

The background of the slide features two broad, diagonal stripes. A light blue stripe runs from the top-left corner towards the bottom-right, and a darker blue stripe runs from the bottom-left corner towards the top-right, intersecting the first stripe.


Deltek

Deltek Cobra®

Data Structure

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Overview

Cost control systems in general and earned value systems must be implemented in a way that suits the project in hand, the contractor, and the client. Cobra offers a great deal of flexibility in the way a project database is organized, and consequently a considerable amount of planning and preparation may be necessary before starting out. Most projects requiring earned value will extend over several years, so time spent on this preparation is well worthwhile.

The purpose of this guide is to provide you with the updated version of all the Cobra tables as well as the WST tables used by several applications, such as Open Plan and Cobra. This guide will help you to review the various aspects of the project data structure at the table level so that you might be able to interpret what happens when you set up a project in Cobra.

Important: Although this guide provides you with the updated Cobra and WST tables, it is recommended that you refer to the Cobra Data Dictionary, as it contains information about all available data tables, columns, and indexes in the Cobra database.

To access the Cobra 8.4 Data Dictionary, do one of the following:

- Click the following link: [Cobra 8.4 Data Dictionary](#).
- Navigate to the Cobra directory and click **Help » Data Dictionary**.

Project Data Tables

The principal tables in the project database are:

- **CAWP:** This table contains control account and work package information.
- **MILESTN:** This table contains milestone information.
- **COSTELEM:** This table contains resource assignment information.
- **TPHASE:** This table contains time-phased information.
- **BASELOG:** This table contains changes to the baseline.
- **LINK:** This table contains information required to link a Cobra project with a schedule.

The tables are discussed in the succeeding sections.

CAWP Table

The CAWP table contains a record for each control account and work package. Each record contains information such as:

- The control account key fields
- The work package key field (for work package records)
- The automatically generated CAWPID that Cobra uses to create a relationship between the tables in the database
- The control account or work package description
- The control account or work package status (unopened, opened, or closed)
- Scheduled and actual/estimated dates
- BCWS, ACWP, BCWP, and BAC values at the control account or work package level
- Any codes assigned to the control account or work package

The CAWP table also contains information related to the calculation of earned value:

- The performance measurement technique used
- Completion percentage
- Units completed or to do

Control Accounts

Each control account in a project has a unique identifier, which is usually referred to as the “control account key.” This control account key is composed of three fields: **CA1**, **CA2**, and **CA3**. Most frequently, a control account is defined using **CA1** and **CA2**.

However, a user may choose to use all three keys or in some cases, only **CA1**.

Note: Although the control account key field names are fixed, the labels used to identify the fields throughout the project are user-defined.

Typically, the control account key consists of a work breakdown structure field (usually called WBS) and an organizational breakdown structure field (OBS). This design is generally required for EVMS reporting

since this approach allows reports to be produced at any level in either structure. Cobra, however, does not require this approach. Other possible designs would be to use a WBS structure code alone or to use one or more unstructured control account numbers (such as a charge number) as identifiers.

Work Packages

Work packages represent a subdivision of control accounts and must be uniquely identified. This work package key is composed of the control account key plus one additional character key field (**WP**).

The work package key field may optionally correspond to a breakdown structure, and this structure may be the same as one of those used to define the control account. In this case, however, the structure codes used to identify the work packages must be the immediate children of the corresponding control account code.

The simplest approach is probably to define an unstructured additional field as a work package number to identify work packages within a control account. In the case of an integrated cost and schedule system, the work package number is often the activity ID.

CAWPID

Cobra randomly generates a unique identification number that is used to create a relationship between the tables in the database. This number is displayed in the CAWPID field. Cobra then uses this number to identify the detailed records, thus saving space and increasing database performance.

CAWP Data Structure

Data in the CAWP table is stored in the following fields:

| Field Name | Data Type | Field Description |
|------------|---------------|------------------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CAWPID | INTEGER | Cobra-generated ID |
| CA1 | NVARCHAR(59) | Control Account Key Field 1 |
| CA2 | NVARCHAR(59) | Control Account Key Field 2 |
| CA3 | NVARCHAR(59) | Control Account Key Field 3 |
| WP | NVARCHAR(59) | Work Package |
| DESCRIP | NVARCHAR(254) | Description |
| SSD | DATETIME | Baseline Start Date |
| SFD | DATETIME | Baseline Finish Date |
| ASD | DATETIME | Actual Start/Forecast Start Date |
| AFD | DATETIME | Actual Finish/Forecast Finish Date |
| ESD | DATETIME | Early Start Date |

Project Data Tables

| Field Name | Data Type | Field Description |
|------------|---------------|----------------------------------|
| EFD | DATETIME | Early Finish Date |
| LSD | DATETIME | Late Start Date |
| LFD | DATETIME | Late Finish Date |
| PSD | DATETIME | Proposed Start Date |
| PFD | DATETIME | Proposed Finish Date |
| ACWP | DECIMAL(21,6) | Actuals |
| BCWP | DECIMAL(21,6) | Earned |
| BCWS | DECIMAL(21,6) | Budget to Date |
| BAC | DECIMAL(21,6) | Budget at Completion |
| EAC | DECIMAL(21,6) | Forecast or Estimate at Complete |
| FLAG | NVARCHAR(1) | Status |
| PMT | NVARCHAR(1) | EVT |
| STARTPC | INTEGER | Start Percent |
| PC_COMP | DECIMAL(11,6) | Percent Complete |
| UNITSTODO | DECIMAL(21,6) | Units To Do |
| UNITS_COMP | DECIMAL(21,6) | Units Complete |
| OP_BATCH | INTEGER | OP Batch |
| CL_BATCH | INTEGER | CL Batch |
| APPLINK | INTEGER | Apportioned Work Package UID |
| C1 | NVARCHAR(59) | Code 1 |
| C2 | NVARCHAR(59) | Code 2 |
| C3 | NVARCHAR(59) | Code 3 |
| C4 | NVARCHAR(59) | Code 4 |
| C5 | NVARCHAR(59) | Code 5 |
| C6 | NVARCHAR(59) | Code 6 |

Project Data Tables

| Field Name | Data Type | Field Description |
|------------|---------------|------------------------|
| C7 | NVARCHAR(59) | Code 7 |
| C8 | NVARCHAR(59) | Code 8 |
| C9 | NVARCHAR(59) | Code 9 |
| C10 | NVARCHAR(59) | Code 10 |
| C11 | NVARCHAR(59) | Code 11 |
| C12 | NVARCHAR(59) | Code 12 |
| C13 | NVARCHAR(59) | Code 13 |
| C14 | NVARCHAR(59) | Code 14 |
| C15 | NVARCHAR(59) | Code 15 |
| C16 | NVARCHAR(59) | Code 16 |
| C17 | NVARCHAR(59) | Code 17 |
| C18 | NVARCHAR(59) | Code 18 |
| C19 | NVARCHAR(59) | Code 19 |
| C20 | NVARCHAR(59) | Code 20 |
| USER_CHR01 | NVARCHAR(100) | User Character Field 1 |
| USER_CHR02 | NVARCHAR(100) | User Character Field 2 |
| USER_CHR03 | NVARCHAR(100) | User Character Field 3 |
| USER_CHR04 | NVARCHAR(100) | User Character Field 4 |
| USER_CHR05 | NVARCHAR(100) | User Character Field 5 |
| USER_NUM01 | DECIMAL(21,6) | User Numeric Field 1 |
| USER_NUM02 | DECIMAL(21,6) | User Numeric Field 2 |
| USER_NUM03 | DECIMAL(21,6) | User Numeric Field 3 |
| USER_NUM04 | DECIMAL(21,6) | User Numeric Field 4 |
| USER_NUM05 | DECIMAL(21,6) | User Numeric Field 5 |
| USER_DTE01 | DATETIME | User Date Field 1 |

Project Data Tables

| Field Name | Data Type | Field Description |
|------------|---------------|--|
| USER_DTE02 | DATETIME | User Date Field 2 |
| USER_DTE03 | DATETIME | User Date Field 3 |
| USER_DTE04 | DATETIME | User Date Field 4 |
| USER_DTE05 | DATETIME | User Date Field 5 |
| BCWS_HRS | DECIMAL(21,6) | Hours Budget to Date |
| BCWP_HRS | DECIMAL(21,6) | Hours Earned |
| ACWP_HRS | DECIMAL(21,6) | Hours Actuals |
| BAC_HRS | DECIMAL(21,6) | Hours Budget |
| EAC_HRS | DECIMAL(21,6) | Forecast Hours |
| MANAGER | NVARCHAR(59) | CAM |
| EAC_NONLAB | DECIMAL(21,6) | Forecast Non-Labor |
| RESERVED1 | NVARCHAR(239) | Used internally to index data processing |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |
| ACWPCP | DECIMAL(21,6) | Current Period Actuals |
| BCWPCP | DECIMAL(21,6) | Current Period Earned |
| BCWSCP | DECIMAL(21,6) | Current Period Budget |
| BCWSCP_HRS | DECIMAL(21,6) | Current Period Hours Budget |
| BCWPCP_HRS | DECIMAL(21,6) | Current Period Hours Earned |
| ACWPCP_HRS | DECIMAL(21,6) | Current Period Hours Actuals |
| EOC | NVARCHAR(59) | Element of Cost |

MILESTN Table

Cobra permits one or more milestones to be defined for each work package, and there is a record for each of these in the milestone table. Thus, a one-to-many relationship exists between the work package records in the CAWP table and records in the MILESTN table.

Because each milestone needs to be uniquely identified, the key to the MILESTN table consists of the **CAWPID** plus one additional field (**MS_NO**).

