

SAP Manufacturing Execution
How-To Guide



How To Set Up the SAP ME ODS Feature

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SAP ME How-To-Guide for ODS Setup

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Document History

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1.0	Initial version	Chet Moutrie
1.1	Corrected explanation of system rules in section 5.3.1 and 5.3.2	Chet Moutrie
1.2	Added info regarding removing Pause command from the ODSLaborRollup.bat file	Chet Moutrie
1.3	Added info regarding ODS ETL scripts command line parameter in section 5.2.2.1.	Chet Moutrie
1.4	Added info regarding custom data in section 3.1.1.	Chet Moutrie
1.5	The 5.2.2.1 Setup and Scheduling of ODS Scripts section has been updated. Added info regarding script parameters.	Sergiy Katerinich

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1 Introduction

1.1 Purpose

The ME How-To-Guide for the Operational Data Store (ODS) setup is intended to provide sufficient information to enable the user to easily configure and readily utilize the Operational Data Store (ODS) tables to support Business Objects (BObj) Reporting, making use of available best practices.

1.2 Scope

This information covers all aspects of ODS, relative to the ODS tables, and ODS integration with the BObj Reporting feature. It does not cover the BObj Reporting feature itself.

ODS is used to mean both the ODS database and the ODS tables (as opposed to the Audit Log tables and the Archive tables) within the ODS database. This How-To-Guide is focused primarily on the ODS tables.

1.3 Glossary

Archive tables	The tables in the ODS database that hold data, related to specific SFC numbers, that has been removed from the WIP database
Audit Log tables	The tables in the ODS database that hold the history of changes to the ME data made via maintenance activities
ETL	Extract, transform and load
Global ODS	The ME global operation data store database that holds summary history data for multiple ME installations
Handle	In SAP ME, a text string comprised of the keys of the database record, with a comma between each pair. The handle is used as the primary key for the database record
ODS	Operational Data Store
ODS database	The ME database that consists of Audit Log tables, ODS tables and Archive tables
ODS tables	The ME operational data store tables that hold production history details and summary history data for reporting and query purposes
WIP	Work In Process
WIP database	The ME transactional database that holds all of the current data regarding the manufacturing execution objects and processes and the ME system status

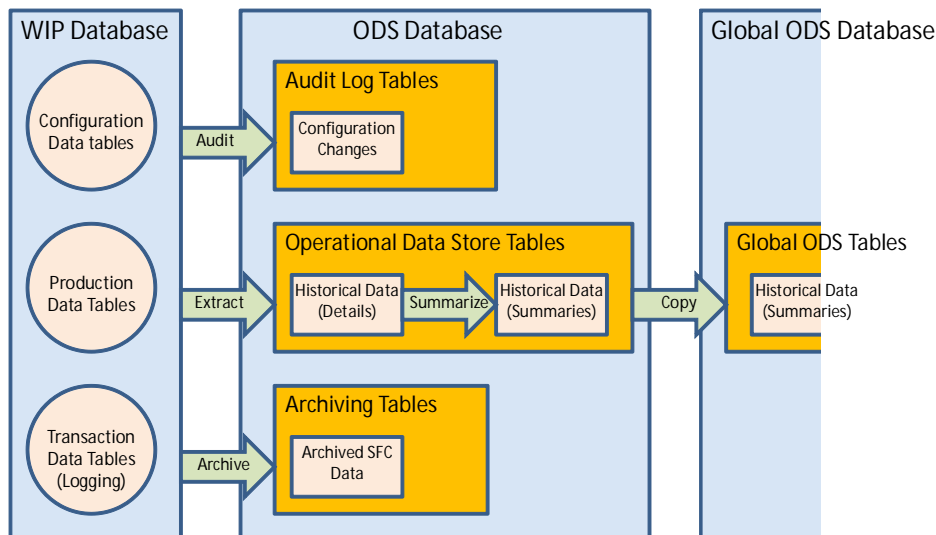
2 ODS Overview

This overview will provide a high level description of the ODS process and ODS setup and a somewhat detailed description of the ODS extract, transform and load (ETL) process.

2.1 Description and Applicability

The ODS tables provide storage for ME data needed for internal and external reporting. They contain both detail and summary data for many of the objects and processes managed by ME.

During real-time transactions, SAP ME stores data in the WIP (Work In Process) database tables. These tables are designed and indexed to optimize data management for the real time functions of SAP ME. Production data can be periodically transferred to the ODS tables and summarized in the ODS summary tables. These tables are designed and indexed to optimize their use in the creation and running of reports. WIP data modified via the ME maintenance activities can be stored in the Audit Log tables of the ODS database. The ME Archive function stores SFC related data in the Archive tables of the ODS database.



Data can be periodically deleted from WIP tables via ODS scripts. This is only for WIP tables that contain data that does not get archived to the Archive tables and that have corresponding ODS tables. Data in the ODS tables can be periodically deleted via ODS scripts.

Summary data in the ODS tables can be periodically copied to the Global ODS tables, via ODS scripts, for enterprise wide manufacturing reporting.

ODS enables the querying and reporting of ME operational data without impacting the performance of the WIP transactional database and production use of ME. It is integrated with the ME BOBj Reporting feature primarily through the ME BOBj universes. More information regarding the use of ODS with BOBj Reporting is available in the BOBj Reporting Guide (see *Other Reference Material*). ODS is integrated with the WIP database via database synonyms and ETL (extract, transform and load) software.

