

**INTELLIGENT DEVICE MANAGER  
– MFP CLIENT  
Installation/Operation Guide**

30 July, 2010



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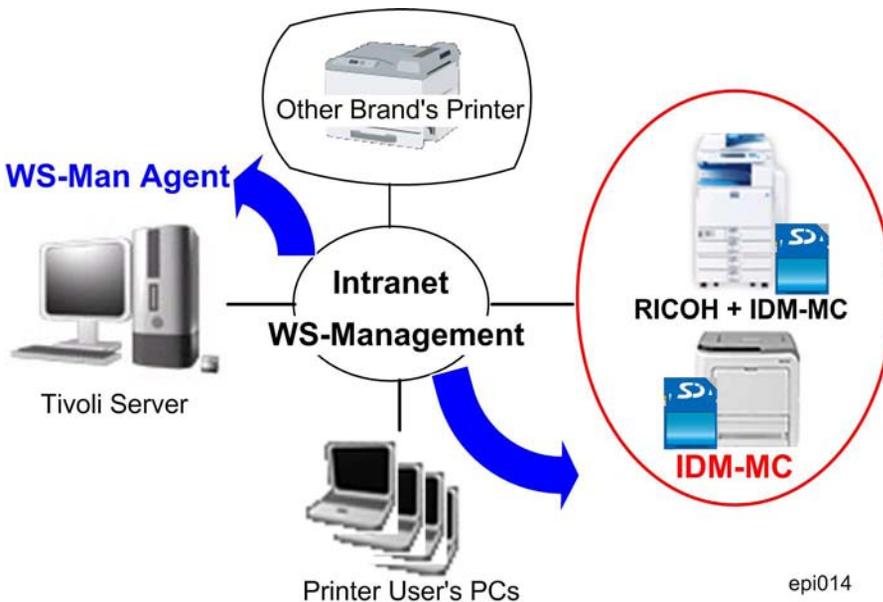


# 1. Overview

## Introduction

The reader of this document is assumed to be familiar with IDM-MC.

### System Overview



IDM-MC (INTELLIGENT DEVICE MANAGER – MFP CLIENT) is an embedded Web service on Ricoh MFP or printer (called "device" later). It can provide information of printer (e.g. model, serial No. status, etc.) and print job log (e.g. user name, number of page, color/mono, completed time, etc.) to Tivoli, and can indicate the event (e.g. paper jam, toner empty, service call, etc.) on device to Tivoli as well. All these information\*<sup>Note</sup> of devices are managed by CIM data model and the communication between Tivoli WS-Man Agent (called Agent later) and IDM-MC are based on WS-Management. With the function of IDM-MC, IT Manager can manage office device via Tivoli in a remote and real time style.

#### ↓ Note

- Currently, IDM-MC does **NOT** support the information about copier, scanner, fax, etc. yet.

### Composition of IDM-MC

IDM-MC is composed of two zip files; "wsman.zip" and "wsman\_filter.zip". These files should be installed in the target device(s) to manage.

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## Function Overview for IDM-MC

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IDM-MC has the following functions to communicate the Agent and RICOH devices.

1

### Discover Device

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Agent can discover a new device based on advertising from IDM-MC on the device. IDM-MC will indicate an event to Agent as a new device enters in the network

### Indicate Event

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When event (e.g. door open, paper jam, toner empty, etc.) is reported from device, IDM-MC can indicate the subscribed event to Agent Default, all the events supported by IDM-MC will indicate to Agent. The first event ("Power On") from IDM-MC is used to discover the device by Agent.

### Subscribe / Unsubscribe Event Indication

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After Agent discovers a device, Agent can subscribe the necessary event indication from the IDM-MC installed on the device at any time. Agent also can unsubscribe any event indication which is subscribed by the Agent itself.

### Fetch Printer Information

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After Agent discovers a device, Agent can fetch all or a part of printer information, such as serial No., model name, current status, etc., from IDM-MC at any time. And this function also can be used to detect the offline of device.

### Fetch Print Job log

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After Agent discovers a device, Agent can fetch print job log, such as printer user name, number of used paper, color or mono, etc., from IDM-MC at any time. Furthermore, IDM-MC can pool print job log inside the IDM-MC, and indicate Agent to fetch them as the pool is almost full.

### Fetch Total Counter Information

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After Agent discovers a device, Agent fetches the current value of various total counter of the device, such as the total counter of full color copy, the total counter of B/W scan, etc., from IDM-MC at any time.

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## Change Power Mode

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After Agent discovers a device, Agent change the power mode of the device to "Full power", "Low power", "Standby" mode at any time, if the device support the power mode change.

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## Configure IDM-MC

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After Agent discovers a device, Agent set the system parameters of IDM-MC to change the behavior of the IDM-MC real time. For example, set a new URI of Agent to change the Tivoli Sever as a trouble shooting for Tivoli server down.

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## Service Tools for IDM-MC

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The service tools for the IDM-MC are provided to install the IDM-MC or get log information for device error analysis.

### Service Tools consist of three tools:

1. Batch Install Tool

This is used to batch installation/update IDM-MC on multiple devices remotely via a GUI.

2. Connection Check Tool

This is used to check if IDM-MC communicate with Tivoli successfully, or not, after the installation/update of IDM-MC.

3. Log Download Tool

This is used to download system log of IDM-MC to help debug.

All these 3 tools are PC application and can be executed on PC without installation.

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## Batch Installer Overview

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We provide Ricoh service technician an installer, called Batch Installer, to install or upgrade IDM-MC onto any Ricoh device listed in p.29 "Support Device List".

Batch Installer has a GUI for all operations which is authenticated by administrator's ID/Password of device.

Batch Installer has following function:

- Install/uninstall a ESA application (both Type J and Type C)  
Upgrade can be performed by re-install.
- Set system parameters of a ESA application before the install
- Reboot device
- Set heap size of ESA
- Operate up to 4,000 devices once (specified by IP address/hostname list of the devices)

- Save and show operation history
- Break and Restart of batch operation

## 1

### **Connection Check Tool Overview**

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Ricoh service technician can check if the IDM-MC is work correctly, or not, roughly.

### **Log Download Tool Overview**

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Ricoh service technician can download both system log and CIM object log to his/her PC locally. Devices from which to download logs can be specified by an IP address/hostname list of the devices.

# 2. Installation

## Installation and Uninstallation

### Environmental Requirement

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#### Hardware

1. Device must be one of the devices listed up in "Target Device List" (See p.29 "Support Device List") and the number of devices is up to the capability of Tivoli server.
2. Each device is assumed as;
  - SNMPV1,V2 or V3 of device is available for call back by IDM-MC.
  - Printer has HDD option and max memory.
  - The latest version Embedded Software Architecture (ESA) is installed and started already and available heap size on it is more than 2MB.
  - Available space on SD Card is more than 5MB.
3. HTTP is available for the communication between device and Tivoli in both directions.
  - Port 8080 is available on device side.
  - Port number on Tivoli server side will be defined by a system parameter.
4. DHCP of device is supported.

#### ★ Important

- IDM-MC can NOT be run as same time as any ESA application which uses GPS filter, such as "ELP\_NX" and "ELP\_Filter". It is recommended that ESA application with GPS filter should be uninstalled.

### IDM-MC Installation

#### Work Flow

When installing IDM-MC to target devices, three service tools, BatchInstall.bat, ConnectionCheck.bat and LogDownload.bat are required. These tools are prepared as one zip file. The following flow summarizes the installation work flow for IDM-MC.

#### [Preparation Phase]

1. Prepare "Device List" at the customer site, and hostname or IP and Port number of the Tivoli Server.

2. Install the Java VM or check if the Java VM card is in the service slot of target devices.
3. Copy the IDM-MC and ServiceTools.zip to your PC.
4. Extract the IDM-MC.zip and ServiceTools.zip in a folder where you want to keep.
  - IDM-MC.zip is composed of two zip files; "wsman.zip" and "wsman\_filter.zip".
  - ServiceTools.zip has three batch files; "Batchinstall.bat", "ConnectionCheck.bat" and "Logdownload.bat".

**[Installation Phase]**

1. Execute the BatchInstall.bat.
2. Install the IDM-MC with the BatchInstall.bat.

**[Confirmation Phase]**

3. Check the connection for each target device with the ConnectionCheck.bat.
  - Meantime, this batch generates a log file in the same folder where three service tools have been extracted.
4. Check the result file which the ConnectionCheck.bat has generated in the same folder where three service tools have been extracted.
  - If the installation result is "NG (Not Good)", follow the error message list in the Appendix A and then solve a problem.

**[Finishing Phase]**

5. If you have executed the service tools on a customer's PC, make sure that all tools are deleted from the customer's PC.

**★ Important**

- Do not leave any files on a customer's PC.