In addition to the milestone key, the milestone table contains information such as:

- Milestone descriptions
- Scheduled and estimate/actual finish dates
- Milestone status
- Relative weights
- Percent complete (optional)

Milestone Data Structure

Data in the Milestone table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|----------------|---------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CAWPID | INTEGER | Cobra-generated ID |
| MS_NO | NVARCHAR(59) | Milestone ID |
| DESCRIP | NVARCHAR(254) | Description |
| SFD | DATETIME | Baseline Finish |
| AFD | DATETIME | Actual Finish |
| FLAG | NVARCHAR(1) | Status |
| WEIGHT | DECIMAL(21, 6) | Weight |
| PC_COMP | DECIMAL(11, 6) | Percent Complete |
| CL_BATCH | INTEGER | CL Batch |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

COSTELEM Table

The Resource Assignment table contains a record for each resource assignment assigned to a work package or control account. In addition to the **CAWPID**, the information stored for each resource assignment includes:

- The resource assignment code and cost class
- The Budget At Complete (BAC) for the resource assignment (In the case of forecast records, the BAC field stores the ETC.)
- The performance factor for statistical forecasts

Resource Assignment Data Structure

Data in the Resource Assignment table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|-------------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CAWPID | INTEGER | Cobra-generated ID |
| CECODE | NVARCHAR(59) | Resource Assignment Key Field |
| CLASS | NVARCHAR(20) | Class |
| BAC | DECIMAL(21,6) | Budget at Completion |
| FC_PC | DECIMAL(11,6) | Percent Complete |
| PF | DECIMAL(21,6) | Performance Factor |
| GA_PF | DECIMAL(21,6) | G&A Performance Factor |
| C1 | NVARCHAR(59) | Code 1 |
| C2 | NVARCHAR(59) | Code 2 |
| C3 | NVARCHAR(59) | Code 3 |
| C4 | NVARCHAR(59) | Code 4 |
| C5 | NVARCHAR(59) | Code 5 |
| C6 | NVARCHAR(59) | Code 6 |
| C7 | NVARCHAR(59) | Code 7 |
| C8 | NVARCHAR(59) | Code 8 |
| C9 | NVARCHAR(59) | Code 9 |

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |
| EOC | NVARCHAR(59) | Element of Cost |
| SPREADNAME | NVARCHAR(16) | Spread Curve Name |

TPHASE Table

The TPHASE table contains time-phased information. Cobra names the columns based on the results of a resource assignment calculation. These columns were defined during installation when tables were created for the project database.

The TPHASE table contains the detailed time-phased budget, forecast, earned value, and actual cost information for each work package or control account. The TPHASE table usually contains multiple records for each work package/control account. The record format includes the following information:

- The CAWPID
- The resource assignment key field (CECODE)
- The cost class
- A date representing the fiscal period of the detail
- A field for each result in the resource assignment table

TPHASE Data Structure

Data in the TPHASE table is stored in the following fields.

| Field Name | Type | Field Description |
|------------|---------------|-------------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CAWPID | INTEGER | Cobra-generated ID |
| CECODE | NVARCHAR(59) | Resource Assignment Key Field |
| CLASS | NVARCHAR(20) | Class |
| DF_DATE | DATETIME | Date |
| BATCHNO | INTEGER | Batch Number |
| COM | DECIMAL(21,6) | Result Code – Cost of Money |
| DIRECT | DECIMAL(21,6) | Result Code – Direct |

| Field Name | Type | Field Description |
|------------|---------------|---|
| FEE | DECIMAL(21,6) | Result Code – Fee |
| FRINGE | DECIMAL(21,6) | Result Code – Fringe |
| FTE | DECIMAL(21,6) | Result Code – Full Time-Equivalent |
| GANDA | DECIMAL(21,6) | Result Code – General and Administrative Expenses |
| HOURS | DECIMAL(21,6) | Result Code – Hours |
| OVERHEAD | DECIMAL(21,6) | Result Code – Overhead |

BASELOG Table

The Baselog table contains a list of changes to the budget baseline. The list of changes is a record of all the movements made between different control accounts or between the various project accounts (for example, distributed and undistributed budget, management reserve, and authorized unpriced work) during the life of the project. The BASELOG table is populated when you initialize the baseline and is automatically updated when changes are made to the baseline.

BASELOG Data Structure

Data in the BASELOG table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|-------------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| ROW_UID | NVARCHAR(59) | Row UID |
| CA1 | NVARCHAR(59) | Control Account Key Field 1 |
| CA2 | NVARCHAR(59) | Control Account Key Field 2 |
| CA3 | NVARCHAR(59) | Control Account Key Field 3 |
| WP | NVARCHAR(59) | Work Package |
| CECODE | NVARCHAR(59) | Resource Assignment Key Field |
| BBL_DATE | DATETIME | Period Date |
| STATUSDATE | DATETIME | Status Date |
| REFNO | INTEGER | Reference Number |
| TRANS_UID | VARCHAR(22) | Transaction UID |

| Field Name | Data Type | Field Description |
|------------|---------------|------------------------|
| DEBIT | NVARCHAR(3) | Debit |
| CREDIT | NVARCHAR(3) | Credit |
| AMOUNT | DECIMAL(21,6) | Amount |
| LOGCOMMENT | NVARCHAR(200) | Comment |
| USR_ID | NVARCHAR(20) | User ID |
| CPR3 | INTEGER | CPR3 |
| TSTAMP | DATETIME | Time Stamp |
| CCN | NVARCHAR | Contract Change Number |
| SIG | INTEGER | Significant Change |
| HOURS | DECIMAL(21,6) | Hours |

LINK Table

The LINK table is created automatically when you load a schedule into Cobra and acts as a lookup table between the schedule activity ID and the control account and work package key fields in Cobra. The LINK table also stores the baseline and early and late dates for the activity at the time the activity was linked to the work item.

LINK Data Structure

Data in the LINK table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|-----------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CA1 | NVARCHAR(59) | Control Account Key Field 1 |
| CA2 | NVARCHAR(59) | Control Account Key Field 2 |
| CA3 | NVARCHAR(59) | Control Account Key Field 3 |
| WP | NVARCHAR(59) | Work Package |
| MS_NO | NVARCHAR(59) | Milestone ID |
| FULLID | NVARCHAR(59) | Full Activity ID |
| CAWPID | INTEGER | Cobra-generated ID |

Project Data Tables

| Field Name | Data Type | Field Description |
|------------|---------------|---|
| LFDATE | DATETIME | Last Finish Date |
| LSDATE | DATETIME | Last Start Date |
| SFDATE | DATETIME | Scheduled Finished Date |
| SSDATE | DATETIME | Scheduled Start Date |
| EFDATE | DATETIME | Early Finish Date |
| ESDATE | DATETIME | Early Start Date |
| BFINISH | DATETIME | Baseline Finish Date |
| BSTART | DATETIME | Baseline Start Date |
| PFINISH | DATETIME | Proposed Start Date |
| PSTART | DATETIME | Proposed Finish Date |
| ID | NVARCHAR | Open Plan Activity ID |
| PRJNAME | NVARCHAR(15) | Schedule Project Name (used when deleting LINK records based on the schedule project) |
| DESCRIP | NVARCHAR(254) | Schedule Project Name Description |
| PMT | NVARCHAR(1) | Progress Technique |
| VALID | NVARCHAR(1) | Valid |
| CLASS | NVARCHAR(20) | Cost Class |
| FCSTCLASS | NVARCHAR(20) | Forecast Class |
| MSWEIGHT | DECIMAL(21,6) | Milestone Weight |
| UNITSTODO | DECIMAL(21,6) | Units to Do |

Other Project-Specific Tables

In addition to the tables described above, the following project-specific tables may be created during the relevant operations.

PROGRAM Table

The PROGRAM table is a directory table consisting of entries containing project and contract information for each project set up in Cobra.

