

Asset Optimization CMMS Integration

System 800xA Asset Optimization uses SAP PM CMMS (Computerized Maintenance Management System) Integration to make information within the SAP PM CMMS database software transparently accessible to users in the process control and maintenance system environments. This data sheet discusses the functionality associated with CMMS Integration.

SAP PM CMMS Integration brings maintenance management to the operator environment to give a single window interface for multiple systems. Context menus on process graphics, the Alarm and Event List, etc. provide access to several views and actions for the specific SAP PM CMMS item. This allows plant personnel to collect, compare and monitor field device data to accurately assess equipment conditions in real time. The maintenance workflow is further reduced through the elimination of paperwork and by providing a single, electronic audit trail for all actions. Presently, Industrial IT System 800xA supports two Computerized Maintenance Management Systems, MRO Maximo[®] and SAP PM[®]. Under ABB's Industrial IT Enablement program, third-party integration is supported, such as with IFS CMMS. This data sheet discusses the functionality associated with SAP PM CMMS Integration. Data sheets discussing integration of asset optimization with other CMMS are also available.

800xA's SAP PM CMMS Integration includes a CMMS Equipment ID aspect, a CMMS Credentials aspect, CMMS Views aspects and Fault Report viewer and submitter aspects.

SAP PM CMMS Equipment ID

One of the issues that traditionally inhibits free interchange between the operations and the maintenance functional areas is their different naming conventions: an asset often



has one name in the operations environment and another in the maintenance environment. With System 800xA, the CMMS Equipment ID aspect provides a simple solution to what would otherwise be a very costly and project specific interface. It provides information for mapping the 800xA object to the SAP PM CMMS equipment in the maintenance system's database for a particular CMMS Server. Multiple Equipment IDs can be associated with the same asset in System 800xA, thus providing the ability to map to more than one piece of equipment defined in the SAP PM CMMS.

SAP PM CMMS Credentials

The SAP PM CMMS uses a different user administration system than System 800xA. To overcome the need of manual login while accessing CMMS views, System 800xA combines CMMS user profiles with its own user profiles through the CMMS Credential aspect. Specifically, ABB's AO Systems' credentials contain the SAP PM CMMS user credentials needed for a specific System 800xA user to access the SAP PM CMMS Server.

SAP PM CMMS Views

The SAP PM CMMS Views consist of the following:

Supported SAP PM CMMS Views
Active Work Orders
Work Order History
Equipment Status
Preventive Maintenance Schedule
Fault Report Submitter/Viewer
CMMS Portal

Table 1

Active Work Order view The Active Work Orders view (Figure 1) lists all active Work Orders in the SAP PM CMMS for a particular asset or group of assets in System 800xA, independent of whether the work order was initialized from the 800xA workplace or from an SAP PM CMMS workplace. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Work Order History View The Work Order History view (Figure 2) lists the history of all Work Orders in the SAP PM CMMS for a particular asset or group of assets in System 800xA, independent of whether the work order was initialized from the 800xA workplace or from a SAP PM CMMS workplace. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Equipment Status View The Equipment Status view (Figure 3) allows viewing of data returned from a status assessment of an asset or group of assets. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Preventive Maintenance Schedule View The Preventive Maintenance Schedule (Figure 4) view lists the preventive maintenance schedule for an asset or group of assets. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

SAP Equipment Number	Notification Number	Order number	Functional Location	Test Location Type	Priority	Description
P-3000-4001	8000000001	-	C1-800-1	HO	1	SLC System test - Restore c7 status/PLU
P-3000-4001	8000000002	-	C1-800-1	HO	1	SLC System test - logged over to gauge
P-3000-4001	8000000003	-	C1-800-1	HO	1	SLC System test
P-3000-4001	8000000004	-	C1-800-1	HO	1	SLC System test
P-3000-4001	8000000005	-	C1-800-1	HO	1	Test CFB - from and to
P-3000-4001	8000000006	-	C1-800-1	HO	1	Test CFB
P-3000-4001	8000000007	-	C1-800-1	HO	1	Test CFB
P-3000-4001	8000000008	-	C1-800-1	HO	1	Test CFB - create as
P-3000-4001	8000000009	-	C1-800-1	HO	1	Test new parameter

Figure 1. Active work orders view

SAP Equipment Number	Notification Number	Order number	Date of Technical Inspection	Name of Person Responsible for Technical Inspection
P-3000-4001	8000000001	8000001240	12-00-00 AM	-
P-3000-4001	8000000002	8000001240	12-00-00 AM	-

Figure 2. Work order history view

SAP Equipment Number	Status	Status Code
P-3000-4001	Equipment needs for product installed	3001
		3007

Figure 3. Equipment status view

SAP Equipment Number	Notification Number	Order number	Maintenance plan	Maintenance strategy	Basic Start date	Basic start date	Scheduled release date
P-3000-4001	8000000001	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000002	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000003	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000004	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000005	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000006	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000007	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000008	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00
P-3000-4001	8000000009	8000001240	-	N/A	12-00-00 AM	12/00/00	12/00/00

Figure 4. Preventive Maintenance Schedule View

Fault Report Submitter / Viewer

For a particular asset problem, the fault report submitter allows a user to electronically generate and submit a work request to the SAP PM CMMS. The fault report carries forward all information contained in the asset monitor. The Fault Report Viewer summarizes all fault reports for a given asset (Figure 5).