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How frequently data is copied from the WIP database into the ODS tables and how the data is summarized are configurable. ODS Setup includes the following tasks / functions:

- Creation and configuration of ODS database
- Creating synonyms in the WIP database
- Creation of Global ODS database (optional)
- Configuration of ODS within ME
- Setup and scheduling of ODS scripts

2.2 Business Purposes / Functions

The ODS tables and scripts are for the purpose of providing historical detail and summary data for ME after-the-fact reporting. It is **not** intended for reporting on the current status of ME production use.

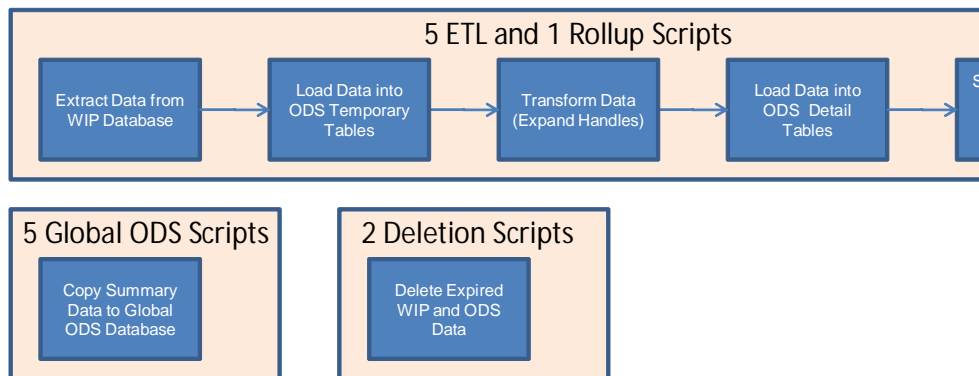
The ODS process does the following:

- Extracts data from the WIP database
- Transforms it by expanding the record handles
- Loads it into the ODS detail data tables
- Summarizes some of the data and stores it into the ODS summary data tables
- Copies the summary data to the Global ODS database, if so configured
- Deletes expired WIP and ODS data

The ODS process accomplishes these functions via scheduled ODS scripts (.bat files for Windows and .ksh files for Unix) that execute SAP ME Java programs. Once the ODS process is configured and the scripts are scheduled, some monitoring of the script executions is required.

2.3 High-Level Process Flows

This figure illustrates the primary flow of the ODS process. The scripts can be scheduled independently.



2.4 Best Practices

We recommend monitoring the ODS process via the log file, ODSLog.txt, (typically located on the ODS database server in \$USER_INSTALL_DIR\$/scripts/) and/or via the ODS Extract Control Date table.

3 ODS Functions

3.1 Extract, Transform, Load and Summarize

3.1.1 Description and Applicability

The ODS ETL scripts copy data from the WIP database and store it in temporary tables in the ODS database. The handles for the data records are expanded by breaking each handle text string into its component key values. The detail data and the additional key values are stored into the ODS history detail tables. Some of the data is summarized and stored in the ODS summary tables. The ODS Reporting Guide provides more details (see *Other Reference Materials*).

There is an ODS ETL script for each of the following types of data:

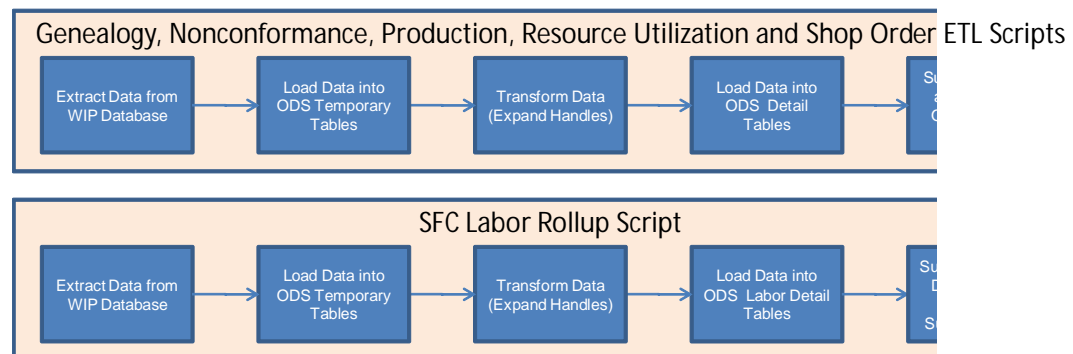
- Genealogy
- Nonconformance
- Production
- Resource Utilization
- Shop Order

There is a rollup (summarization) script for the labor data. Summarization of the other types of data is handled by the ETL script.

Custom fields in the ODS tables come from the Data Field Assignment fields only, and go to CUSTOM_ xxx fields in the corresponding ODS tables (such as ODS_NC_DATA). The custom data fields for an ME master data object are stored in the ODS audit log tables if ME audit logging is configured for the master data object.

3.1.2 Process Flow

This figure illustrates the flow for the ETL scripts and the labor rollup script.



3.2 Copy Summary Data to Global ODS

3.2.1 Description and Applicability

The ODS ETL Global Copy scripts copy summary data from the ODS tables to the corresponding tables in the Global ODS database. There is an ODS ETL Global Copy script for each of the following types of data:

- DPMO (Nonconformance)
- Nonconformance
- Production
- Resource Utilization
- Shop Order

3.3 Delete WIP and ODS Data

3.3.1 Description and Applicability

The ODS WIP Aging script deletes WIP data that has been in the WIP database for a longer time than the WIP Retention Period value for that type of data. The ODS Aging script deletes ODS data that has been in the ODS data tables for a longer time than the ODS Retention Period value for that type of data. It is possible for data to exist in both the WIP database and the ODS tables for some time. For example, production log data may remain in the WIP database for use with internal SAP ME reports even though the data has already been copied to the ODS tables.