PROGRAM Table Structure

Data in the PROGRAM table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|-----------------------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| STATUSDATE | DATETIME | Status Date |
| PD_START | DATETIME | Period Start Date |
| CA_ACTUAL | NVARCHAR(1) | Capture Actuals Level |
| FISC_FILE | NVARCHAR(22) | Calendar File |
| CALC_FILE | NVARCHAR(22) | Resource File |
| RATE_FILE | NVARCHAR(22) | Rate File |
| CA_ID1 | NVARCHAR(10) | Control Account Field 1 Prompt |
| CA_ID2 | NVARCHAR(10) | Control Account Field 2 Prompt |
| CA_ID3 | NVARCHAR(10) | Control Account Field 3 Prompt |
| CA_BD1 | NVARCHAR(22) | Control Account Field 1 Code File |
| CA_BD2 | NVARCHAR(22) | Control Account Field 2 Code File |
| CA_BD3 | NVARCHAR(22) | Control Account Field 3 Code File |
| WP_ID | NVARCHAR(10) | Work Package Prompt |
| WP_BDN | NVARCHAR(22) | Work Package Field Code File |
| CLC_PROMPT | NVARCHAR(20) | No Longer Used |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|------------|---------------|-------------------------|
| CE_ID | NVARCHAR(10) | No Longer Used |
| CE_BDN | NVARCHAR(22) | No Longer Used |
| BATCHNO | INTEGER | Transaction Number |
| SPTYPE | INTEGER | Spread Weight Method |
| LOG | NVARCHAR(3) | Last Used Log Number |
| PERCENT1 | INTEGER | Percent Range1 |
| PERCENT2 | INTEGER | Percent Range2 |
| PERCENT3 | INTEGER | Percent Range3 |
| FC_TYPE1 | NVARCHAR(1) | Forecast Method Range 1 |
| FC_TYPE2 | NVARCHAR(1) | Forecast Method Range 2 |
| FC_TYPE3 | NVARCHAR(1) | Forecast Method Range 3 |
| FC_TYPE4 | NVARCHAR(1) | Forecast Method Range 4 |
| SCALECAP | NVARCHAR(20) | Scale Caption |
| SSD | DATETIME | Baseline Start |
| SFD | DATETIME | Baseline Finish |
| AFD | DATETIME | Forecast Finish |
| SCALEFAC | INTEGER | Scale Factor |
| CONT_NAME | NVARCHAR(250) | Contractor Name |
| CONT_LOC | NVARCHAR(40) | Contract Location |
| CONT_FLAG | NVARCHAR(1) | Contract Flag |
| CONT_TYPE | NVARCHAR(10) | Contract Type |
| CONT_NO | NVARCHAR(100) | Contract Number |
| QUANTITY | INTEGER | Quantity |
| FEE_PRCENT | DECIMAL(21,6) | Fee Percent |
| SHARERATIO | NVARCHAR(20) | Share Ratio |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|------------|---------------|---------------------------------|
| CTC | DECIMAL(21,6) | Negotiated Cost |
| AUW | DECIMAL(21,6) | Authorized Unpriced Work |
| OTC | DECIMAL(21,6) | Original Negotiated Cost |
| CBB | DECIMAL(21,6) | Contract Budget Base |
| FEE | DECIMAL(21,6) | Fee |
| MR | DECIMAL(21,6) | Management Reserve |
| UB | DECIMAL(21,6) | Undistributed Budget |
| CEILING | DECIMAL(21,6) | Contract Price Ceiling |
| LRE | DECIMAL(21,6) | Forecast |
| ESTCEILING | DECIMAL(21,6) | Estimated Ceiling |
| ESTMR | DECIMAL(21,6) | Estimated Management Reserve |
| ESTUB | DECIMAL(21,6) | Estimated Undistributed Budget |
| BASELINED | INTEGER | Baseline Set |
| CAMCODE | NVARCHAR(59) | No Longer Used |
| OTB | DECIMAL(21,6) | Negotiated Cost |
| OPP_PROJ | NVARCHAR(254) | Open Plan Project |
| FISC_RW | NVARCHAR(22) | Rolling Wave Calendar |
| CCN_USEBDN | INTEGER | Is Change Number Code File Used |
| CCN_BDN | NVARCHAR(22) | Change Number Code File |
| CCN_VAL | NVARCHAR(1) | Is Change Number Code Required |
| P1 | NVARCHAR(59) | Project Code 1 |
| P2 | NVARCHAR(59) | Project Code 2 |
| P3 | NVARCHAR(59) | Project Code 3 |
| P4 | NVARCHAR(59) | Project Code 4 |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|------------|---------------|-------------------------------|
| P5 | NVARCHAR(59) | Project Code 5 |
| P6 | NVARCHAR(59) | Project Code 6 |
| P7 | NVARCHAR(59) | Project Code 7 |
| P8 | NVARCHAR(59) | Project Code 8 |
| P9 | NVARCHAR(59) | Project Code 9 |
| MPSCODE | NVARCHAR(59) | No longer used |
| MGRFILE | NVARCHAR(22) | Manager Code File |
| MGRVALID | NVARCHAR(1) | Is Manager Code Validated |
| MGRTYPE | NVARCHAR(1) | No longer used |
| CONTRACT | NVARCHAR(100) | Contract Name |
| CONT_PHASE | NVARCHAR(20) | Contract Phase |
| CONT_REPN | NVARCHAR(60) | Contract Representative Name |
| CONT_REPT | NVARCHAR(60) | Contract Representative Title |
| CLASSFCN | NVARCHAR(60) | Classification |
| EVMS_ACC | INTEGER | EVMS Acceptance |
| EVMS_ADATE | DATETIME | EVMS Acceptance Date |
| OTB_DATE | DATETIME | Over Target Baseline Date |
| EAC_BEST | DECIMAL(21,6) | Best Case Forecast |
| EAC_WORST | DECIMAL(21,6) | Worst Case Forecast |
| ACWP | DECIMAL(21,6) | Actual |
| ACWP_HRS | DECIMAL(21,6) | Hours Actual |
| BCWP | DECIMAL(21,6) | Earned |
| BCWP_HRS | DECIMAL(21,6) | Hours Earned |
| BCWS | DECIMAL(21,6) | Budget to Date |
| BCWS_HRS | DECIMAL(21,6) | Hours Budget to Date |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|-------------|---------------|--|
| BAC | DECIMAL(21,6) | Budget |
| BAC_HRS | DECIMAL(21,6) | Budget Hours |
| EAC | DECIMAL(21,6) | Forecast |
| EAC_HRS | DECIMAL(21,6) | Forecast Hours |
| COMPLETE | DATETIME | Complete |
| DEFINITE | DATETIME | Definite |
| C_SYMBOL | NVARCHAR(6) | Currency Symbol |
| C_RIGHT | INTEGER | Currency Symbol on Right |
| ISMASTER | INTEGER | Master Project Flag |
| PRODVIS | INTEGER | Indicates whether project is visible to PM Compass and/or Cobra |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |
| IPMR2_CODE | NVARCHAR(30) | Code file assigned to the resource on the project (selected in the IPMR Format 2 Summary field on the Files tab of the Project Properties dialog box) |
| ADDRESS | NVARCHAR(70) | Address |
| STATE | NVARCHAR(3) | State |
| ZIP | NVARCHAR(11) | Zip code |
| ESTPRICE | DECIMAL(21,6) | Estimated Price |
| CITY | NVARCHAR(30) | City |
| COUNTRY | NVARCHAR(20) | Country |
| CONT_IDTYPE | NVARCHAR(15) | Contract Type |
| CONT_IDCODE | NVARCHAR(20) | Contract Code |

| Field Name | Data Type | Field Description |
|----------------|---------------------|----------------------------------|
| CONT_PROGRAM | NVARCHAR(80) | Contract Project |
| CONT_REPPHONE | NVARCHAR(20) | Contract Repetitive Phone Number |
| CONT_REPEMAIL | NVARCHAR(60) | Contract Repetitive Email |
| CONT_STATEMENT | NTEXT/LONG NVARCHAR | Contract Statement |
| CONT_TASK | NVARCHAR(80) | Contract Task |
| CONT_PROGTYPE | NVARCHAR(2) | Contract Program Type |

Baseline Tables

When a baseline is set, Cobra creates the following baseline tables:

- BASELINE
- BASEDETL
- BASEHIST

BASELINE Table

The BASELINE table contains baseline information that has been stored for each project in the Cobra installation.

Data in the BASELINE table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|--------------------------|
| PROGRAM | NVARCHAR | Project Name |
| TRANS_UID | NVARCHAR | Transaction ID |
| REFNO | INTEGER | Reference Number |
| BASE_DATE | DATETIME | Date |
| LABEL | NVARCHAR(10) | Label |
| BBLCOMMENT | NVARCHAR(200) | Comment |
| UB | DECIMAL(21,6) | Undistributed Budget |
| MR | DECIMAL(21,6) | Management Reserve |
| AUW | DECIMAL(21,6) | Authorized Unpriced Work |
| CTC | DECIMAL(21,6) | Contract Target Cost |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|------------|---------------|--------------------|
| DB | DECIMAL(21,6) | Distributed Budget |
| EAC | DECIMAL(21,6) | EAC |
| FEE | DECIMAL(21,6) | Fee |

BASEDETL Table

The BASEDETL table stores the time phased beginning period data for CPR Format 3.

Data in the BASEDETL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|-------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| TRANS_UID | NVARCHAR(22) | Transaction ID |
| FSC_DATE | DATETIME | Period Date |
| HOURS | DECIMAL(21,6) | Hours |
| AMOUNT | DECIMAL(21,6) | Amount |

BASEHIST Table

The BASEHIST table stores a snap shot of the budget, actual and earned by control account when the calendar is advanced.

Data in the BASEHIST table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|--------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CAWPID | INTEGER | Cobra-generated ID |
| HIST_DATE | DATETIME | Period Date |
| BAC | DECIMAL(21,6) | Budget |
| EAC | DECIMAL(21,6) | Forecast |
| BCWS | DECIMAL(21,6) | Budget to Date |
| BCWP | DECIMAL(21,6) | Earned |
| ACWP | DECIMAL(21,6) | Actual |

| Field Name | Data Type | Field Description |
|------------|---------------|----------------------|
| BCWS_HRS | DECIMAL(21,6) | Hours Budget to Date |
| BCWP_HRS | DECIMAL(21,6) | Hours Earned |
| ACWP_HRS | DECIMAL(21,6) | Hours Actual |
| BAC_HRS | DECIMAL(21,6) | Budget Hours |
| EAC_HRS | DECIMAL(21,6) | Forecast Hours |

MULTIPROG Table

If you use the multi-project link or merge facility, Cobra automatically creates a multi-project table that stores information about the projects attached to the master project.

Data in the MULTIPROG table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| MASTER | NVARCHAR(22) | Master Project Name |
| SUBPROGRAM | NVARCHAR(22) | Subproject Name |

Narrative Table

Cobra uses the following table when storing variance narrative data.

NARRTEXT Table

This table is used to store the narrative text data.

Data in the NARRTEXT table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|--------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| STATUSDATE | DATETIME | Status Date |
| CAWPID | INTEGER | Cobra-generated ID |
| CODE | NVARCHAR(59) | Code |
| KEY_TYPE | NVARCHAR(20) | Key Type |
| CAT_UID | INTEGER | Category |
| NARR_TEXT | TEXT | Narrative Text |

Other Project-Specific Tables

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

Ancillary Tables

Ancillary tables, in general, essential to the normal operations of Cobra. In several cases, in fact, you must have the data tables already in place before you can set up a project. Auxiliary tables may be shared among multiple projects and, depending on network security, may be shared among users in a multi-user environment.

