

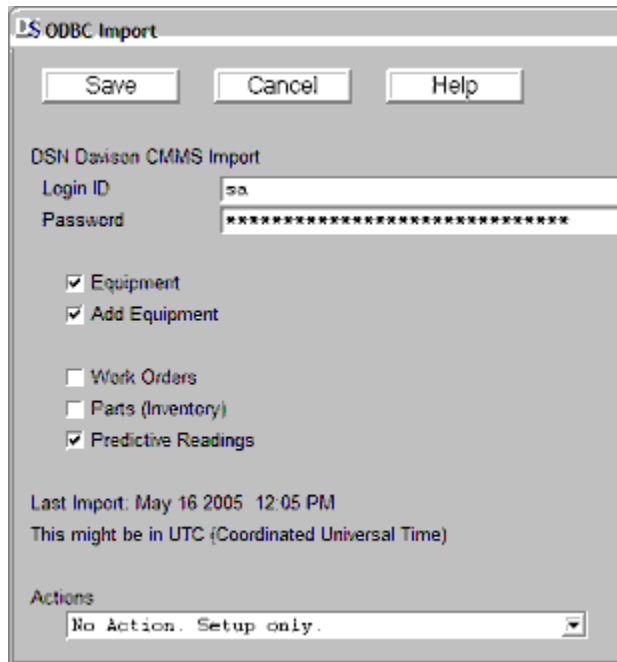
ODBC Import

ODBC Import provides basic tables for importing new information to Davison Software CMMS or PredictMate from SCADA or any source that can populate the ODBC Import tables. An application external to the CMMS can populate the ODBC Import tables without concern for violating validation rules for the CMMS. The ODBC Import tables are created by the CMMS via ODBC connection to any of the following DBMS:

MS Access, SQL Server, SyBase, MySQL, Oracle

See [Staging Tables and Scheduling](#)

ODBC Import runs either on demand from "File, ODBC Import, Setup...", or from the Windows Task Scheduler or an equivalent scheduler.



Login ID and password may not be required. Typically "Equipment" should be checked if "Work Orders" or "Predictive Readings" is checked for relation to any new equipment. If "Equipment" is checked and you only want to update equipment records, uncheck "Add Equipment". With "Add Equipment" unchecked, any import data with new (or invalid) equipment codes will not add equipment records.

Each time ODBC Import runs it stores the latest date and time from the field SRVLASTUPD of any rows that were imported. This "Last Import <Date Time>" displayed in the ODBC Import Setup window will not affect how rows are retrieved from the SQL import tables. Any change in data imported from the SQL import tables can be manipulated simply by deleting or inserted rows as needed.

Actions include "Setup only", "Run Import now". "No Processing..." will only import from the ODBC Import tables to staging tables without adding records to the CMMS or PredictMate. "Process Only" is intended to complete the process after "No Processing..." had run.

Scheduling

To schedule ODBC Import, run C:\DMSsystem\ImportRun.exe from the Windows Task Scheduler or an

equivalent scheduler. When executed the program ImportRun.exe will display a prompt and wait about 30 seconds if you wish to cancel. Then the program runs in the background. If run from a scheduler, we suggest an interval of once per hour or less often. Each time the program will retrieve the latest rows in the ODBC Import tables for import to the CMMS or PredictMate. The options setup in "File, ODBC Import, Setup..." apply to the program when run from a scheduler.

PredictMate Readings date and time

The date and time of predictive readings and work order requests are rounded to the latest hour. For example a date and time of January 15, 2001 09:36 is rounded to January 15, 2001 09:00. This allows repeated work orders or readings without adding duplicates or too many records to the CMMS. However, if the same predictive reading is found in the CMMS it is updated with the more recent row for that hour from the ODBC Import table.

This behavior can be bypassed, so that every reading with a different time by seconds is added if the configuration parameter PdMRoundToHr=No.

