

Ricoh PCC 5.1

Release Notes

Release History

Version	Released	Affected	Description of Change
1.0	August 23, 2016	All	Initial release.
1.1	August 24, 2016	3, 4, 5, and 6	Updates to release.
1.2	April 17, 2017	All	Updates to release.
1.3	April 18, 2017	All	Updates to release.
1.4	July 6, 2018	All	Updates to release.
1.5	July 31, 2018	4, 5, 7, and 8	Updates to release.
2.0	September 14, 2018	All	New release.
2.1	January 25, 2019	1, 3, 4, 5, and 8	Updates to release.
2.2	February 20, 2019	1, 3, 4, 5, 8 and 10	Updates to release.
2.3	March 18, 2019	6 and 8	Updates to release.

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1 Purpose

This document summarizes and communicates the new features, requirements, and known issues for PCC 5.1, build version 1.30.213.

It is intended for staff and partners who support and service PCC 5.1.

2 Scope

This release provides new device support and the ability to set the authentication screen displayed to the user.

3 Changes in This Release

The following section includes enhancements and fix details.

Build 1.30.213

Release provides new device support. For more details, see section [Fixed Issues and Updates](#).

Build 1.30.199

Release provides fixes for the embedded client. For more details, see section [Previously Released Fixes and Updates](#).

Build 1.30.184

Product Introduction		
Feature	Description	Benefit
Updated embedded client for Ricoh Smart Operation Panel (SOP) devices	<p>Updated single embedded application that provides Equitrac Office/Express print capability and AutoStore capture within the same user session.</p> <p>This updated embedded client is supported with the following versions of software:</p> <ul style="list-style-type: none">▪ AutoStore 7 SP5 or greater▪ Equitrac Office / Express version 5.6 or 5.7 or greater	<p>Provides key enhanced functionality at the device with single user experience between print and capture workflows that delivers increased productivity with reduced user time needed to access key document workflows within the same user session.</p>

Usability Enhancements

Feature	Description	Benefit
Ability to change the text message on the Welcome Screen	Additional functionality has been added to DRS and the embedded client so that the system admin can change the text that is displayed on the Welcome Screen.	Increased user usability and reduction in user specific training where specific messaging can be applied to the first screen of the embedded client.
Ability to change the image and logo on the Welcome Screen	Additional functionality has been added to DRS and the embedded client so that the system admin can change the image and logo that is displayed on the Welcome Screen.	Increased user usability where specific imagery and company logos can be applied to the first screen of the embedded client.
Deploy the Full Native Copy, Fax & Scan Applications on the screens	Additional functionality has been added so that the system admin can add the full native Copy, Scan and Fax applications to the Launcher and Welcome / Login screen as quick-selects. The configuration for this feature has been added to DRS via new configuration settings. <i>This feature only applies to devices that support Full Copy, Full Scan, and Full Fax workflows.</i>	Increased user usability and adoption as quick access is provided to key device functionality within the embedded application with the ability to build workflows dependent on customer requirements.
Deploy extended native applications such as GlobalScan NX and Ricoh Cloud apps on the screens	Additional functionality has been added so that the system admin can add extended native applications such as GlobalScan NX and Ricoh Cloud Apps to the Launcher and Welcome / Login screen as quick-selects. The configuration for this feature has been added to DRS via new configuration settings.	Increased user usability and adoption as quick access is provided to key device functionality within the embedded application with the ability to build workflows dependent on customer requirements.
Simplified user notifications via Inline Notifications	The embedded client now provides two levels of user notifications within inline messaging, one for errors and one for status alerts. Visual representation has been added to the User Interface to distinguish the alert and only the error alert automatically pops-up on screen. When a status alert occurs, this will	Increased user usability and reduction in user specific training as error alerts are displayed to the user immediately, whilst the status notifications are only displayed when the user

	only blink the status icon to encourage the user to review but will not pop-up the alert on the screen.	chooses to review the notice.
Server Status Screen	A new overlay screen has been added to the client that displays the current connection status to connected servers, this includes three states – Online, Offline or Connecting. The connected server address or hostname is also shown. This new overlay screen can be opened via the settings menu at the top of the screen and the screen will be automatically displayed in the event of the server state going offline.	Increased user usability as the embedded client will provide immediate notification to the user of the server state going offline. In addition, this status screen provides valuable information to the service/support teams in isolating error conditions on-site.
Follow You Print Screen Enhancements	Elements of the Follow You Screen have been enhanced to aid usability and visual aesthetics, this includes a new design for the Force Mono button and re-location of the User Balance notice.	Increased user usability and adoption with a clearer, concise user interface for print release.
Revised product application icon	The application icon that appears on the Ricoh home screen has been updated to aid visual aesthetics and appear more in line with the Ricoh look n' feel.	Increased user usability and adoption with a clearer, concise user interface that matches the Ricoh User Interface.