Cobra uses the following types of auxiliary tables, each of which is discussed in the sections that follow:

- Breakdown structure tables
- Code tables
- Fiscal calendar tables
- Rate tables
- Resource tables
- Note tables

Breakdown Structure Tables

Breakdown structure tables can be shared between multiple projects in Cobra.

Cobra stores information about breakdown structures in two tables:

- BREAKDWN
- BDNDETL

Each of these tables is described in the succeeding sections.

BREAKDWN Table

The BREAKDWN table contains information about all the breakdown structures in Cobra. Each record in the BREAKDWN table represents a single breakdown structure file.

Data in the BREAKDWN table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|------------------------|
| BREAKFILE | NVARCHAR(22) | Code File |
| BREAK_TYPE | NVARCHAR(1) | Code Format |
| CODELENGTH | INTEGER | Maximum Code Length |
| MAX_LEVEL | INTEGER | Maximum Code Level |
| PAD_CHAR | NVARCHAR(1) | Punctuation Character |
| TH_FLAGS | NVARCHAR(10) | Threshold Flags |
| LEVEL1 | INTEGER | Characters for Level 1 |
| LEVEL2 | INTEGER | Characters for Level 2 |

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|--------------|-------------------------|
| LEVEL3 | INTEGER | Characters for Level 3 |
| LEVEL4 | INTEGER | Characters for Level 4 |
| LEVEL5 | INTEGER | Characters for Level 5 |
| LEVEL6 | INTEGER | Characters for Level 6 |
| LEVEL7 | INTEGER | Characters for Level 7 |
| LEVEL8 | INTEGER | Characters for Level 8 |
| LEVEL9 | INTEGER | Characters for Level 9 |
| LEVEL10 | INTEGER | Characters for Level 10 |
| LEVEL11 | INTEGER | Characters for Level 11 |
| LEVEL12 | INTEGER | Characters for Level 12 |
| LEVEL13 | INTEGER | Characters for Level 13 |
| LEVEL14 | INTEGER | Characters for Level 14 |
| LEVEL15 | INTEGER | Characters for Level 15 |
| LEVEL16 | INTEGER | Characters for Level 16 |
| LEVEL17 | INTEGER | Characters for Level 17 |
| LEVEL18 | INTEGER | Characters for Level 18 |
| LEVEL19 | INTEGER | Characters for Level 19 |
| LEVEL20 | INTEGER | Characters for Level 20 |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

BDNDETL Table

The BDNDETL table contains detailed information about all the breakdown structures in Cobra.

Data in the BDNDETL table is stored in the following fields.

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|---------------|---|
| BREAKFILE | NVARCHAR(22) | Code File |
| CODE | NVARCHAR(59) | Element of Code |
| TAG | NCHAR(60) | Hierarchy |
| NUMCHILD | INTEGER | Number of Children |
| CODEDESC | NVARCHAR(254) | Code Description |
| TH_SPVF | DECIMAL(21,6) | Threshold SV Value Current Period Favorable |
| TH_SPVU | DECIMAL(21,6) | Threshold SV Value Current Period Unfavorable |
| TH_SPPF | DECIMAL(21,6) | Threshold SV % Current Period Favorable |
| TH_SPPU | DECIMAL(21,6) | Threshold SV % Current Period Unfavorable |
| TH_SCVF | DECIMAL(21,6) | Threshold SV Value Cumulative Unfavorable |
| TH_SCVU | DECIMAL(21,6) | Threshold SV Value Cumulative Unfavorable |
| TH_SCPF | DECIMAL(21,6) | Threshold SV % Cumulative Favorable |
| TH_SCPU | DECIMAL(21,6) | Threshold SV % Cumulative Unfavorable |
| TH_CPVF | DECIMAL(21,6) | Threshold CV Value Current Period Favorable |
| TH_CPVU | DECIMAL(21,6) | Threshold CV Value Current Period Unfavorable |
| TH_CPPF | DECIMAL(21,6) | Threshold CV % Current Period Favorable |
| TH_CPPU | DECIMAL(21,6) | Threshold CV % Current Period Unfavorable |
| TH_CCVF | DECIMAL(21,6) | Threshold CV Value Cumulative Unfavorable |

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|---------------|--|
| TH_CCVU | DECIMAL(21,6) | Threshold CV Value Cumulative Unfavorable |
| TH_CCPF | DECIMAL(21,6) | Threshold CV % Cumulative Favorable |
| TH_CCPU | DECIMAL(21,6) | Threshold CV % Cumulative Unfavorable |
| TH_CAVF | DECIMAL(21,6) | Threshold CV Value At Complete Favorable |
| TH_CAVU | DECIMAL(21,6) | Threshold CV Value At Complete Unfavorable |
| TH_CAPF | DECIMAL(21,6) | Threshold CV % At Complete Favorable |
| TH_CAPU | DECIMAL(21,6) | Threshold CV % At Complete Unfavorable |
| D1 | NVARCHAR(59) | Optional Code 1 |
| D2 | NVARCHAR(59) | Optional Code 2 |
| D3 | NVARCHAR(59) | Optional Code 3 |
| D4 | NVARCHAR(59) | Optional Code 4 |
| D5 | NVARCHAR(59) | Optional Code 5 |
| D6 | NVARCHAR(59) | Optional Code 6 |
| D7 | NVARCHAR(59) | Optional Code 7 |
| D8 | NVARCHAR(59) | Optional Code 8 |
| D9 | NVARCHAR(59) | Optional Code 9 |
| PARENT | NVARCHAR | Parent |
| BDN_LEVEL | INTEGER | Level |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

Fiscal Calendar Tables

The fiscal calendar information is stored in the Cobra project folder.

Cobra stores information about fiscal calendars in three tables:

- FISCAL
- FISCDETL
- FISCHOL

Each of these tables is described in the sections that follow.

FISCAL Table

The FISCAL table contains information about all the fiscal calendar tables in Cobra. Each record in the FISCAL table represents a single calendar file.

Data in the FISCAL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|--------------------------|
| FISCFILE | NVARCHAR(22) | Fiscal Calendar Filename |
| PATTERN | NVARCHAR(254) | Date Pattern |
| DESC00 | NVARCHAR(254) | Calendar 00 Description |
| DESC01 | NVARCHAR(254) | Calendar 01 Description |
| DESC02 | NVARCHAR(254) | Calendar 02 Description |
| DESC03 | NVARCHAR(254) | Calendar 03 Description |
| DESC04 | NVARCHAR(254) | Calendar 04 Description |
| DESC05 | NVARCHAR(254) | Calendar 05 Description |
| DESC06 | NVARCHAR(254) | Calendar 06 Description |
| DESC07 | NVARCHAR(254) | Calendar 07 Description |
| DESC08 | NVARCHAR(254) | Calendar 08 Description |
| DESC09 | NVARCHAR(254) | Calendar 09 Description |
| DESC10 | NVARCHAR(254) | Calendar 10 Description |
| DESC11 | NVARCHAR(254) | Calendar 11 Description |
| DESC12 | NVARCHAR(254) | Calendar 12 Description |
| DESC13 | NVARCHAR(254) | Calendar 13 Description |

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|---------------|-------------------------|
| DESC14 | NVARCHAR(254) | Calendar 14 Description |
| DESC15 | NVARCHAR(254) | Calendar 15 Description |
| DESC16 | NVARCHAR(254) | Calendar 16 Description |
| DESC17 | NVARCHAR(254) | Calendar 17 Description |
| DESC18 | NVARCHAR(254) | Calendar 18 Description |
| DESC19 | NVARCHAR(254) | Calendar 19 Description |
| DOW_HOURS | NVARCHAR(60) | Day of Week Hours |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

FISCDETL Table

The FISCDETL table contains a record for each fiscal period in all calendar files.

Data in the FISCDETL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|----------------------------------|
| FISCFILE | NVARCHAR | Fiscal Calendar Filename |
| FSC_DATE | DATETIME | Cut-off Date |
| HOURS | DECIMAL | Hours in Reporting Period |
| FLAG00 | NVARCHAR(1) | Flag for Calendar Set 00 (*, \$) |
| FIELD00 | NVARCHAR(20) | Label for Calendar Set 00 |
| FLAG01 | NVARCHAR(1) | Flag for Calendar Set 01 (*, \$) |
| FIELD01 | NVARCHAR(20) | Label for Calendar Set 01 |
| FLAG02 | NVARCHAR(1) | Flag for Calendar Set 02 (*, \$) |
| FIELD02 | NVARCHAR(20) | Label for Calendar Set 02 |
| FIELD03 | NVARCHAR(20) | Label for Calendar Set 03 |
| FLAG03 | NVARCHAR(1) | Flag for Calendar Set 03 (*, \$) |

