



GAINSystems Oracle Integration Overview

by GAINSystems, Inc.

W h i t e P a p e r

Overview

GAINSystems has a long track record of integration success with Oracle. To facilitate the exchange of data between Oracle and GAINS, the GAINS Integration Toolkit (GIT) was developed by GAINSystems as a purpose-specific utility strictly for GAINS-related interfacing. It enables precise mapping of fields between Oracle and the GAINS database. The diagram below provides a summary-level data flow between GAINS and Oracle.

Standard mapping templates are provided out of the box and are maintained by GAINS to ensure integrity across new GAINS and Oracle ERP versions. Data is transferred by means of interface files (XML or ASCII), or by directly populating Oracle staging tables via auto-generated queries. The GUI-based toolkit also provides great flexibility in tailoring its usage to client-specific variations of Oracle. It can be used on-demand to interface data, or it can be run automatically as part of a regularly scheduled batch process. In both cases, data may be imported and/or exported to Oracle.

Aliases are used in the toolkit to map GAINS fields to corresponding fields in Oracle and vice versa. These aliases are then logically grouped in a variety of ways to create Data Sets. As is shown in the screenshot below, SQL is automatically generated which can be used to import or export the data. This particular example shows the mapping for a bill-of-material interface file.

| ALIAS | Transfer Condition | Required | Field No | Field Name | Format | Length | Default Value | Comment |
|-------------------|--------------------|----------|----------|-----------------------|-----------|--------|---------------|--------------------------|
| bon_assemblyItem | | true | 1 | KIT Item Code | Char(65) | 65 | | Cannot contain quotab... |
| bon_assemblyLoc | | true | 2 | KIT Location Code | Char(8) | 8 | | Cannot contain quotab... |
| bon_component | | true | 3 | COMPONENT Item Code | Char(65) | 65 | | Cannot contain quotab... |
| bon_compLoc | | true | 4 | COMPONENT Locatio... | Char(8) | 8 | | Cannot contain quotab... |
| bon_qtyPer | | true | 5 | Component Qty per KIT | Float | 8 | | |
| bon_yield | | true | 6 | Yield Percentage | Float | 5 | | |
| Select Alias Name | | false | 7 | Core Component Flag | Char (1) | 1 | | |
| Select Alias Name | | false | 8 | Filter | Char (13) | 13 | | |
| EOB | | false | 9 | End of Record | Char(1) | 1 | X | |

Select Query

```
and RELATIONSHIP_TYPE_ID='B') SUPERCESSION_DATA WHERE bic.bill_sequence_id =  
bbom.common_bill_sequence_id  
and bic.component_item_id = mail.inventory_item_id  
and bbom.assembly_item_id = ms12.inventory_item_id  
and bbom.organization_id = ms11.organization_id  
and bbom.organization_id = ms12.organization_id  
and ms11.segment1 = supercession_data.related_segment1(+) and  
substrc (ms11.organization_id,1,6)=supercession_data.RELATED_ORGANIZATION_ID(+)  
and ms12.planning_make_buy_code<>2  
and bic.disable_date is null  
and ms12.item_type not in ('ATO','PTO','AOC','POC')
```

Figure 1: Grouping of alia in a defined bill-of-material data set

Data Sets, are then further grouped into Data Maps and Groups. This enables well-defined groups of interfaces for various situations. For example, a client may choose to only interface new and changed records daily, while processing all items on the weekend during low system usage.

The Integration Toolkit allows the specification of one Data Group, which contains only the data needed for daily processing, and another Data Group which may contain the data needed for weekend processing.