The FR State column shows the status of the Fault Report at any instance in time. It can either be a current condition of the asset, or the Most Severe Unacknowledged (MSU) sub condition of the asset. If the alarm line corresponding to the condition is not acknowledged, the Fault Report Viewer keeps the MSU even when the condition goes back to normal, in which case the FR State column reads Most Severe Unacknowledged. If the MSU is the current condition, then the FR State column reads Current.

The **Dismiss after successful submittal** check box in the Submit Fault Report view is a configurable option. If it is unchecked, the Fault Report is retained with a Fault Report status of "Submitted". It can be dismissed later or automatically replaced with subsequent Fault Reports. Right-clicking anywhere in a Fault Report row produces a context menu with the option to dismiss the Fault Report or submit it. Selecting "Dismiss" deletes the selected Fault Report from the Asset Optimization system. It also acknowledges the alarm in the Alarm and Event List.

Selecting "Submit" launches the Submit Fault Report view (Figure 6). There are three different Submit Fault Report views: one for submission to the SAP PM CMMS only, one for submission to the Meriam Process Technologies Device Management System (DMS) only and one for submission to both systems. The view that comes up depends on the configuration of the system. Figure 5 shows the Submit Fault Report View for submission to both systems.

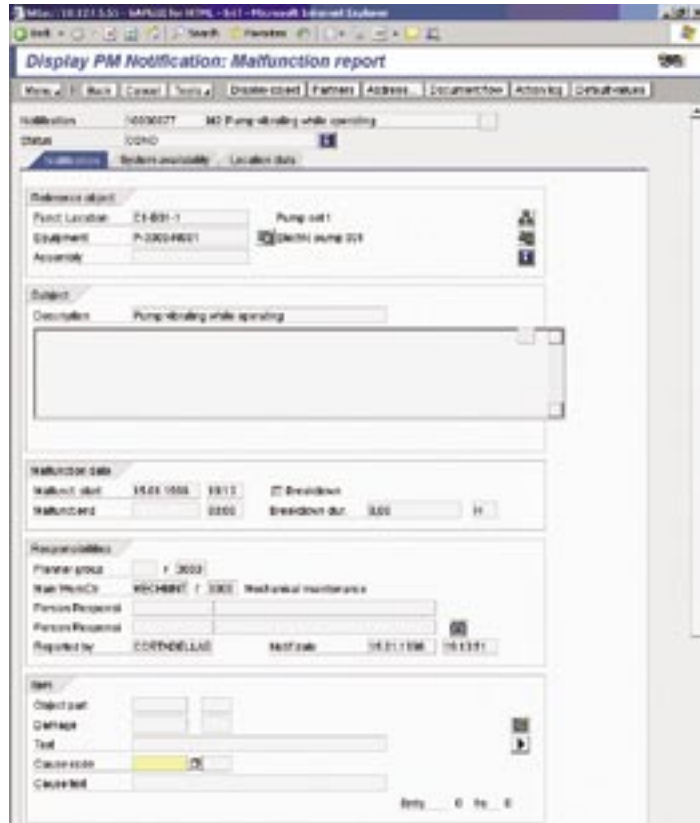


Figure 5. SAP PM CMMS portal views (SAP)

