cause

Bug in the firmware that handles MIB communication in these Samsung devices.

Action

Update the firmware to the following version or newer.

A2.06, C2.04_RA110285, P2.01-RA110081, K2.02

Note: You can update the firmware via RFU, or by overwriting the firmware files on the SD card directly.

Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459008

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Subject: Disconnection error with RC Gate A			Prepared by: T. Takahashi
From: : 1st Tech Service Sect., MFP/P Tech Service Dept.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

SYMPTOM

The connection between RC Gate A and the device is suddenly broken.

CAUSE

An error occurs while the SD card is being accessed.

SOLUTION

Permanent Solution:
To be announced at a later date.

Temporary Solution:
Update the firmware to the following version or newer.
A2.06, C2.04_RA110285, P2.01_RE110373, K2.02_RE110373

IMPORTANT: As soon as you install this firmware version, RC Gate A will **no longer be CC (Common Criteria) certified.** This is because this firmware version is not being released as a standard version, but rather as an individual countermeasure for this specific symptom.

Note:

- The modified firmware mentioned above has an "**auto reboot**" function. If you shut down the Uz-A using the Web UI, the Uz-A will always reboot itself automatically (about 16 seconds later). To successfully shut down the Uz-A, do the shut down operation from the UI (or press the power button on the Uz-A), and then remove the power plug from outlet **within 10 seconds.**
- You can update the firmware via RFU, or by overwriting the firmware files on the SD card directly.

Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

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Subject: Disconnection error with RC Gate A			Prepared by: T. Takahashi
From: : 1st Tech Service Sect., MFP/P Tech Service Dept.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

SYMPTOM

In some cases, the @Remote Function Flag (SP5816-003) is not enabled after device registration is completed, and no calls are sent to the appliance.

Note:

- Normally, after device registration is completed, this flag (SP5816-003) is automatically enabled (0: Disabled, 1: Enabled).
- This symptom occurs less frequently with RC Gate A than with RC Gate or RC Gate S Pro. This is because RC Gate A has a function that automatically enables the flag just after a Device Connect Check is completed.

SOLUTION

Permanent:

To be announced at a later date

Temporary (workaround in the field):

Do the procedure below.

Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

Temporary Solution (workaround)

Check the status of the @Remote flag and enable it if it is currently disabled.

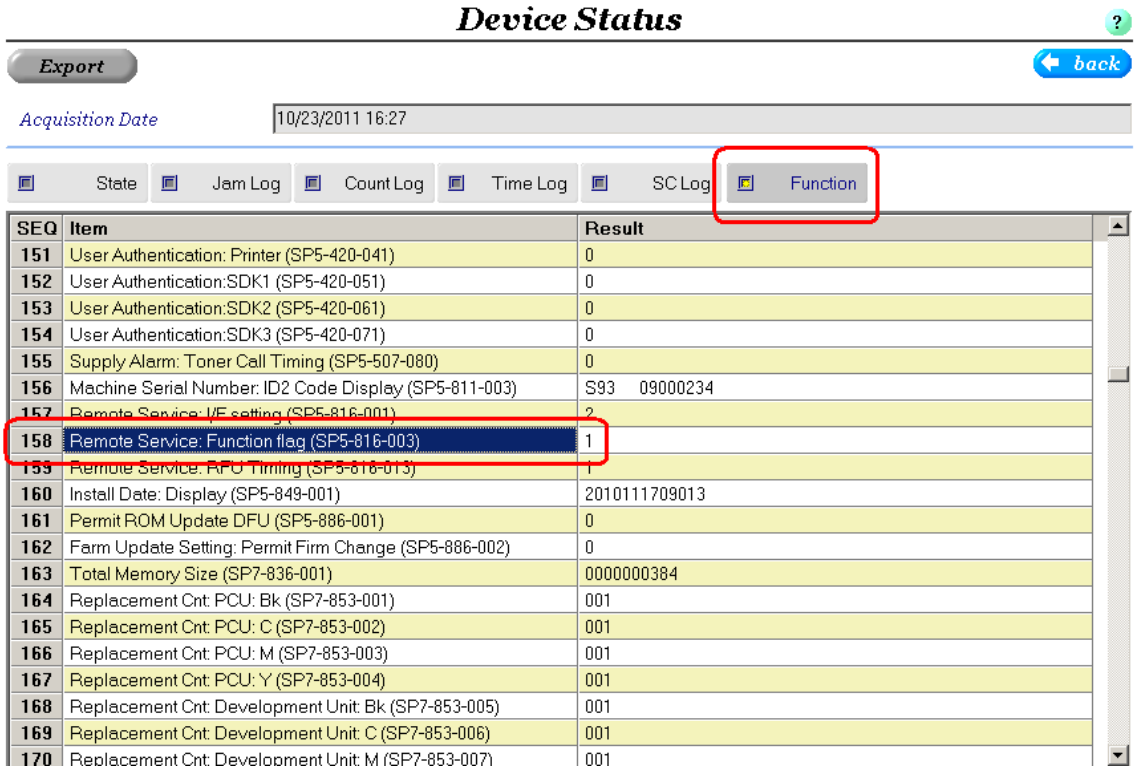
For local device registrations:

1. Send a Manual Call from the devices to the appliance soon after the device registration is completed.
2. If the call fails, change the status of the flag (SP5816-003) to "1" (enabled).
   Note: If the call was successful, this means the flag was already enabled.

For remote device registrations:

1. If the device is a 09A model or later, check the status of the flag on the HTTPS daily report on the Device Status screen. Then, go to **Step 3** below.

   Note: It may take up to a day after device registration is completed for this report to be available.



Device Status

Export back

Acquisition Date 10/23/2011 16:27

State | Jam Log | Count Log | Time Log | SC Log | Function

SEQ	Item	Result
151	User Authentication: Printer (SP5-420-041)	0
152	User Authentication:SDK1 (SP5-420-051)	0
153	User Authentication:SDK2 (SP5-420-061)	0
154	User Authentication:SDK3 (SP5-420-071)	0
155	Supply Alarm: Toner Call Timing (SP5-507-080)	0
156	Machine Serial Number: ID2 Code Display (SP5-811-003)	S93 09000234
157	Remote Service: I/F setting (SP5-816-001)	2
158	Remote Service: Function flag (SP5-816-003)	1
159	Remote Service: RFU Timing (SP5-816-013)	1
160	Install Date: Display (SP5-849-001)	2010111709013
161	Permit ROM Update DFU (SP5-886-001)	0
162	Farm Update Setting: Permit Firm Change (SP5-886-002)	0
163	Total Memory Size (SP7-836-001)	0000000384
164	Replacement Cnt: PCU: Bk (SP7-853-001)	001
165	Replacement Cnt: PCU: C (SP7-853-002)	001
166	Replacement Cnt: PCU: M (SP7-853-003)	001
167	Replacement Cnt: PCU: Y (SP7-853-004)	001
168	Replacement Cnt: Development Unit: Bk (SP7-853-005)	001
169	Replacement Cnt: Development Unit: C (SP7-853-006)	001
170	Replacement Cnt: Development Unit: M (SP7-853-007)	001

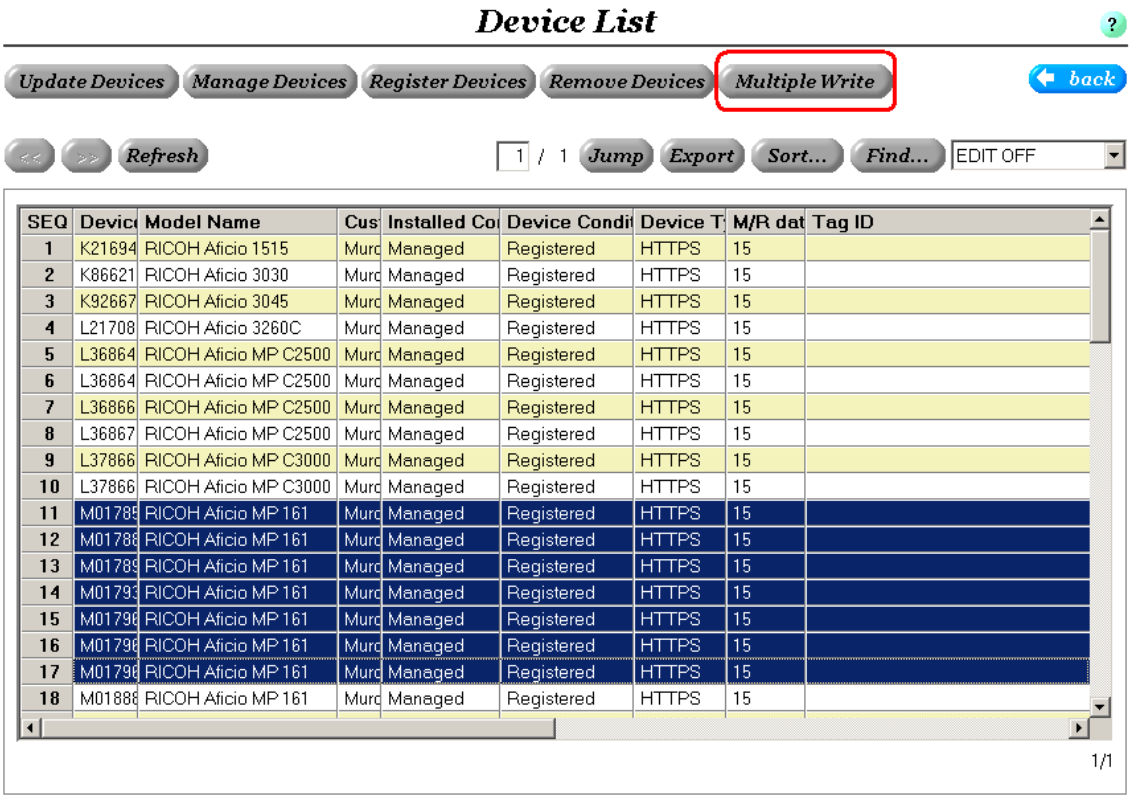
Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

2. If the device is a 09S model or earlier, check the status of the flag using the "Multiple Write" feature on the Device List screen.

   2-1. Select the device(s) you want to check.
   2-2. Click the "Multiple Write" button.

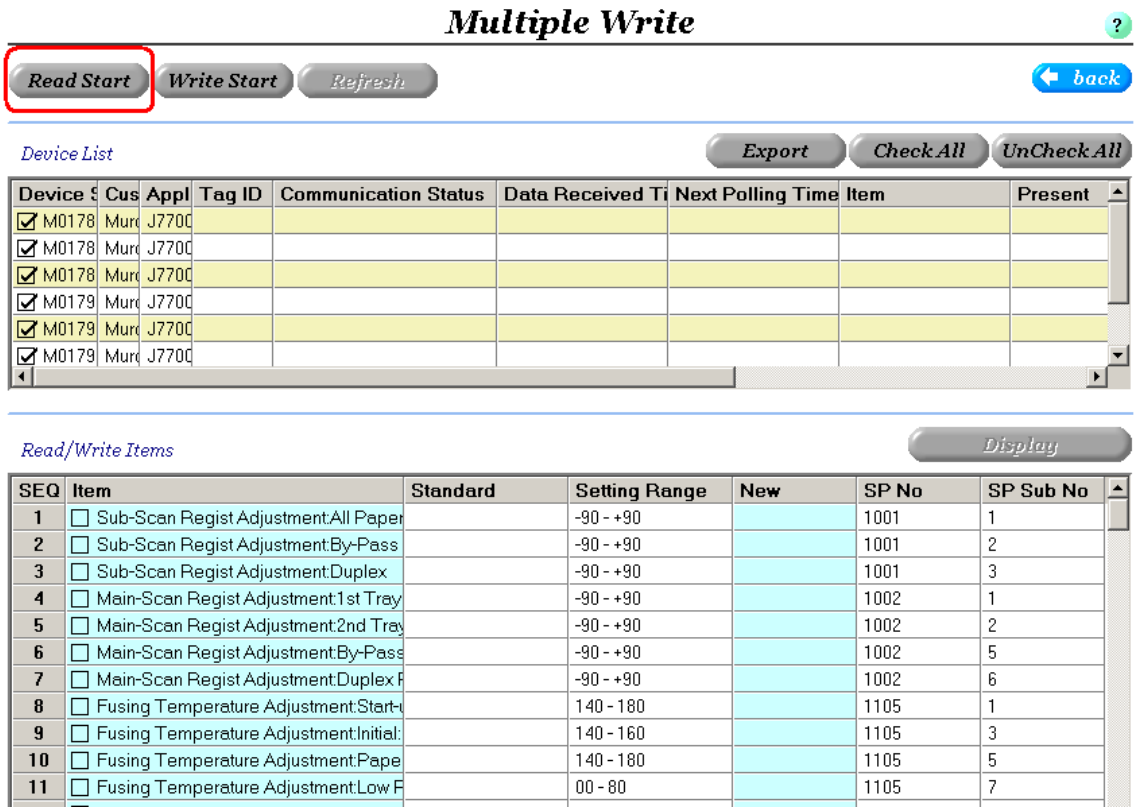
Note:

- It may take up to one hour (the polling interval default setting) for the results to be available.
- You can select up to 100 devices at the same time, as long as the devices are all the same model (same Device prefix), all HTTPS devices, **and** all registered devices.



Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

2-3. Click the “Read Start” button.

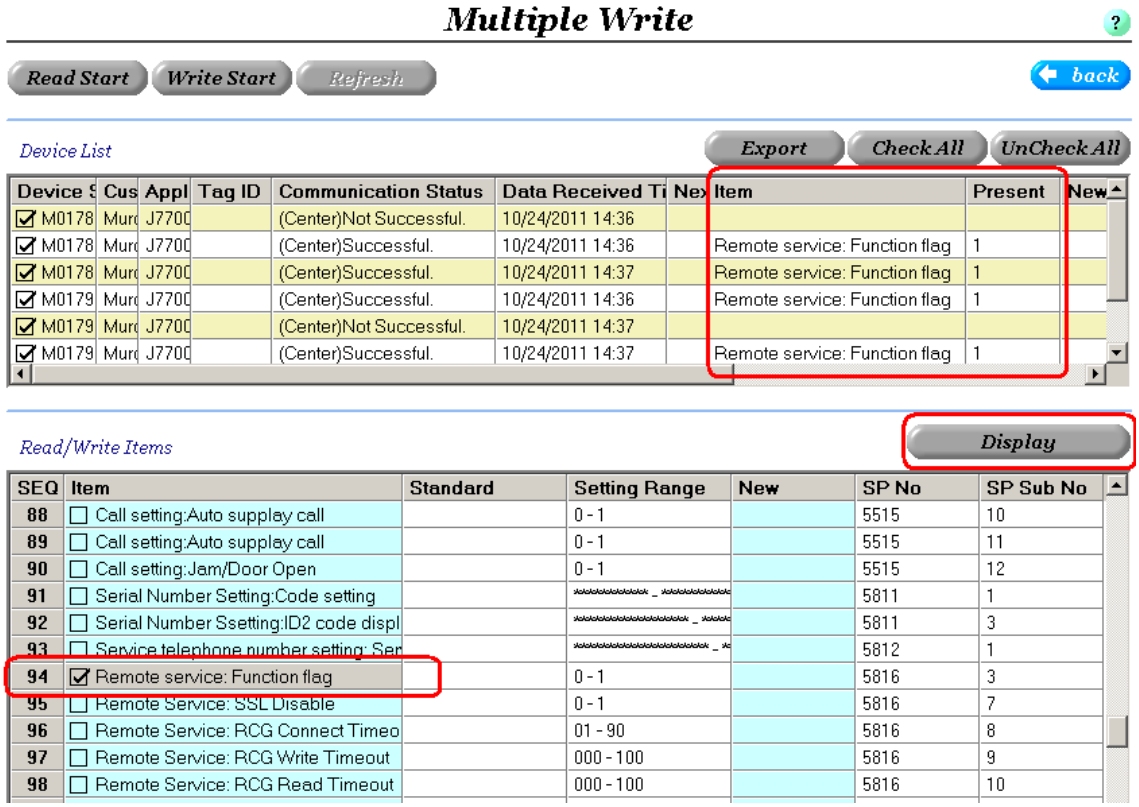


Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

2-4. Check the “Remote service: Function flag” box in the “Read/Write Items” list.

2-5. Click the “Display” button.

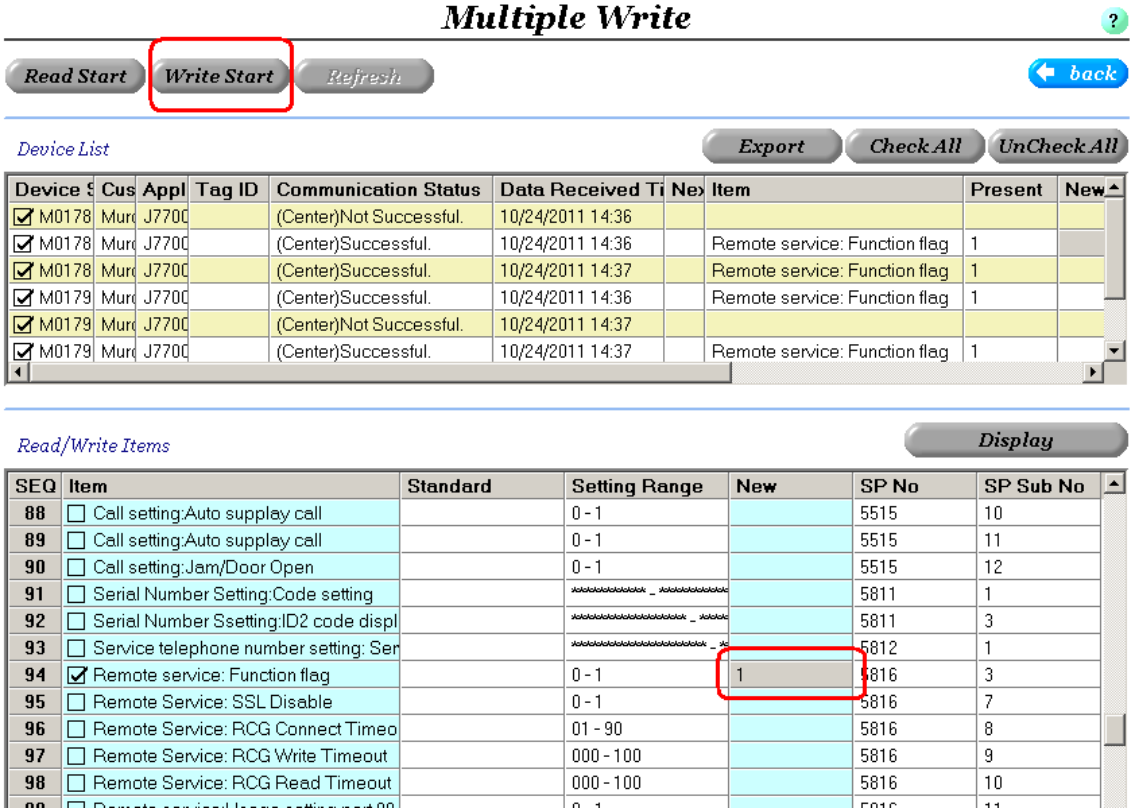
2-6. If any of the devices shows a value of “0” in the “Present” column, go to **Step 3.** (If all the devices show a value of “1”, the flag is enabled for these devices).



Model: Uz-A1 (RC Gate A)	Date: 14-Nov-11	No.: RD459009

3. Check the box for any device(s) that show a value of “0”.
4. Enter “1” in the “New” column of the Read/Write Items list for the Remote service: Function flag (circled in red below).
5. Click the “Write Start” button.

   Note: The new setting (1: Enabled) will be applied for the device(s) in question.



Model: Uz-A1 (RC Gate A)	Date: 28-March-12	No.: RD459010

Subject: Default Setting Change of Alarm Call Notification			Prepared by: T. Takahashi
From: : 1st Tech. Service Sec. MFP/P Technical Service Dep			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Installation)	☒ Tier 2

Important Information:

Default for Alarm Call Notification will be Changed to "No Send"

Overview

- The default setting of the Alarm Call notification will be changed from "Every Date" to **"No Send"** for all appliances newly registered on **March 29, 2012 onward.** The setting for appliances registered before this date will not change.

- This is because the large volume of Alarm Calls is taxing the Center system. Currently, Alarm Calls make up 25% of the total call volume. If this continues, soon the Center system will be overloaded with high network traffic. In addition, 95% of all Alarm Calls are automatically closed, which means that most Alarm Calls are unnecessary.

ACTION

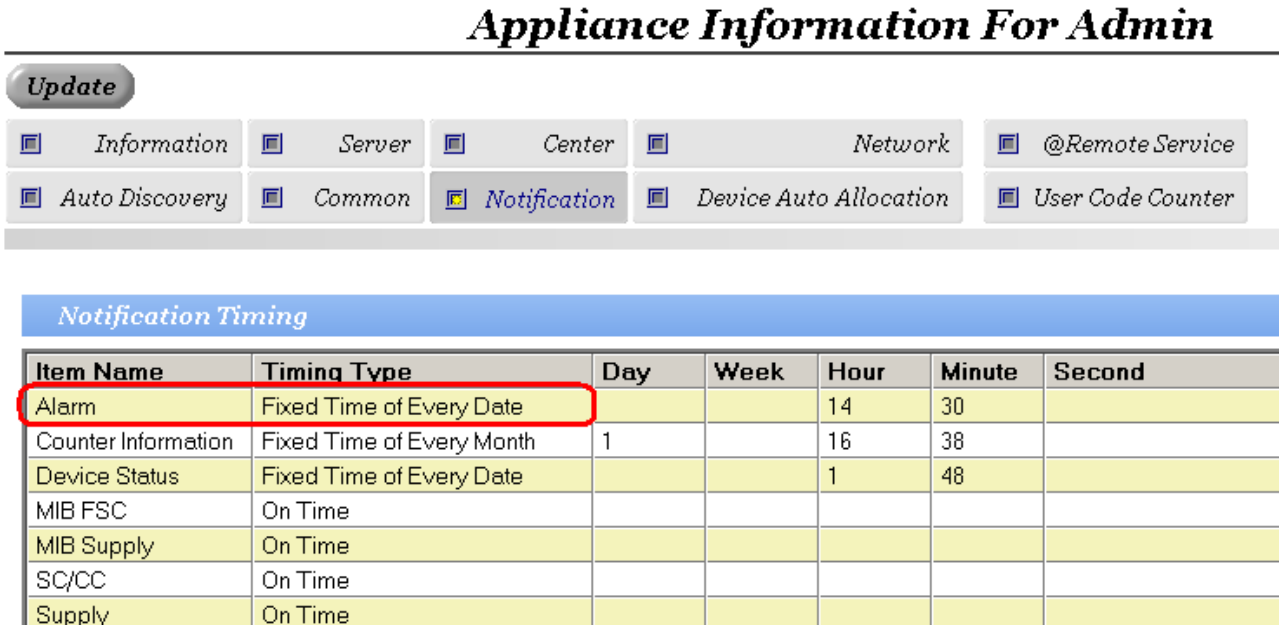
- If you want to use Alarm Call notifications on appliances newly registered on or after March 29, change the Alarm setting when you register the appliance.
  See the procedure below.

  - Examples of when Alarm Call notifications are needed:
    - To remind you about periodic PM visits (PM alarm)
    - To inform you of problems anticipated on PP products (error prediction)
    - To continue using Error Alarms

- If you **do not need** to use Alarm Call notifications on appliances **already installed** in the field, change the setting back to **"No Send".**

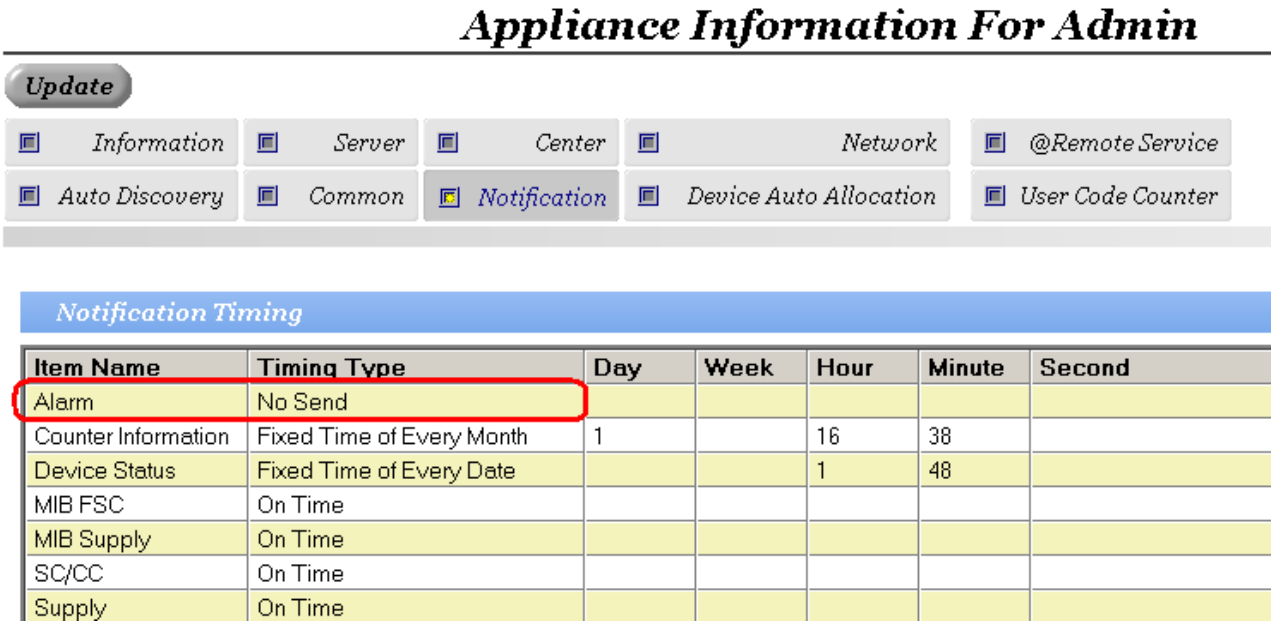
Model: Uz-A1 (RC Gate A)	Date: 28-March-12	No.: RD459010