There is a separate WIP Retention Period rule for each of the following types of data:

- Defect Transfer Table Detail (DPMO)
- Production Log Detail
- Resource Utilization Detail
- Time-Based Component Detail

There is a separate ODS Retention Period rule for each of the following types of data:

- Defect Transfer Table Detail (DPMO)
- Defect Transfer Table Summary (DPMO)
- Nonconformance Detail
- Nonconformance Summary
- Order Cycle Time
- Production Log Detail
- Production Operation Summary
- Production Cycle Time
- Resource Utilization Detail
- Resource Utilization Summary
- Time-Based Component Detail
- Work Center Production

3.3.2 Best Practices

We do not recommend scheduling the WIP Aging script to run automatically. The reason for this is that the situation could arise where an ETL script fails resulting in some data not being copied from the WIP database to the ODS database. If the WIP Aging script then runs and deletes the data (that was not copied to ODS), that data may be permanently lost. If the data that was not copied is time-based genealogy data, this important traceability data would be lost. If you choose to schedule the WIP Aging script to run automatically, you should make certain that you set every WIP Retention Period rule to a value large enough to ensure that no data would be lost due to the failure of an ETL script and carefully monitor the execution of the ODS scripts.

4 Integration

Not Applicable

5 ODS Setup

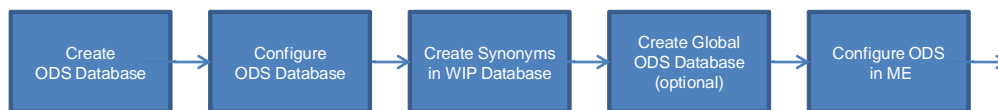
5.1 ODS Setup Overview

ODS Setup includes the following tasks / functions:

- Creation and configuration of ODS database
- Creating synonyms in the WIP database
- Creation of Global ODS database (optional)
- Configuration of ODS within ME
- Setup and scheduling of ODS scripts

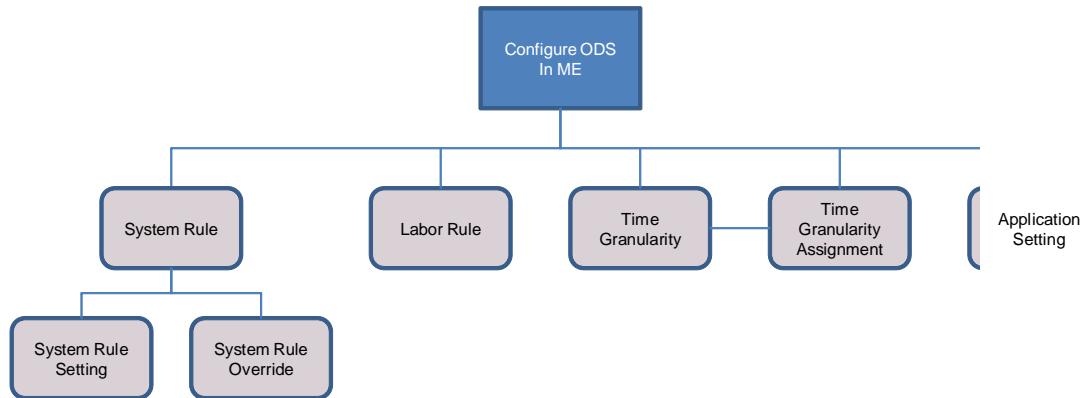
5.1.1 High-Level Process Flow

This figure illustrates the primary flow of system administrator actions when setting up ODS.



5.1.2 High Level Data Model

The following figure shows the relationship between the ODS Setup functions and ME database tables. ODS Rules are stored in the System Rule tables.



5.1.3 Best Practices

If ODS will ever be used for the ME installation, it should be set up at the time that the system is installed. Waiting to set up ODS until after the ME system is in use, can cause significant problems in getting the ODS database “caught up” with all of the data that is already in the WIP database at that time.

5.2 External Configuration

5.2.1 Installation

Installation instructions are provided in the SAP ME Installation Guide, which can be downloaded from SAP Service Marketplace. See also the *Links to Additional Information* and *Other Reference Material*.

5.2.1.1 Creation and configuration of ODS database

The ODS database should be created and configured at the time that the ME system is installed. Instructions for the creation and configuration of the database are included in the SAP ME Installation Guide (see *Other Reference Material*).

Use of the ODS tables for reporting depends upon Master Definition data in the WIP database. This includes names / IDs of the primary ME business objects, such as Sites, Materials, Operations, Resources, etc.

SQL scripts are used to create synonyms in the ODS database for the WIP tables that contain the Master Definition data.

5.2.1.2 Creating synonyms in the WIP database

Synonyms for the ODS tables should be created in the WIP database at the time that the ME system is installed. Instructions for the creation of synonyms in the WIP database are included in the SAP ME Installation Guide.

The ODS ETL scripts utilize these synonyms when extracting, transforming and loading data from the WIP database into the ODS database.

5.2.1.3 Creation and Configuration of Global ODS database

If the Global ODS database is going to be used, it should be created and configured at the time that the ME system is installed. Instructions for the creation and configuration of the Global ODS database are included in the SAP ME Installation Guide (see *Other Reference Material*).

5.2.2 External Program Setup

In order to automatically store and manage WIP data in the ODS tables, the ODS scripts must be scheduled to be run on a regular basis. ODS Scripts execute Java programs to perform the ETL and/or summarization functions, copying data to the Global ODS or deletion of data from a database.