Security Features

Feature	Description	Benefit
Certificate Pinning between client and DCE service	A major new security feature has been added where the certificate used between the Equitrac Service and the device is now verified via a check mechanism where the certificate is pinned between the client and DCE so that only the DCE that presents the certificate to the client in the original transaction can continue to communicate with the client.	Raises the compliance level and provides enhanced security as this mechanism will reduce the likelihood of a man-in-the-middle attack between the embedded client and the Equitrac DCE service.
Authorisation Key between client and DRS application	Security enhancement to provide additional security between the DRS application and the device via an authorization key. This additional	Raises the compliance level and provides enhanced security as this mechanism will

	security check will confirm that only the initial DRS instance that was used to deploy / configure the device can be used to update the configuration of the embedded client on the device.	reduce the likelihood of a man-in-the-middle attack between the embedded client and the DRS application.
Common Access Card (CAC) support	For US Government accounts the embedded client can use CAC cards for user authentication when configured with Equitrac. In this instance Equitrac will now operate in AUTH-OFF mode.	Provides US federal government customers with the ability to use their existing ID cards with the solution, increasing user usability, security and productivity.
Support for AES_256 ciphers	The updated client will now support AES_256 ciphers.	Provides effective data security.

New Device Support

Feature	Description	Benefit
Support for Ricoh Smart Operation Panel-enabled SFP models	The updated client will support Smart Operation Panel-enabled Single Function Print (SFP) devices. Additional device handling has been added to DRS to choose what device type is being configured at time of deployment or configuration.	Provides Ricoh and resellers a wider selection of devices that can be deployed with this embedded client and provides a higher level of user usability and adaptation as the same interface can be applied across multiple MFP and SFP devices.

AutoStore Specific Features

Feature	Description	Benefit
Support for protected and restricted RRTs	The embedded client when used with AutoStore will now support protected and restricted Runtime Replacement Tags (RRTs).	Increased user usability and adoption as the embedded client will now allow greater flexibility when using AutoStore RRTs.
Ability to use a list field without a default value selected	The embedded client when used with AutoStore will now allow a list field to be used without a default entry.	Increased user usability and adoption as the embedded client will now allow greater flexibility when using AutoStore list fields.

New DRS Configuration Features for Ricoh

Feature	Description	Benefit
Multiple Install options to deploy the embedded client	<p>Allows the system admin to choose multiple install / configuration options to deploy and/or configure the embedded application to the device.</p> <p>Choices can range from Quick Install, Full Install, Install & Reboot, Configure & Reboot, Assets Sync, Sync Workflow Buttons, Reboot, Uninstall, Get Device Settings and Set Device Settings.</p>	<p>Provides the system admin or installing engineer multiple options to fine tune the deployment and configuration of the application to the device to speed up the operation of deployment.</p> <p>As an example, these enhancements will enable Hotfix only deployments to execute quicker and more efficiently.</p>
Deployment Status	<p>The DRS application will now provide status feedback to the system admin that shows the current state of the deployment of the embedded application to the device.</p>	<p>Provides direct feedback that can inform the system admin or installing engineer on the current deployment process and alert the admin of success or failure of the install process.</p>
Hostname or IP address used to contact device	<p>The DRS application will now use either a hostname or IP address to contact the device from within the DRS application.</p>	<p>Allows system administrators more flexibility in assigning network addresses to devices within their IT infrastructure.</p>
Deploy Native Device Functionality and Extended Device Functionally to device	<p>Enhancement to configure and control deployment of native device functions (copy, fax, scan, GlobalScan NX & Ricoh Cloud Apps) to a single device or multiple devices.</p>	<p>Provides the system admin or installing engineer with the ability to build specific workflows dependent on customer requirements within the DRS application.</p>
Device Type Configuration	<p>When deploying native device apps, DRS can now be configured to select the correct device type (MFP, SFP or</p>	<p>Allows the system admin or installing engineer to configure key device-specific</p>

	306/406) to ensure only supported functionality is deployed to the device.	workflows to the right devices within the DRS application.
DMNX Device Reboot Sequence	The client application and DRS will now function with the device reboot sequence that is initiated via Ricoh's DMNX application.	Allows Ricoh and our channel partners to utilise both the Ricoh DMNX application and the PCC 5.1 embedded application with no loss of functionality.