Old default setting (before March 29, 2012):



Item Name	Timing Type	Day	Week	Hour	Minute	Second
Alarm	Fixed Time of Every Date			14	30	
Counter Information	Fixed Time of Every Month	1		16	38	
Device Status	Fixed Time of Every Date			1	48	
MIB FSC	On Time					
MIB Supply	On Time					
SC/CC	On Time					
Supply	On Time					

New default setting (from March 29, 2012):



Item Name	Timing Type	Day	Week	Hour	Minute	Second
Alarm	No Send					
Counter Information	Fixed Time of Every Month	1		16	38	
Device Status	Fixed Time of Every Date			1	48	
MIB FSC	On Time					
MIB Supply	On Time					
SC/CC	On Time					
Supply	On Time					

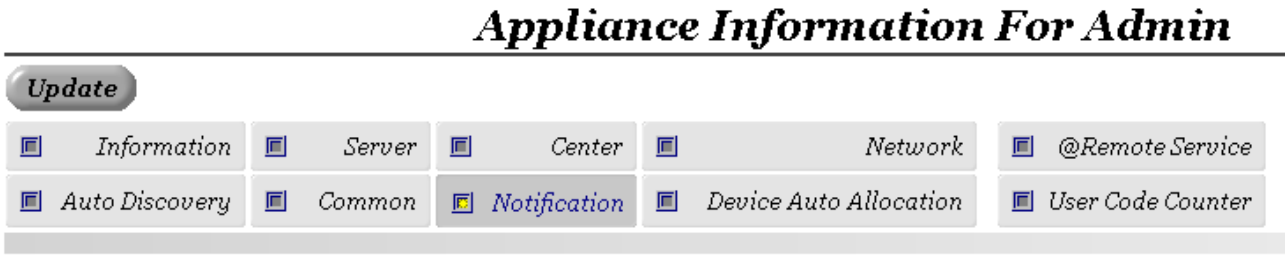
Model: Uz-A1 (RC Gate A)	Date: 28-March-12	No.: RD459010

Procedure

Do the following if you want to enable the Alarm Notification when you register a new appliance on or after March 29, 2012.

Note: Although you can see the Alarm Notification setting from the Appliance GUI, this is read only. To change the setting, you must access the Admin menu on the Center GUI.

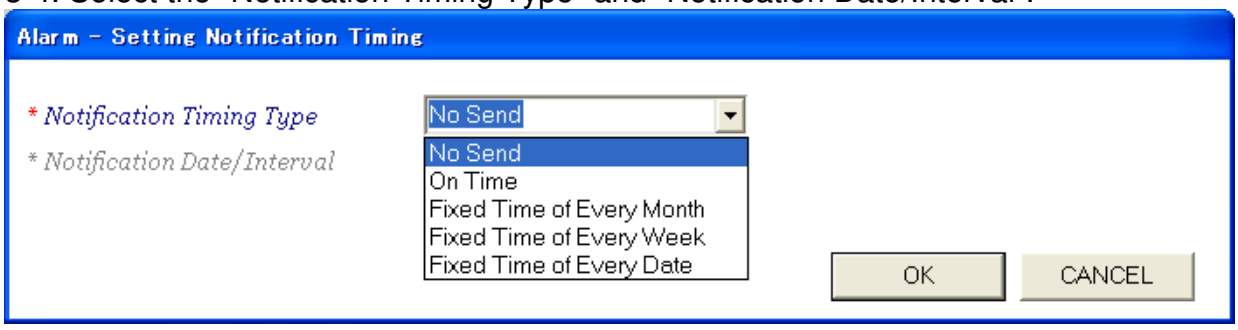
1. Register the new Appliance on-site with the Center System.
2. Login to the Center GUI and access the Admin menu.
3. Select the appliance from the list displayed.
4. Click on the “Notification” box.
5. Double-click on the “Alarm” row listed under “Notification Timing”.



Notification Timing

Item Name	Timing Type	Day	Week	Hour	Minute	Second
Alarm	No Send					
Counter Information	Fixed Time of Every Month	1		16	38	
Device Status	Fixed Time of Every Date			1	48	
MIB FSC	On Time					
MIB Supply	On Time					
SC/CC	On Time					
Supply	On Time					

3-4. Select the “Notification Timing Type” and “Notification Date/Interval”.



3-5. Click [OK] to complete the procedure.

Model: Uz-A1 (RC Gate A)	Date: 24-Sep-12	No.: RD459011

Subject: Security concern after Microsoft Update			Prepared by: T. Takahashi
From: : 1st Tech. Service Sec. MFP/P Technical Service Dep			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Installation)	☒ Tier 2

SYMPTOM

RC Gate series appliances (RC Gate, RC Gate A, RC Gate S pro @Remote) cannot be accessed from the Web UI.

Note: This has **no effect** on @Remote functionality. Acquisition of counter data, Auto Call Notification, and all other features are completely unaffected.

CAUSE

The following update released by Microsoft blocks RSA certificates with security keys that are less than 1024 bits long:
http://support.microsoft.com/kb/2661254

The RC Gate series (RC Gate/ RC Gate A/ RC Gate S pro @remote) uses RSA certificates with a security key that is 512 bits long. As a result, after the Microsoft update is applied, the user will not be able to access an RC Gate series appliance from the Web browser.

Note: This update was released by Microsoft on August 14, 2012, and will be included in Windows Updates from October 9.

SOLUTION

Temporary solution:
Modify the size of the keys that are blocked by the PC.
See procedure below.

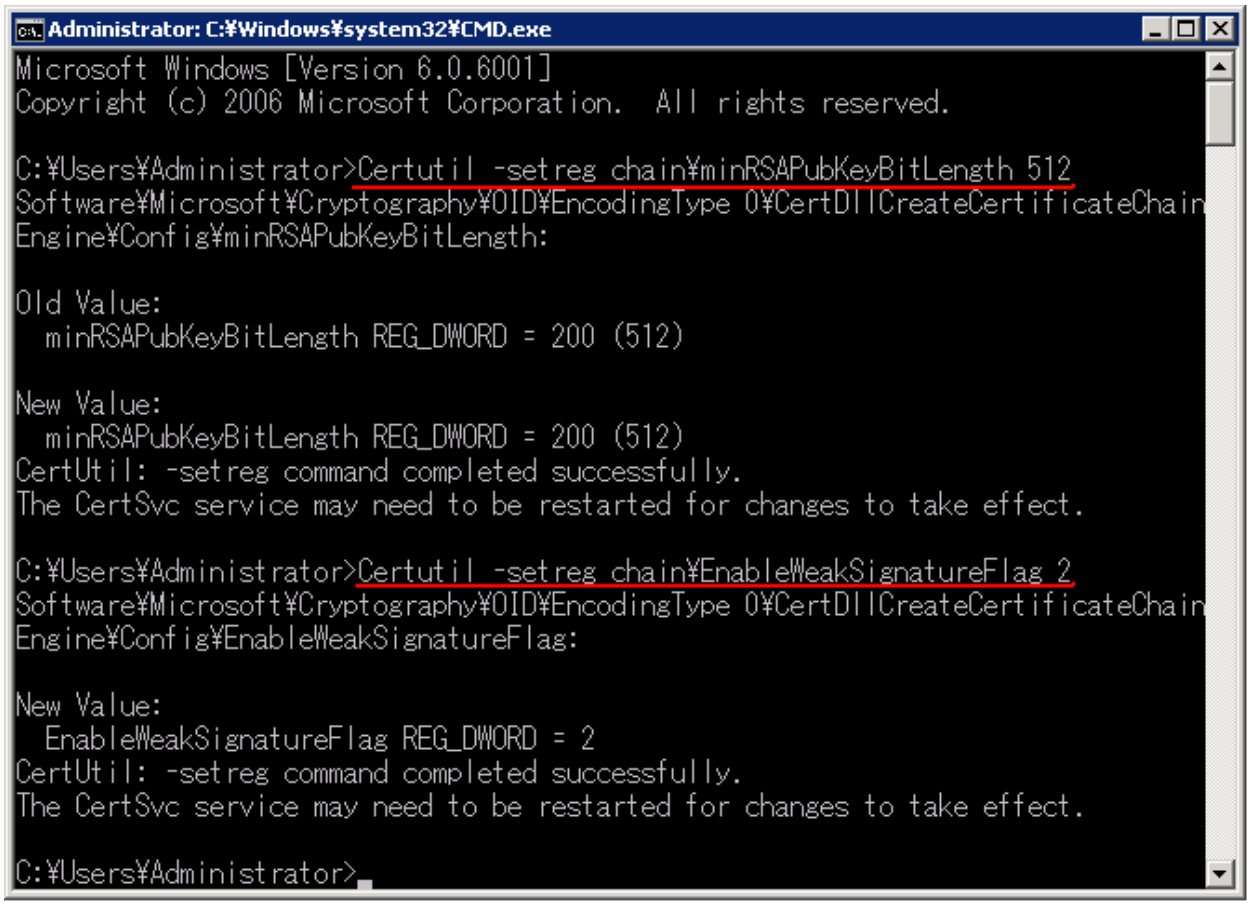
Permanent solution:
To be announced at a later date.

Procedure

Do the following.

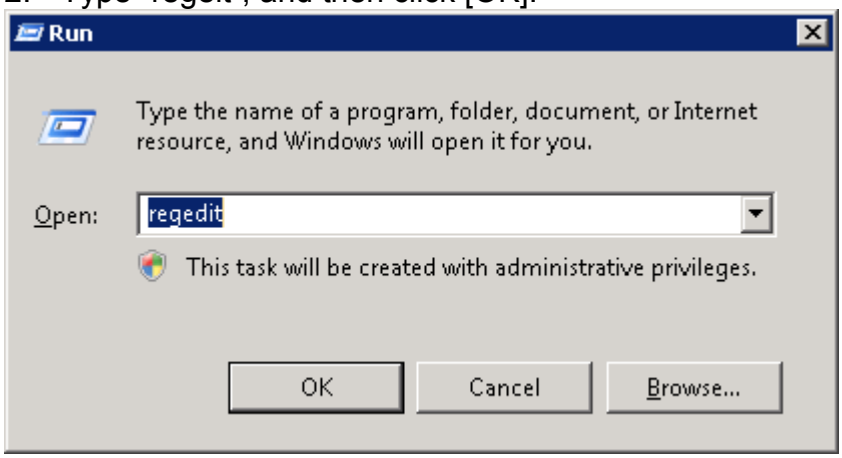
Windows 7/Vista:

1. Access the DOS command prompt.
2. Type the following command, and then press Enter:
   Certutil -setreg chain\minRSAPubKeyBitLength 512
3. Type the following command, and then press Enter:
   Certutil -setreg chain\EnableWeakSignatureFlag 2