There are two versions of each of the following scripts. One version (.bat) is for use with Windows systems. The other version (.ksh) is for use with Unix systems.

ETL

- ODS Labor Export SFC
- ODS Labor Export User

ETL and Summarization

- ODS Genealogy ETL
- ODS Nonconformance ETL
- ODS Production ETL
- ODS Resource ETL
- ODS Shop Order ETL

Summarization

- ODS Labor Rollup

Copy to Global ODS

- ODS DPMO ETL Global Copy
- ODS Nonconformance ETL Global Copy
- ODS Production ETL Global Copy
- ODS Resource ETL Global Copy
- ODS Shop Order ETL Global Copy

Delete Data from Database

- ODS Aging
- ODS WIP Aging

5.2.2.1 Setup and Scheduling of ODS Scripts

The ODS Extract Control Date table is used to set the beginning date for the next ODS extract or summarization process for ODS tables. Not all ODS tables will have an entry in this table. This table is initialized to a date and time in 2004 by the ODS Load Control Dates sql script during the creation and configuration of the ODS database. The beginning date for each table needs to be edited and set to a more current date prior to running the ODS scripts for the first time. Each of the ETL scripts has a command line parameter (integer number) that can be used to specify the length of the data chunk in

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minutes that the script will take into processing from the end point of the chunk processed during the previous run of the script (for example, ODSResourceETL.bat 60).

Labor Export scripts have a command line parameter that defines the name of the output file where the extracted data will be saved. If such file exists, the script will be terminated to prevent overwriting the previously extracted data.

The Labor Rollup script can take the following parameters:

- The first parameter as an integer that can be used to specify the length of the data chunk in minutes that the script will take into processing from the end point of the chunk processed during the previous run of the script.
- Specific names of transaction of the Rollup process (see SAP Note [1557028](#)): AutoClockOut, Extraction, Expansion, Aging, or ALL.
- USE_MULTIPLE_COMMITS and MAX_DATA_SIZE (see SAP Note [2390641](#)).
- SKIP_ACTIVE (see SAP Note [2390461](#)).
- ALLOW_MULTIPLE_EXTRACT and FORCE_AGING (see SAP Note [2390420](#)).

The scheduling and execution of the ODS scripts is accomplished via the standard scheduling function of the operating system of the database server. For Windows systems, this is the Task Scheduler. For Unix systems, it is cron. For information on these functions, please see your operating system documentation or Help.

The following table lists the ODS functions performed by each of the listed scripts.

Script	Function
ODS Genealogy ETL	SFC BOM Extract
	SFC BOM Expansion
	Resource Time Log Extract
	Resource Time Log Expansion
	Resource Time Log Summary
	Comp Time Log Extract
	Comp Time Log Expansion
	Time Based Expansion
	BOM Extract
	BOM Expansion
Nonconformance ETL	NC Data Extract
	NC Data Expansion
	NC Data Summary
	DPMO Extract
	DPMO Expansion
Production ETL	DPMO Summary
	Production Log Extract
	Shop Order Extract
	Shop Order Expansion
	Production Log Expansion

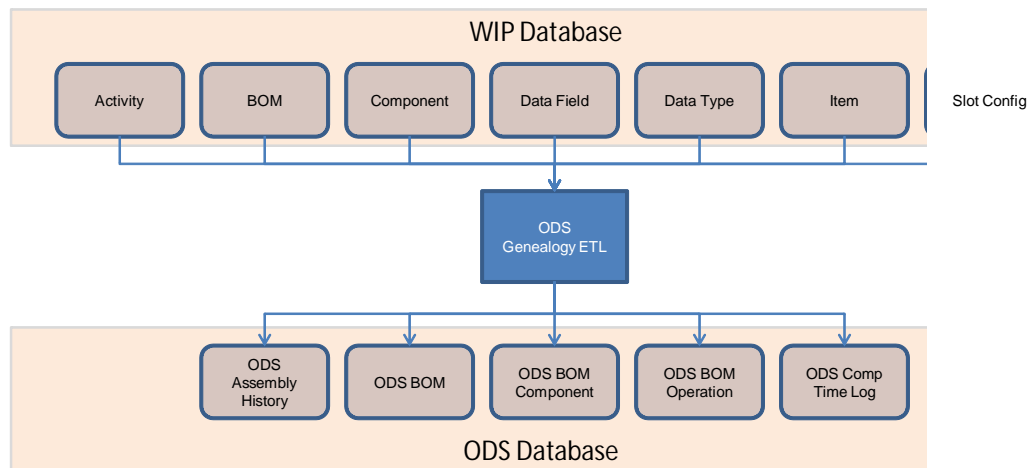
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Script	Function
	Production Log Summary 1
	Production Log Summary 2
	Production Log Summary 3
	Production Log Summary 4
	Production Log Summary 5
Resource ETL	Resource Time Log Extract
	Resource Time Log Expansion
	Resource Time Log Summary
Shop Order ETL	Shop Order Extract
	Shop Order Expansion
Labor Export SFC	LT Export SFC
Labor Export User	LT Export User
Labor Rollup	LT Labor ALL
ODS Genealogy ETL	SFC BOM Extract