4 Fixed Issues and Updates

4.1 *AutoStore*

Build	ID	Description
1.30.213	D-15060 RN 153170	Mandatory numeric fields only accept maximum 3 digits when the device language is set to Swedish.
1.30.213	D-15061 RN 156173	The client displays a validation error and it is not possible to make changes within a displayed field.
1.30.213	D-15178	Numeric fields cannot handle decimal precision for locales.

4.2 *Equitrac*

Build	ID	Description
1.30.213	B-22773	Address ability to show either the Welcome screen or Login screen for walk up authentication.
1.30.213	B-22827	Native shortcuts now launch full copy/scan/fax on IM devices.

4.3 *Ricoh*

Build	ID	Description
DRS 7.13	D-15015	Update installer to work with MP C501 and IM devices
DRS 7.13	D-15074 Ref. 2831	Scan GUI service is no longer uninstalled. It is a protected service on IM devices.
1.30.213	B-22878	Client support for new scan settings introduced on IM series device with Scan GUI service 2.01. Refer to Ricoh documentation on how to use these new settings.

4.4 DRS

Build	ID	Description
DRS 7.13	B-22625	No longer change the SP mode to delete entries from the address book when full.
DRS 7.13	B-22838	Do not remove Scan GUI service from devices on uninstall
DRS 7.13	B-22839	Address ability to show either the welcome screen or login screen for walk up authentication

5 Previously Released Fixes and Updates

5.1 AutoStore

Build	ID	Description
1.30.199	SR: 181012-000136 EQ: B-22234	Scan form field values can now be updated following the completion of an AutoStore scan.
1.30.199	SR: 180928-000440; 181108-000180 EQ: D-13849	Enabling TLS 1.2 on the AutoStore server resulted in random generation of 0 KB PDF files.
1.30.199	SR: 180926-000338; 181128-000744 EQ: D-15847	Scans were not completed after immediately pressing the Scan button if a required field was present in a scan workflow.

5.2 Equitrac

Build	ID	Description
1.30.184	N/A	Very rapid, repeated pressing of the Platform Check Status button can result in the application displaying the "Unfortunately, Embedded for Ricoh Smart Operation Panel has stopped" dialog, prompting a restart and recovery process.
1.30.184	D-02699	If the connection to the DCE1 is lost and a user tries to start scanning, the warning messages disappear before they can be read.
1.30.184	D-05136 D-05140	Launcher screen - clicking Stop button after selecting Launcher shortcut takes user to blank screen.
1.30.184	D-05430 D-05433	SharePoint: Not possible to select subfolders. Navigation between folders will cause "Error while validating prompts".
1.30.184	D-05452	Workflows become unresponsive when device times out; not able to login.
1.30.184	D-05461	Intermittently, changing the language does not fully take effect immediately

Build	ID	Description
1.30.184	D-11487	Upon performing Install with Equitrac and AutoStore (Authentication ON) through DRS, the install is successful but the message "Failed to get Equitrac workflows" is displayed on the Welcome Screen and Quick shortcuts are not visible. Also applicable with AutoStore deployment.
1.30.184	D-12090	MPC 406 device shows 'Failed to get Equitrac workflows' following a reboot. Workflows are available after login.

5.3 DRS

Build	ID	Description
1.30.184	D-11944	User remains logged in when sending a reboot command from DRS with user logged in.

6 Known Issues

The following list contains the known issues in this release:

6.1 AutoStore

ID	Description	Resolution
D-02337	Scan Settings: Allow Changes option does not work for [Multi Page] setting. The user can change the multi-page setting even if Allow Changes option is disabled.	Kofax will consider this in a future release.
D-08606	UX - Scan Settings: The [File Type] settings can be changed in runtime if the Allow Changes option is disabled.	Kofax will consider this in a future release.
D-08611	Scan Settings: The Allow Changes option is available for compression level/method.	Kofax will consider this in a future release.
D-15132	In AutoStore, when login with user that has restricted form and public forms - user cannot see the restricted forms, only the public forms.	Kofax will consider this in a future release.

