



## SMART FRAMEWORKS FOR ORACLE DATA INTEGRATOR

### WHY DO I NEED THIS?

If your Oracle Data Integrator (ODI) projects are:

- taking too long, and requiring too many resources to deliver
- spent testing and resolving defects more than developing
- difficult to maintain due to inconsistencies

Smart Frameworks improve developer productivity, quality, and consistency, whilst simultaneously reducing development, testing, and maintenance timescales, costs, and risk.

### HOW DOES IT WORK?

The Smart Frameworks consist of a number of components that leverage the ODI API to automate the creation and maintenance of ODI Model and Datastore Metadata, Interfaces/Mappings, Packages, and Load Plans.

Modules can either be run 'stand alone' from the command line, or as an OpenTool step from inside a Package.

### THE RESULT?

- Faster, cheaper, better data integration
- Developers can instead focus on understanding more complicated business rules, transformations, and processes.

- Repetitive and error-prone tasks that would otherwise have to be performed manually by expensive developer resources can be automated on an industrial scale, resulting in thousands of objects being created or modified in a matter of seconds consistently, accurately, and reliably according to flexible parameters and powerful rules you specify.
- Test cycles, and defect lists are shorter. Fixing a problem once fixes it everywhere it occurs.

### OTHER FEATURES

- Any interface or mapping can leverage Slowly Changing Dimension (SCD) Integration Knowledge Module (IKM) functionality, without any need to manually set SCD behaviours at the Datastore level.
- Data quality flow control Check Knowledge Modules (CKM) can automatically be executed in parent and child dependency order, with maximum parallelisation.
- Workflows used to schedule and manage the execution order of interdependent processes can be automated.
- The code to migrate entire databases from one instance to another - regardless of the underlying source and target technologies - can be automated in a matter of minutes.
- Supports both Oracle Data Integrator 11g and 12c.



## COMPONENT

## CAPABILITIES

MetaGen



- Iterates through Model objects (or a subset thereof) to automatically set SCD behaviours such as Natural Key, Surrogate Key, Start/End Timestamp, Add Row/Overwrite On Change, Current Record Flag based on sophisticated attribute matching rules.
- File technology descriptors such as delimiters, row/column separators and header lines to skip can be automatically and consistently set in a single pass - enabling copies of source datastores to be used to define the structure and layout of the flat files they are exported to.
- Primary Key constraints can be automatically inferred based on sophisticated matching rules if not explicitly declared and reverse engineered elsewhere.
- Datastore and Attribute level comments can be automatically imported from external sources and added to Model metadata.

InGen



- Iterates through Model objects (or a subset thereof) to dynamically generate Interfaces and Mappings from a source to a matching target DataStore - even when the names are significantly different and may not easily be matched through regular expressions and other implicit matching methods.
- Which particular IKM, LKM, and CKM, and Staging Area to be used for generated Interfaces and Mappings can be specified, along with any associated options.
- Sophisticated custom filters and mappings e.g. containing variables, literals, functions, conditional or data type driven logic, etc. can be automatically added to specific attributes, and a different execution location can be set for each.
- User defined flags can be automatically set at the attribute level based on a variety of rules including attribute name, regular expression match, data type, SCD behaviour, or PK/FK presence.
- Documentation for all the logic and parameter settings used can optionally be added to each generated Interface or Mapping.

ExeGen



- Iterates through either Model or Folder objects to automatically generate Package or Load Plan objects to execute corresponding Interface, Mapping, or Scenario objects found according to sophisticated matching and execution rules.
- Can set Scenarios to run asynchronously or synchronously within dynamically generated Packages or Load Plans, at specific log levels, and optionally to always run either the latest or a specific version of a Scenario.
- Can automatically set restart behaviours for serial and parallel Load Plan steps.
- Can automatically declare, set, or refresh variables within a generated Package or Load Plan as well as specify which variables will be used to pass values between Scenarios

  
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