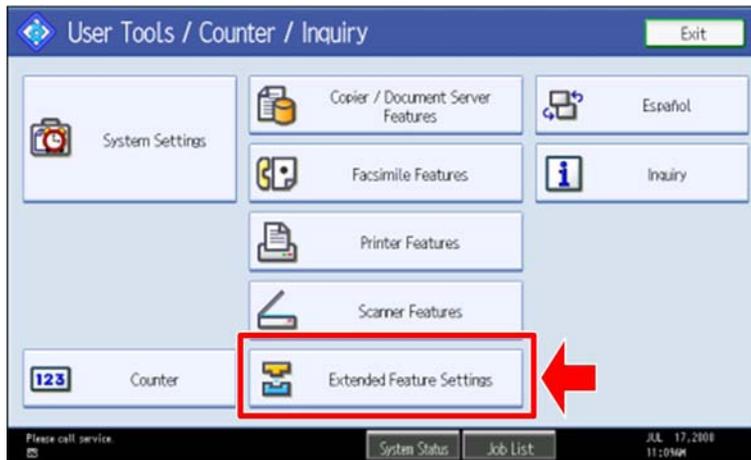
**Preparation Phase**

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If a target device for the IDM-MC does not have the Java VM card, install the Java VM card following procedure below.

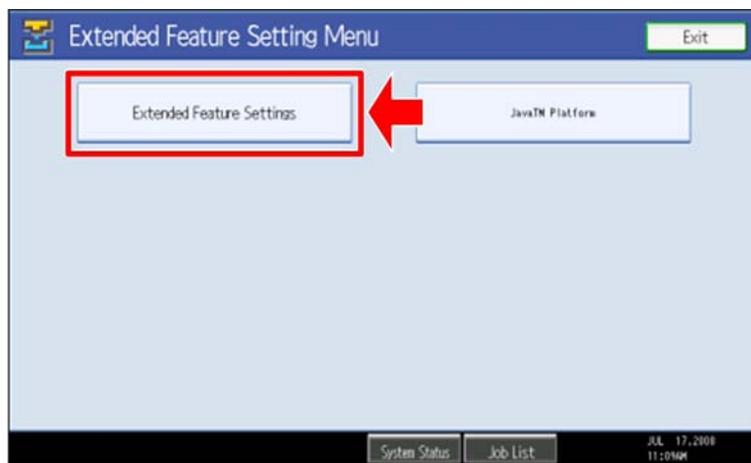
**VM Card Installation:**

1. Install the VM card in the service slot of the target machine.
1. Turn on the target machine.
2. Ask a machine administrator to login to the target machine with the login name and password of the machine's administrator.



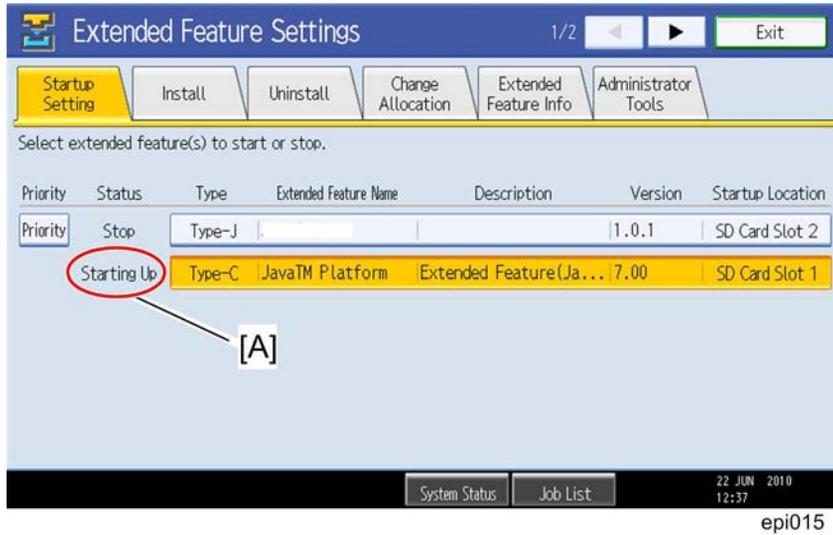
gl\_i104

3. Enter the "User Tools", and then press "Extended Feature Settings" on the LCD.



gl\_i105

4. Press "Extended Feature Settings" on the LCD.



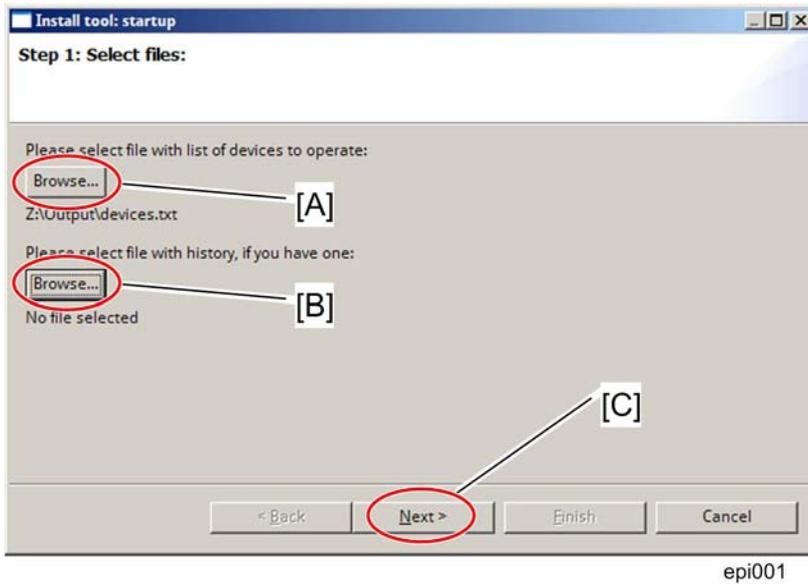
5. Check if the status [A] of the Java TM Platform is "Starting Up".
  - If not, star the Java TM Platform.

## Installation Phase

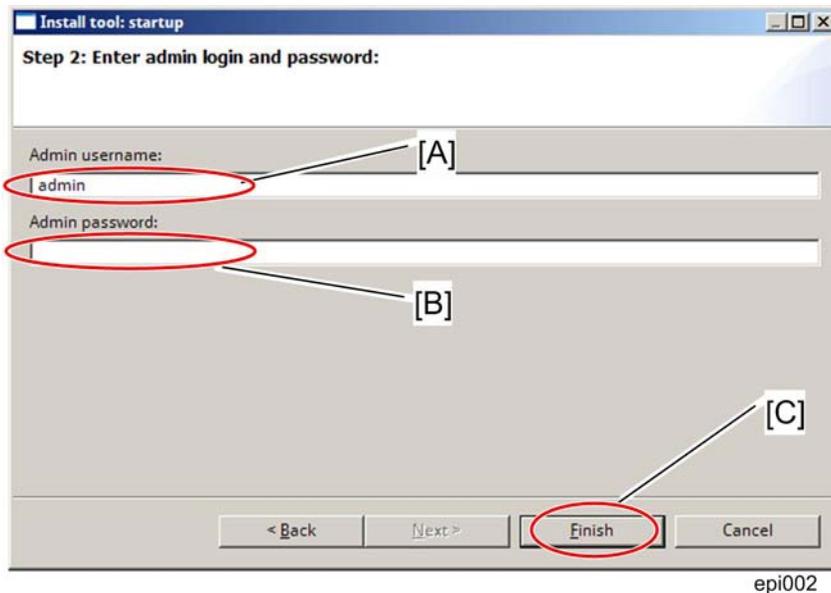
1. Prepare PC which has direct network access to target devices.
2. Copy the ServiceTools.zip, and then extract the zip file on your PC's hard drive or run application from removable media.
3. Copy the IDM-MC.zip, and then extract the zip file on your PC's hard drive or removable media.
4. Enter IP addresses or hostnames of target devices, one per line in the "devices.txt" which is in the same folder where three service tools have been extracted.
  - If you need to specify special username and/or password for some device, use following syntax:  
`xx.xx.xx.xx[;username=<username>][;password=<password>]`

**example:**

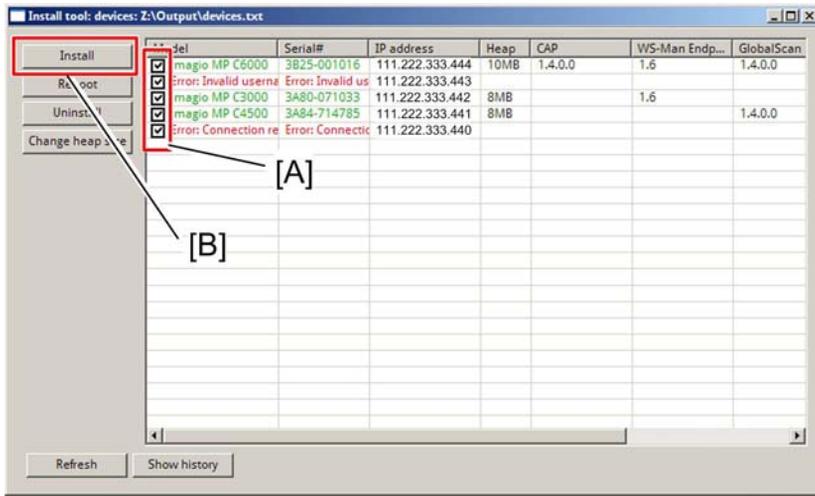
```
10.0.1.9
10.0.1.10;username=administrator
10.0.1.11;password=pwd
10.0.1.12;username=administrator;password=pwd
```
  - If no username and/or password provided, default values, entered at application startup will be used.
5. Execute the BatchInstall.bat.
  - BatchInstall.exe is automatically executed, and then "Install tool: startup" screen appears.