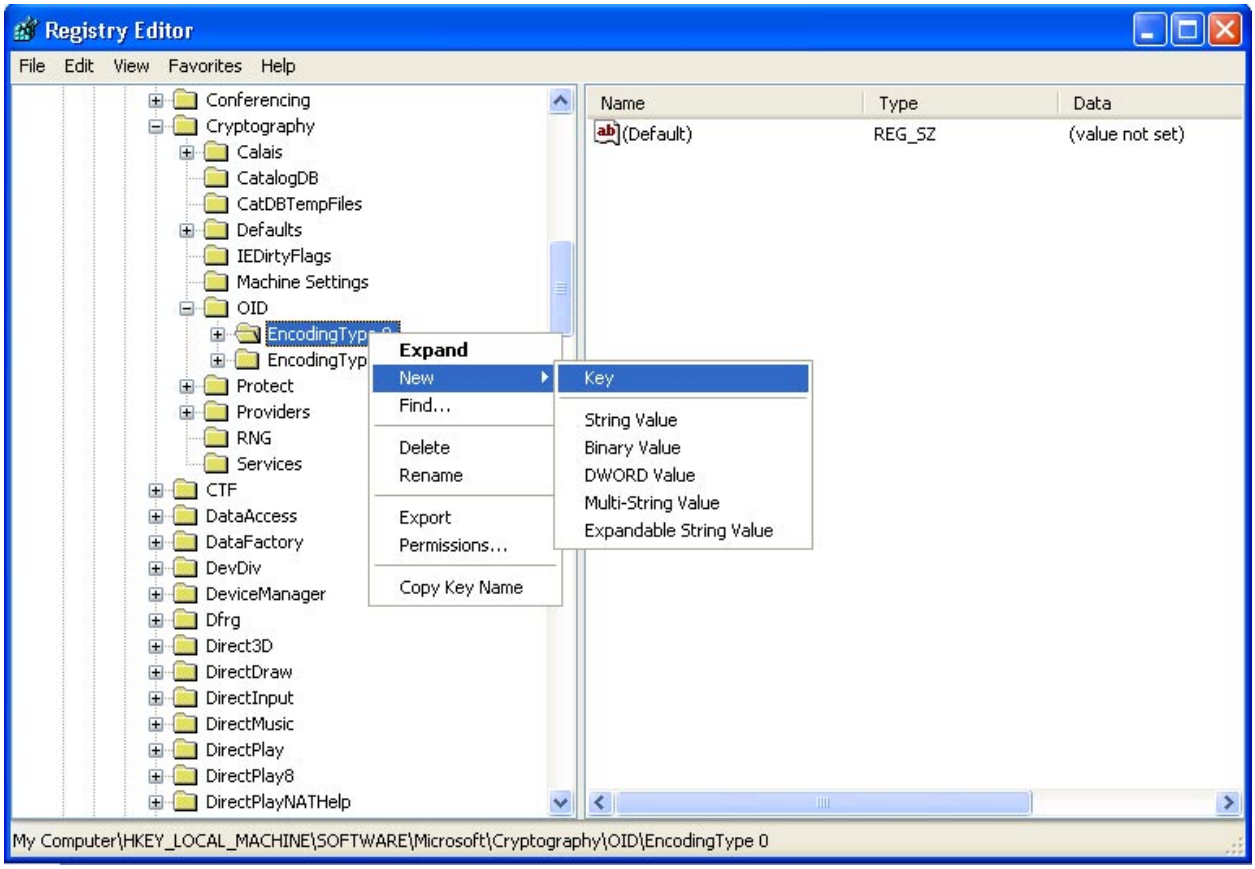
Windows XP

1. Click [Start], then [Run].
2. Type “regeit”, and then click [OK].

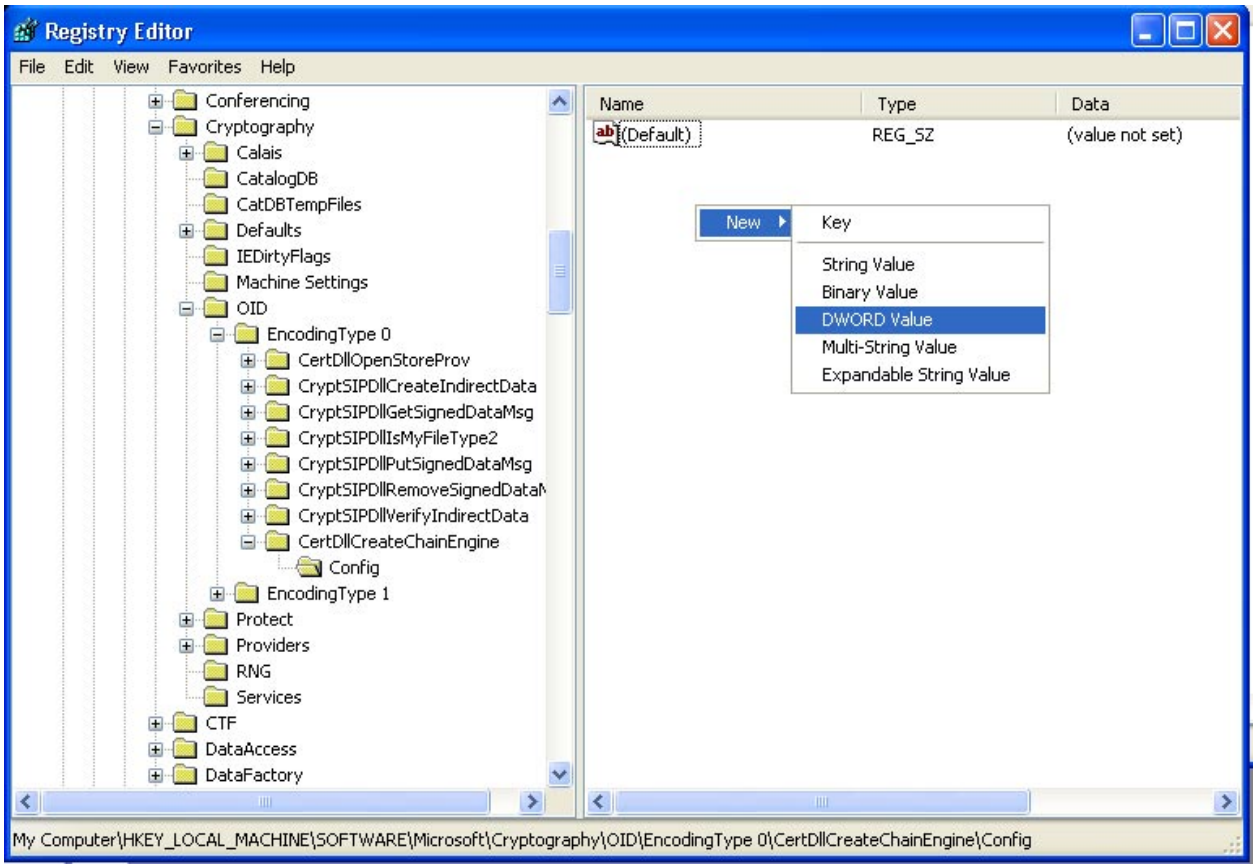


3. Right-click on the “Encoding Type 0” folder, select “New”, and then select “Key”.
   Location of this folder:
   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Cryptography\OID\EncodingType 0

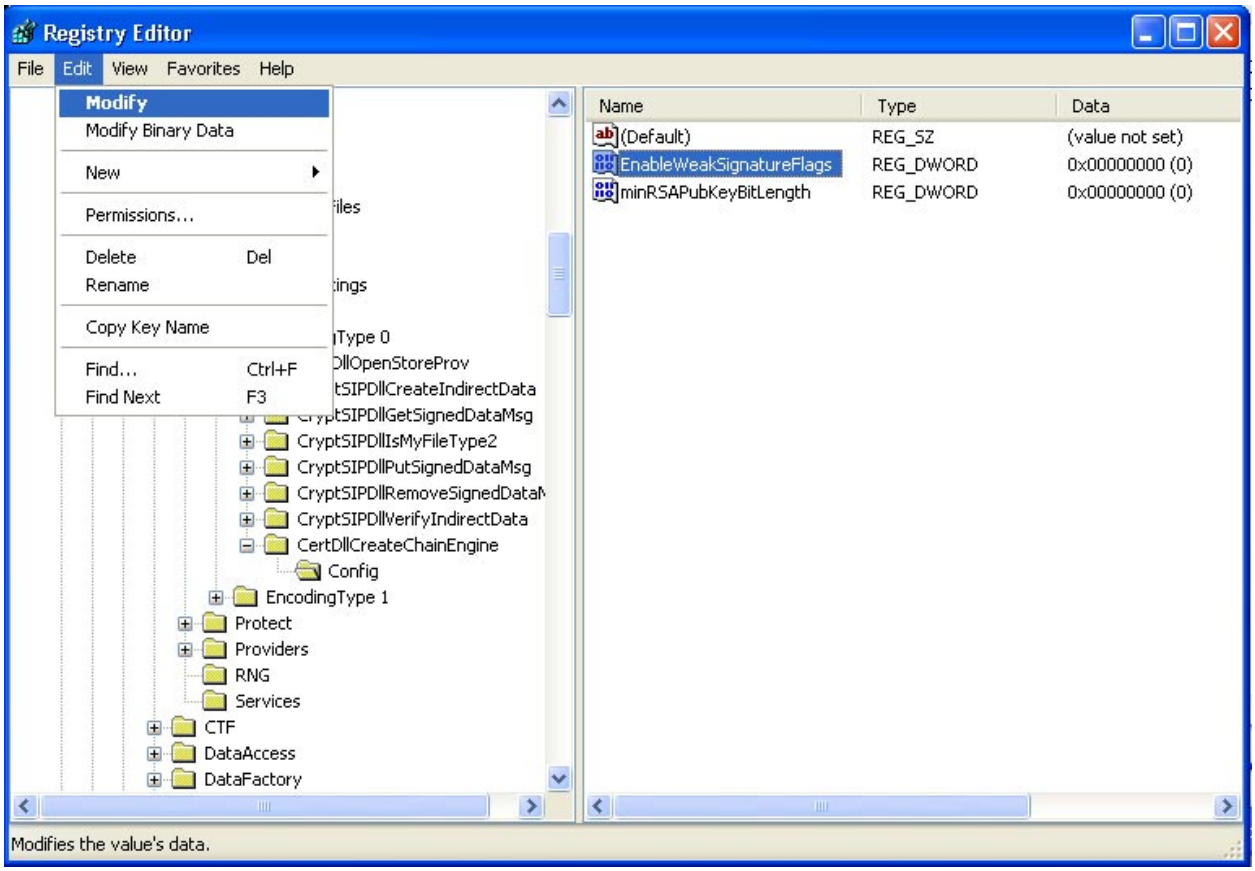
4. Add the key, “CertDllCreateCertificateChainEngine”.



5. In the same way, add the key “Config” under:
   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Cryptography\OID\EncodingType 0\CertDllCreateCertificateChainEngine”
6. Right click anywhere inside the right part of the window (where files are displayed).
7. Select “New”, and then select “REG_DWORD”.
8. Create by the following file by inputting its name:
   EnableWeakSignatureFlags
9. Repeat **Steps 6–8**, creating the following file in Step 8:
   minRSAPubKeyBitLength

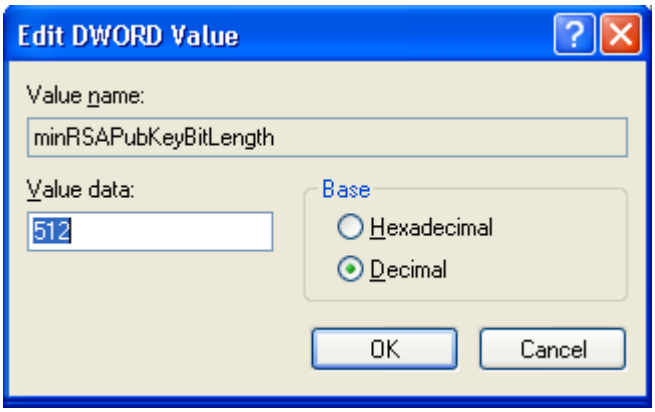


10. Single-click on the first file you created (“EnableWeakSignatureFlags”), and then select “Modify” from the Edit menu.
Note: This can also be done by right-clicking on either file and then selecting “Modify”.



11. Set the “Value data” to: **2** (Hexadecimal or Decimal).

12. Repeat **Steps 10 and 11** for the second file you created ("minRSAPubKeyBitLength"), setting "Value data" to: **512** (decimal).



Model: Uz-A1 (RC Gate A)	Date: 03-Jun-13	No.: RD459012

Subject: Appliance suddenly stops working			Prepared by: A. Ishiyama
From: : 1st Tech. Service Sec. MFP/P Technical Service Dep			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

SYMPTOM

RC Gate A stops working when rebooting following a firmware update (LCD screen is blank, @Remote connection is broken, firmware recovery not possible).

CAUSE

PCB hardware failure/defect

Due to this defect, a status error occurs with the onboard flash memory, causing the PCB to judge that the firmware update was not completed successfully (even though it was). RC Gate A then judges that the backup of the previous firmware version and related data have been deleted (even though they have not). As a result, it continues moving in an endless loop (cannot start up anymore).

SOLUTION

- **If the symptom occurs,** replace the appliance box itself. Then, make sure that the modified firmware version mentioned below is installed.
  Note: Once the symptom occurs, this is the only way to recover the condition. Since this is a hardware failure, replacing or rewriting the SD card will not solve the issue.

- **Before the symptom occurs,** install the following firmware version or newer:
  D4595160F (A2.07, C2.06, P2.03, K2.03)

Note:

- The modified firmware mentioned above has an “auto reboot” feature (see RTB RD459008). If you shut down RC Gate A from the Web UI, RC Gate A will reboot itself automatically in 16 seconds. Therefore, to shut down the appliance, perform the necessary operation from the UI (or press the Shutdown button on RC Gate A), and then remove the power plug from the outlet within 10 seconds.
- You can update the firmware via RFU, or by overwriting the firmware files on the SD card directly.
- See RTB RD459001l for the release notes of the modified firmware mentioned above.