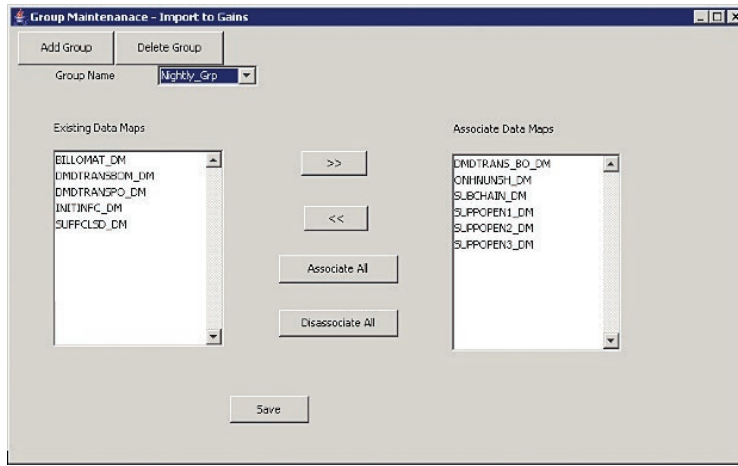


Figure 2: Data Sets are maintained in Data Groups to facilitate multiple interface processes

Best of Breed Built on Scientific Foundation

As mentioned, this paper focuses on the science of GAINS Inventory Optimization, those elements that GAINS uniquely provides. That said, GAINS matches the best-in-class abilities to provide workbenches with embedded reports to manage in any unit-of-measure, at the aggregate level, to connect and synch multiple plans across multiple functions in the enterprise (e.g., Strategic / Financial / Marketing) with the Detailed Plans (including replenishment). See the figure below for a sample of the multi-level, multi-unit-of-measure review abilities.

Appendix 1: Summary of the Oracle-to-GAINS data table mappings:

| # | Type of Data | GAINSystems File | Oracle Tables Referenced | Notes |
|---|-----------------------|------------------|---|--|
| 1 | Item Master | InitInfc | 1) kesx_mtl_related_items_all 2) inv.mtl_system_items_b 3) apps.mtl_categories 4) inv.mtl_item_categories 5) gl.gl_code_combinations 6) bom.cst_item_costs 7) apps.mtl_onhand_quantities 8) inv.mtl_secondary_inventories | Defines items along with and attributes and on-hand values |
| 2 | Demand Transactions | Dmdtrans | 1) ont.oe_order_lines_all 2) apps.hz_cust_accounts 3) inv.mtl_system_items_b 4) ont.oe_order_headers_all 5) inv.mtl_material_transactions 6) wip.wip_discrete_jobs_wdj 7) wip.wip_entities 8) ar.hz_cust_accounts 9) apps.mtl_system_items | Defines set of open and historical demand transactions |
| 3 | Supplier Transactions | Suptrans | 1) wip.wip_discrete_jobs 2) wip.wip_entities 3) inv.mtl_system_items_b 4) apps.mtl_categories 5) inv.mtl_item_categories 6) po.po_lines_all 7) apps.fnd_user 8) wip.wip_requirement_operations 9) po.po_requisition_headers_all 10) po.po_requisition_lines_all 11) po.rcv_shipment_lines 12) po.po_distributions_all 13) po.po_headers_all 14) po.po_line_locations_all | Defines set of open and historical supply transactions |
| 4 | Supersceded Items | Subchain | 1) kesx_mtl_related_items_all 2) inv.mtl_system_items_b | Defines relationships between items where superscessions have occurred |
| 5 | Bill of Materials | BilloMat | 1) apps.bom_inventory_components 2) apps.bom_bill_of_materials 3) apps.mtl_system_items 4) kesx_mtl_related_items_all 5) inv.mtl_system_items | Defines relationships between kits and associated components |

Appendix 2: Examples of the GAINS-to-Oracle data table mappings (similar mappings exist for other order types and inventory parameters):

| # | Type of Data | Oracle Tables Referenced | Notes |
|---|-----------------|--|--|
| 1 | Purchase orders | 1) po_headers.po_distributions_interface 2) po_headers.po_headers_interface 3) po_headers.po_lines_interface | Defines required purchase order information such as supplier, quantity, date, etc. |



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