6. Choose the devices.txt with "Browse..." button [A].
7. Choose a history file with "Browse..." button [B] if you have.
8. Press "Next" [C].

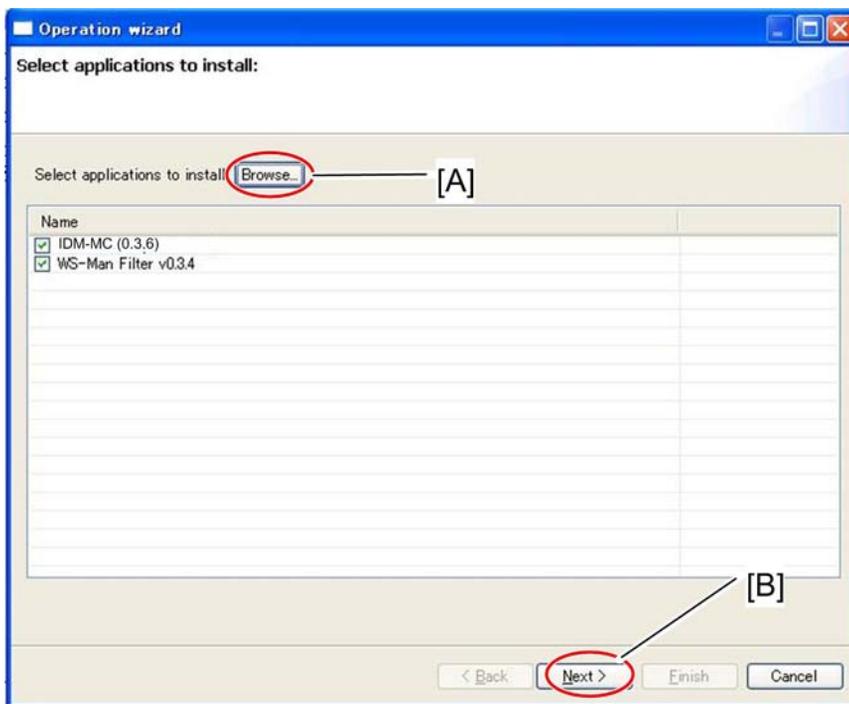


9. Enter the default administrator username [A] and password [B] of the target device in the input fields.
10. Press "Finish" [C].
  - If the username and/or password of the target device is provided in device list, these values will be used, not provided here.



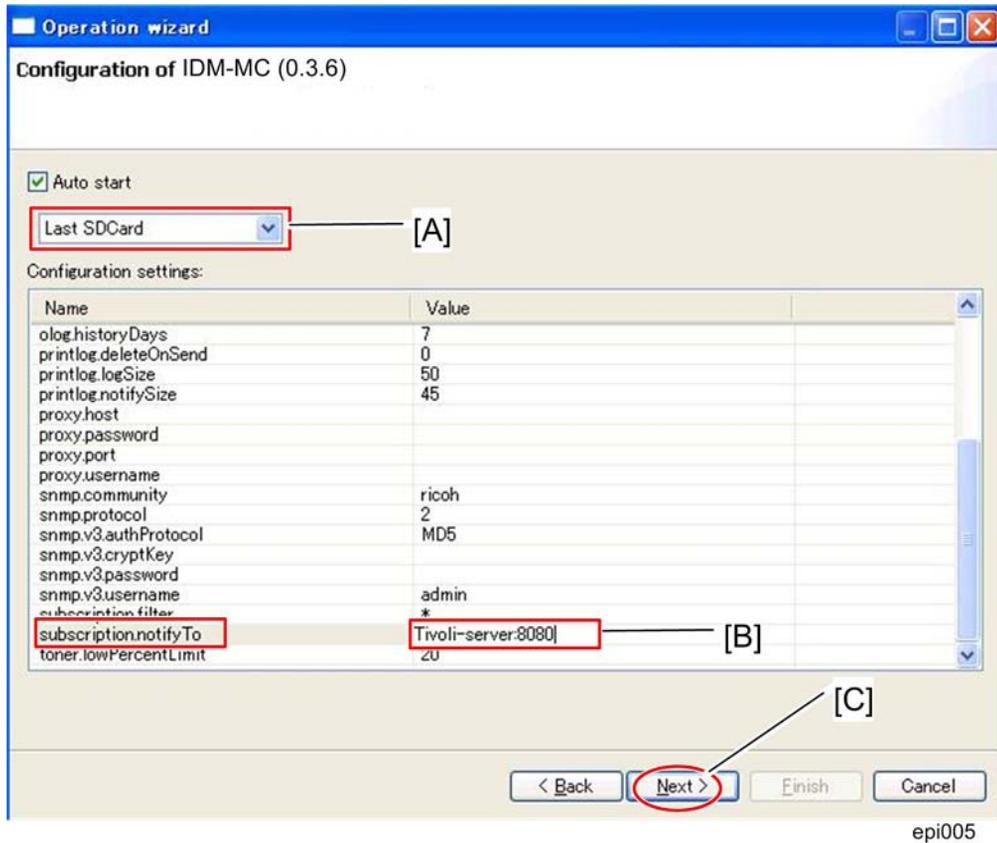
epi003

11. Wait until device information is refreshed, and then check if some device has the GPS Filter (ex. "ELP\_NX" and "ELP\_Filter").
12. Select target devices with checkboxes [A].
13. Exclude the device which has the "ELP\_NX" or "ELP\_Filter" with "Filter" button or uninstall the "ELP\_NX" or "ELP\_Filter" from the device with "Uninstall" button.
14. Press "Install" [B] from the left menu.



epi004

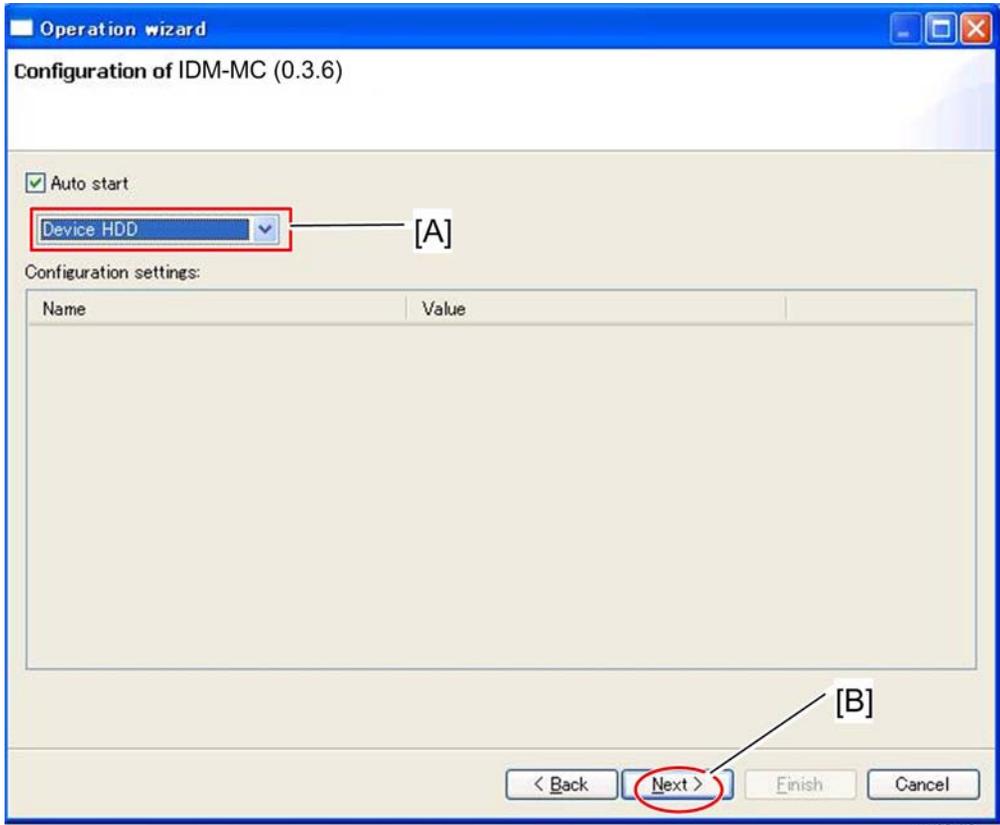
15. Select a folder where you have already extracted the IDM-MC to install with the "Browser..." button [A].
  - Make sure that "IDM-MC" and "WS-Man Filter" are selected in the name list on the GUI.
16. Press "Next" [B].