Model: Uz-A1 (RC Gate A)	Date: 7-Nov-13	No.: RD459013

Subject: New functions are added			Prepared by: K. Yamamoto
From: : 2nd Tech Service Sect., MFP/P Tech Service Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other (New function information)	☐ Tier 2

The firmware (D4595160) of RC Gate A is updated to Ver 2.00 due to the following:

1. IPv6 compatibility
2. Strengthening of security algorithms (Year 2010 Issues on Cryptographic Algorithms).
3. Recovery of missing devices

Summary of the modification

1. IPv6 compatibility

Due to the number of IP-V4 addresses running out, the usage of IP-V6 is increasing rapidly.
Because of this change, some major firms have already tried to replace machines and we expect that this trend will accelerate.
Based on this market change, RC Gate A also adopts IP-V6. We expect that host name search will be a major tool for IP-v6 because IP-v6 addresses are long and it is not practical to enter the whole IP-v6 address.

2. Strengthening of security algorithms (Year 2010 Issues on Cryptographic Algorithms).

A notification from NIST (National Institute of Standards Technology) requests that recommended security algorithms are used in network environments. Because of this, the Uz-A1 program is modified to be compatible with high security algorithms.

3. Recovery of missing devices

If the IP address for a device or the Uz-A1 is changed, the Uz-A1 will lose track of the device. In the case, this function will find the new IP address and store the new IP address.

Version of Target firmware

D4595160G (Ver. 2.00-00)
Modules

- Application D4595161E (Ver. 3.00)
- Common Module D4595162F (Ver. 3.00)
- Platform D4595163F (Ver. 3.00)
- Kernel D4595164E (Ver. 3.00)

Cut in serial number
Production from November

Details about the modification

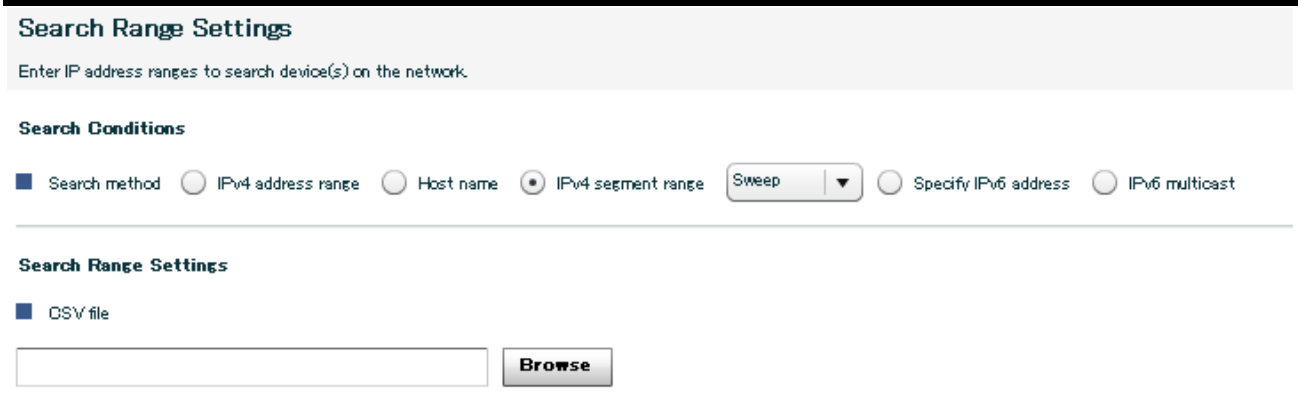
- IP-v6 -

A new device search method is added.

Due to the long IP addresses used with IP-v6, it is difficult to search for the devices using a range setting. As a result, the following three methods are the main methods for searching.

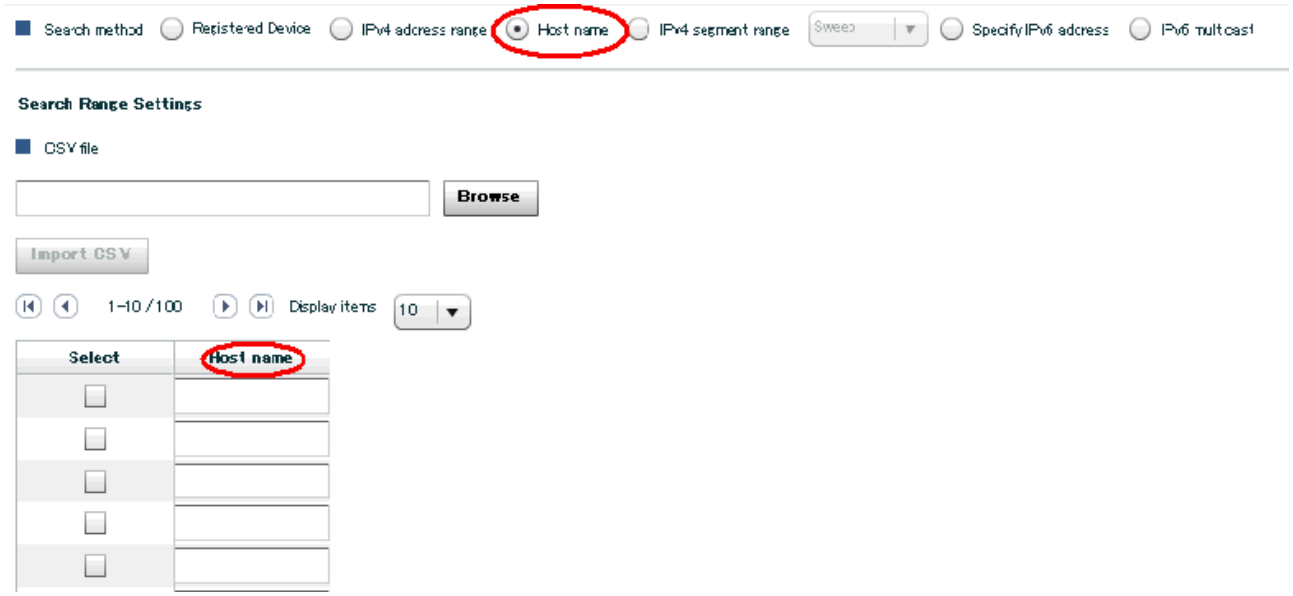
- Host name search:
- IP Address setting
  - ➢ Individual IP addresses are set one by one instead of setting a range of IP address
- Multicast search

Enter the “Auto Discovery” tab and select “Edit Auto Discovery Range”



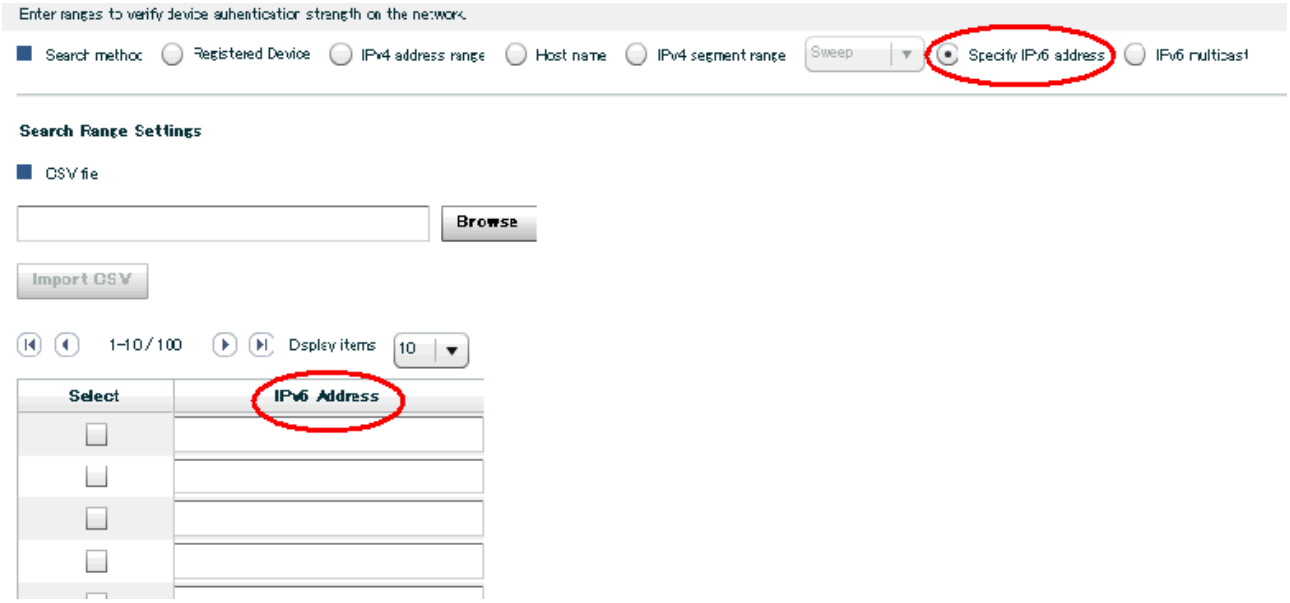
Host name search

This is the main search method for IP-v6 because it is difficult to set each IP address of the devices.



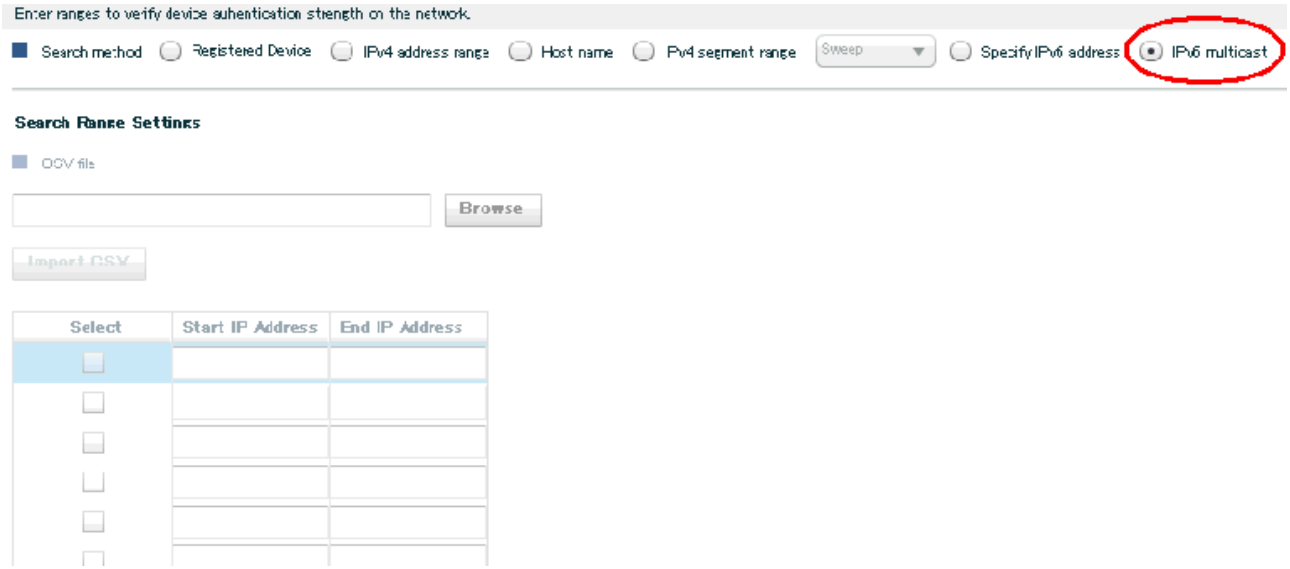
IP-v6 IP address setting

The search area will be enormous if a search range is set in an IP-v6 environment and the search time will be unrealistically long; therefore, individual IP addresses should be set one by one in an IP-v6 environment.



Multicast search

This method searches all devices in the same LAN area; in other words, it cannot search for devices outside the LAN area. You do not have to set a range.