PredictMate Personnel ID

ODBC Import puts the ID "ZZ_IMPORT" for every reading. If this ID does not exist in the Personnel table, it is added automatically. This allows unselecting imported readings for transfer to handheld.

Imported readings, with the ID "ZZ_IMPORT", should not be selected for handheld or printout, except when importing is not possible, for example an interruption of a SCADA system. Then you can schedule imported readings to handheld or printout with this ID.

Details

All codes from the ODBC import, like equipment number or part number, are converted to upper case in the CMMS or PredictMate.

Rows from the ODBC Import tables are retrieved to final staging tables in the same folder as the application data. The staging data files have names beginning "Impt...". Final staging tables have the following advantages:

- History (and backup) of last result set attempted. Each staging table includes a field (SRVUPDTLOG) recording success of the imported record. Usually if this field begins "Y", the record was imported to the CMMS or PredictMate.

- Intermittent ODBC connection is permissible. Import processing continues if ODBC connection is lost, but only if the complete result set was retrieved.

- Imports related tables and primary table information before processing begins so that no data lacks a relation to a primary table.

- Final sorting for custom processing if needed.

Deleting rows in the Import tables

Rows are deleted from the import tables as they are retrieved to the final staging tables. About 100 rows are retrieved with each SELECT statement, then deleted before the next SELECT statement. Configuration parameter ODBCMaxRowCnt=100 is default for maximum rows per SELECT statement.

Import tables in MS Access are an exception. All rows are retrieved on one SELECT statement. Rows are not deleted with each SELECT statement, but after all rows are retrieved and processed. Therefore, MS Access may not be adequate for imports with a large number of rows (about 50,000 or greater) each time the import runs.

Custom Options

Custom import routines are possible. The most basic import is provided. Other, more complicated possibilities include importing PM task completion and more information (additional fields) for equipment, work orders, or parts. However, most of this additional information is better handled within the CMMS after basic information is imported.

ODBC Import tables

* Defaults filled by the CMMS if the import leaves the field empty. (Empty) indicates no value required from import and not in the CMMS.

** Required fields

A dateTime string format of CCYYMMDDhhmmss is supported in the column SRVLASTUPD and other text columns with date-time strings documented here. The CCYYMMDDhhmmss format is a compatible alternative with most SQL date-time formats.

Rows with empty or invalid date strings in SRVLASTUPD will not be imported. Date and time in Coordinated Universal Time (UTC) or Greenwich Mean Time (GMT) is acceptable for SRVLASTUPD since this is a relative date and time for controlling the last update. In fields *other than* SRVLASTUPD ccyymmdd (with empty time) is acceptable.

Rows are retrieved where SRVUPDTLOG >= the last import.

- Table: ImptEquip - Import equipment to CMMS

Columns Type Length *Default values

| | | | |
|------------|------|------|---|
| EQ_CODE | Text | 70 | ** |
| EQ_DESC | Text | 80 | |
| NOTINSERVC | Text | 1 | (Empty) Leave blank for units that are in service. |
| LMT_READ | Numb | 11,2 | (Empty) |
| COMP_CODE | Text | 10 | (Empty) |
| COMP_DESC | Text | 80 | (Required only if Comp_Code is filled.) |
| LOCA_CODE | Text | 10 | (Empty) |
| LOCA_DESC | Text | 45 | (Needed only if Loca_Code is filled and is new location.) |
| NOTES | Memo | 10 | (Empty) |
| SRVLASTUPD | Text | 16 | ** (ccyymmddhhmmss) |

ImptEquip continued from above list of columns

Columns Description

| | |
|------------|---|
| EQ_CODE | Equipment unit. |
| EQ_DESC | Equipment unit description. |
| NOTINSERVC | Unit is not in service. Any Character = Out of service |
| LMT_READ | Equipment component reading. For example runtime hours. |
| COMP_CODE | Equipment component code, like motor or driven component. |
| COMP_DESC | Component code description. |
| LOCA_CODE | Physical area within a facility. |
| LOCA_DESC | Location description |
| NOTES | Nameplate data or general notes for each component. |
| SRVLASTUPD | Date and time that equipment is added to this table. |

