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Introduction

MobiControl v13 redesigns the method by which administrators distribute groups of applications, files, and scripts (together known as “packages”) to managed devices by leveraging the “profiles” feature introduced in MobiControl v12. This approach replaces existing “Package Deployment Rules” and enhances package distribution with the flexibility, granularity, and scalability of profiles.

This Package Rules to Profiles Migration Guide describes the outcome when legacy package deployment rules are migrated to profiles during an upgrade to MobiControl v13. This document does not cover standard practices for the installation or upgrade of MobiControl environments and assumes that you have basic knowledge, and administrative access to all MobiControl components including the database.

Packages are NOT available for Android (generic), iOS, or Windows Phone device platforms. If you are managing these platforms exclusively this guide does not apply to you. If you manage Android+, Windows Mobile/CE/Desktop devices you are highly encouraged to read this guide prior to upgrading.

If you are upgrading from MobiControl v11 or earlier, please familiarize yourself with the migration of legacy device configurations to “profiles” by reading the MobiControl v12 Migration to Profiles Guide.

For consultation and/or support of your MobiControl upgrade please contact SOTI’s Professional Services and Support teams.
Comparison of Legacy Package Deployment Rules to Profiles

Legacy Package Deployment Rules

Prior to MobiControl v13, one or more packages were distributed using “Package Deployment Rules” to devices contained within specified device groups. Child device groups inherit the same package deployment rule as its parent unless the child was explicitly excluded during target selection.

Virtual device groups were also valid targets for package deployment rules, and were often used to select a subset of devices based on more granular criteria such as make, model, or operating system version.

The following conceptual illustration shows a package deployment rule that targets a virtual device group called “Sales Devices”, and the “My Company” root device group including its children through inheritance, except the device group “Toronto” where a manual override was defined.

![Package Deployment Rule Illustration](image)

Figure 1 – Package Deployment Rule targeting “Sales Devices”, “My Company” and children except “Toronto”

Overview of Profiles for Package Distribution

MobiControl v12 introduced profiles which improved device configuration by de-coupling configurations from device groups to provide a distribution method that accounted for device specific, and even user specific requirements. This flexibility is achieved with granular assignment criteria that includes device groups, device properties, and LDAP group associations for identifying the devices to target a configuration to. Assignment criteria is independent from the contents of what the profile is deploying to the device and can be reconfigured and edited at any time.

With MobiControl v13, a package can now be added as a payload of a profile and distributed to devices using the same granular assignment criteria thereby receiving all the benefits of a
Migration to Profiles

During upgrade to MobiControl v13, all legacy package deployment rules will be migrated to profiles and will appear under the “Profiles” tab in the web console. Package deployment rules are migrated to profiles in such a way that devices remain untouched during and after the upgrade process.

Package Deployment Rules to Profiles

The following logic is used to migrate legacy package deployment rules to profiles:

Creation

- A platform-specific (Android+, Windows Mobile/CE, etc.) profile will be created for every package deployment rule.
- A separate profile will be created for every virtual group that a package deployment rule was targeting.
- Package deployment rules for Android+ where the option “Install Inside KNOX Container” was selected will be migrated to an Android+ profile with a sub-type of KNOX.
- Disabled or deactivated rules will be migrated to a disabled profile state.
- Package dependencies will be migrated from the global package catalog to each Profile as they are profile-specific in v13.

Naming Convention

- Profiles created as a result of a migration will maintain the same name as the original package deployment rule.
- Profiles created as a result of a virtual group target will maintain the same name as the original package deployment rule and include the virtual group name. For example: “Package Deployment Rule – Virtual Group”.

Assignment

- Profiles will be assigned to the device groups where the legacy package deployment rule was targeting excluding any child device groups that were being overridden.
- Profiles that were originally targeting virtual groups will be assigned to the virtual group’s parent device group, or all root groups if the virtual group itself was a root group. The profile’s assignment criteria will then be filtered to match that of the original virtual group. Exceptions apply, see Migration Failure.
- Any devices manually added to a virtual group will be targeted directly by the profile.
Permissions

- The default “MobiControl Administrators” group is granted “Read & Write” access to all profiles created as a result of migration.

Execution Status

- Package installation statuses will match the installation status prior to upgrade, either “Installed” or “Failed”.