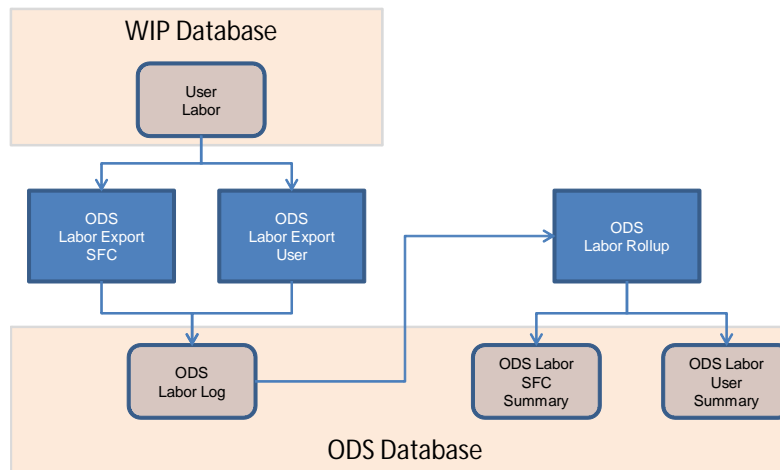
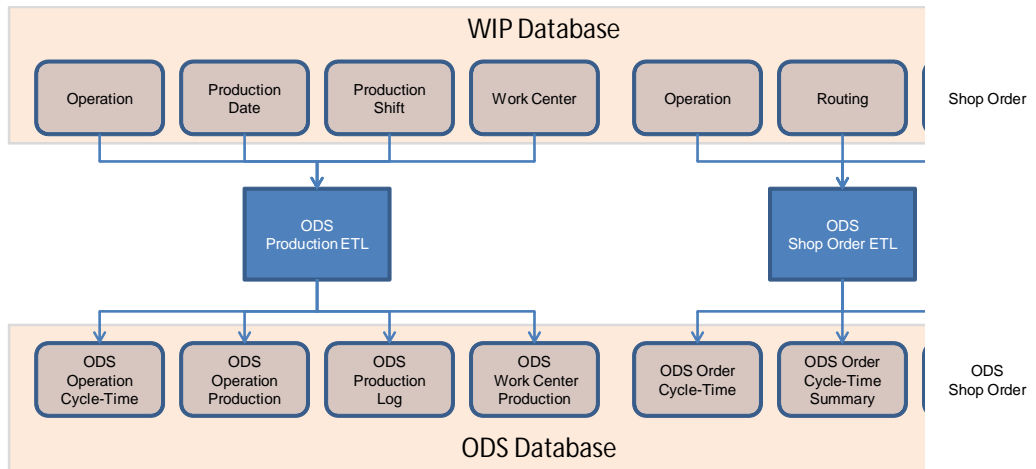
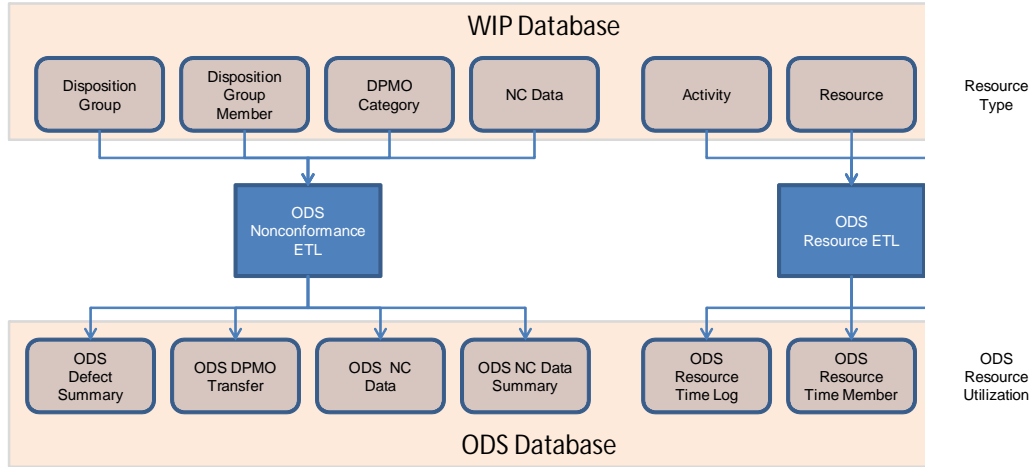
As can be seen by the highlighted entries in the above table, some functions are performed by two different scripts. Thus, if the Genealogy ETL script is run, the Resource ETL script does not need to be run. Likewise, if the Production ETL script is run, the Shop Order ETL script does not need to be run.

5.2.2.2 Data Model

The following figures show the relationship between some of the ODS Scripts and ME WIP and ODS database tables.



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5.2.2.3 Best Practices

We recommend that a copy of the ODS Load Control Dates sql script be modified to set the beginning dates to a date just prior to the date when the SAP ME system will be put into production. This modified script should be run prior to running any of the ODS ETL scripts.

While at least one customer has scheduled ETL scripts to run as frequently as every 5 minutes, we recommend that they not be scheduled to run more frequently than every 15 minutes for most SAP ME installations. How frequently the scripts can be run effectively depends upon the computing environment and the amount of data being copied to the ODS tables.

Typically scripts are scheduled to run every 15 minutes up to every 24 hours. The functions include a number-of-minutes parameter which controls the maximum time span processed on each run. This ensures that the function can be completed without over-utilizing resources. Typically we set this parameter to 60 if the script is not going to be run again for longer than that amount of time. The scripts provide a looping option to keep running each function or group of functions until the script end conditions are met. It is vital to monitor that the scripts are running without errors and that the date / times in the ODS Extract Control Date table are moving forward. It is also important to ensure the time taken for each script to run is less than the time between scheduled runs.

If ODS will ever be used for the ME installation, the scripts should be scheduled to start running at the time that the system is put into production. Waiting to set up ODS until after the ME system is in use, can cause significant problems in getting the ODS database “caught up” with all of the data that is already in the WIP database at that time.