6.2 Equitrac

ID	Description	Resolution
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<p>D-05176 D-09703</p>	<p>After install or reboot the device is in Restricted mode preventing login until the Home Key/System Home is selected.</p>	<p>Kofax will continue to investigate this issue with Ricoh.</p>
<p>D-05178 D-12497 Ref. 4799</p>	<p>Clicking Stop at Welcome screen takes UI into restricted mode.</p>	<p>Workaround:</p> <ol style="list-style-type: none"> 1. Dismiss the Welcome screen by clicking the hamburger menu and selecting Administration from the drop-down list. 2. Click the Continue Printing button to exit access restricted mode. The Login button is now visible at the top right corner of the Ricoh panel and the user is able to login. <p>Kofax will consider this in a future release.</p>
<p>D-10261</p>	<p>If Equitrac DCE offline server settings are updated in System Manager, changes may take up to 12 hours to take effect.</p>	<p>Workaround: Restart the DCE.</p> <p>Kofax will consider this in a future release.</p>
<p>D-10732</p>	<p>The order of customized workflows is changed if default workflow is not available. The relative order of customized Workflow buttons may change in Quick Shortcuts if the default workflow is not available.</p>	<p>Kofax will consider this in a future release.</p>
<p>D-11872</p>	<p>Scan Settings: DPI setting button unresponsive on first selection.</p> <p>On an MPC 306/406 device, in Scan GUI, the DPI setting button is unresponsive on first selection.</p>	<p>Workaround: The user needs to exit the Change Scan Settings screen and then re-enter to select DPI setting(s).</p> <p>Kofax will continue to investigate this issue with Ricoh.</p>
<p>D-12269</p>	<p>Web pages printed out from device browser are not shown in Equitrac reports.</p>	<p>Kofax will consider this in a future release.</p>
<p>D-12635 Ref. 4823</p>	<p>Unsupported workflows set as Default in System Manager are displayed on SFP device Quick Shortcuts.</p>	<p>Kofax will consider this in a future release.</p>

D-13162	On MP C306 devices, when a scan workflow is using a monochrome mixed color mode, monochrome lineart is displayed.	Kofax will consider this in a future release.
D-15094	Devices without fax hardware still show active Native Fax link, if configured.	Kofax will consider this in a future release. You can configure the system to not show fax on those devices. If the Fax application opens, exit out of it.
D-15183	Billing code search window does not auto dismiss under some scenarios.	Kofax will consider this in a future release. You can close the window manually.
D-15272	Equitrac FAC exceptions do not work as expected: You can either allow all users access to a function or deny all users access to a function.	Kofax will consider this in a future release.
D-15405	Equitrac scan tracking reports total pages scanned even when Delete Blank Pages option is selected.	Kofax considers this as designed.

6.3 Ricoh

ID	Description	Resolution
N/A	If you are using a 306/406 MFP device, you cannot deploy the Full Native Copy, Fax, and Scan Applications to Kofax screens, as these workflows are not applicable to these devices.	Quick Copy, Fax, and Scan Applications are supported on 306/406 MFP devices.
D-08909	Auto reset timer does not timeout and return to launcher from the Scan Settings screen.	Kofax will continue to investigate with Ricoh.
D-11332	Scan preview screen - Auto logout timer does not timeout from the Scan Preview screen (see D-11507).	Workaround: Disable scan preview from DRS.
D-12107	A blank screen is displayed when pressing the Home key and then Logout while the device has a paper jam during a Copy or Scan job.	Workaround: This can be recovered by pressing Back or Home key again which will bring back the Launcher.