17. Select the "Last Slot" [A] for the IDM-MC storage.

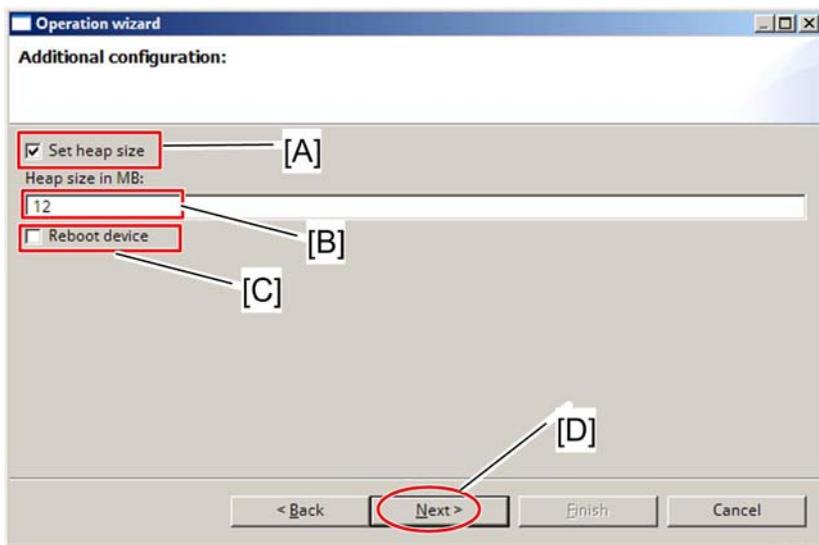
**Note**

- "Last Slot" means the biggest number among the SD Card slots.
  - The IDM-MC must be installed in the Java VM platform which should be in the service slot of the target device.
18. Enter the IP address and port number [B] of the Tivoli Server in the "subscription.notifyTo".
    - For details of other settings, see p.29 "System Parameter List of IDM-MC" in the Appendix.
  19. Press "Next" [C].



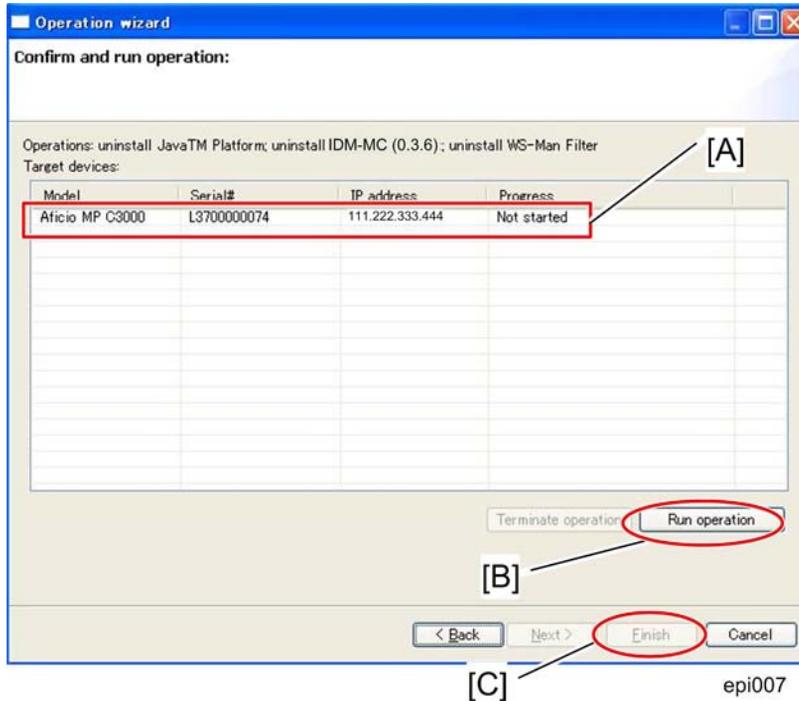
epi019

- 20. Select the "Device HDD" [A] for the WS Man Filter's storage.
- 21. Press "Next" [B].



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22. Select "Set heap size" [A] to set heap size after applications install.
23. Enter "15" MB or more in the input field [B] for the heap size.
24. Confirm that "Reboot device" [C] is checked to initiate reboot after applications install.
25. Press "Next" [D].



26. Review operation parameters [A].
27. Press "Run operation" [B] to start.
28. Press "Finish" [C] to close wizard after operation completed
29. Main screen appears.
30. Close the GUI of the BatchInstall.exe.
  - You are asked to save a working log file before the BatchInstall.exe is closed.
31. Save a working log file for the troubleshooting.
  - This working log file may be used to confirm a working history just in case.

## Confirmation Phase

### Connection Check Tool

CE/SE can run this tool from removable media (e.g. USB) or PC's hard driver.

1. Make sure that the device.txt, which has target device IP addresses file, exists in the same directory as ConnectionCheck.bat.

- The ConnectionCheck.bat. refers to the device.txt in the same directory. If there is no target IP address in the device.txt, ConnectionCheck.bat. does not properly work and fails to check.

2. Run the ConnectionCheck.bat.

3. Check the check result file which the ConnectionCheck.bat has generated.

	A	B	C	D	E	F	G	H	I	J
1	111.222.33	NG								
2	111.222.33	NG								
3	111.222.33	NG								
4	111.222.33	NG								
5	111.222.33	OK	IDM-MC	IDM-MC						
6										
7										
8										

[A]

epi022

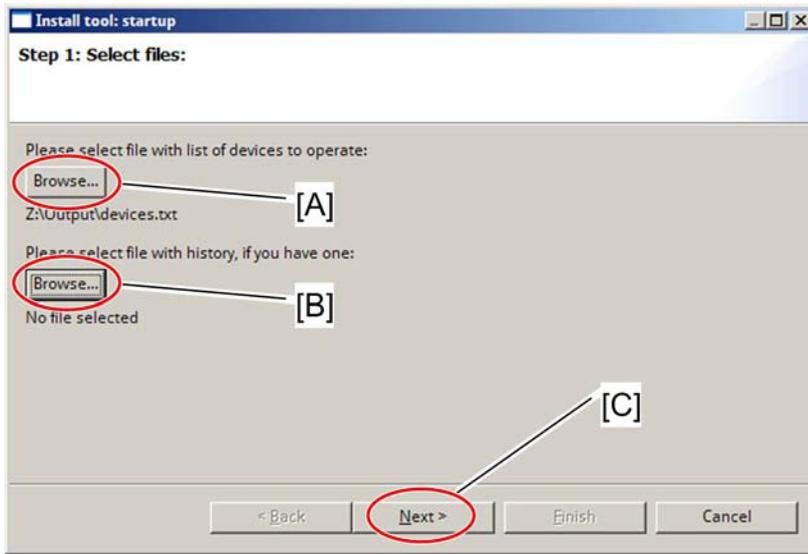
1. If the installation result is "NG (Not Good)" [A], follow the error message list in the Appendix A, and then solve a problem.
2. If the installation result is "OK", finish the installation procedure.

### Finishing Phase

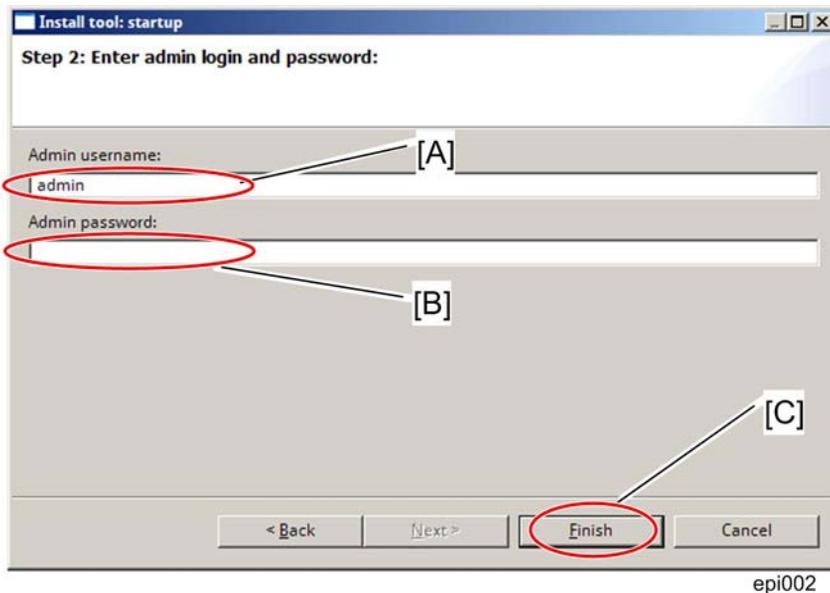
1. Check if any files or applications are left in a customer PC or server.
2. Delete all files and applications except the working log file which you have saved on the customer PC or server after IDM-MC installation.

### Uninstallation

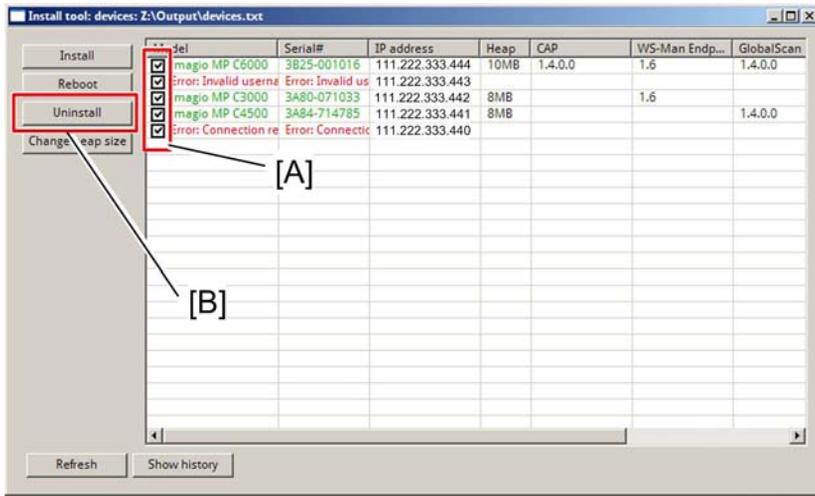
1. Execute the BatchInstall.bat.