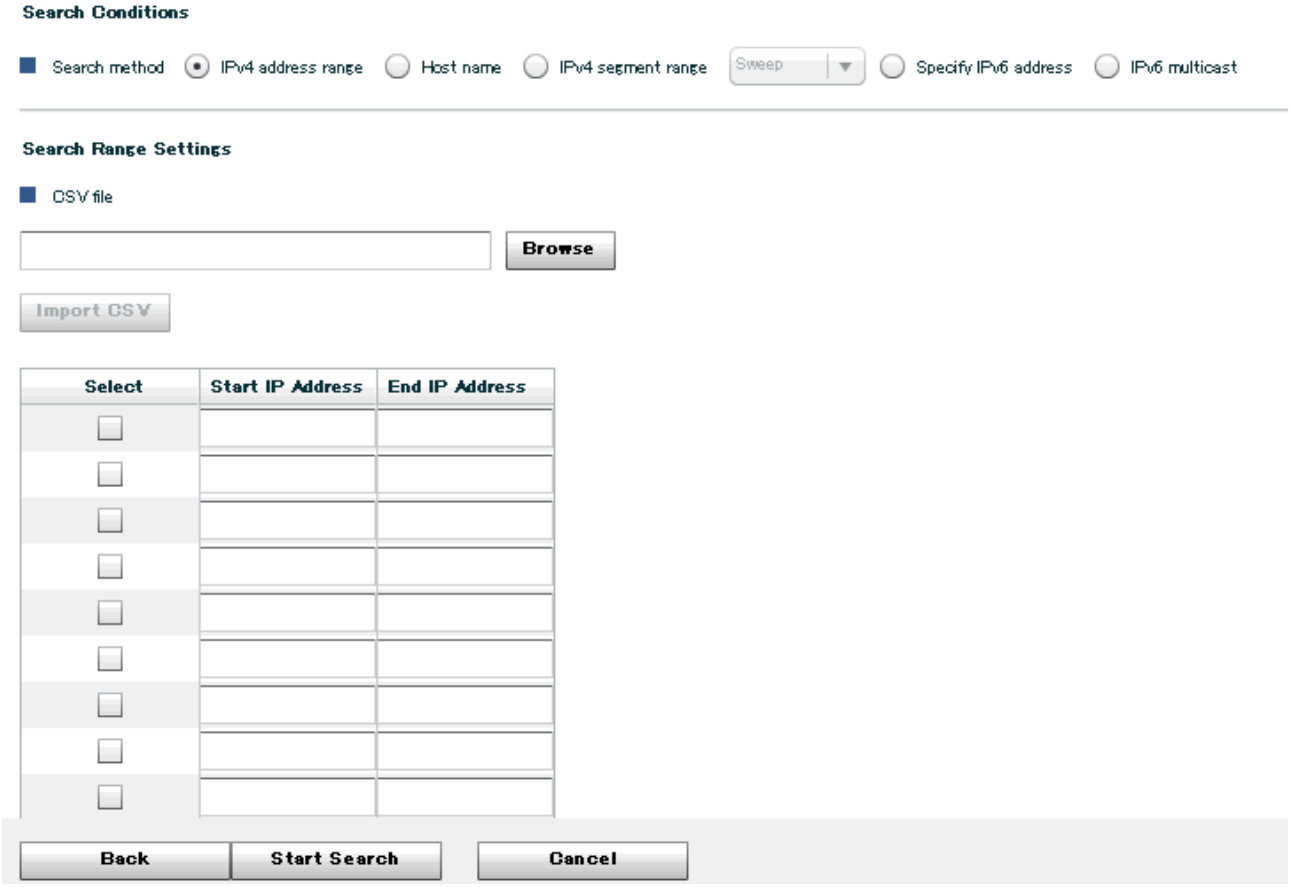


Caution:

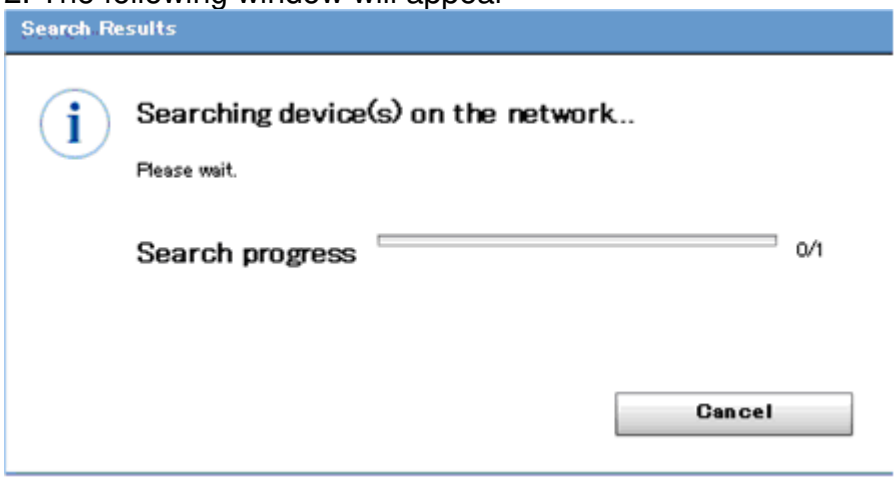
1. The IP-v6 environment can be used not only for the device search but also for the connection between Uz-A1 and the center server.
2. Basically, the network environment should be unified to IP-v6 or IP-v4. However, if environment is mixed with IP-v4 and IP-v6, IP-v4 and IP-v6 can be searched separately with different methods.

The procedure of the search for both IP-v4 and IP-v6:

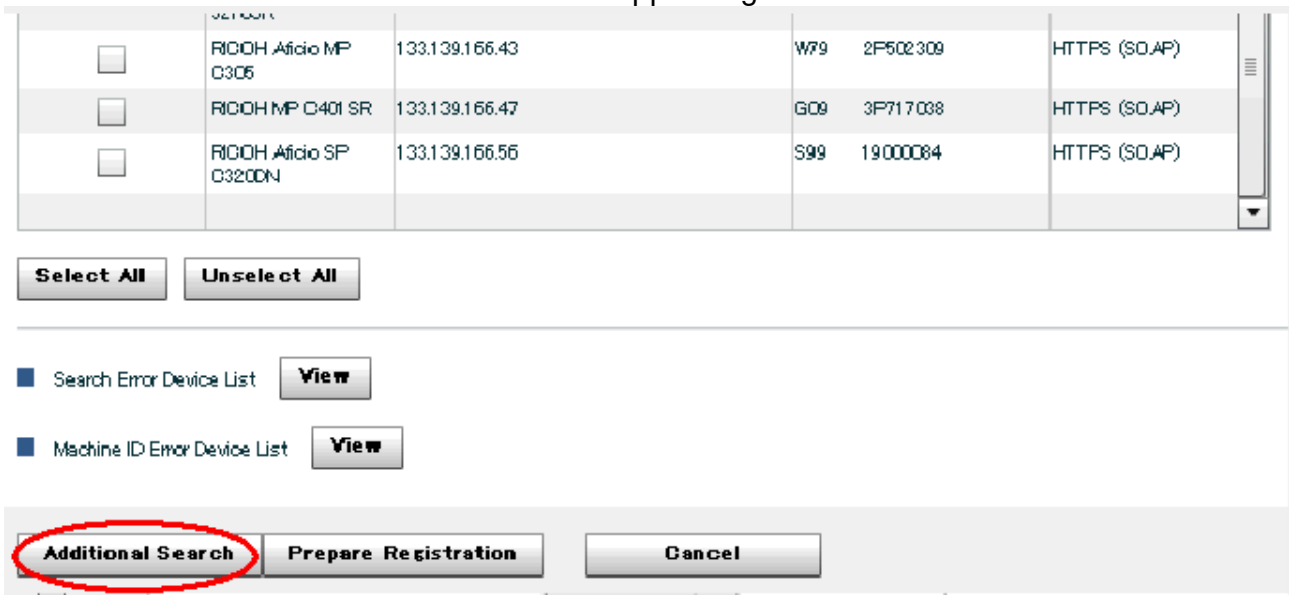
1. Select the search condition for IP-v4 (it is possible to search IP-v6 first), then click “Start Search”.



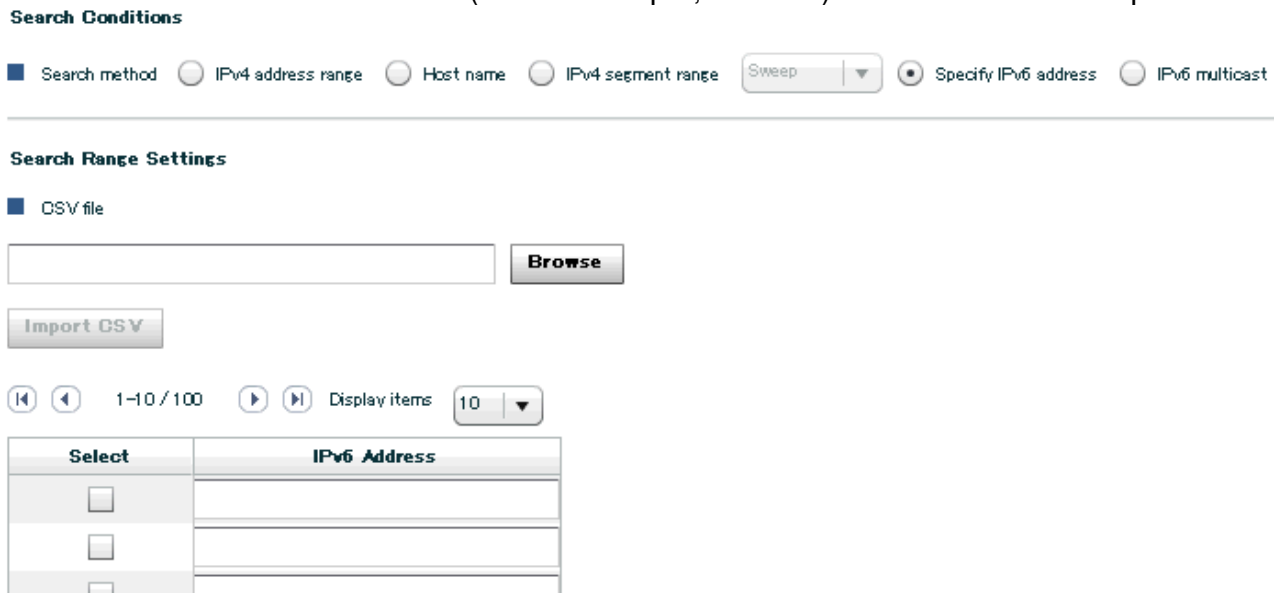
2. The following window will appear



3. When the 1st search is done, click “Additional Search”
The search condition selection window will appear again.



4. Select the 2nd search condition (in this example, for IPv6) and do the same steps.



- Strengthening of security algorithms -

Uz-A1 can select one of two levels of security algorithms.

Level of security algorithms

Low-security algorithm: 512-bit

High-security algorithm: 2048-bit

Merits of the strengthening of security algorithms

- Protection from pretend spoofing attacks on the Client server
- Protection from illegal access and outflow of data
- Protection from illegal data alteration

Presupposition of device specifications

1. Basically, 11A GW controller devices support the high-security algorithm; however, the default value of the security level is different between products, so check the specification for each device before installation.

2. The Uz-A1 is pre-set for the low-security algorithm (512-bit). On the other hand, the default value of some devices is high-security algorithm (2048-bit).

3. The Uz-A1 can mange the devices which uses the same algorithm as the Uz-A1.

For example, if the setting of Uz-A1 is 2048-bit, only the devices which are set for 2024-bit can be managed by the Uz-A1. Therefore, you need to match the algorithms of all devices and the Uz-A1.

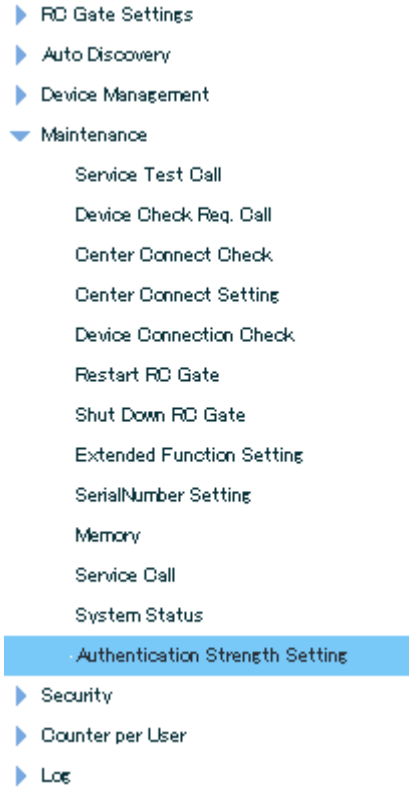
4. Only a CE can change the security algorithm of the Uz-A1.

5. When high-security algorithm is set, the OS of the PC should be XP SP3 or a later version.

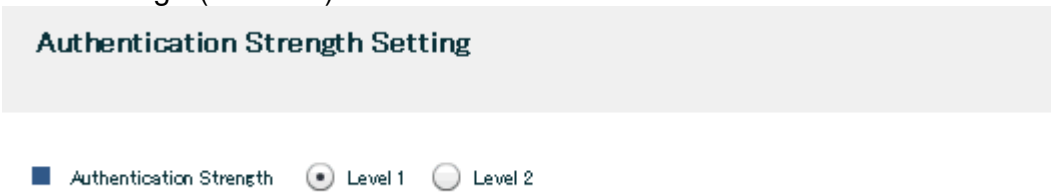
Model: Uz-A1 (RC Gate A)	Date: 7-Nov-13	No.: RD459013

Procedure for changing the strength of the security algorithm used by the Uz-A1

Chose the “Maintenance” tab and select “Authentication Strength Setting”.