ID	Description	Resolution
D-12212 Ref. 4739	When selecting the Administration option on the hamburger menu of Kofax Unified Client for Ricoh Smart Operation Panel 1.1 client screen, a blank screen may be displayed if the Home key is set to Kofax .	Workaround: To continue, choose one of the following options: <ul style="list-style-type: none"> • Press the System Home button to access the Ricoh Home screen. • Press the Login button to display the Welcome screen. • Wait for the auto reset timer to display Welcome screen. Kofax will consider this enhancement in a future release.
D-12271 Ref. 4752	Use of Ricoh device native Function Keys is currently not supported.	Kofax will consider this in a future release.
D-12290	During scanning, the Recall Setting History does not work.	Kofax will continue to investigate this issue with Ricoh.
D-12534 Ref. 4814	If an error occurs on the device, the auto-logout and the auto-rest timers will not work until you clear the error	Workaround: Press the Stop button. Kofax can continue reviewing this with RCL post-verification.
D-12659 Ref. 4825	At times, the device might display the following message: "Unfortunately, Copy has stopped."	This issue will be fixed in a future firmware update.
D-13060	On the Scan Settings screen, some of the text might overlap.	Kofax will continue to investigate this issue with Ricoh.
D-13078	During a batch scan, after approximately 1500 pages, the following error message is displayed: "Exceeded max data size per file. Cannot scan. The scanned data will be deleted."	Kofax will continue to investigate this issue with Ricoh.
D-15224 Ref. 2833	During install, the device becomes unresponsive while showing a modal message.	Reboot using DRS reboot may recover the device. If that fails, use the hard power button.

ID	Description	Resolution
D-15347 Ref.2852	If Scan Preview is the screen owner, CAC will logout and lock the device. It is not possible to go to the home screen to cancel the preview session and a restart is required.	Workaround: Disable scan preview from DRS.

6.4 DRS

ID	Description	Resolution
D-11694	Order of fields upon adding an application are different between upgrade and new install. The ordering of fields in the Application and Device Details is not preserved during an update.	Kofax will consider this in a future release.
D-11695	The order of actions is off from upgrade compared to new install. The ordering of Device Actions is not preserved during an update.	Kofax will consider this in a future release.
D-12213 Ref. 4738	Home Key Assignment Mode set to UI Change Mode which puts the Ricoh Home Key in the top left corner of the panel is not currently supported.	Kofax will consider this in a future release.

7 Notes

- Logging in as the administrator from User Tools reverts to the Launcher main screen. The administrator must access the System Home page/User Tools one more time.
- Pressing the **Home** key while a Scan is in progress no longer cancels the Scan. To cancel the scan, the user must press the **Stop** button and cancel the scan job from the Ricoh Job listing or fix the error condition and complete or cancel the job.
- SFP devices limitation: The Billing Code at login for Equitrac is still displayed on client (at login) if set on the server, but will not be used for tracking any activity, as SFP devices do not support copy, fax or scan functionalities. This setting cannot be set per device as it is set globally on the server.
- Configuring and using DRS for a Common Access Card (CAC) device (version 4.0.5): For more information, see [Configuring and using DRS for a Common Access Card \(CAC\) device](#).
- Native workflows show up on SFPs with workflow set to default quick shortcut. When Native workflows are set as Default in System manager, they are not filtered from Quick Shortcuts.
- Print and Scan transactions performed using Ricoh cloud apps are not tracked using the PCC 5.1 client as this is not a supported configuration.
- Sync Workflow customization and Sync Assets actions are not supported if Authentication

- is set to **False**.
- AutoStore: Workflow customization is not supported in AutoStore only deployment. Customized workflows are not displayed on Launcher for AutoStore only installation.
- The card reader may not be attached to the USB port on the body of the printer.
- Some scanning options are different between the MP C306z / MP 406z models and other supported models due to a different Ricoh Scan GUI Service.
- In this release, the Session Summary Screen is not available.

8 Installation Requirements

8.1 Supported Ricoh MFPs

Please review the supported model matrix for updates when new models are released:
https://nuanceimaging.custhelp.com/app/imaging/supported_devices?mfr=7.

8.2 Ricoh Firmware

This client supports Ricoh firmware M2a_System version (Smart Operation Panel firmware) v1.26 or later. Note: IM series devices may require M2a_System version 1.06.1 or later.

8.3 PCC 5.1 version

For client upgrade only, perform the following:

1. Upload a new client installation package. Refer to *Configure Device Registration Service* section in the deployment guides listed below.
2. Perform a Quick Install. Refer to *Ricoh PCC 5.1 Actions Reference* section in the deployment guides listed below.

Deployment guides available:

- The *Unified for Ricoh PCC5.1 Equitrac Deployment Guide*
- The *Unified for Ricoh PCC5.1 Equitrac and AutoStore Deployment Guide*.

Note: When installing into a new deployment, ensure to deploy using the Full Install method.