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|--------------|----------------------------------|
| FIELD04 | NVARCHAR(20) | Label for Calendar Set 04 |
| FLAG04 | NVARCHAR(1) | Flag for Calendar Set 04 (*, \$) |
| FIELD05 | NVARCHAR(20) | Label for Calendar Set 05 |
| FLAG05 | NVARCHAR(1) | Flag for Calendar Set 05 (*, \$) |
| FIELD06 | NVARCHAR(20) | Label for Calendar Set 06 |
| FLAG06 | NVARCHAR(1) | Flag for Calendar Set 06 (*, \$) |
| FLAG07 | NVARCHAR(1) | Flag for Calendar Set 07 (*, \$) |
| FIELD07 | NVARCHAR(20) | Label for Calendar Set 07 |
| FLAG08 | NVARCHAR(1) | Flag for Calendar Set 08 (*, \$) |
| FIELD08 | NVARCHAR(20) | Label for Calendar Set 08 |
| FLAG09 | NVARCHAR(1) | Flag for Calendar Set 09 (*, \$) |
| FIELD09 | NVARCHAR(20) | Label for Calendar Set 09 |
| FLAG10 | NVARCHAR(1) | Flag for Calendar Set 10 (*, \$) |
| FIELD10 | NVARCHAR(20) | Label for Calendar Set 10 |
| FLAG11 | NVARCHAR(1) | Flag for Calendar Set 11 (*, \$) |
| FIELD11 | NVARCHAR(20) | Label for Calendar Set 11 |
| FLAG12 | NVARCHAR(1) | Flag for Calendar Set 12 (*, \$) |
| FIELD12 | NVARCHAR(20) | Label for Calendar Set 12 |
| FLAG13 | NVARCHAR(1) | Flag for Calendar Set 13 (*, \$) |
| FIELD13 | NVARCHAR(20) | Label for Calendar Set 13 |
| FLAG14 | NVARCHAR(1) | Flag for Calendar Set 14 (*, \$) |
| FIELD14 | NVARCHAR(20) | Label for Calendar Set 14 |
| FLAG15 | NVARCHAR(1) | Flag for Calendar Set 15 (*, \$) |
| FIELD15 | NVARCHAR(20) | Label for Calendar Set 15 |
| FLAG16 | NVARCHAR(1) | Flag for Calendar Set 16 (*, \$) |

| Field Name | Data Type | Field Description |
|------------|--------------|----------------------------------|
| FIELD16 | NVARCHAR(20) | Label for Calendar Set 16 |
| FLAG17 | NVARCHAR(1) | Flag for Calendar Set 17 (*, \$) |
| FIELD17 | NVARCHAR(20) | Label for Calendar Set 17 |
| FLAG18 | NVARCHAR(1) | Flag for Calendar Set 18 (*, \$) |
| FIELD18 | NVARCHAR(20) | Label for Calendar Set 18 |
| FLAG19 | NVARCHAR(1) | Flag for Calendar Set 19 (*, \$) |
| FIELD19 | NVARCHAR(20) | Label for Calendar Set 19 |
| USR_ID | NVARCHAR(20) | User ID |
| LASTUPDATE | DATETIME | Date of Last Update |
| SEQUENCE | INTEGER | Internal Sort Order |

FISCHOL Table

The FISCHOL table contains a record for each holiday defined in the calendars.

Data in the FISCHOL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|--------------------------|
| FISCFILE | NVARCHAR(22) | Fiscal Calendar Filename |
| HOLIDAY | DATETIME | Date of Holiday |

Rate Tables

Rate tables define the multipliers used to calculate costs.

Rate tables can be shared between multiple projects in Cobra.

Cobra stores information about rates in three tables:

- RATE
- RATEDESC
- RATEDETL

Each of these tables is described in the succeeding sections.

RATE Table

The RATE table contains information about all the rate tables in Cobra. Each record in the RATE table represents a single rate file.

Data in the RATE table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| RATEFILE | NVARCHAR | Rate File |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

RATEDESC

The RATEDESC table contains information about all the rate sets in each rate file in Cobra. Each record in the RATEDESC table represents a single rate set.

Data in the RATEDESC table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|------------------------|
| RATEFILE | NVARCHAR(22) | Rate File |
| RATE_TABLE | NVARCHAR(59) | Rate Set |
| RTDESC | NVARCHAR(254) | Rate Table Description |
| C1 | NVARCHAR(59) | Code 1 |
| C2 | NVARCHAR(59) | Code 2 |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

RATEDETL Table

Rates define the multipliers used to calculate costs. Each record in the RATEDETL table represents a single rate set.

Data in the RATEDETL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| RATEFILE | NVARCHAR(22) | Rate File |
| RATE_TABLE | NVARCHAR(59) | Rate Set |
| RATE_DATE | DATETIME | Rate Effective Date |

| Field Name | Data Type | Field Description |
|------------|---------------|---------------------|
| RATE | DECIMAL(21,6) | Rate |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

Resource Tables

Resource tables play a major role in Cobra since they not only define the calculation of many types of costs, but also are used to determine the structure of the TPHASE table.

Resource assignment tables can be shared between multiple projects in Cobra.

Cobra stores information about resource calculations in four tables:

- CALC
- CALCDISC
- CALCDETL
- CALCFLDS

Each of these tables is described in the succeeding sections.

CALC Table

The CALC table contains information about all the resource tables in the Cobra installation. Each record in the CALC table represents a single resource file.

Data in the CALC table is stored in the following fields.

| Field Name | Type | Field Description |
|------------|---------------|-----------------------|
| CALCFILE | NVARCHAR(22) | Resource File |
| CODE_TYPE | NVARCHAR(1) | Code Type |
| CODELENGTH | INTEGER | Maximum Code Length |
| MAX_LEVEL | INTEGER | Maximum Code Level |
| PAD_CHAR | NVARCHAR(1) | Punctuation Character |
| TH_FLAGS | NVARCHAR(10) | Threshold Flag |
| RATEFILE | NVARCHAR(22) | Rate File |
| RSLTALL | NVARCHAR(250) | Result List |
| RSLTCURR | NVARCHAR(250) | Currency Results |

Ancillary Tables

| Field Name | Type | Field Description |
|------------|--------------|-------------------------|
| LEVEL1 | INTEGER | Characters for Level 1 |
| LEVEL2 | INTEGER | Characters for Level 2 |
| LEVEL3 | INTEGER | Characters for Level 3 |
| LEVEL4 | INTEGER | Characters for Level 4 |
| LEVEL5 | INTEGER | Characters for Level 5 |
| LEVEL6 | INTEGER | Characters for Level 6 |
| LEVEL7 | INTEGER | Characters for Level 7 |
| LEVEL8 | INTEGER | Characters for Level 8 |
| LEVEL9 | INTEGER | Characters for Level 9 |
| LEVEL10 | INTEGER | Characters for Level 10 |
| LEVEL11 | INTEGER | Characters for Level 11 |
| LEVEL12 | INTEGER | Characters for Level 12 |
| LEVEL13 | INTEGER | Characters for Level 13 |
| LEVEL14 | INTEGER | Characters for Level 14 |
| LEVEL15 | INTEGER | Characters for Level 15 |
| LEVEL16 | INTEGER | Characters for Level 16 |
| LEVEL17 | INTEGER | Characters for Level 17 |
| LEVEL18 | INTEGER | Characters for Level 18 |
| LEVEL19 | INTEGER | Characters for Level 19 |
| LEVEL20 | INTEGER | Characters for Level 20 |
| USR_ID | NVARCHAR(20) | User ID |
| LASTUPDATE | DATETIME | Date of Last Update |
| SEQUENCE | INTEGER | Internal Sort Order |

CALCDESC Table

The CALCDESC table contains information about all the resources in the resource table in Cobra. Each record in the CALCDESC table represents a single resource in the file.

Data in the CALCDESC table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|---|
| CALCFILE | NVARCHAR(22) | Resource File |
| CECODE | NVARCHAR(59) | Resource ID |
| CEDESC | NVARCHAR(254) | Resource Description |
| PARENT | NVARCHAR(59) | Parent |
| CE_LEVEL | INTEGER | Resource Level |
| TAG | NCHAR(60) | Hierarchy |
| NUMCHILD | INTEGER | Number of Children |
| TH_SPVF | DECIMAL(21,6) | Threshold SV Value Current Period Favorable |
| TH_SPVU | DECIMAL(21,6) | Threshold SV Value Current Period Unfavorable |
| TH_SPPF | DECIMAL(5,2) | Threshold SV % Current Period Favorable |
| TH_SPPU | DECIMAL(5,2) | Threshold SV % Current Period Unfavorable |
| TH_SCVF | DECIMAL(21,6) | Threshold SV Value Cumulative Favorable |
| TH_SCVU | DECIMAL(21,6) | Threshold SV Value Cumulative Unfavorable |
| TH_SCPF | DECIMAL(5,2) | Threshold SV % Cumulative Favorable |
| TH_SCPU | DECIMAL(5,2) | Threshold SV % Cumulative Unfavorable |
| TH_CPVF | DECIMAL(21,6) | Threshold CV Value Current Period Favorable |
| TH_CPVU | DECIMAL(21,6) | Threshold CV Value Current Period Unfavorable |

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|---------------|--|
| TH_CPPF | DECIMAL(5,2) | Threshold CV % Current Period Favorable |
| TH_CPPU | DECIMAL(5,2) | Threshold CV % Current Period Unfavorable |
| TH_CCVF | DECIMAL(21,6) | Threshold CV Value Cumulative Favorable |
| TH_CCVU | DECIMAL(21,6) | Threshold CV Value Cumulative Unfavorable |
| TH_CCPF | DECIMAL(5,2) | Threshold CV % Cumulative Favorable |
| TH_CCPU | DECIMAL(5,2) | Threshold CV % Cumulative Unfavorable |
| TH_CAVF | DECIMAL(21,6) | Threshold CV Value At Complete Favorable |
| TH_CAVU | DECIMAL(21,6) | Threshold CV Value At Complete Unfavorable |
| TH_CAPF | DECIMAL(5,2) | Threshold CV % At Complete Favorable |
| TH_CAPU | DECIMAL(5,2) | Optional Code 9 |
| D1 | NVARCHAR(59) | Optional Code 1 |
| D2 | NVARCHAR(59) | Optional Code 2 |
| D3 | NVARCHAR(59) | Optional Code 3 |
| D4 | NVARCHAR(59) | Optional Code 4 |
| D5 | NVARCHAR(59) | Optional Code 5 |
| D6 | NVARCHAR(59) | Optional Code 6 |
| D7 | NVARCHAR(59) | Optional Code 7 |
| D8 | NVARCHAR(59) | Optional Code 8 |
| D9 | NVARCHAR(59) | Optional Code 9 |
| EOC | NVARCHAR(59) | Element of Cost |
| SEQUENCE | INTEGER | Internal Sort Order |

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

CALCDETL Table

The CALCDETL table contains information about each result for all resources in Cobra. Each record in the CALCDETL table represents a single result for the resource.