Level 1: Low (512-bit)
Level 2: High (2048-bit)

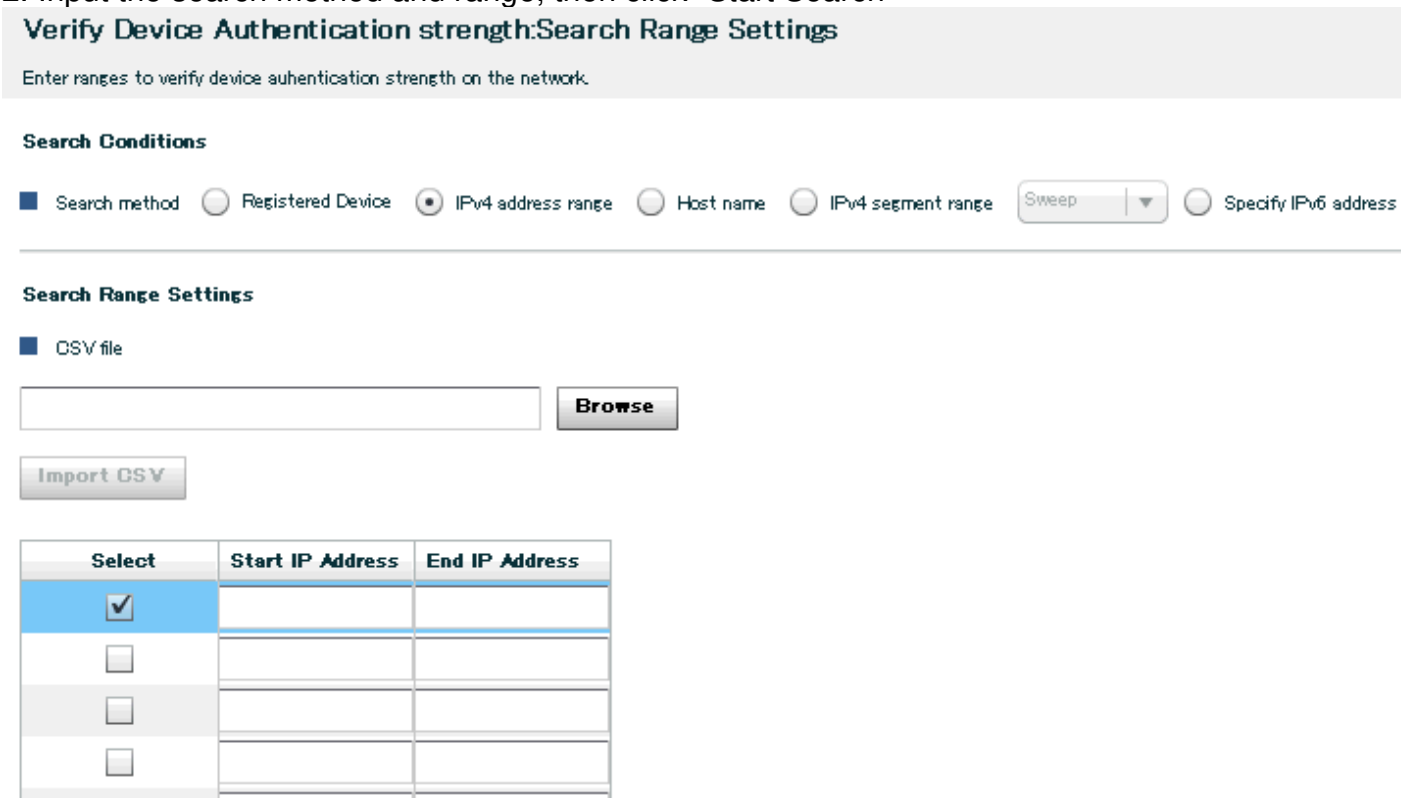


Model: Uz-A1 (RC Gate A)	Date: 7-Nov-13	No.: RD459013

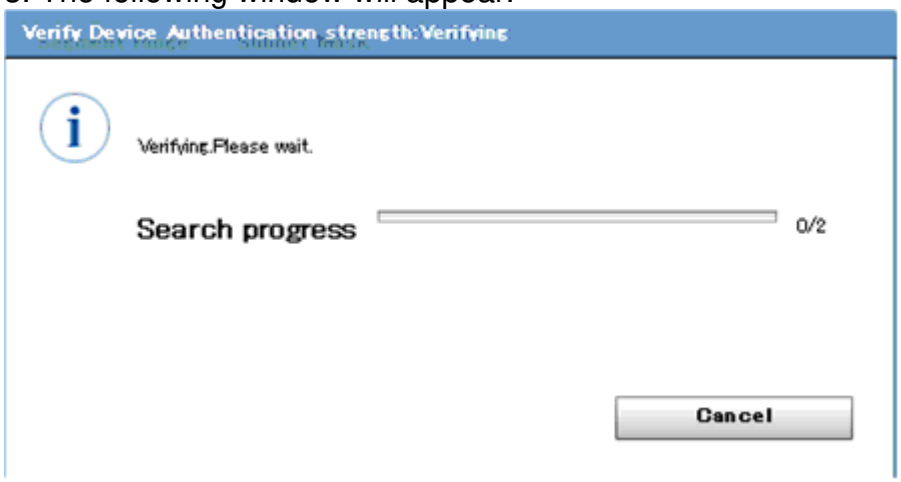
Procedure for checking/changing the strength of security algorithms for devices by the Uz-A1

1. Chose “Device Management” and select “Verify Device Authentication Strength: Search Range Settings”

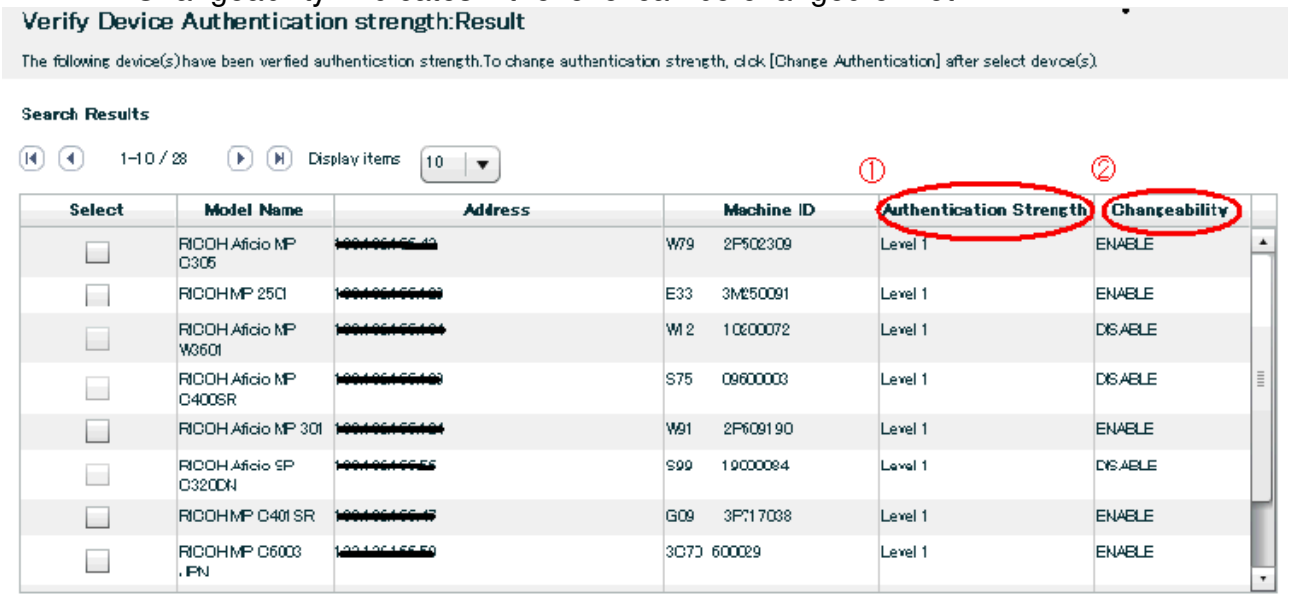
2. Input the search method and range, then click “Start Search”



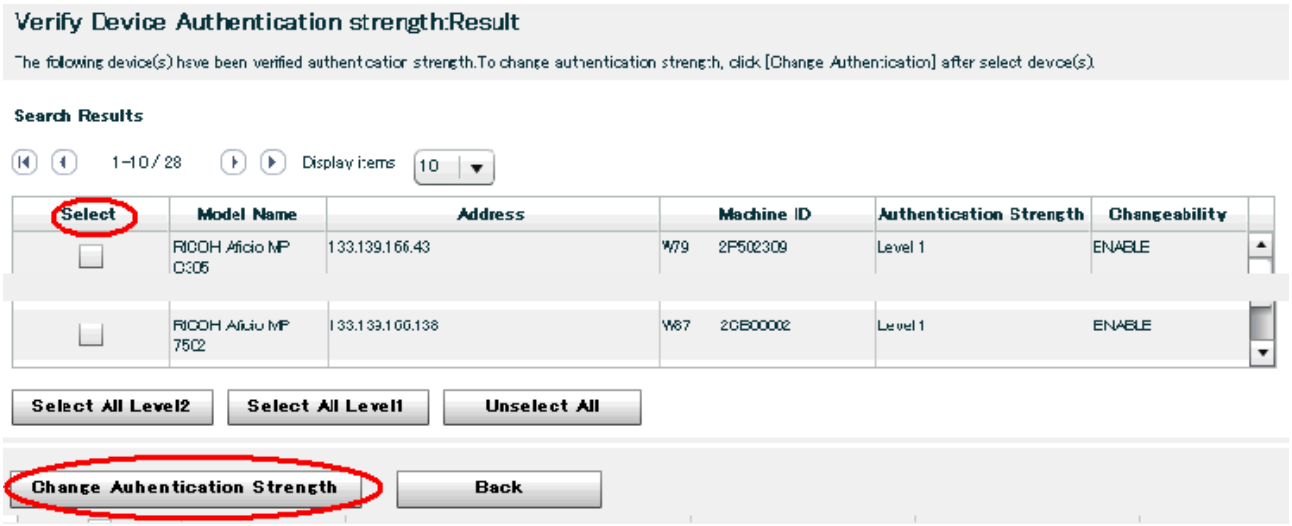
3. The following window will appear.



4. The status of each device is indicated.
    1. Authentication Strength: Check the level of the algorithm
    2. Changeability: Indicates if the level can be changed or not.



5. If the level can be changed, “Enable” is displayed. To change the setting, select the model and click “Change Authentication Strength”.
If the original level is 1, the level will become level 2. If the original level is 2, the level will become level 1.

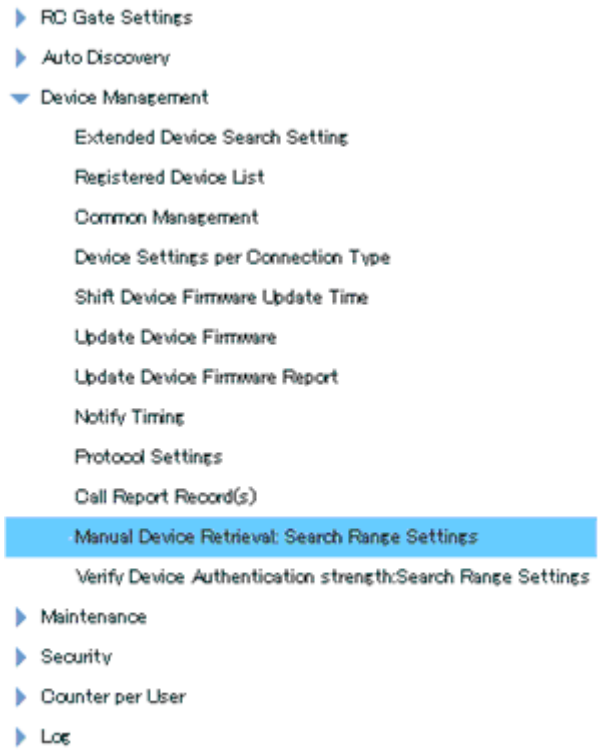


Caution: The level of all devices and the Uz-A1 should be set to the same level.