Package Deployment Rule Options

- The following package deployment rule options are migrated to profile assignment criteria features that either existed or were added to support packages.
  - Schedule Installation (renamed to “Install Package Date”)
  - Network Restriction
  - Persistently Store Packages (renamed to “Store packages persistently when supported by device”)
  - Uninstall Contents upon Rule Deletion (renamed to “Uninstall package contents upon profile revocation or deletion”)
  - Always Force Re-install (renamed to “Reinstall packages on every update schedule”)
  - Push Package as Soon as Possible (is default behavior with profiles, however to delay profile assignment use the “Delay to next update schedule” option)
  - Activation Date (migrated to “Assign Date”)
  - Deactivation Date (migrated to “Disable Date”)
  - Install Inside KNOX Container (rules with this option are migrated to Android+ profiles with “KNOX” subtype)
- The following package deployment rule options are obsolete and are not migrated:
  - “Rule Priority”
  - “Target KNOX Supported Devices Only”

Examples

The following provides a visual representation of the migration logic performed during upgrade. With each example, the package deployment rule is shown on the left and the profiles created as a result of the migration, on the right. Device group inheritance is still applicable in the migrated profile although not depicted in the resulting diagram.

Package Deployment Rule Targeting Real Device Groups with Inheritance Exclusions

The following illustration represents the most common migration scenarios where a package deployment rule targets only real device groups which are migrated like for like to assignment
criteria in the profile after migration.

Figure 2 - Migration of Rule with Real Device Group Targets

Package Deployment Rules Targeting Virtual Groups

The following illustration demonstrates the migration of a package deployment rule that targets real device groups as well as two virtual device groups. This results in a profile for the real devices groups and two profiles to accommodate the virtual groups.

Figure 3 – Migration of Rule with Real and Virtual Group Targets
Migration Failure

Upgrading to MobiControl v13 may fail with a package deployment rule migration error. This will occur if your current MobiControl configuration includes package deployment rules that target a virtual group with unsupported filter criteria. A failure of this type during upgrade is non-destructive. In other words, you may restart services to restore the environment without completing the upgrade.

Supported filter criteria for migration is as follows, everything else is considered unsupported.

- Total External Storage
- Total Memory
- OS Version
- Model
- Manufacturer
- Is Encrypted
- Has Passcode
- Installed Applications
- Custom Data using anything but the “Any” operator
- Custom Attribute using anything but the “Any” operator
- MDM Compatibility using anything but the “Any” operator
- LDAP Group using anything but the “Any” operator

The name of the package deployment rule(s) that violates the migration criteria is logged in the installation log upon failure. You must change the virtual group filter criteria to match the supported properties before you can continue with the upgrade.

**WARNING:** Exercise caution when changing virtual group filter criteria to meet this requirement. Changes to the filter criteria will undoubtedly cause some devices to receive or not receive a package.

Before Upgrade

To ensure the smoothest upgrade experience the following considerations should be taken into account in addition to any standard upgrade practices such as data backups, documentation review, etc.

Optimizing Migration

Profiles allow for a more efficient use and re-use of configurations and now packages; however unlike package deployment rules, profiles do not target virtual groups which after migration may result in more profiles than originating package deployment rules.
To reduce the number of profiles created during migration, check all package deployment rules for obsolete and un-used virtual group targets and remove them prior to upgrade.

Check for Unsupported Filter Criteria

As described in the Migration Failure section of this guide, the upgrade procedure will fail if a package deployment rule is targeting a virtual group with unsupported filter criteria. To programmatically check whether your environment will fail upgrade as a result of this condition without having to run the MobiControl installer, the following SQL script is provided. The script requires database “Owner” privileges to execute successfully and can be obtained at the following URL:

https://www.soti.net/files/shared/UpgradeV13PreCheck.sql

Staging Upgrade in Pre-Production Environments

SOTI strongly encourages the standard IT change control practice of testing upgrades thoroughly in pre-production environments before being transitioned into production. If you currently do not follow these IT practices with MobiControl please contact SOTI’s Professional Services and Support Team for consultation before proceeding with your upgrade.

After Upgrade

Having successfully completed the upgrade to MobiControl v13, you are ready to take full advantage of profiles for package deployment. During the migration process however MobiControl made several decisions that you should review and adjust as necessary.

Permissions

- Administrators that had “Manage Package Deployment Rules” prior to upgrade do not automatically gain the “View Profiles” or “Manage Profiles” permission. Without these permissions administrators that may have previously deployed packages may not be able to do so after upgrade.
- By default, “MobiControl Administrators” have been given full read and write access to profiles that were created, but if an administrative user is not a member of that group, they will not see the migrated profiles.
- Administrators with the now obsolete “View Packages” permission will automatically gain the “View and Deploy Packages”, and “Manage Packages” permission.