2. Choose the devices.txt with "Browse..." button [A].
3. Choose a history file with "Browse..." button [B] if you have.
4. Press "Next" [C].

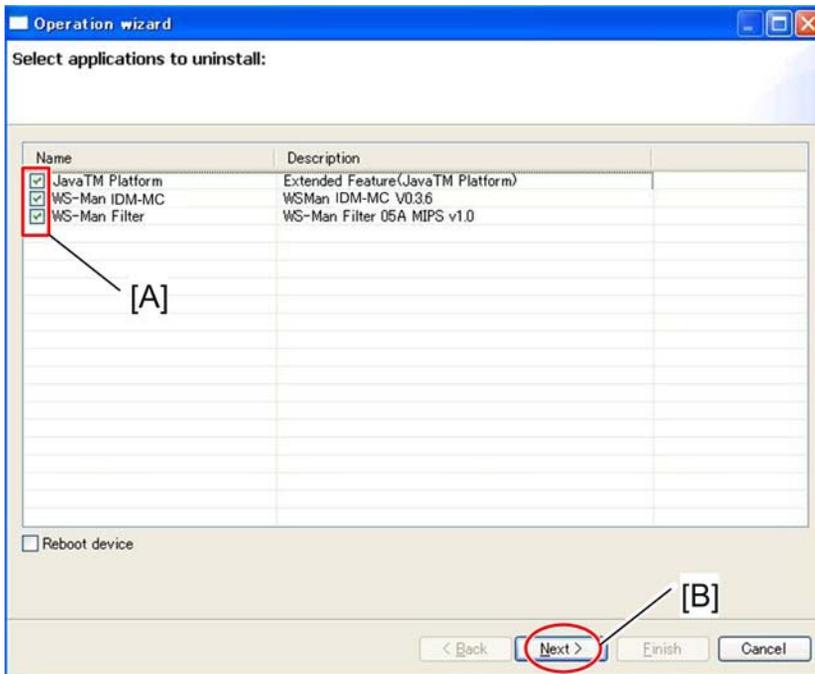


5. Enter the administrator username [A] and password [B] of the target device in the input fields.
6. Press "Finish" [C].
  - If the username and/or password of the target device is provided in device list, these values will be used, not provided here.



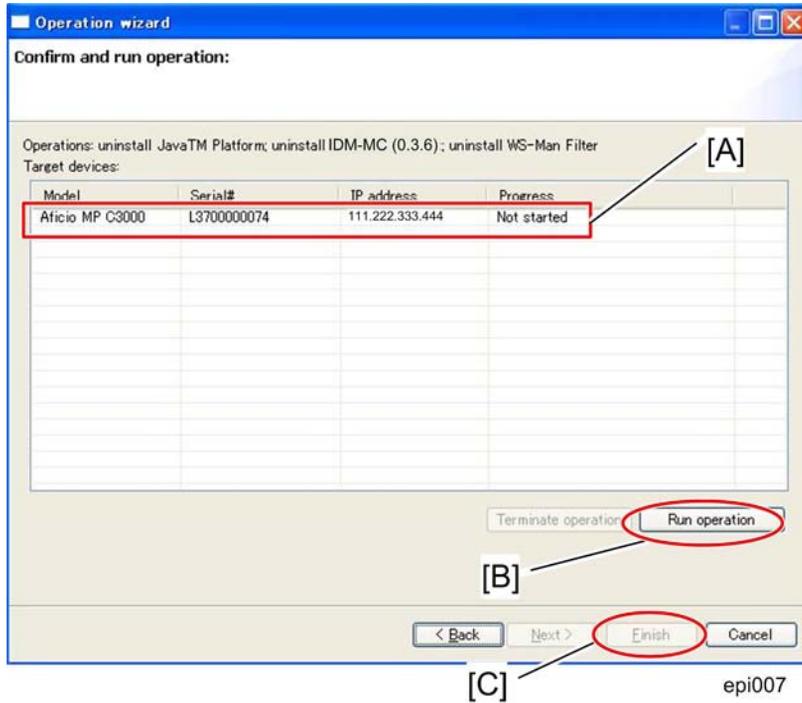
epi003a

- 7. Select target devices with checkboxes [A].
- 8. Press "Uninstall" [B].



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- 9. Select applications (multiple) to uninstall with check boxes [A].
- 10. Press "Next" [B].



11. Review operation parameters [A].
12. Press "Run operation" [B] to start.
  - It may take one minute to uninstall an application from one device. How much time you need to uninstall an application depends on how many devices you try to work for.
13. Press "Finish" [C] to close wizard after operation completed.
14. Main screen appears.



# 3. Maintenance

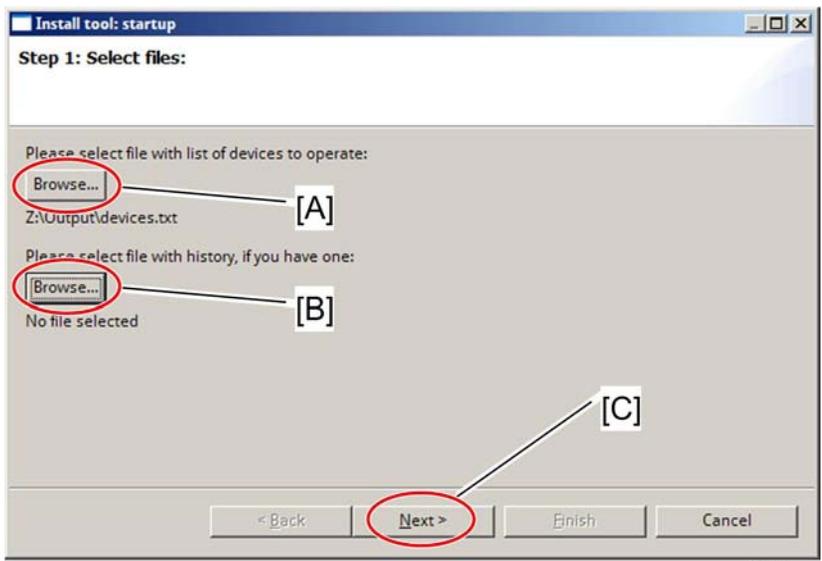
## Updating

### Overview for Updating

The updating for each application in the target devices can be executed by the BatchInstall.exe. The way of updating an application is same as the way of the IDM-MC installation.

### Updating for Application

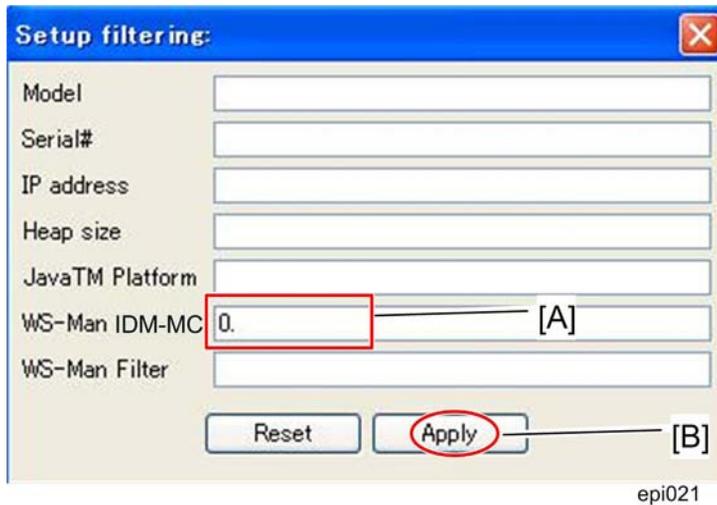
1. Prepare the latest version of an application.
2. Execute the BatchInstall.bat.



epi001

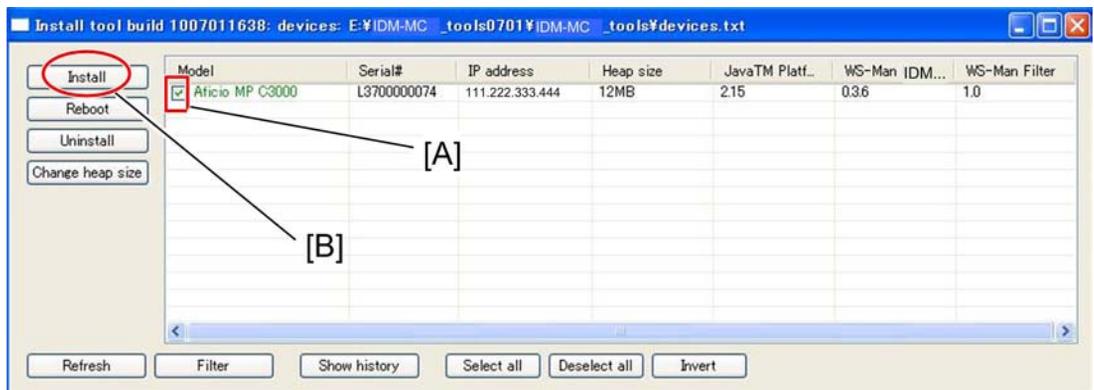
3. Choose the devices.txt with "Browse..." button [A].
4. Choose a history file with "Browse..." button [B] if you have.
5. Press "Next" [C].