When the ODSLaborRollup.bat file is scheduled to be run periodically, the last command (Pause) should be removed from the .bat file.

5.3 Maintenance Activities

The use of ODS is highly configurable. The system administrator can specify:

- Types of data to be stored in the ODS tables
- When the data is to be stored
- How the data is to be summarized
- Time granularity for data summarization
- How long data is to be retained in the ODS tables
- How long data stored in ODS is to be retained in the WIP database tables
- Whether or not summarized data is to be copied to the Global ODS database
- Parameters controlling the expansion of database record handles

Configuration of ODS in ME is achieved through the use of the following maintenance activities:

- Labor Rule Maintenance
- ODS Rule Maintenance

- System Rule Maintenance
- System Setup
- Time Granularity Maintenance
- Time Granularity Assignment Maintenance

5.3.1 System Rules

5.3.1.1 Store Data Collection Results in ODS

5.3.1.1.1 Purpose / Effects

This system rule is used to specify that the parameter values collected in Data Collection are to be stored directly into the ODS database (Archive tables) instead of being stored into the WIP database.

5.3.1.1.2 Settings / Example

If the system rule is set to TRUE, the parameter values will only be stored directly into the Archive tables in the ODS database. If it is set to FALSE, the parameter values will only be stored in the WIP database.

5.3.1.2 Store Test Plan Results in ODS

5.3.1.2.1 Purpose / Effects

This system rule is used to specify that the parameter values collected from factory floor machines via test plans are to be stored directly into the ODS database (Archive tables) instead of being stored into the WIP database.

5.3.1.2.2 Settings / Example

If the system rule is set to TRUE, the parameter values will only be stored directly into the Archive tables in the ODS database. If it is set to FALSE, the parameter values will only be stored in the WIP database.

5.3.2 System Setup Parameters

5.3.2.1 `expand.handle.timeout`

5.3.2.1.1 Purpose / Effects

This property specifies the timeout value (in minutes) for the expansion of the ME business object handles for the allowed number of database table records specified in the `max.records.for.handle.expansion` property.

An ME business object handle is a text string that is comprised of the database record key values concatenated together. Expanding an ME business object handle consists of breaking the handle apart into its component key values. These key values are then stored in separate columns in the new database table record being created. Business object handles can be nested (i.e. a handle can contain another handle, which can contain another handle, and so on). Thus it is possible that a large number

of handles could take a long time to expand. Thus a timeout value is provided to ensure that the expansion process is stopped after a specified amount of time.

5.3.2.1.2 Settings / Example

This property value is a numeric value specifying the number of minutes that will be allowed for the expansion of the allowed number of ME business object handles for a database table. The default value is 30.

For example, by setting the `expand.handle.timeout` value to 15, the expansion of the allowed number of handles (including the expansion of all nested handles) for a database table will stop if not completed in fifteen minutes.

5.3.2.2 **max.records.for.handle.expansion**

5.3.2.2.1 Purpose / Effects

This property specifies the maximum number of database records in a table that can have their handle expanded as a single action.

5.3.2.2.2 Settings / Example

This property value is a numeric value specifying the maximum number of database records whose handle can be expanded, for a specific table at a specific time. The default value is 50000.

For example, by setting the `max.records.for.handle.expansion` value to 10000, the expansion of the handles for a table will be stopped after ten thousand records, if not already complete.

5.3.3 System Configuration

5.3.3.1 ODS Rule Maintenance

This activity provides the majority of the configuration capabilities for ODS. These include:

- The delta into the past at which to stop extracting WIP data
- How data is to be summarized
- Whether or not data is to be summarized in the local time zone
- How long data is to be retained in the ODS tables
- How long data stored in ODS is to be retained in the WIP database tables
- Whether or not summarized data is to be copied to the Global ODS database
- Whether or not time-based component data is stored in the ODS tables

ODS Rule Maintenance applies to the following types of data:

- Defect Transfer Table Detail (DPMO)
- Defect Transfer Table Summary (DPMO)
- Nonconformance Detail

- Nonconformance Summary
- Order Cycle Time
- Production Log Detail
- Production Operation Summary
- Production Cycle Time
- Resource Utilization Detail
- Resource Utilization Summary
- Shop Order Detail
- Time-Based Component Detail
- Work Center Production

5.3.3.1.1 Extract Lag Time

This ODS rule specifies the number of minutes into the past at which the ODS data extraction process should stop extracting WIP data for storage into the ODS tables. This rule applies to all types of data and is used each time the ODS data extraction process runs. It provides a safety margin to ensure that each ME business transaction is completed prior to any of its data being stored into the ODS tables. The default value is 0. This rule can only be set for the global (*) site.

5.3.3.1.2 Best Practice

We recommend that the Extract Lag Time rule be set to a value greater than zero. SAP ME WIP database records can be created via web service calls. It is possible for these records to be inserted into the database with a record creation time that is in the past. If the Extract Lag Time value is too small, this can cause the inserted record to have a creation time that is prior to the end time of the last ODS execution (start time of the next ODS execution). In this situation, the inserted record will never be copied to the ODS tables. The Extract Lag Time should be set to a value greater than the maximum possible delta, between the stored creation time for a record created by a web service and the current time when the web service is executed. Or the time zone for both the database server and the database should be set to GMT (see SAP Note 1471975).

5.3.3.2 How Data is Summarized

For summary type data, ODS rule maintenance provides control over how (for which business objects) the data is summarized. Each summary data type is summarized for some business objects by default.

The Summary data types and the business objects for which they are summarized are listed below.