- Table: Impt_PdM - Import predictive readings to CMMS

Columns Type Length *Default values

| | | | |
|-----------|------|----|---|
| EQ_CODE | Text | 70 | ** |
| READ_TYPE | Text | 20 | ** |
| READ_POS | Text | 3 | (Empty) |
| DATM_READ | Text | 16 | Current date and time (or SRVLASTUPD if configured) |

READ_VAL Numb 11,4 ** (999999.9999) Also fills equip reading.
 SRVLASTUPD Text 16 ** (ccyymmddhhmmss)

Impt_PdM continued from above list of columns
 Columns Description

EQ_CODE Equipment unit. Mnt_Unit.Eq_Code
 READ_TYPE Type of reading (Vibration, Amperage, others)
 Valid values are found in PDMRTYPE.READ_TYPE
 READ_POS Position of predictive reading.
 Roughly equivalent to a physical location on the equipment.
 This position can also be a phase for amperage or an
 abstract position for other types of readings.
 DATM_READ Date and time of Reading (ccyymmddhhmmss).
 Time for every reading for an equipment unit is rounded
 to the last hour.
 If Eq_Code + position + type + date + time are found
 in the CMMS, READ_VAL is updated.
 READ_VAL Numeric value of reading. Maximum 6 intergers, 2 decimals
 SRVLASTUPD Date and time that reading is added to this table.

- Table: ImptWork - Import work orders to CMMS

| Columns | Type | Length | *Default values |
|------------|------|--------|-----------------------------|
| Eq_Code | Text | 70 | " REQUESTED---" |
| Comp_Code | Text | 10 | (Empty) |
| Loca_Code | Text | 10 | (Empty) |
| Req_By | Text | 9 | (Empty) |
| DaTm_Reqst | Text | 16 | SRVLASTUPD (ccyymmddhhmmss) |
| Notes | Memo | 10 | ** |
| SRVLASTUPD | Text | 16 | ** (ccyymmddhhmmss) |

ImptWork continued from above list of columns
 Columns Description

Eq_Code Equipment unit.
 Comp_Code Equipment component.
 Loca_Code Physical area within a facility.
 Req_By Initials or SSN of personnel.
 DaTm_Reqst Date and time of WO request.
 Notes Work order description.
 SRVLASTUPD Date and time that WO request is added to this table

If no equipment code is passed " REQUESTED---" is used for a common equipment code where work orders are requested without relation to specific equipment, but perhaps by location. The user can assign an equipment code later in the CMMS.

Duplicates are avoided by comparing the Cause code "_IMPT", Eq_Code, Comp_Code, Date, Time to existing work orders. Duplicates (with a different work order number) would be added only if the user changes any of the cause, equipment number, date, time for the work order, and the work order is sent repeatedly at later times by SCADA.

- Table: ImptPart - Import parts (inventory) to CMMS

| Columns | Type | Length | *Default values |
|------------|------|--------|----------------------|
| STK_CODE | Text | 50 | ** |
| QUANTITY | Numb | 9 | ** |
| STK_LOCA | Text | 10 | (Empty) |
| PART_DESC | Text | 80 | (Empty) |
| SRVLASTUPD | Text | 16 | ** (ccyymmddhhmmss). |

ImptPart continued from above list of columns
 Columns Description

STK_CODE Internal part number, regardless of vendor.
 If found in the CMMS, Quantity, location, description are updated.

| | |
|------------|---|
| QUANTITY | Numeric Quantity of part (stock) in stock Zero is a valid value. If zero, zero will be put to CMMS quantity. |
| STK_LOCA | Location for a part. A bin number or building location |
| PART_DESC | Description of this part (stock). |
| SRVLASTUPD | Date and time that part information is added to this table. |