Data in the CALCDETL table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|--------------|-------------------------------|
| CALCFILE | NVARCHAR(22) | Resource File |
| CECODE | NVARCHAR(59) | Resource Assignment Key Field |
| LINE | INTEGER | Line |
| RESULT | NVARCHAR(10) | Result Field Being Defined |
| ALIAS | NVARCHAR(20) | Alias for Display |
| UNITS | NVARCHAR(10) | Units for Measure |
| RATE_TABLE | NVARCHAR(59) | Rate Set |
| CURRENCY | NVARCHAR(1) | Currency |
| SORT_CODE | NVARCHAR(1) | Result Code |
| SOURCE1 | NVARCHAR(10) | First Source Field |
| SOURCE2 | NVARCHAR(10) | Second Source Field |
| SOURCE3 | NVARCHAR(10) | Third Source Field |
| SOURCE4 | NVARCHAR(10) | Fourth Source Field |
| SOURCE5 | NVARCHAR(10) | Fifth Source Field |
| SOURCE6 | NVARCHAR(10) | Sixth Source Field |
| SOURCE7 | NVARCHAR(10) | Seventh Source Field |
| SOURCE8 | NVARCHAR(10) | Eighth Source Field |
| SOURCE9 | NVARCHAR(10) | Ninth Source Field |

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| SOURCE10 | NVARCHAR(10) | Tenth Source Field |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

CALCFLDS Table

The CALCFLDS table contains information about calculated results. Each record in the CALCFLDS table represents a single result file.

Data in the CALCFLDS table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------|---------------------|
| PROGRAM | NVARCHAR(22) | Project Name |
| CALCFIELD | NVARCHAR(10) | Calculated Field |
| EXPR | NVARCHAR(250) | Expression |
| CURRENCY | NVARCHAR(1) | Currency |
| SORT_CODE | NVARCHAR(1) | Result Code |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |
| USR_ID | NVARCHAR(20) | User ID |

Note Tables

Note tables allow you to attach multiple notes to control accounts and work packages and to organize the notes into categories.

Cobra stores note information in two tables:

- COB_CAT
- COB_NTX

Each of these tables is described in the following sections.

COB_CAT

The COB_CAT table contains information about the note categories you can define.

Data in the COB_CAT table is stored in the following fields.

Ancillary Tables

| Field Name | Data Type | Field Description |
|------------|--------------|---------------------|
| ROW_ID | INTEGER | Row ID |
| CONTEXT | NVARCHAR(30) | Table Name |
| CAT_ID | NVARCHAR(59) | Category Name |
| USR_ID | NVARCHAR(20) | User ID |
| SEQUENCE | INTEGER | Internal Sort Order |
| LASTUPDATE | DATETIME | Date of Last Update |

COB_NTX Table

The COB_NTX table contains information about the note text you enter for a category.

Data in the COB_NTX table is stored in the following fields.

| Field Name | Data Type | Field Description |
|------------|---------------------|------------------------------------|
| CAT_UID | INTEGER | Category ID |
| TABLE_TYPE | NVARCHAR(30) | Defines where the note is attached |
| DIR_ID | NVARCHAR(22) | Project Name |
| FK_ID | INTEGER | Unique CAWP ID for note |
| FK_ID_CHAR | NVARCHAR(59) | Note Description |
| NOTE_TEXT | NTEXT/LONG NVARCHAR | Note Text |
| USR_ID | NVARCHAR | User ID |
| LASTUPDATE | DATETIME | Date of Last Update |
| SEQUENCE | INTEGER | Internal Sort Order |

System Data

This section provides you with the updated version of all WST tables. These tables are used by several applications, such as Open Plan and Cobra.

Configuration Data

Table WST_AUDIT_LOG – Audit Log

The Audit Log table stores limited audit information pertaining to user activity in the PPM products.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| EVENT_DATE | Date / Time of event occurrence. | DATE | NOT NULL |
| EVENT_ID | Event ID number 257 = Using Standard Authentication 258 = Using Windows Authentication 259 = User login 260 = Bad user name or password 265 = User not authorized for product 266 = Logins are disabled for product 267 = Product license count exceeded. 269 = User logoff 270 = Product terminated. Too many failed login attempts | NUMBER(10, 0) | NOT NULL |
| EVENT_TYPE | Event Type 1 = Error 2 = Warning 3 = Information 4 = Debug | NUMBER(10,0) | NOT NULL |
| DATA | Event Data (For future use). | LONG | NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| MACHINE_ID | Computer that generated the event. | VARCHAR(15) | NOT NULL |
| PRD_UID | Product ID of the application that generated the event. | Number(10, 0) | NOT NULL |
| ROW_UID | Row Unique Identifier. | VARCHAR(22) | NOT NULL |
| USR_ID | User ID of user that generated the event. | VARCHAR(20) | NOT NULL |

Table WST_CUSTOM_MENU – Custom Menu Items

The Custom Menu items table stores information related to custom menu items created via the Security Administrator for use in Cobra. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| ACL_UID | The unique identifier for an access control record. | VARCHAR2(22) | NOT NULL |
| DIR_UID | The unique identifier for the directory object record to which the access control record applies. | VARCHAR2(22) | NOT NULL |
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NULL |
| READONLY | Determines whether the user, group, or role combination is restricted to opening the directory object in read only mode. | NUMBER(10, 0) | NOT NULL |
| ROL_ID | The unique identifier of a role. | VARCHAR2(20) | NULL |
| USR_ID | The unique identifier of a user. | VARCHAR2(20) | NULL |

Table WST_DCT – Data Dictionary

The Data Dictionary table defines the columns for tables within Cobra. The structure of this table itself should never be modified. If the structure of any Cobra tables defined in the data dictionary is modified, appropriate entries or adjustments must be made to this table. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|---------------|--|------------------|----------|
| COL_FLAGS | | NUMBER(10, 0) | NOT NULL |
| FKEY_FLD_NAME | | VARCHAR2(30) | NULL |
| FKEY_REQUIRED | | NUMBER(10, 0) | NOT NULL |
| FKEY_TABLE | | VARCHAR2(30) | NULL |
| FKEY_VIRTUAL | | NUMBER(10, 0) | NOT NULL |
| FLD_NAME | The name of a Cobra field. | VARCHAR2(30) | NOT NULL |
| LENGTH | The number of characters required for the field. | NUMBER(10, 0) | NOT NULL |
| SCALE | The number of decimal places required for the field. | NUMBER(10, 0) | NOT NULL |
| STRING_ID | The identifier of the field's string resources. | NUMBER(10, 0) | NOT NULL |
| SYS_NAME | | VARCHAR2(30) | NULL |
| TABLE_TYPE | The three-character identifier of the table in which the field exists. | VARCHAR2(30) | NOT NULL |
| TYPE | The Cobra data type of the field. | VARCHAR2(4) | NOT NULL |
| USR_NAME | A user-defined name to be displayed for this field, overriding the name determined by the STRING_ID. | VARCHAR2(60) | NULL |

Table WST_ENUM – PPM Enumeration Types

The PPM Enumeration Types table stores all enumeration types associated with fields in PPM tables. This table is not used by Cobra.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|-------------------|------------------|----------|
| ENUM_CODE | Enumeration code. | VARCHAR(4) | NOT NULL |
| ENUM_ORDER | Sort order. | NUMBER(10,0) | NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--------------------------|------------------|----------|
| FLD_NAME | Field name of the table. | VARCHAR(30) | NOT NULL |
| STRING_ID | Language resource ID. | VARCHAR(30) | NOT NULL |
| TABLE_TYPE | Unique table type. | VARCHAR(30) | NOT NULL |

Table WST_LCK – Object Locks

The Locked Objects table maintains a list of items that are currently open within Cobra. The data dictionary table identifier for table OPP_LCK is LCK.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| CONTEXT | Context of the lock. | VARCHAR2(22) | NULL |
| CONTEXT_ID | The unique identifier of a file or object which has been locked. | VARCHAR2(200) | NULL |
| DIR_UID | The unique identifier of the locked directory object. This value is not displayed in Cobra. The object's name (DIR_ID) is displayed instead. | VARCHAR2(22) | NOT NULL |
| LASTUPDATE | The date and time that the lock record was last updated. | DATE | NOT NULL |
| LCK_UID | The unique identifier for an object lock record. This value is not displayed in Cobra. | VARCHAR2(22) | NOT NULL |
| LOCKMODE | The mode in which the directory object is locked: E (Exclusive), S (Shared), R (Read Only), B (checked out to the briefcase data source), or I (checked out to the main data source). | VARCHAR(1) | NOT NULL |
| MACHINE_ID | The machine ID of a user associated with an object lock record. | VARCHAR2(48) | NOT NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| PRD_UID | The unique identifier for a Deltek product record. | NUMBER(10, 0) | NOT NULL |
| ULI_UID | The identifier for the user's login, unique for each session even if for the same user. | VARCHAR(22) | NOT NULL |
| USR_ID | The ID of the user that has the object locked. | VARCHAR2(20) | NOT NULL |

Table WST_LICN – Licenses

The Licenses table contains the list of licenses installed. This table is not used by Cobra.

| Field Name | Description | Oracle Data Type | Nulls |
|----------------|--------------------|------------------|----------|
| LICN_KEY | License Key. | VARCHAR(255) | NOT NULL |
| LICN_UID | Unique License ID. | VARCHAR(22) | NOT NULL |
| PRD_UID | Unique Product ID. | NUMBER(10, 0) | NOT NULL |
| LICN_ORG | | NVARCHAR2(60) | |
| LICN_CLIENT_ID | | VARCHAR2(100) | |