3

9. Enter the version [A] of the application to be updated.
10. Press "Apply" [B] to filter target devices which have old version of an application.



11. Select the target devices to be updated with check boxes [A].
12. Press "Install" [B].
13. Repeat steps from 13 to 31 of the "IDM-MC Installation Procedure".

# Troubleshooting

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## Trouble Analysis

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WS-Man IDM-MC relies on both the SDK application and the Tivoli server. RCL only provides support for issues related to the IDM-MC SDK application and the Ricoh MFP. Customers should work with their IT manager if it appears to be a network issue.

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Please send problem reports to Ricoh Co., Ltd. using the GFPR system as soon as possible if a problem occurs. A detailed description of the customer's environment must be included.

Please follow the list below to determine which type of error is occurring.

1. First check for a device issue:
  - The device should be turned on and have no SC. The Java VM and IDM-MC should all be "starting" and the IDM-MC filter should be "waiting". All device applications should be functioning normally.
2. If the device is ok, then check for a network issue:
  - Make sure that communications from the device to the Tivoli server and from the Tivoli server to the device are both occurring using ping tests (IP Address and HostName).
3. If the network is working, then check for a communication issue between Tivoli and IDM-MC using the Connection Check Tool:
  - If a problem or warning is found, please use the troubleshooting table described below. Additionally, please collect the information requested below if you need to submit a report to RCL.
  - If there is no problem or warning, then the issue is with Tivoli. Please follow IBM's troubleshooting guidelines.
4. If the above conditions do not meet the issue experienced, then it is an issue with the IDM-MC SDK application.

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## Necessary Information for GFPR

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- A GFPR will typically require some or all of the following:
- Detailed description of the problem
- Possible cause(s)
- Actions taken to produce the problem
- MFP/LP model and serial number
- SMC reports
- Network environment (protocols, addresses, configuration)

- Network packet capture
- # of devices and device types affected by the issue
- # of devices and devices types not affect by the issue
- Other information (detailed below):

### Issue affecting Service Tool

Information	How to Collect
Screenshot	Press "PrintScreen" button, open "MS Paint", paste, save image.
OS version	Open "Control Panel", open "System".
Java version	Open command line, type: java -version.
Application version	It is displayed during the install process.
Application name	Name of SDK application installed
Target device information (Model name, SDKJ version, SSL options)	Open Web Image Monitor to find this info
Operation parameters	Which operation was running, operation parameters (device configuration options, application configuration, install location, heap size).

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### Issue affecting IDM-MC

Information	How to Collect
System and object logs (IDM-MC)	Use the LogDownload tool. For detail, see the following content "How to Use LogDownload bat" under p.26 "Troubleshooting for Installation".
SNMP settings	Take a screenshot of the settings page for SNMP and SNMP v3.
Rlogs	Use Rlogtool: - If using RLogTool version 2: 125, 126, 127, 256, 1000, 1025, 2000, 2001, 2002, 2222, 2223, 4400, 4401, 4500, 4600 and 14000 - If using RLogTool version 3: Press the "Printer" button.

Information	How to Collect
SNMP walk	Any SNMP browser is acceptable.
Frequency (how often, etc.) and timing (when, procedure used, etc.)	A guide to reproducing the issue would also be very useful.

## Troubleshooting for Installation

### 3

#### Error Messages on Batch Install Tool

Following errors can be displayed on the GUI of Batch Install tool:

Message	Description	Action to be taken
E01:Cannot connect to remote host	Device is offline or IP address/hostname is incorrect.	Start device, check device list
E02:Cannot find language	Device model is unsupported.	Exclude device from device list.
E03:Cannot setup SSL connection	Invalid JRE version is used.	Install correct version of JRE
E04:Invalid username/password	Admin username/password are incorrect.	Restart application, enter correct username/password.
E05:Invalid set heap size request	JVM is not installed on device or model is unsupported.	Check that JVM is installed and started.
E06:Invalid set heap size response	JVM is not installed on device or model is unsupported.	Check that JVM is installed and started.
E07:Invalid settings page	JVM is not installed on device or model is unsupported.	Check that JVM is installed and started.
E08:Invalid reset page	Device model is unsupported.	Exclude device from device list.
E09:ProductID not found in output	JVM is not installed on device, model is unsupported or file is not application.	Check that JVM is installed and started, check application file/folder.
E10:Install location is not available	Selected location is not available on device.	Select correct install location.

## How to Use LogDownload.bat

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1. Enter IP addresses of target devices in the "trouble\_devices.txt" which is in the same directory as LogDownload.bat.
2. Execute the LogDownload.bat.
3. "WS-ManLog-----.zip" is generated in the same directory as LogDownload.bat.
  - This zip file has a suffix which indicates generated year, month, date and time.

### ↓ Note

- The object logs are basically kept for 7 days by default. Please visit a customer site as soon as possible if problem analysis is required. (The interval for object log saving can be adjustable with the olog.historyDays in the parameter of the IDM-MC. For details, see p.29 "System Parameter List of IDM-MC".



# 4. Appendix

## Appendix

### Support Device List

Group	MFP/LP	Product Name
05A	MFP	Aficio MPC300
		Aficio MPC4500
		Aficio MPC5500
07A	MFP	Aficio MP C6000/ Aficio MP C7500
		Aficio MP C4000, 4000B/ Aficio MP C5000, 5000B
		Aficio MP C2550, 2550B/ Aficio MP C3350, 3350B
	LP (4 lines)	Aficio SP 8200DN
08S	MFP	Aficio MP C2800/ Aficio MP C3300
		Aficio MP C4000/ Aficio MP C5000
		Aficio MP C2050/ Aficio MP C2550
08A	MFP	Pro 970EX/ Pro 1107EX/ Pro 1357EX
		Aficio MP 6001/ Aficio MP 7001/ Aficio MP 8001/ Aficio MP 9001
	LP (2 lines)	Aficio SP 4210N
09S	MFP	Aficio MP171

### System Parameter List of IDM-MC

Property Name in Configuration	Type	Default value	Description
general.username	string	admin	HTTP authentication username
general.password	string		HTTP authentication password

Property Name in Configuration	Type	Default value	Description
general.protocol	string	http	Version of HTTP protocol to be used. One of: http, https
subscription.notifyTo	string		IP address and port of Agent separated by ":"
subscription.filter	string	*	Subscription XPath filter
general.maxEventsNumber	uint	10	Number of events to keep in event queue. Up to 255
general.eventResendInterval	uint	60	Time period to re-send the failed indication of event. In seconds.
proxy.host	string		Proxy host name
proxy.port	uint		Proxy port
proxy.username	string		Proxy username
proxy.password	string		Proxy password
snmp.protocol	uint	2	SNMP version used
snmp.v3.username	string	admin	SNMP v.3 username
snmp.v3.password	string		SNMP v.3 password
snmp.v3.cryptKey	string		SNMP v.3 cryptkey
snmp.v3.authProtocol	string	MD5	SNMP v.3 authorization protocol
snmp.community	string	ricoh	SNMP v.1/v.2 community name
toner.lowPercentLimit	uint	20	Low level limit, for toner low events, in percentage
media.lowPercentLimit	uint	10	Low level limit, for media low events, in percentage
printlog.logSize	uint	50	Maximum log size. Up to 255
printlog.notifySize	uint	45	Notify every ... print jobs. Not bigger than printlog.logSize
PrintLogDeleteOnSend	uint	0	1 : Delete print jobs after Enumerate request, 0 :Otherwise
log.level	string	INFO	Log level for Standard output. One of: DEBUG, INFO, ERROR, CRITICAL_ERROR

Property Name in Configuration	Type	Default value	Description
log.fileLevel	string	INFO	Log level for log file. One of: DEBUG, INFO, ERROR, CRITICAL_ERROR
log.fileMaxSize	uint	10000 0	Maximum log file size, in bytes
log.fileCount	uint	10	Number of log files to keep. Up to 255
olog.historyDays	uint	7	Keep log for last ... days. Up 31

## Error Messages in System Log

Following errors can be found in system log generated by LogDownload.bat.

