

# Marketplace app compatibility

Version 8.0



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# Configure the Marketplace app for composable architecture compatibility



Composable package architecture is available for Creatio version 8.0.6 and later.

As part of transition to new architecture, the package architecture was revamped in Creatio version 8.0.6. During the transition period, existing Creatio instances include both composable and classic package architectures after updating to version 8.0.6 and later. Learn more in a separate article: [Composable package architecture](#). Existing Marketplace apps are developed based on classic package architecture. During the transition period, existing Marketplace apps work as intended. After the transition period, new Creatio instances will only include composable architecture. I. e., installing a Marketplace app into an updated Creatio instance will not work. Configure the Marketplace app for composable architecture compatibility to ensure the app operates as expected after the transition to composable architecture.

We recommend configuring the Marketplace app for composable architecture compatibility during the transition period if your app meets the following **prerequisites**:

- The app is a complete and independent product. For example, the app generates requests without using contacts and accounts.
- The app adds new features to Freedom UI Designer or extends existing features. For example, the app adds a new component to the Freedom UI Designer or improves the UX of the Configuration Element Designers.

If your Marketplace app is based on Classic UI sections that have no Freedom UI section counterparts yet, we recommend waiting for the release of composable apps that include the required Freedom UI sections. After the release, review the new functionality of the composable app, configure your Marketplace app for composable architecture compatibility, and publish the new version on Creatio Marketplace.

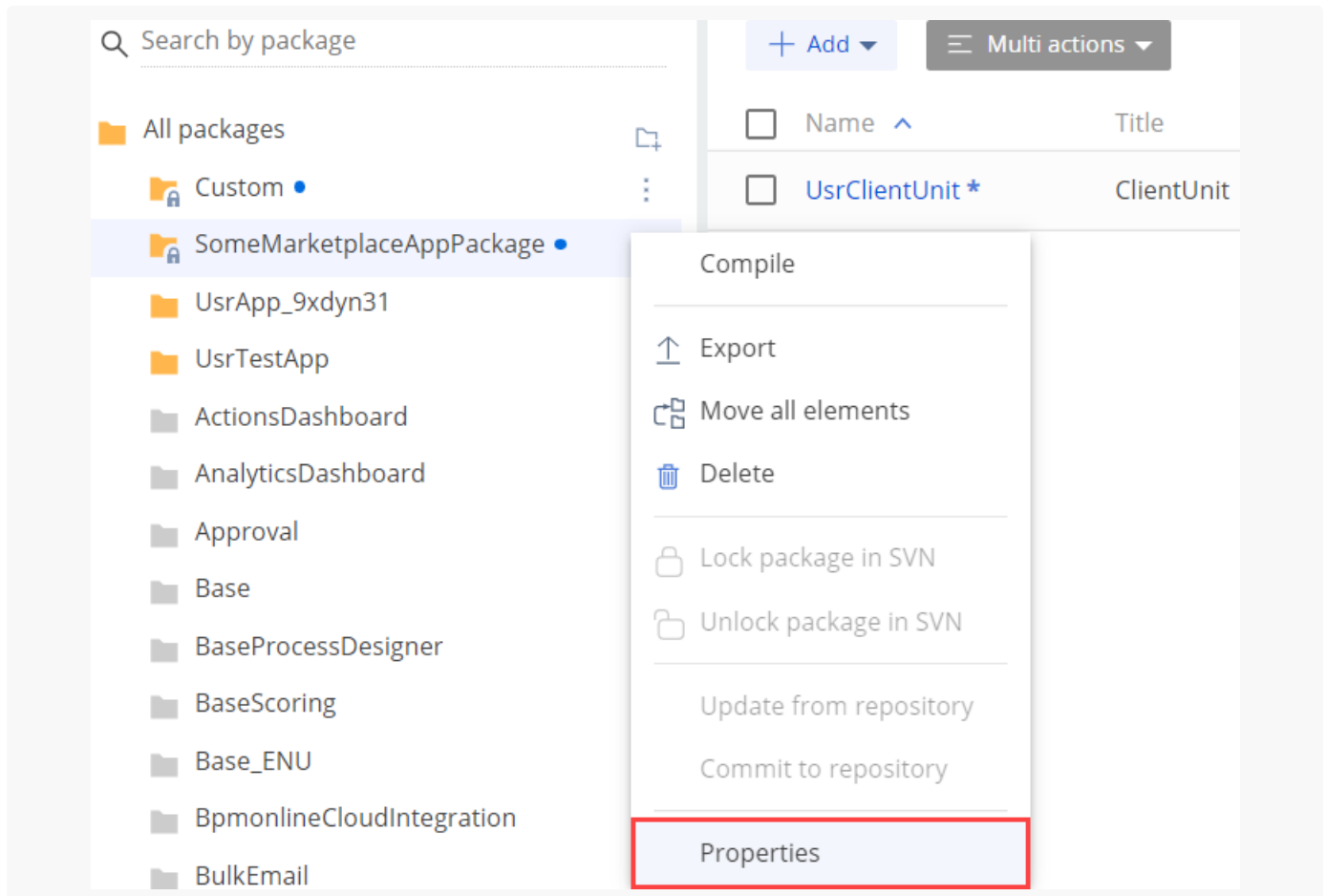
You can configure the Marketplace app for composable architecture compatibility in the following ways:

- using Creatio IDE
- without using Creatio IDE

## Configure the Marketplace app for composable architecture compatibility using Creatio IDE

1. Prepare the app development environment version 8.0.6 or later. You can deploy the app development website on-site or in the cloud. To do this, follow the instructions in a separate article: [Steps to develop the Marketplace app](#).
2. Install the Marketplace app into Creatio.
3. Unlock the package that contains the Marketplace app functionality using the Clio utility. To do this, follow the instructions in the utility documentation [on GitHub](#).

4. [Open the \[ Configuration \] section](#) and select the [package](#) that contains the Marketplace app functionality.
5. Select [ *Properties* ] in the package menu.



6. Edit the package dependencies.
  - a. Open the [ *Dependencies* ] tab.
  - b. Add packages of composable architecture to the dependencies.
    - a. Click [ + Add ] in the [ *Depends on Packages* ] block.
    - b. Select the `CrtCore` package and add a dependency to the package.
    - c. If your app uses the functionality of composable apps, add the package that implements the required functionality to the dependencies. For example, your Marketplace app uses the functionality of the [ *Customer360* ] composable app. In this case, select `CrtCustomer360App` and/or `CrtCustomer360Mobile` packages and add dependencies to the Marketplace app package.
  - c. Remove dependencies on packages of classic architecture, for example, `Base`, `Platform`, `NUI`, etc.

**Attention.** If errors occur while removing package dependencies, debug the Marketplace app and identify the schemas where you must remove the dependencies on schemas and packages of classic architecture.

- d. Save the changes.

Package properties Creatio

**CLOSE** ACTIONS ▾

---

Name  
SomeMarketplaceAppPackage

Repository address

Repository version

Package version

Maintainer  
Customer (i)