Table WST_LTYP – License Types

The License Types table contains the list of license types. This table is not used by Cobra.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|----------------------------|------------------|----------|
| LTYP | Unique ID of License Type. | VARCHAR(8) | NOT NULL |
| PRD_UID | Unique Product ID. | NUMBER(10, 0) | NULL |
| TYPE_NAME | Type Name. | VARCHAR(50) | NULL |

Table WST_TAB – Table Names

The Table Names table provides a mapping between the 3-character data dictionary table identifier and the actual database table name. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|---|------------------|----------|
| COTYPE | For Deltek use only. | VARCHAR2(30) | NULL |
| FLAGS | For Deltek use only. | NUMBER(10, 0) | NOT NULL |
| PRIMARY_KEY | Not used by Cobra. | VARCHAR2(100) | NULL |
| PRD_UID | Deltek PPM Product ID. | NUMBER(10, 0) | NULL |
| TABLE_NAME | Names of the tables defined in the Cobra data dictionary (WST_DCT). | VARCHAR2(30) | NOT NULL |
| TABLE_TYPE | Table types defined in the Cobra data dictionary (WST_DCT). | VARCHAR2(30) | NOT NULL |
| VERSION | | VARCHAR2(4) | NOT NULL |

Table WST_UPD – User Preference Defaults

The User Preference Defaults table stores the default values for user preference information used within Cobra. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| CAT_VALUE | The value of the user preference default. | VARCHAR2(2000) | NULL |
| CATEGORY | The category for a user preference default record. | VARCHAR2(60) | NOT NULL |
| PRD_UID | The unique identifier for a Deltek product record. | NUMBER(10, 0) | NOT NULL |
| SECURE | | NUMBER(10,0) | NOT NULL |

Table WST_UPF – User Preference Settings

The User Preferences table stores all user preference information used within Cobra. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| CAT_VALUE | The value of the user preference setting. | VARCHAR2(2000) | NULL |
| CATEGORY | The category for a user preference setting. | VARCHAR2(60) | NOT NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| DIR_UID | | VARCHAR2(22) | NOT NULL |
| PRD_UID | The unique identifier for a Deltek product record. | NUMBER(10, 0) | NOT NULL |
| USR_ID | The user to whom the user preference setting applies. | VARCHAR2(20) | NOT NULL |
| SECURE | | NUMBER(10, 0) | NOT NULL |

Directory Data

Table WST_DIR – Object Directory

The Object Directory table is the master directory for all project-related data items. The data dictionary table identifier for table WST_DIR is DIR.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|--|------------------|----------|
| DESCRIPTION | The description of a directory object. | NVARCHAR(125) | NULL |
| DIR_ID | The name of a project, code, calendar, resource, or view object. In Cobra, these objects are often referred to as "files". | VARCHAR2(22) | NOT NULL |
| DIR_UID | A unique identifier for an object directory record. | VARCHAR2(22) | NOT NULL |
| LASTUPDATE | The date and time that the directory object record was last updated. | DATE | NOT NULL |
| OPENMODE | The mode in which the object is to be opened: Exclusive, Shared, or Read Only. The values are stored in the database as E, S, and R, respectively. | VARCHAR2(1) | NOT NULL |
| OWNER_ID | The user ID of the object's owner. | VARCHAR2(20) | NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| SEQUENCE | Used to manage multi-user concurrency in shared mode. | NUMBER(10, 0) | NOT NULL |
| TABLE_TYPE | The data type of the directory object. Valid values are: CLD (calendar file), COD (code file), PRJ (project file), RCL (reporting calendar), RDS (resource file), and VUE (view file). | VARCHAR2(30) | NOT NULL |
| USR_ID | The user ID of the last user to update the directory object record. | VARCHAR2(20) | NOT NULL |

Security Data

Table WST_ACL – Object Access Rights

The Object Access Control table stores access control information for items in the object folder table. The data dictionary table identifier for table WST_ACL is ACL.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| ACL_UID | The unique identifier for an access control record. | VARCHAR2(22) | NOT NULL |
| DIR_UID | The unique identifier for the directory object record to which the access control record applies. | VARCHAR2(22) | NOT NULL |
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NULL |
| READONLY | Determines whether the user, group, or role combination is restricted to opening the directory object in read only mode. | NUMBER(10, 0) | NOT NULL |
| ROL_ID | The unique identifier of a role. | VARCHAR2(20) | NULL |
| USR_ID | The unique identifier of a user. | VARCHAR2(20) | NULL |

Table WST_GRP – Group Definitions

The Group Definitions table contains definitions of valid groups. The data dictionary table identifier for table WST_GRP is GRP.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|-----------------------------------|------------------|----------|
| DESCRIPTION | The description of a group. | VARCHAR2(60) | NULL |
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NOT NULL |
| MANAGER | The group's manager. | VARCHAR2(20) | NULL |
| ROL_ID | The default role for a group. | VARCHAR2(20) | NULL |

Table WST_LIC – License Exceptions

The License Exceptions table contains information about license exceptions. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|--------------|--|------------------|----------|
| LIC_USERS | | NUMBER(10, 0) | NOT NULL |
| LICENSE | | VARCHAR2(32) | NOT NULL |
| LOGGED_USERS | The number of logged in users when the exception occurred. | NUMBER(10, 0) | NOT NULL |
| LOGINTIME | A user's last login date and time. | DATE | NOT NULL |
| MACHINE_ID | The machine ID of a currently logged in user. | VARCHAR2(48) | NOT NULL |
| PRD_UID | The unique identifier for a Delttek product record. | NUMBER(10, 0) | NOT NULL |
| USR_ID | The unique identifier for a user. | VARCHAR2(20) | NOT NULL |

Table WST_PFA – Product Function Group Access Rights

Access rights to a product function group are assigned for each role that the administrator has defined. These access rights are stored in the Product Function Group Access Rights table.

Records in this table represent the intersection of a Role and a Product Function group and the specified access rights.

System Data

Each function group has 2 security attributes that can be controlled. The first attribute controls the visible state of securable objects in the function group as Visible or Not Visible. The second attribute controls the enabled state of securable objects in the function group as Enabled or Not Enabled.

The access attributes are stored in a single field using the following definitions: FLAG_VISIBLE Mask = 0x00000001L

0 = Not Visible 1 = Visible

FLAG_ENABLED Mask = 0x00000002L

0 = Not Enabled 1 = Enabled

These flags are independent so that a user may be granted rights to execute a command or modify a data element even if it is not displayed to the user because of the state of the visibility flag. Data in the access rights table is stored in a sparse format such that records exist only for items that do not have rights granted to them. If an item is specified as both visible and enabled, then a record does not exist in the access rights table. If an item is specified as not visible and/or not enabled, then records are placed in the access rights table. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NULL |
| PFG_UID | The unique identifier of a product function group record. | VARCHAR2(22) | NOT NULL |
| RIGHTS | The rights specified by the product function group access record. | NUMBER(10, 0) | NOT NULL |
| ROL_ID | The unique identifier of a role. | VARCHAR2(20) | NULL |

Table WST_PFD – Project Function Group Detail

The Product Function Group Details table stores the associations of Securable objects to function groups. This table is used by the Security Runtime module to determine the securable objects that are controlled by a particular function group. It is not referenced by the Security administration module. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NULL |
| PFG_UID | The unique identifier of a product function group record. | VARCHAR2(22) | NOT NULL |

Table WST_PFG – Product Function Group Definitions

The Product Function Group table stores a collection of one or more Securable objects that are controlled as a single item for purposes of defining access control. For instance, the user might define a function group that contains a single command. This group can then be set to define whether or not a user can execute that command. Another function group might be made up of a group of data elements that are secured as a group such as the fields that make up Activity Costs. Another function group could be defined to control the ability to update Activity Progress. This function group might contain both command and data elements to prevent the user from both displaying the progress dialog as well as changing the data elements through a spreadsheet.

As implied by their title, product function groups are defined by each product. Product function groups are also defined as applying to either a Group or a Role based on the value of the TYPE field. A TYPE field value of 0 represents a Group, a value of 1 represents a Role. Function groups defined for groups are displayed as part of the Group administration module by product. Function groups defined for Roles are displayed as part of the Role administration module by product.

Product function groups are stored in the Product Function Group table by product ID. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|---|------------------|----------|
| DESCRIPTION | The description of the product function group. | NVARCHAR(100) | NULL |
| PFG_ID | | VARCHAR2(44) | NULL |
| PFG_UID | The unique identifier of a product function group record. | VARCHAR2(22) | NULL |
| PRD_UID | The unique identifier for a Deltek product record. | NUMBER(10, 0) | NOT NULL |
| TYPE | | NUMBER(10, 0) | NULL |

Table WST_PRD – Installed Deltek Products

The Installed Products table stores product identifiers that are used to determine security information for each specific product. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|--|------------------|----------|
| DESCRIPTION | The name of the installed product. | VARCHAR2(60) | NOT NULL |
| FLAG | | NUMBER(10, 0) | NULL |
| INSTALLDATE | The date and time the product was installed. | DATE | NOT NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|---------------------------|---|------------------|----------|
| INSTALLEDVER_MAJ | The major version number (the portion of the version number to the left of the decimal place). | NUMBER(10, 0) | NULL |
| INSTALLEDVER_MIN | The minor version number (the portion of the version number to the right of the decimal place). | NUMBER(10, 0) | NULL |
| LICENSE | The license key for the installed product. | VARCHAR2(32) | NULL |
| MESSAGETEXT | A message that is to be displayed to each user upon logging into the product. | VARCHAR2(250) | NULL |
| MSGEXPIRE | The expiration date of the login message. | DATE | NULL |
| PRD_UID | The unique identifier for a Delttek product record. | NUMBER(10, 0) | NOT NULL |
| INSTALLEDVER _REVISION | The service pack version. | NUMBER(10, 0) | NOT NULL |
| INSTALLEDVER_SP | | NUMBER(10, 0) | |