8.4 Supported Servers

- Equitrac Office / Express 5.7 with latest hotfixes (including EQ57-HF-353803-CAS or later)
- Equitrac Office / Express 5.6 with latest hotfixes (including EQ56-HF-334058-DCE or later and EQ56-HF-353790-CAS or later)
- AutoStore 7 SP5 or later
- DRS 7.13 or later

This client is unified and can support multiple product servers individually or simultaneously.

The client can act as an Authentication Agent or run as a regular application on the Smart Operation Panel.

At this time, we recommend that you do not set the client as the Priority Application for any deployment configurations.

Scenario	EO/EE	AutoStore	Authentication Agent
Equitrac standalone	Yes		Yes
Equitrac standalone - CAC	Yes		No
AutoStore standalone (no device locking)		Yes	No
Equitrac and AutoStore	Yes	Yes	Yes
Equitrac and AutoStore - CAC	Yes	Yes	No

9 Third-Party Application Dependencies

- CAC – 4.1.2-54
- AAA – 2.0.3
- RXOP – 3.7.3
- Scan GUI Service:
 - SmartScanEx – 1.06 (used for MP devices except for MP C306/C406 and SFP devices)
 - SimpleScanEx – 1.03.00 (used only for MP C306/C406 model devices)
 - IM devices come preinstalled with Scan GUI service 2.01.

10 Supported DRS Releases

From DRS 7.12, support for PCC 5.0 has been discontinued. This means that if a user with PCC 5.0 wants to upgrade from previous DRS to DRS 7.13, they must also upgrade their PCC client from 5.0 to 5.1.

For more information on how to upgrade from PCC 5.0 to PCC 5.1, see [Best Practices](#).

DRS version	PCC 5.1 (versions 1.30.184, 1.30.199 and 1.30.213)	PCC 5.0 (version 1.14.525)	PCC 5.0 (version 1.14.342)
7.13 (**)	Yes	No	No
7.12	Yes	No	No
7.11	No	Yes	Yes
7.10	No	Yes	Yes
7.9 (patch 2)	No	Yes	Yes
7.9	No	No	Yes
7.8 (*)	No	No	Yes
7.7 (*)	No	No	Yes
7.6	No	No	Yes

(*) These DRS builds were not released to market.

(**) For new Ricoh devices, use build 1.30.213

Note: DRS 7.11 does not support Ricoh PCC 5.1.

11 Configuring and using DRS for a Common Access Card (CAC) device

11.1 Selection on the Ricoh Smart Operation Panel device – DRS Web client

1. Open the <http://<DRSIP>:9000/device> or <https://<DRSIP>:9000/device> depending on TLS configuration.
2. Make sure you select the Baseline Installation as 'False'. Note: For NON-CAC device use Baseline Installation as 'True'.

11.2 DRS action steps

1. Select the device which has CAC on it.
2. Run action 'Full Install'.

See the *Deployment Guide* for additional information

12 Best Practices

- For Equitrac, it is recommended that you do not add Quick Shortcuts to the Launcher container, as you might experience an infinite navigation loop.
- Purging the address book before installation is strongly recommended to ensure the login performance gain is recognized.
- When updating firmware, it is recommended to perform a Full Install action in DRS after installation. This will ensure that the SP modes are set as required after the firmware update.
- To upgrade from PCC 5.0 to 5.1, complete the following:
 1. Upgrade from DRS 7.11 to at least DRS 7.12 for PCC 5.1.
NOTE: It is recommended to upgrade to DRS 7.13 to use new devices. For more information, see section *Upgrading Device Registration Service* in the *Device Registration Service 7.13 Installation Guide*.
 2. Uninstall PCC 5.0 client
 3. Install the latest PCC 5.1 client using DRS 7.13 with a Full Install action.

Also note the following:

- Allow DRS 7.12 or later to uninstall PCC 5.0.
- Do not allow DRS 7.12 or later to manage or install a PCC 5.0 environment.
- (If available) Do not allow DRS 7.11 to manage, install or upgrade a PCC 5.1 environment.

Database Upgrade Tool: The database upgrade tool is run after an existing DRS installation has been successfully upgraded, with the backed-up database correctly restored, but before the DRS service is started. The tool goes through all existing application profiles, devices and device groups, and perform necessary modifications to have the database records ready for the latest DRS release. For more information, see section *Database Upgrade Tool* in the *Device Registration Service 7.13 Installation Guide*.