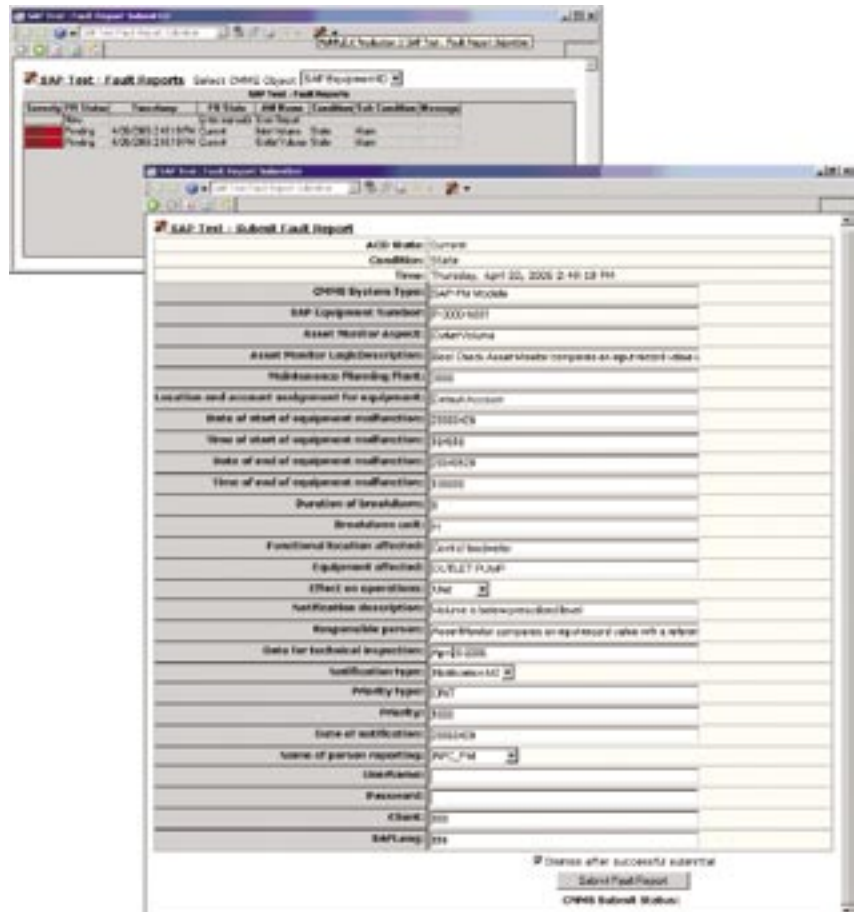


Figure 6. Fault report view and submitter

SAP PM CMMS portal views For every entry in the SAP PM CMMS view, it is possible to navigate to the related SAP PM CMMS portal view (Figure 7). The portal view is a web view that allows direct interaction with the SAP PM CMMS data if the user has appropriate rights, making changes to the data possible.

Additional SAP PM CMMS Integration System Requirements:

CMMS Integration	CMMS Requirements
SAP PM	800xA SAP PM Integration requires SAP software obtained from SAP: <ul style="list-style-type: none"> ■ SAP software version 4.7

Table 2. CMMS requirements

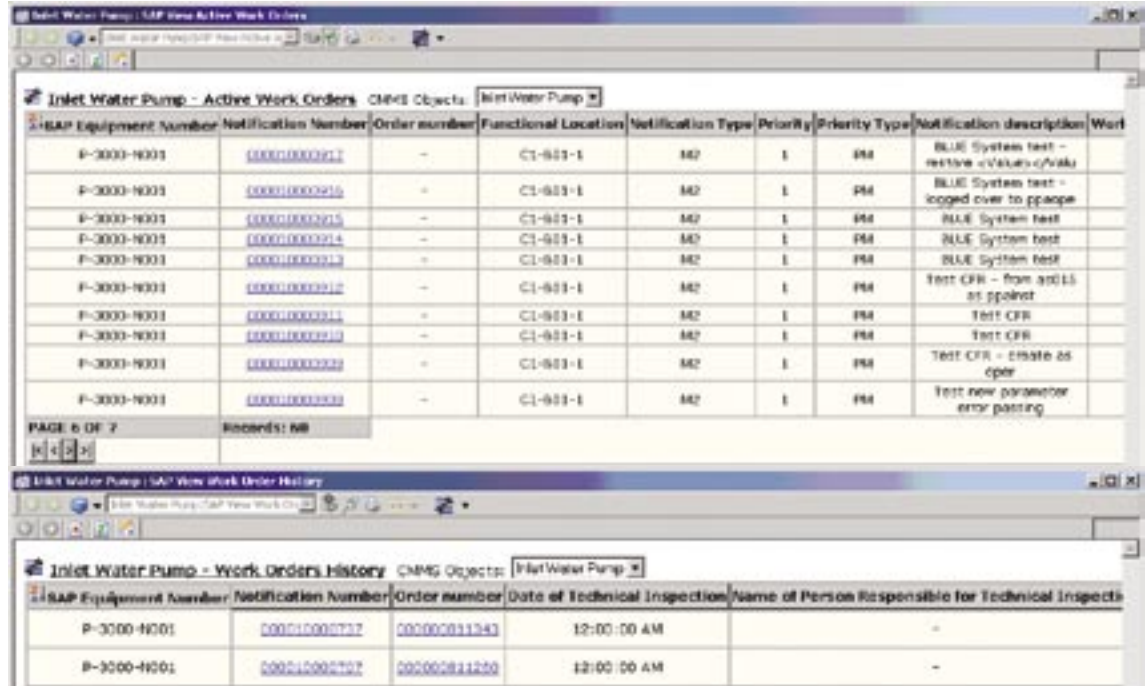


Figure 7.

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