- Defect Transfer Table Summary (DPMO)
 - Always Summarized by
 - DPMO Category
 - Material
 - Root Cause Operation
 - Site

- Option to Summarize by
 - Customer
 - Customer Order
 - NC Code
 - Operation
 - Order Type
 - Resource
 - Shop Order
 - Times Processed
- Nonconformance Summary
 - Always Summarized by
 - Failure ID
 - Material
 - NC Category
 - NC Code
 - Operation
 - Parent NC Code
 - Site
 - Option to Summarize by
 - Component
 - Component SFC Material (can be set only for global site)
 - Custom NC Data Fields (can be set only for global site)
 - Customer
 - Customer Order
 - Disposition Routing
 - External Lot Number
 - External Serial Number
 - Grand Parent NC Code
 - Identifier
 - Incident NC Code
 - Inventory ID
 - Location
 - Operation Type
 - Order Type
 - Ref Des
 - Reporting Center
 - Resource
 - Responsible Operation
 - Routing
 - Routing Type
 - Shop Order
 - Step ID
 - Times Processed
 - User ID
 - Vendor
 - Vendor Date Code

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- Vendor Lot
 - Work Center
- Order Cycle Time
 - Always Summarized by
 - Material
 - Operation
 - Shop Order
 - Site
 - Option to Summarize by
 - Customer
 - Customer Order
 - Cost Center
 - Labor Charge Code
 - Order Type
 - Reporting Center
 - Resource
 - Rollup Cost Center
 - Routing
 - Step ID
 - User ID
- Production Cycle Time
 - Always Summarized by
 - Material
 - Operation
 - Site
 - Option to Summarize by
 - Customer
 - Customer Order
 - Cost Center
 - Labor Charge Code
 - Reporting Center
 - Resource
 - Rollup Cost Center
 - Routing
 - Routing Step
 - Shop Order
 - User ID
- Production Operation Summary
 - Always Summarized by
 - Material
 - Operation
 - Site
 - Option to Summarize by
 - Customer
 - Customer Order
 - Cost Center
 - Labor Charge Code

- Order Type
- Reporting Center
- Resource
- Rollup Cost Center
- Routing
- Shop Order
- Step ID
- User ID
- Resource Utilization Summary
 - Always Summarized by
 - Resource
 - Site
 - Option to Summarize by
 - Resource Type
 - Work center
- Work Center Production
 - Always Summarized by
 - Site
 - Work Center
 - Work Center Category
 - Option to Summarize by
 - Customer
 - Customer Order
 - Material
 - Order Type
 - Shop Order

5.3.3.3 Best Practice

We recommend summarizing data by all available objects. This is because if data is not summarized by an object, and later it is determined that summarization by that object is needed, it may no longer be possible to summarize the data based upon that object. For example: Two users each log a nonconformance. If the NC data is summarized by User, there will be two records in the ODS NC Data Summary table (one for each User). However, if the NC data is not summarized by User, there will only be one record with a quantity of 2 and the user information will not be present in the ODS NC Data Summary table.

5.3.3.4 Summarize by Local Time Zone

This ODS rule specifies whether to summarize data based on GMT time or based on the local time zone. This primarily affects data summarized using the Time Granularity of DAY.

If the rule value is TRUE, all data summarization is based on the local time zone. If the rule value is FALSE, all data summarization is based on GMT time. The default value is FALSE.

5.3.3.5 ODS Retention Period

This ODS rule specifies how many days data is to be kept in the ODS tables before being deleted from the ODS tables. The default value is 30.

There is a separate ODS Retention Period rule for each of the following types of data:

- Defect Transfer Table Detail (DPMO)
- Defect Transfer Table Summary (DPMO)
- Nonconformance Detail
- Nonconformance Summary
- Order Cycle Time
- Production Log Detail
- Production Operation Summary
- Production Cycle Time
- Resource Utilization Detail
- Resource Utilization Summary
- Time-Based Component Detail
- Work Center Production

5.3.3.6 WIP Retention Period

This ODS rule specifies how many days data, which can be stored in the ODS tables, is to be kept in the WIP tables before being deleted from the WIP tables. The default value is 30.

There is a separate WIP Retention Period rule for each of the following types of data:

- Defect Transfer Table Detail (DPMO)
- Production Log Detail
- Resource Utilization Detail
- Time-Based Component Detail

5.3.3.7 Copy to Global ODS

This ODS rule specifies whether or not to copy the summary data to the Global ODS database. The default value is FALSE.

There is a separate ODS Copy to Global ODS rule for each of the following types of data:

- Defect Transfer Table Summary (DPMO)
- Nonconformance Summary
- Order Cycle Time
- Production Operation Summary
- Production Cycle Time
- Resource Utilization Summary
- Work Center Production

5.3.3.8 Copy Time-Based Data to ODS

This ODS rule specifies whether or not to copy time-based genealogy data to the ODS tables.

If the rule value is TRUE, time-based genealogy data is extracted, transformed and loaded into the ODS tables. If the rule value is FALSE, time-based genealogy data is not copied to the ODS tables. The default value is FALSE.

5.3.3.9 Convert to Discrete

This ODS rule specifies whether or not to convert time-based genealogy data to discrete data when copying time-based data to the ODS tables.

If the rule value is TRUE, time-based genealogy data is converted to discrete data records. If the rule value is FALSE, time-based genealogy data is not converted to discrete data records. The default value is FALSE.