---

DEPENDENCIES    INSTALLATION STEPS    SYSTEM INFORMATION

Depends on Packages (i) ^

Q Search by package

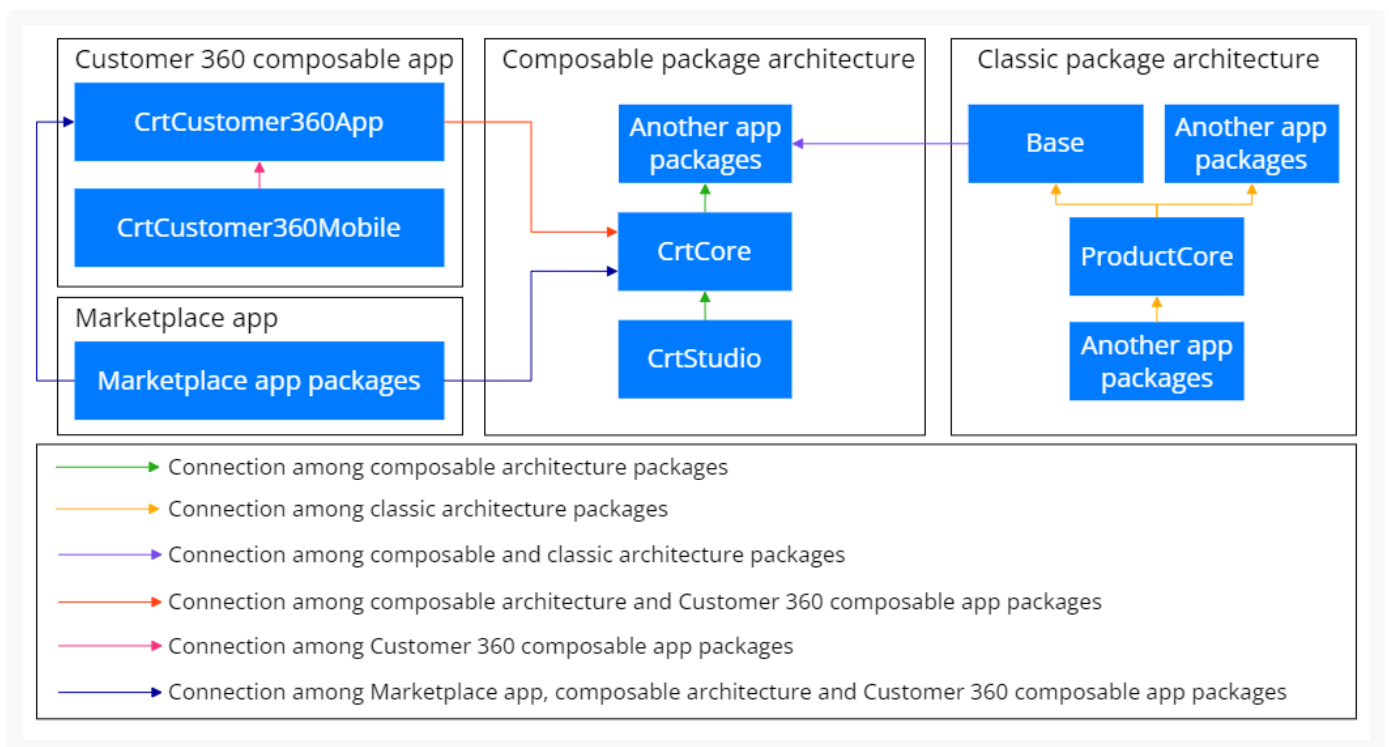
Name ^

📁 CrtCore

📁 CrtCustomer360App

+ Add

For example, view the connection chart among Marketplace app, composable architecture, and [ *Customer 360* ] composable app packages in the figure below.



7. Test the Marketplace app operability. To do this, verify that the functionality operates as expected using a new or existing Creatio instance version 8.0.6 or later. Make sure the app meets the requirements listed in a separate article: [Requirements for Marketplace app](#).

## Configure the Marketplace app for composable architecture compatibility without using Creatio IDE

1. Download the package that contains the Marketplace app functionality.
2. Unpack the \*.zip archive that contains the Marketplace app packages using the Clio utility. To do this, follow the instructions in the utility documentation [on GitHub](#).
3. Edit the package dependencies.
  - a. Open the `...\Terrasoft.WebApp\Terrasoft.Configuration\Pkg\SomePackageName\descriptor.json` file.
  - b. Add packages to the array property of the `DependsOn` object.
    - a. Add the `CrtCore` package to the array property of the `DependsOn` object.
    - b. If your app uses the functionality of composable apps, add the package that implements the required functionality to the array property of the `DependsOn` object. For example, your Marketplace app uses the functionality of the [ `Customer360` ] composable app. In this case, add `CrtCustomer360App` and/or `CrtCustomer360Mobile` packages to the array property of the `DependsOn` object.
  - c. Remove dependencies on packages of classic architecture, for example, `Base`, `Platform`, `NUI`, etc.
  - d. Save the changes.

View the example of the `descriptor.json` file below.

#### `descriptor.json` file

```
{
  "Descriptor": {
    ...,
    "DependsOn": [
      {
        "UId": "012e2e14-082b-ac2b-da5a-2fc87bad41d4",
        "PackageVersion": "7.8.0",
        "Name": "CrtCore"
      },
      {
        "UId": "2ecba2bd-b810-47a5-a1b1-08c888529d6c",
        "PackageVersion": "7.8.0",
        "Name": "CrtCustomer360App"
      }
    ]
  }
}
```

4. Test the Marketplace app operability. To do this, install the app into a new Creatio instance version 8.0.6 or later and verify that the functionality operates as expected. Make sure the app meets the requirements listed in a separate article: [Requirements for Marketplace app](#).

