Deployment (20.1)

Agile Data Engine's built-in and fully integrated Deployment Management module manages the CI/CD processes.

The runtime metadata of each of environments is stored in an internal repository and it includes both database structure definitions and the data workflows metadata.
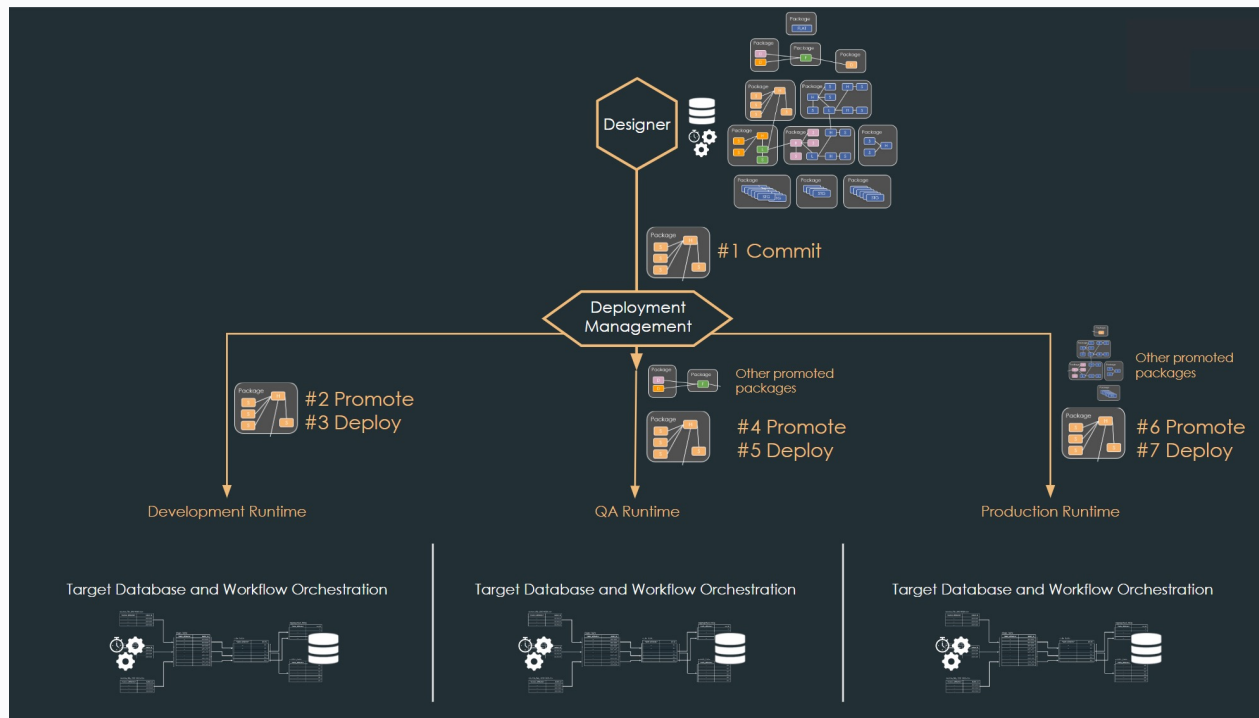
ADE is able to determine the optimal way to deploy the object structure SQL and workflow management Python code into an environment, i.e. identify needed changes by comparing state of objects instead of deploying code sequentially.

Packages (groups of entities with their corresponding loads) are units of promotion and deployment in ADE.

Deployment (20.2)
Deployment process

Commit, promotion, demotion and deployment are the central concepts of the deployment process in ADE:

Deployment (20.3)
Deployment flow

1. Commit - the deployment process starts when a package is committed. A Package groups multiple entities together along with their loads and is the unit of commit in ADE.

2. Promotion is an approval for deployment to a Runtime environment. It is possible to deploy several promoted packages at once.

3. If needed, packages can be demoted (uninstalled).

4. Deployment module installs changes in the promoted package versions to the target database (SQL) and to Workflow Orchestration (Python).

5. The deployment code is executed in the database as set of transactions.

6. Potential errors are caught and visible in the log. In case of deployment errors ADE rolls back a transaction on an entity level (can be also for example a satellite with its corresponding satellite view) and the state is rolled back and ready for re-deployment.

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