Table WST_PSO – Securable Object Definition

The Securable Object Definition table stores items that products define and recognize as being able to participate in the overall security model. Securable objects can be broken down into 2 distinct groups: Data elements and Commands. Data elements represent is the persistent properties of an object that are typically stored as fields on a database table. Commands are operations that can be executed by the user - these are most analogous to the menu options available in each product. Securable objects are stored on the table by Product ID. The securable object table enumerates all items that the product exposes as securable. This table is not defined in the Cobra data dictionary, and its structure must not be changed.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|---|------------------|----------|
| OBJ_UID | | VARCHAR2(60) | NOT NULL |
| PRD_UID | The unique identifier for a Delttek product record. | NUMBER(10, 0) | NOT NULL |

Table WST_ROL – Role Definitions

Roles are used to specify access rights against product function groups. The Security Role Definition table contains the definitions of the Security roles. The data dictionary table identifier for table WST_ROL is ROL.

| Field Name | Description | Oracle Data Type | Nulls |
|----------------|----------------------------------|------------------|----------|
| DESCRIPTION | The description of a role. | VARCHAR2(60) | NULL |
| MANAGER | The role's manager. | VARCHAR2(20) | NULL |
| ROL_ID | The unique identifier of a role. | VARCHAR2(20) | NOT NULL |
| OWNER_DELEGATE | | Owner Delegate | |

Table WST_UPA – User Product Access Control

The User Product Access Control table stores information about which products user are permitted to run. The data dictionary table identifier for table WST_UPA is UPA.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| FLAGS | | NUMBER(10, 0) | NOT NULL |
| PRD_UID | The unique identifier for a Deltak product record. | NUMBER(10, 0) | NOT NULL |
| USR_ID | The unique identifier of a user. | VARCHAR2(20) | NOT NULL |
| LICN_UID | Not used by Cobra. | VARCHAR2(22) | NULL |

Table WST_USG – User-group Assignment

The User-Group Assignment table contains the associations of users to groups. The data dictionary table identifier for table WST_USG is USG.

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--|------------------|----------|
| GRP_ID | The unique identifier of a group. | VARCHAR2(20) | NOT NULL |
| USG_UID | The unique identifier for a user-group association record. | VARCHAR2(22) | NULL |
| USR_ID | The unique identifier of a user. | VARCHAR2(20) | NOT NULL |

Table WST_USR – User Definitions

The User Definitions table contains definitions of valid users. The data dictionary table identifier for table WST_USR is USR.

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|--------------------------------------|------------------|-------|
| ACT_COMPARE | | VARCHAR2(4) | NULL |
| ACT_FIELD | | VARCHAR2(30) | NULL |
| ACT_RULE | | NUMBER(10, 0) | NULL |
| ACT_VALUE | | VARCHAR2(30) | NULL |
| ADDRESS1 | The user's address. | VARCHAR2(60) | NULL |
| ADDRESS2 | Second line in the user's address. | VARCHAR2(60) | NULL |
| ALTMANAGER | The user's alternate manager. | VARCHAR2(20) | NULL |
| CITY | The user's city. | VARCHAR2(20) | NULL |
| COMMENTS | Comments for the user record. | VARCHAR2(255) | NULL |
| COUNTRY | The user's country. | VARCHAR2(20) | NULL |
| DEPARTMENT | The user's department. | VARCHAR2(60) | NULL |
| DESCRIPTION | A description of the user's account. | VARCHAR2(60) | NULL |
| EMAIL | The user's email address. | VARCHAR2(60) | NULL |
| FAX | The user's fax number. | VARCHAR2(20) | NULL |
| FILTER | | VARCHAR2(10) | NULL |
| FIRST_NAME | The user's first name. | VARCHAR2(50) | NULL |
| LAST_NAME | The user's last name. | VARCHAR2(50) | NULL |
| LOCATION | The user's location. | VARCHAR2(60) | NULL |
| MANAGER | The user's manager. | VARCHAR2(20) | NULL |
| PASSWD | The user's encrypted password. | VARCHAR2(178) | NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|--------------------------|------------------|----------|
| PHONE | The user's phone number. | VARCHAR2(20) | NULL |
| ROL_ID | The users default Role. | VARCHAR(20) | NULL |
| STATE | The user's state. | VARCHAR2(20) | NULL |
| USR_ID | The user's ID. | VARCHAR2(20) | NOT NULL |
| DOMAIN | | VARCHAR(80) | |

Common WST Tables not used by Cobra

Table WST_CFG

| Field Name | Description | Oracle Data Type | Nulls |
|-------------|-------------|------------------|----------|
| CFG_UID | | VARCHAR(22) | NOT NULL |
| SEQUENCE | | NUMBER(10, 0) | NOT NULL |
| PRD_UID | | NUMBER(10, 0) | NOT NULL |
| CFG_TYPE | | VARCHAR2(30) | NOT NULL |
| CFG_ID | | NVARCHAR2(60) | NOT NULL |
| OWNER_ID | | NVARCHAR2(20) | NULL |
| USR_ID | | NVARCHAR2(20) | NOT NULL |
| LASTUPDATE | | DATE | NOT NULL |
| DESCRIPTION | | NVARCHAR2(254) | NULL |
| DATA | | LONG | NULL |

Table WST_FILE

| Field Name | Description | Oracle Data Type | Nulls |
|------------|-------------|------------------|----------|
| FILE_UID | | VARCHAR2(22) | NOT NULL |
| FK_UID | | VARCHAR2(22) | NOT NULL |
| LASTUPDATE | | DATE | NOT NULL |

| Field Name | Description | Oracle Data Type | Nulls |
|------------|-------------|------------------|----------|
| OWNER_ID | | NVARCHAR2(20) | NOT NULL |
| TABLE_TYPE | | VARCHAR2(30) | NOT NULL |
| FILE_NAME | | NVARCHAR2(255) | NOT NULL |
| FILE_DATA | | BLOB | NOT NULL |

Table WST_MESSAGE_QUEUE

| Field Name | Description | Oracle Data Type | Nulls |
|----------------|-------------|------------------|----------|
| MESSAGE_UID | | VARCHAR2(22) | NOT NULL |
| SEQUENCE | | NUMBER(10,0) | NOT NULL |
| LASTUPDATE | | DATE | NOT NULL |
| MESSAGE_STATUS | | VARCHAR2(4) | NOT NULL |
| QUEUE_SERVER | | VARCHAR2(15) | NOT NULL |
| USR_ID | | NVARCHAR2(20) | NOT NULL |

Table WST_PROCESSLOG

| Field Name | Description | Oracle Data Type | Nulls |
|-----------------|-------------|------------------|----------|
| ROW_UID | | VARCHAR2(22) | NOT NULL |
| PARENT_UID | | VARCHAR2(22) | |
| PRD_UID | | NUMBER(10, 0) | NOT NULL |
| PERCENTCOMPLETE | | NUMBER(10, 0) | NOT NULL |
| ERRORCOUNT | | NUMBER(10, 0) | |
| WARNINGCOUNT | | NUMBER(10, 0) | |
| USER_ABORT | | NUMBER(10, 0) | NOT NULL |
| STARTDATE | | TIMESTAMP | |
| FINISHDATE | | TIMESTAMP | |
| LASTUPDATE | | TIMESTAMP | |

System Data

| Field Name | Description | Oracle Data Type | Nulls |
|---------------|-------------|------------------|----------|
| PROCESS_ID | | VARCHAR2(30) | NOT NULL |
| USR_ID | | NVARCHAR2(20) | NOT NULL |
| DIR_ID | | NVARCHAR2(22) | |
| TABLE_TYPE | | VARCHAR2(30) | |
| LOGFILENAME | | NVARCHAR2(254) | |
| PROGRESS_TEXT | | NVARCHAR2(254) | |

Appendix A: If You Need Assistance

If you need assistance installing, implementing, or using Cobra, Deltek makes a wealth of information and expertise readily available to you.

Customer Services

For over 30 years, Deltek has maintained close relationships with client firms, helping with their problems, listening to their needs, and getting to know their individual business environments. A full range of customer services has grown out of this close contact, including the following:

- Extensive self-support options through the Deltek Support Center.
- Phone and email support from Deltek Customer Success analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Attention: Find out more about these and other services from the Deltek Support Center.

Deltek Support Center

The Deltek Support Center is a support Web site for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options that the Deltek Support Center provides:

- Search for product documentation, such as release notes, install guides, technical information, online help topics, and white papers
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Support Center Community
- Access Cloud-specific documents and forums
- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Submit a support case and check on its progress
- Transfer requested files to a Deltek Customer Success analyst
- Subscribe to Deltek communications about your products and services
- Receive alerts of new Deltek releases and hot fixes
- Initiate a Chat to submit a question to a Deltek Customer Success analyst online

Attention: For more information regarding Deltek Support Center, refer to the online help available from the Web site.

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to <https://deltek.custhelp.com>.
2. Enter your Deltek Support Center **Username** and **Password**.
3. Click **Login**.

Note: If you forget your username or password, you can click the **Need Help?** button on the login screen for help.

Additional Documentation

The following table lists the Deltek documentation available for this release. Except where noted, all the user guides and quick reference guides listed in this table are available for download from the Deltek Support Center.

| Document Name | Description |
|-------------------------------------|--|
| Cobra 8.4 Online Help | The online help contains detailed information and instructions on how to use Cobra's various features. |
| <i>Cobra 8.4 Release Notes</i> | This document contains important information concerning the installation and use of the product, and describes outstanding issues. |
| <i>Cobra 8.4 Installation Guide</i> | The Installation Guide provides step-by-step procedures on how to install the application. It also provides information about the software and hardware requirements of the product. |



About Deltek

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