## Recommendations for developing

# compatible Marketplace apps



Upcoming Creatio releases change the way apps are installed into the environment and app compatibility requirements. Configure the Marketplace app to ensure the app is compatible with Creatio.

Follow these **recommendations** to ensure the Marketplace app compatibility:

- Recommendations for developing a reversibly installable Marketplace app
- Recommendations for developing a Marketplace app compatible with Creatio in multi-tenant mode
- Recommendations for developing a Marketplace app compatible with Creatio that has external file storage connected

## Recommendations for developing a reversibly installable Marketplace app

In version 8.0 Atlas, we changed the rollback mechanism that the users can initiate if the package installation ends with an error. The **key changes** to the rollback mechanism are as follows:

- You can roll back changes executed by data bindings.
- You can flag custom SQL scripts as backward compatible. Learn more in a separate article: [Backward compatible SQL scripts](#).
- You can use install scripts to execute CRUD operations with data as part of package installation. Learn more in a separate article: [Customize delivery process](#).

These changes ensure the restoring the configuration without using database backup as long as the functionality of the installed package executes reversible database changes. To **develop a reversibly installable Marketplace app**, follow our recommendations and requirements when implementing the functionality.

To make the recovery process easier, the upcoming releases will include an **automatic app analyzer** that detects irreversible changes. Before and while installing the package, the analyzer will check the package functionality for irreversible changes and notify the user on detected irreversible changes. The WorkspaceConsole utility already includes partial functionality of the analyzer. Upcoming Creatio releases will add the analyzer to the mechanism that installs packages via UI.

To ensure the functionality of the Marketplace app is installable reversibly, follow these **recommendations**:

- Use **package install scripts** instead of SQL scripts to execute CRUD operations with data as part of the package installation process.

If the installation of a package that contains Marketplace app functionality ends with an error, you can roll the configuration back completely as long as configuration elements make reversible changes to the database as part of the package installation. However, you cannot roll the configuration back completely if the configuration elements of the [ *SQL script* ] type make irreversible changes to the database as part of the package installation.

Install scripts execute operations with data using the `Entity` class. Creatio saves changes made by install scripts as part of the package installation to the package backup. You can roll back to the previous configuration state completely in case of an error. Learn more in a separate article: [Customize delivery](#)



[process](#).

- Use **backward compatible SQL scripts** to create database objects. Learn more in a separate article: [Backward compatible SQL scripts](#).

## Recommendations for developing a Marketplace app compatible with Creatio in multi-tenant mode

**Multi-tenant mode** is a Creatio deployment mode that enables multiple organizations to work independently on a single Creatio instance. Multi-tenant mode in Creatio grants the organization users access to the organization sections, apps, and functionality. Users, data, and functionality of different organizations do not overlap. As such, Creatio in multi-tenant mode requires organization data to be isolated.

To ensure the Marketplace app is compatible with Creatio in multi-tenant mode, use **package install scripts** instead of SQL scripts to execute CRUD operations with data as part of package installation. Creatio forbids executing SQL scripts on Creatio instances in multi-tenant mode to isolate organizations and ensure data security. Learn more about install scripts in a separate article: [Customize delivery process](#).

## Recommendations for developing a Marketplace app compatible with Creatio that has external file storage connected

Users can set up integration with S3 (since version 7.18.3) and Azure Blob (since version 8.0.2) external file storages. Learn more in the user documentation: [File storage](#).

Users of Creatio in the cloud can store files in the S3 file storage on demand. We will configure integration with the Azure Blob file storage for users of Creatio in the cloud in the upcoming Creatio releases. As such, Marketplace apps that use direct SQL queries to access files will be incompatible with Creatio that has S3 or Azure Blob file storages connected.

To ensure the Marketplace app is compatible with Creatio that has external file storage connected, use file management API in your Marketplace app instead of direct SQL queries. The API lets you access files stored in the database and external storage. Learn more about the API in a separate article: [API for file management](#).