No.	Log Message	Description	Action to be taken
1	Cannot load config file	Installed application is invalid or SD Card corrupt	Install correct version of IDM-MC
2	Invalid value provided for configuration property	Type and/or value of configuration property is invalid	Reinstall application with correct configuration
3	Cannot write custom properties to file	Modified configuration Cannot be saved to SD Card	Check that SD Card is not empty and not corrupt
4	Basic authorization failed	Username/password provided with request are invalid	Check username/password provided
5	Cleaning log: Cannot delete file	SD Card is not writable or corrupt	Check SD Card is not corrupt
6	Error writing log file to HTTP response	SD Card is not readable or corrupt	Check SD Card is not corrupt
7	SOAP fault received	Tivoli side rejected IDM-MC	Check log messages on IBM Tivoli side
8	Cannot send SOAP message	Connection to Tivoli gateway failed	Check IBM Tivoli URL (part of the message) and Tivoli server

No.	Log Message	Description	Action to be taken
9	Received SOAP request while IDM-MC background initialization is in progress or IDM-MC is already stopped	Another side called SOAP operation while IDM-MC is starting or stopping	No action required
10	SOAP output is Fault	Result of SOAP operation is predefined SOAP fault	Check log messages on IBM Tivoli side
11	Cleaning object log: Cannot delete file	SD Card is not writable or corrupt	Check SD Card is not corrupted
12	Object log save error	SD Card is not writable or corrupt	Check that SD Card is not empty and not corrupt
13	Cannot write log file to servlet output	SD Card is not readable or corrupt	Check SD Card is not corrupt
14	Exception thrown while loading cache	SD Card is not readable or corrupt	Check SD Card is not corrupt
15	Number of events for subscription exceeded	Event queue is full, oldest event will be removed	Check connection to Tivoli server and IBM Tivoli URL
16	Error accessing the paper sizes of each tray	Error when loading the device paper sizes per tray. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
17	Error during SetPowerState operation.	Error during SetPowerState operation. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
18	Error during SetPowerState operation: error trying to reset printer.	Error during SetPowerState operation: failed while trying to rest the device. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
19	Error during SetPowerState operation: error trying to set printer power state	Error during SetPowerState operation. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC

No.	Log Message	Description	Action to be taken
20	Error during SetPowerState operation: PowerState value not supported.	Error during SetPowerState operation: the PowerState value given in argument is not supported by the IDM-MC.	If problem persist, please contact Ricoh
21	Error during SetPowerState operation: snmp returned exception: <exception>	Error during SetPowerState operation. SNMP return an exception.	If problem persist, please contact Ricoh
22	Error getting paper sizes by trays	Error when loading the tray paper sizes information by trays, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
23	Error preloading supported paper size	Error when loading the device supported natural languages. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
24	Error preloading <property>	Error when getting <property> property. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
25	Error preloading energy state types information	Error when loading the device energy states information. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
26	Error while checking <property>	Error when getting <property> property. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
27	Error while checking Availability: error getting power state information	Error when checking Availability. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
28	Error while checking Availability: error getting device status information	Error when checking Availability. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
29	Error while checking CurrentCharSet: needed CharSetsSupported is failed.	Error when checking CurrentCharSet: CharSetsSupported is needed but returns null. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC

No.	Log Message	Description	Action to be taken
30	Error while checking PaperSizeSupported	Error when checking PaperSizeSupported, the model file may not have been found or is incomplete.	If problem persist, please contact Ricoh
31	Error while checking TimeOfLastReset: error getting time info from SNMP	Error when fetchin time information. SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
32	The IANA charsets description file could not be processed correctly	Corruption of jar or no more memory	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
33	The IANA charsets description file could not be closed correctly	Corruption of jar or no more memory	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
34	Tray dimension unit <unit> is not supported, size unknown.	Error when loading the tray paper sizes information: the unit for paper size is not supported.	If problem persist, please contact Ricoh
35	Error reading counter value for counter <counter name>	The value for counter <counter name> could not be read, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
36	Error while checking counters.	Error while checking counters, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
37	Unit <unit> for counter <counter name> not supported yet.	The counter <counter name> uses an unit that we do not support now.	If problem persist, please contact Ricoh
38	Error parsing submit date from "<string>" : <error message>	The submit date of the job could not be parsed.	If problem persist, please contact Ricoh
39	Property map should only contain array values.	Internal error.	If problem persist, please contact Ricoh

No.	Log Message	Description	Action to be taken
40	Alert ID <alert ID> not referenced as a door opened alert.	An alert was caught that describes a door alert but its ID is not known to be the one of a door alert	Please check model file and/or SNMP output.
41	Alert ID <alert ID> not referenced as a jam alert	An alert was caught that describes a jam alert but its ID is not known to be the one of a jam alert	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
42	Cannot load from file.	Error loading some saved information.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
43	Could not retrieve generalTotalCounter.	Error while checking the device total counter, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
44	Error getting the time of last reset.	Could not get the time of last reset, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
45	Error in event loop.	An unspecified error occurred in the main loop, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
46	Error while checking power state.	Error while checking power state, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
47	Error checking toner	Error while checking toner status, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
48	Error checking input trays	Error while checking input trays status, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
49	Error checking for overwork	Error while checking for overwork, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC

No.	Log Message	Description	Action to be taken
50	Error creating or reporting PowerStatusIndication alert.	Error while creating or reporting a PowerStatusIndication alert, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
51	Error while checking toner levels	Error while checking toner levels, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
52	Error while checking input tray levels	Error while checking input trays levels, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
53	Error retrieving availabilities	Error while retrieving availabilities from Ricoh_Printer, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
54	Error while checking toner infos	Error while checking toner info (name, color...), SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
55	Error trying to load the input trays names file	Corruption of jar or no more memory, the input trays names file could not be loaded.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
56	Error trying to find constant name for tray "<tray name>", using UNKNOWN.	Could not find any suitable constant name for tray <tray name>, UNKNOWN is used instead.	If problem persists, please contact Ricoh
57	Error while checking input trays infos.	Error while checking input trays info (name, size...), SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
58	Error while checking counters.	Error while checking counters, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
59	Error checking job entries	Error while checking job entries, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC

No.	Log Message	Description	Action to be taken
60	Error checking the spool directory	Error while checking the job headers files directory	If problem persist, please contact Ricoh
61	Error while checking jobs queue	An error occurred while checking the print job queue, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
62	Error reading header file "<file name>"	Header file <file name> could not be read. Memory may be low or the file may be corrupted or locked.	Please check there is sufficient memory for the IDM-MC and on the SD Card.
63	Error sending ending PowerStatusIndication event.	The final PowerStatusIndication event could not be generated or sent.	If problem persist, please contact Ricoh
64	Error parsing value from <saved value of total counter>	Error parsing the saved total counter value information, some file may be corrupted	Make sure the SD Card is not corrupted
65	Error parsing date from <saved date of total counter check>	Error parsing the saved total counter date information, some file may be corrupted	Make sure the SD Card is not corrupted
66	Error loading Opened Doors list	Error loading the list of opened doors	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
67	Initialization refused as SNMP connection is not working.	Error initializing the event loop as SNMP connection is not working	Make sure SNMP settings are correct on both MFP and IDM-MC
68	Job <job id> Error extracting number of pages processed and/or pages printed: jobPage = <str>	Error extracting the pages number informations for job <job id>.	If problem persist, please contact Ricoh
69	Spool <path of spool> is not directory .	A file already exists with the spool name in the IDM-MC home directory.	Please check the home directory of the IDM-MC for any spool file.
70	Spool directory not found .	Could not find the spool directory in the IDM-MC home directory.	If problem persist, please contact Ricoh

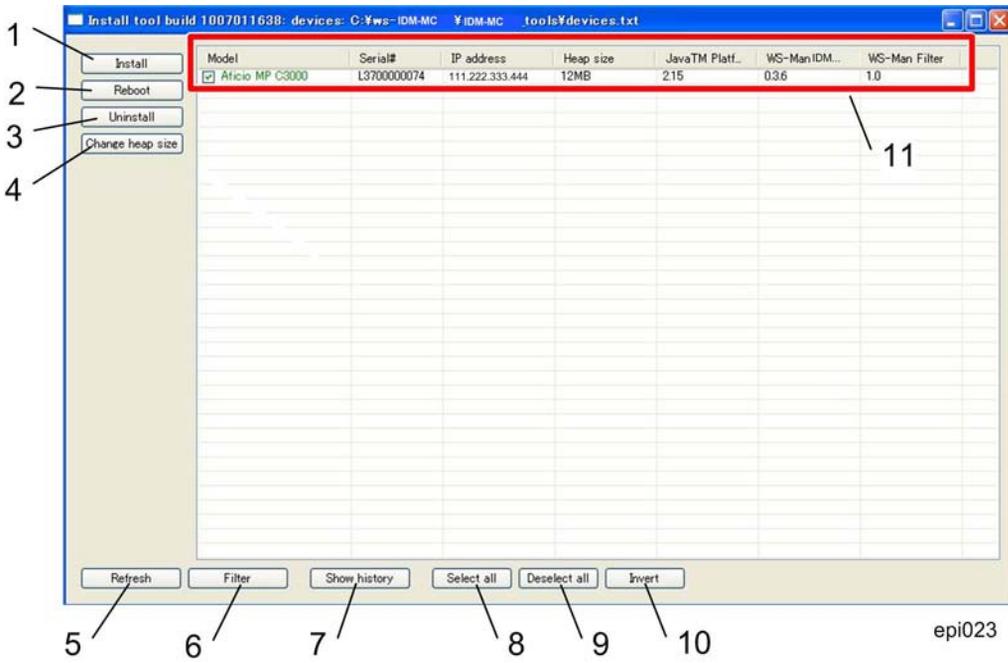
No.	Log Message	Description	Action to be taken
71	Thread running while connection not working, stopping.	A non working connection is detected while running the main even check loop, the loop is stopped.	Make sure SNMP settings are correct on both MFP and IDM-MC
72	Unknown doorName for alert ID: <alert ID>	The door alert with ID <alert ID> does not have any associated door name in model file, UNKNOWN is used.	Please check model file and/or SNMP output.
73	Bad value for snmp.protocol, please set to 2 or 3, reverting to previous value.	A bad SNMP protocol value was being set, the previous value will be used instead	Make sure SNMP settings are correct on both MFP and IDM-MC
74	Bad value for snmp.v3.authProtocol, please set to MD5 or SHA, reverting to previous value.	A forbidden SNMP v3 authentication protocol was being set, the previous value is used instead. Authentication protocol should be MD5 or SHA.	Make sure SNMP settings are correct on both MFP and IDM-MC
75	Bad value for snmp.v3.cryptKey, should be blank or atleast 8 bytes long, reverting to previous value.	A forbidden SNMP v3 crypt key was being set, the previous value is used instead. Cryp key should be blank or at least 8 characters long	Make sure SNMP settings are correct on both MFP and IDM-MC
76	Bad value for snmp.v3.password, should be blank or atleast 8 bytes long, reverting to previous value.	A forbidden SNMP v3 password was being set, the previous value is used instead. Password should be blank or at least 8 characters long	Make sure SNMP settings are correct on both MFP and IDM-MC
77	Error listing active threads	Error listing the current active threads of the IDM-MC	If problem persist, please contact Ricoh
78	Error trying to recreate SNMPConnectionManager	An error occurred while trying to restart the SNMP connection	Make sure SNMP settings are correct on both MFP and IDM-MC
79	Error trying to start StateMonitor monitoring	An error occurred while trying to start the main even check loop	If problem persist, please contact Ricoh