5.3.3.10 ODS NC Serialization Adjustment

This ODS rule specifies whether or not to remove a previously collected nonconformance (NC) against a panel. When NC data is recorded against a panel material and a location is referenced, then the NC data may optionally be moved to the relevant SFC number after serialization. See *Post Split/Serialize - Copy NC Data (Site hook NC999)* for more details. In this case, the ODS process may record the NC data against the panel at one ETL script execution and then later against the serialized SFC, thereby doubling the failure data. This ODS rule provides for the deletion of the panel NC data from the ODS tables when the NC is recorded in ODS for the SFC number.

If the rule value is TRUE, then the original NC data that was recorded against the panel material is deleted from the ODS tables. If the rule value is FALSE, the panel data is not deleted. The default value is FALSE.

5.3.3.11 Perform Summarization at

This ODS rule specifies whether to perform nonconformance data summarization based upon incident closure or NC closure. The valid values are On Incident Closure and On NC Closure. The default value is On Incident Closure. This ODS rule is only available for the Nonconformance Summary type data.

5.3.4 Other Maintenance Activities

5.3.4.1 Labor Rule Maintenance

The Rollup Processing tab in the Labor Rule Maintenance activity provides configuration capabilities for the summarization of Labor Tracking data. The configuration capabilities include:

- How labor data is to be summarized
- How long labor data is to be retained in the ODS tables

5.3.4.1.1 Enable SFC Labor Summarization

This rule (checkbox) specifies whether or not labor data is to be summarized by SFC number. If the checkbox is selected, labor data will be summarized by SFC number and the summary data will be loaded into the ODS tables. If the checkbox is not selected, labor data will not be summarized by SFC number. By default the checkbox is selected.

5.3.4.1.2 Enable User Labor Summarization

This rule (checkbox) specifies whether or not labor data is to be summarized by user. If the checkbox is selected, labor data will be summarized by user and the summary data will be loaded into the ODS tables. If the checkbox is not selected, labor data will not be summarized by user. By default the checkbox is selected.

5.3.4.1.3 Summarize SFC Labor by

This rule provides control over how (for which business objects) the labor data is summarized by SFC number. If the checkbox associated to the business object is selected, the labor data will be summarized by SFC number for that business object. If the checkbox is not selected, the labor data will not be summarized by SFC number for that business object.

The business objects for which labor data can be summarized by SFC number are listed below.

- Cost Center (summarized by default)
- Customer
- Customer Order
- Material
- Operation
- Reporting Center
- Resource
- Routing Step
- SFC
- Shop Order (summarized by default)
- Work Center

5.3.4.1.4 Summarize SFC Labor by Custom Fields

This rule specifies the custom fields for which the labor data will be summarized by SFC number. Custom field names must be separated by a comma.

5.3.4.1.5 Summarize User Labor by Custom Fields

This rule specifies the custom fields for which the labor data will be summarized by user. Custom field names must be separated by a comma.

5.3.4.1.6 Labor Age

This rule specifies how many days labor data (SFC number and user) is to be kept in the ODS tables before being deleted from the ODS tables. The default value is 60.

5.3.4.1.7 Idle Factor for Labor Time Age

This rule specifies how idle time between SFC numbers is to be applied. If the rule is set to Labor on to Labor on, the idle time is allocated to the preceding SFC number - time allocated to the SFC number is from labor on to the SFC number until labor on to a different SFC number. If the rule is set to Labor on to Labor off, the idle time will be allocated to the default labor charge code (LCC) for the user's cost center. The time allocated to the SFC number is only from labor on to the SFC number until labor off of that SFC number. The default setting is Labor on to Labor off.

5.3.4.1.8 Distribution of SFC Labor Time

This rule specifies how labor time for multiple SFC numbers, worked simultaneously, will be distributed across the SFC numbers. The rule settings and the resulting actions are described in the following table.

Rule Setting	Action
Equal	Divides SFC labor time equally among SFC numbers
LCC	Divides SFC labor time equally among labor charge codes used
All	Allocates the total SFC labor time to each SFC number
Quantity	Prorates the SFC labor time based on the quantity of each SFC number

5.3.4.1.9 Time Card Approval Required for Export

This checkbox specifies whether or not the user labor time must be approved prior to the labor data being extracted and loaded into the ODS tables. If the checkbox is selected the user labor time must be approved. If the checkbox is not selected, the labor data can be extracted and loaded into the ODS tables without the user labor time being approved. The default is that the labor time must be approved.

5.3.4.2 Time Granularity Maintenance

A time granularity defines the time span (time bucket) that will be used for data summarization. The pre-defined time granularities are HOUR, DAY and SHIFT.

To create a new time granularity, specify its start date / time and end date / time. You can also specify whether or not the time granularity is to be recurring yearly.

5.3.4.3 Best Practice

We recommend that you use one of the pre-defined time granularities.

5.3.4.4 Time Granularity Assignment Maintenance

This activity provides the capability to specify the summarization time granularity for each type of data that is summarized:

- Defect Transfer Table (DPMO)
- Nonconformance
- Production Cycle Time
- Production Operation
- Resource Utilization
- Work Center Production

Multiple granularities can be specified for each type of data.

5.3.4.5 Best Practice

We recommend that you only specify one time granularity and that you use the pre-defined time granularity of HOUR. With data summarized by hour, reports can then easily calculate day and shift summaries.

6 Usage Scenario Examples

Not Applicable

7 Links to Additional Information

[SAP Service Marketplace](#)

8 Other Reference Material

Installation Guide SAP ME – This guide can be downloaded from the SAP Service Marketplace.

ODS Reporting Guide – This guide can be downloaded from the SAP Service Marketplace.

SAP BusinessObjects Reporting Guide – This guide can be downloaded from the SAP Service Marketplace.

9 Overview of Changes

Not Applicable