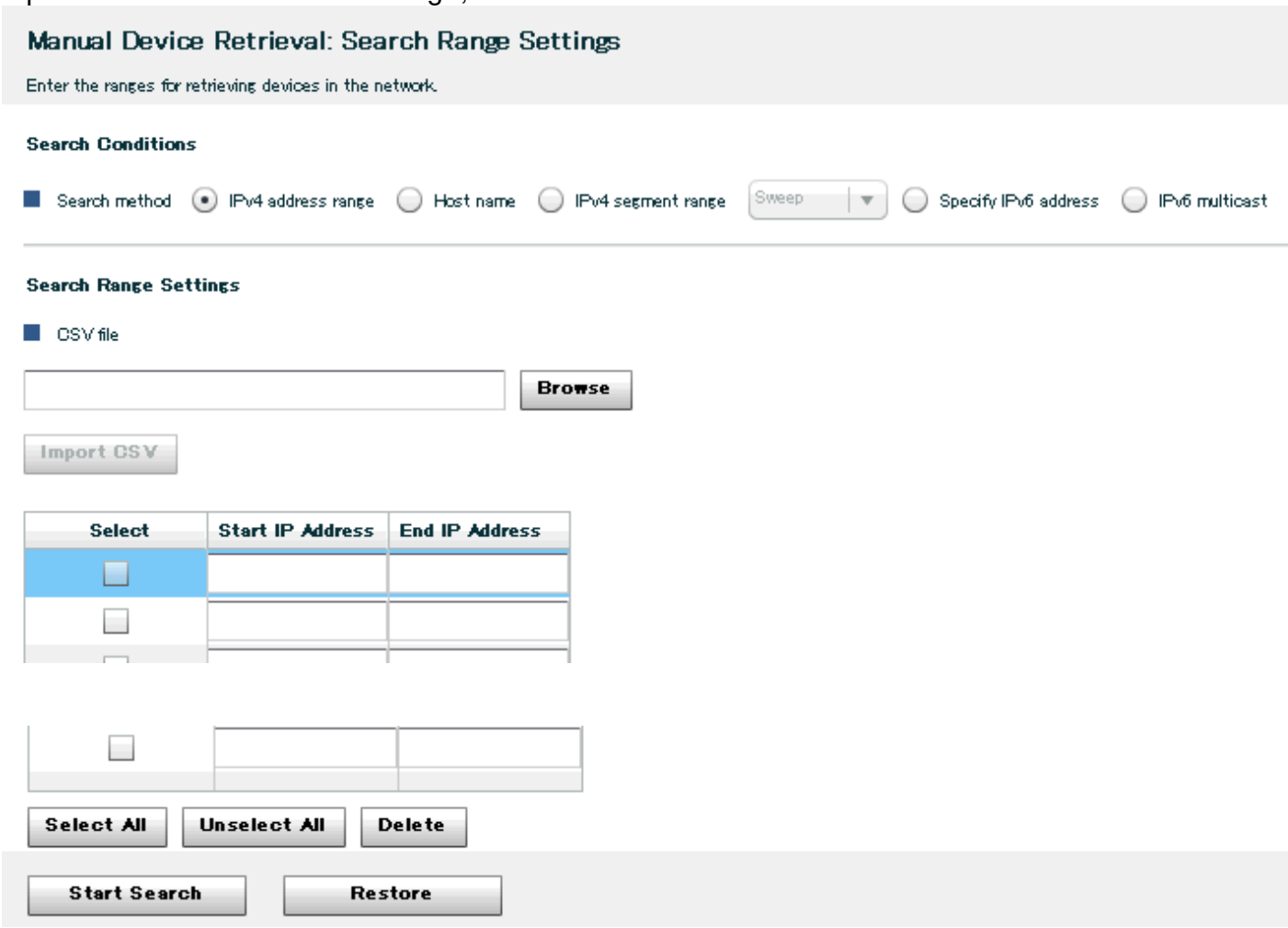
- Recovery of missing devices -

When the Uz-A1 loses connection with devices because the IP addresses of the devices was changed, the UZ-A1 can find the new IP addresses of those devices and store the new IP addresses in the Uz-A1.

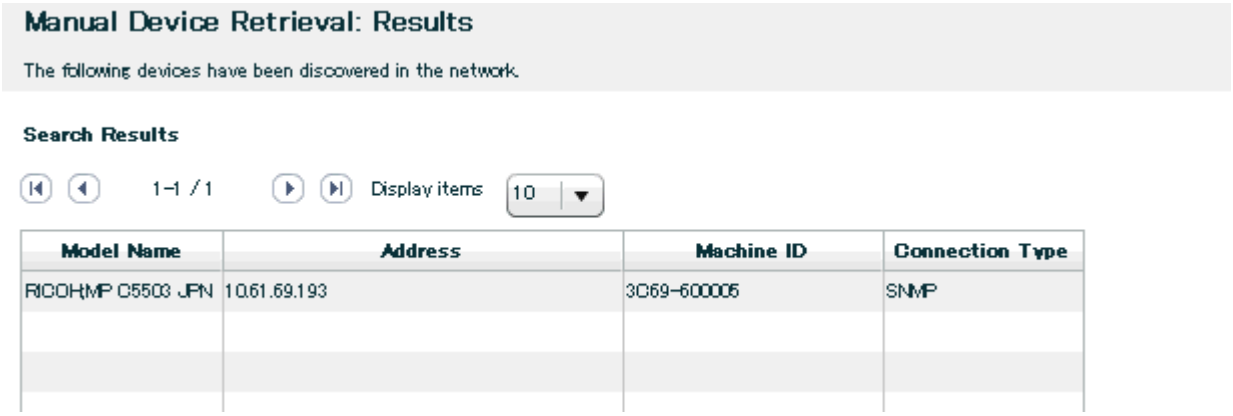
1. Chose “Device Management” and select “Manual Device Retrieval: Search Range Settings”



2. Search for the missing managed devices.
Input the search method and range, then click “Restore”.



3. The IP addresses of missing devices are found and displayed.
The new IP addresses are set in the Uz-A1. Also, the new IP address of the Uz-A1 is set in the devices.



Model: Uz-A1 (RC Gate A)	Date: 22-Jan-14	No.: RD459014

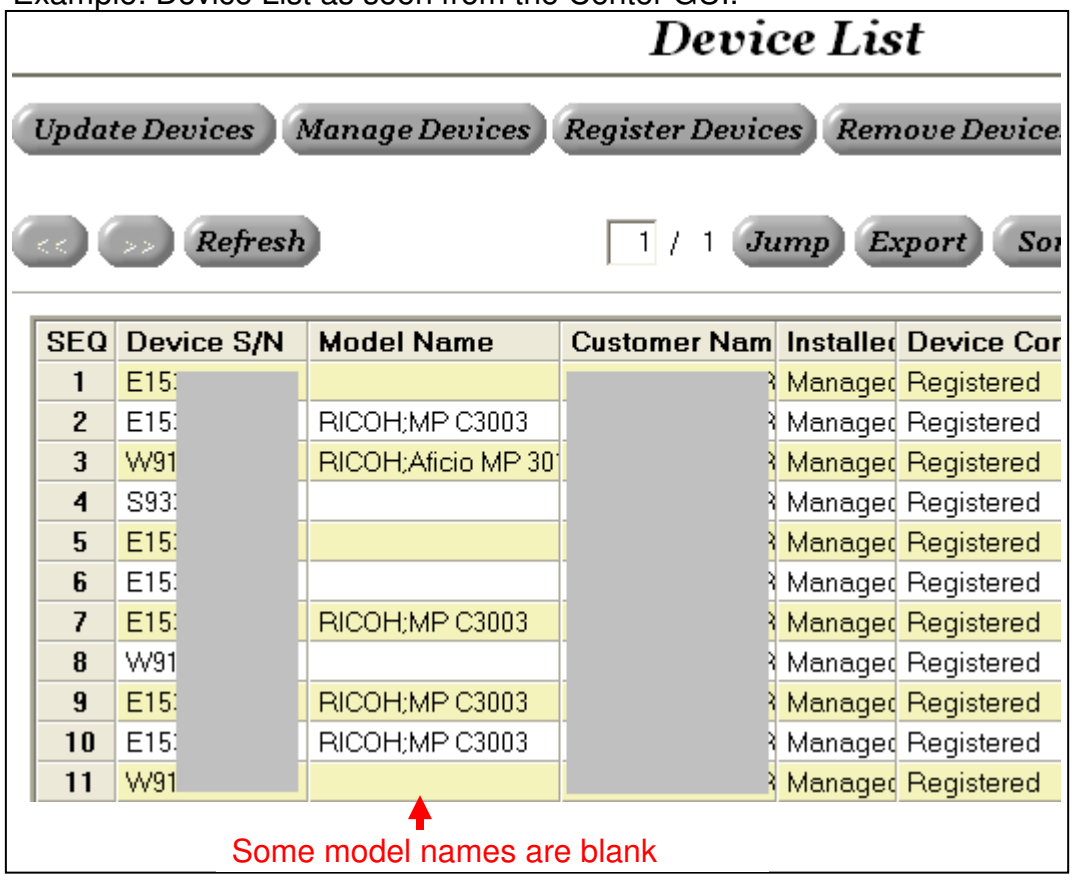
Subject: Model Name does not appear on the Center GUI			Prepared by: A. Ishiyama
From: : 2nd Tech. Service Sec. MFP/LP Tech. Service Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

SYMPTOM

The model name of a device registered under RC Gate A after the firmware is updated to Ver. 02.00-00 (AV3.00, PV3.00, CV3.00, KV3.00) may not appear on the Device List in the Center GUI.

Note: The model names for devices registered before the update appear normally.

Example: Device List as seen from the Center GUI.



CAUSE

Software bug with version 02.00-00 (AV3.00, PV3.00, CV3.00, KV3.00)

Note: This version was released in November 2013.

SOLUTION

Temporary:

IT/S Japan will enter the model names of the affected devices manually once a month until the end of Feb. 2014 (i.e. at the end of Dec. 2013, Jan. 2014, and Feb. 2014).

Permanent:

Install the modified firmware (V02.xx) via RFU.

Note: This firmware is scheduled to be released **no later than the end of February 2014** (Best efforts are being made to release the firmware sooner than this).

IMPORTANT:

- If the **affected version (V02.00-00)** is currently installed in the RC Gate A:
  You can update via RFU or by overwriting the firmware files on the SD card directly.

- If an **older version (i.e. V01.xxx)** is currently installed:
  You can only update **by RFU.**
  DO NOT update by overwriting the firmware files on the SD card.

  This is because V02.xx and newer use a stronger algorithm for more secure communication, which is based on a 2048-bit key. V01.xxx only contains a 512-bit certificate. If you try to update from an SD card, RC Gate A will not have the chance to communicate with the Rescue Gateway to obtain the new 2048-bit certificate.

Model: Uz-A1 (RC Gate A)	Date: 10-Feb-14	No.: RD459015

Subject: Cannot register to the @Remote Center			Prepared by: A. Ishiyama
From: : 2nd Tech. Service Sec. MFP/LP Tech. Service Dept.			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2

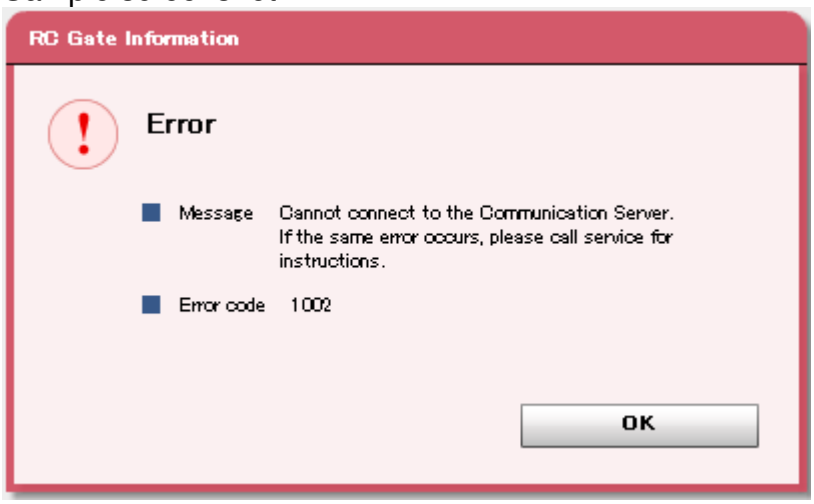
SYMPTOM

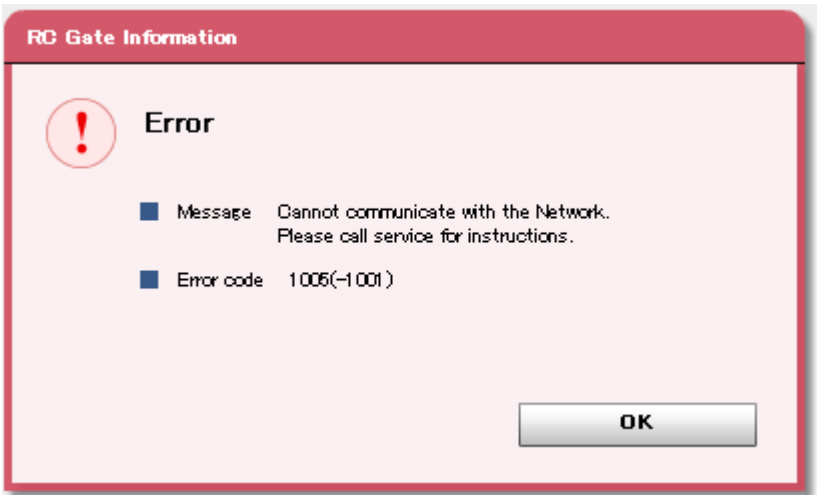
RC Gate A units with the serial numbers below cannot be newly registered with the @Remote Center (error code 1002 or 1005 occurs).

Affected S/N:

V7830800031 to –00070 (August 2013 production)
V7830900001 to –00145 (September 2013 production)

Sample screenshot:





Model: Uz-A1 (RC Gate A)	Date: 14-Feb-14	No.: RD459015

CAUSE

The wrong certificate (2048 bit key certificate) for SSL communication was written into the memory of the PCB board. The correct one is a 512 bit key certificate.

SOLUTION

Replace the affected unit.

Note: This is a hardware issue, so it cannot be solved by firmware update.