No.	Log Message	Description	Action to be taken
80	Error trying to stop StateMonitor monitoring	An error occurred while trying to stop the main even check loop	If problem persist, please contact Ricoh
81	stopMonitoring: Error trying to disconnect SNMPConnectionManager.	Error trying to disconnect SNMP connection when stoping the monitoring of the DeviceHandler	Make sure SNMP settings are correct on both MFP and IDM-MC
82	Error listing active threads	Error listing the current active threads of the IDM-MC	If problem persist, please contact Ricoh
83	Error: CacheManager creation failed!	Could not create the cache manager.	If problem persist, please contact Ricoh
84	Error: CIMPrinterManager creation failed!	Could not create the Ricoh_Printer manager	If problem persist, please contact Ricoh
85	Error InvocationTargetException for <property name>	Some error appeared while getting property <property name> of Ricoh_Printer, SNMP connection may be not working.	Make sure SNMP settings are correct on both MFP and IDM-MC
86	Error finding product ID	The device product ID could not be found, SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
87	Error reading the devices architectures property file.	Error reading the device architectures index file, the jar may be corrupted or the memory is low.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
88	Error opening the device architecture common.dat file, some properties may be left blank.	Error reading the device architecture shared property file, the jar may be corrupted or the memory is low.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
89	Error opening the device model specific property file, some properties may be left blank.	Error reading the device specific property file, the jar may be corrupted or the memory is low.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
90	Empty value for attribute <attribute name> in model file entry in index file.	An attribute was found for mf tag in model file index entry that does not have any content.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted

No.	Log Message	Description	Action to be taken
91	unknown attribute for tag "mf": <attribute name>	An attribute was found for mf tag in model file index entry that is unknown.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
92	Empty filter for model file entry in index file.	A blank filter was found for entry in model file index entry	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
93	unknown filter for model file entry in index file: <filter name>	An unknown filter was found for entry in model file index entry	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
94	Error parsing the device architecture index file.	An error occurred while parsing the architecture index file for this device.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
95	Key <key> of model file is not recognized.	An unknown key was found in the device model file	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
96	Unsupported paper type found in model file: <paper type>	An unsupported paper type was found in the device model file	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
97	Property PaperSizesSupported not found in model file	The device model file does not have the PaperSizesSupported key.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
98	Bad value in property <property name> in model file: <value>	There is a bad value for a property in the device model file, some functionality may not work.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
99	Property <property name> not found in model file	There is a missing property in the device model file, some functionality may not work.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
100	Bad value in property MaxCopyCounterPerMonth in model file file: <value>	The MaxCopyCounterPerMonth key in device model file is erroneous, device overwork will not work.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted

No.	Log Message	Description	Action to be taken
101	Property MaxCopyCounterPerMonth not found in model file	The device model file does not have the MaxCopyCounterPerMonth key, device overwork will not work.	Make sure there is enough memory for IDM-MC and that the SD Card is not corrupted
102	Error parsing snmp.protocol setting value: <protocol>	An error occurred while reading the SNMP protocol number setting	Make sure SNMP settings are correct on both MFP and IDM-MC
103	Error disconnecting SNMP	An error appeared when trying to disconnect SNMP connection	Make sure SNMP settings are correct on both MFP and IDM-MC
104	Error while operating one or more OIDs: <list of OIDs>	The OIDs <list of OID> could not be fetched	Make sure SNMP settings are correct on both MFP and IDM-MC
105	Error while fetching OID <OID>	The OID <OID> could not be fetched	Make sure SNMP settings are correct on both MFP and IDM-MC
106	SNMPConnectionManager constructor: Error creating SNMPConnectionManager	An error occurred when creating SNMP connection.	Make sure SNMP settings are correct on both MFP and IDM-MC
107	SNMPConnectionManager instance cannot be created.	An error appeared when trying to create SNMP connection	Make sure SNMP settings are correct on both MFP and IDM-MC
108	Got null result when getting property CharSetsSupported	CharSetsSupported needed but null, SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC
109	Trying to use Utils.getEncodedStringValue on null data	Tried to encode a null String, SNMP connection may be not working	Make sure SNMP settings are correct on both MFP and IDM-MC

## BatchInstaller GUI



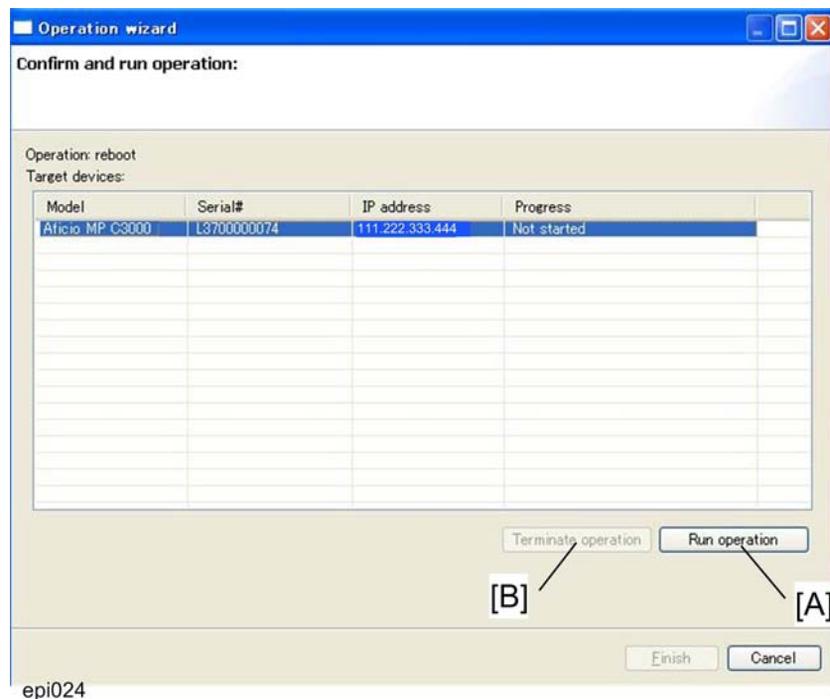
4

### 1. Install

This starts install/update operation wizard on selected devices. For details, see "Installation Phase" in p.7 "IDM-MC Installation".

- To install applications related with IDM-MC
- To set installation options; (auto-start, install location)
- To set system parameter of IDM-MC
- To set the heap size at the same time of installation
- To select "Reboot device" to initiate reboot after applications install
- To confirm the operation parameters

## 2. Reboot



This starts reboot operation wizard on selected devices

- To confirm operation parameters, press "Run operation" [A] to start the reboot
- To terminate the operation at any time by press "Terminate operation" [B]

## 3. Uninstallion

This starts uninstall operation wizard on selected devices. For details, see "Installation Phase" in p.16 "Uninstallation".

- To select applications (multiple) to uninstall
- To confirm operation parameters with "Run operation" button

## 4. Change heap size

This starts change heap size operation wizard on selected devices

- To input new heap size value
- To confirm operation parameters with "Run operation" button



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This shows operation history about selected device.

- Time – date and time of operation
- Operation – operation name (Install, Uninstall, Heap size change, Reboot)
- Application – target operation
- Result – operation result (Completed with parameters, Failed with error)

## 8. Select all

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This selects all devices in list.

## 9. Deselect all

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This deselects all devices in list.

## 10. Invert

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This inverts selection.

## 11. Status Bar

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This bar shows some status below:

- Model – device model name. Contains model name (green), Error message (red), 'Loading...' message while data is refreshed
- Serial# - device serial number. Contains serial number (green), Error message (red), 'Loading...' message while data is refreshed
- IP address – device IP address, from loaded device list
- Heap – current heap size, or blank if data is not available
- Other columns – Installed applications on devices, one column per product ID. If application is installed, cell contains application version, blank if there is no such application

