**SRP MEP Customizations**

**Colorado Community College System**

The EDW and SRP products, as delivered by Ellucian, require heavy customization in order to work in a MEP environment. The purpose of this document is to outline at a high level what the steps are to get SRP functional in our MEP environment.

1. **Cleansing Values**
   1. **Multi Source Cleansing Rule**
      1. **Adjust SQL – see here: M:\SRP\cleansing\_rule\_mods.txt**
2. **Operational Extract Packages**SRP is driven off Oracle packages, made up of table functions & procedures. Many aspects of these table functions need to be customized in order to maintain MEP functionality, and allow for fast speed of loads & refreshes.
   1. **Edw\_general\_extr**
      1. **Spec**
         1. **Take out joins on person\_detail MEP**
         2. **Take out joins on geographic\_region\_status MEP**
         3. **Take out joins on mst\_telephone MEP**
         4. **Take out joins on mst\_race MEP**
         5. **Take out joins on mst\_visa MEP**
         6. **Take out joins on mst\_institution\_demographic mep**
         7. **Take out NVL on joins where source tables are fully mep’d**
      2. **Body**
         1. **Customization for chg\_student\_course table**
            1. **Variables**
            2. **Modify if/else logic to take term into account**
            3. **Execute pre/post counts**
         2. **Customization for change table counts**
         3. **Insert user\_attribute\_01 to ret\_row inserts where applicable**
         4. **Change wcv\_extr\_person\_details to odsmgr.CCCS\_EXTR\_PERSON\_DETS\_NO\_ADDY PD,**
         5. **Modify table functions to use WE user\_attribute\_01 MIF value rather than un-mep’d table’s mif value**
         6. **Remove MEP joins on PD**
         7. **Remove NVL mep joins on fully mep’d tables**
         8. **Modify new (8.5) dynamic table function for race**
   2. **Edw\_finaid\_extr**
      1. **Spec: take out NVL on joins where source tables are fully mep’d**
      2. **Body**
         1. **Change WCV\_EXTR\_PERSON\_DETAILS to CCCS\_EXTR\_PERSON\_DETS\_NO\_ADDY**
         2. **Need joins on wdt\_warehouse\_entity.user\_attribute\_01 to source tables (MEP)**
         3. **Remove MEP joins on PD.MULTI\_SRC as PD is not MEP’d**
            1. **Make refresh only data >= 2009**
         4. **Insert user\_attribute\_01 value as multi\_source in the ret\_row inserts**
   3. **Edw\_student\_extr <<this documentation still needs some work between the numbers 2 & 4 … I skipped a lot of table functions>>>**
      1. **Spec**
         1. **Modified MEP joins for fully MEP’d tables, removed NVL**
         2. **Heavy mod to get\_retention\_seq\_like\_ind**
            1. **Need to use source code of academic\_study view rather than pull directly from it as performance is awful from reporting view, need to use composite tables**
         3. **Bug in get\_gpa\_by\_term**
            1. **Needs mep inputs in cursor (default + mep) & mep join**
         4. **Bug in get\_acd\_per\_first\_last**
            1. **Needs mep inputs in cursor**
            2. **Customized to use tables instead of reporting view for performance**
         5. **But in get\_major\_counts**
            1. **Needs mep inputs in cursor & joins**
      2. **Body**
         1. **F\_get\_prosp\_students**
            1. **Change wcv\_extr\_person\_details to our custom version**
         2. **f\_get\_ret\_ind calls**
            1. **bug - default & mif input parms are backwards, BLM submitted bug on 9/8/15**
         3. **…. Lots of table functions I didn’t document**
         4. **F\_get\_advisor**
            1. **Fix joins & use custom view; add in custom user\_attribute\_01s**
         5. **F\_get\_student\_cohort**
            1. **Eliminate continuing ed terms**
            2. **Customize joins for fully mep’d tables (no NVL)**
            3. **Add WE mep join**
            4. **Remove PD join; use custom PD view**
            5. **Make refresh only data >= 2009**
            6. **Custom user\_attribute\_01 values**
         6. **F\_get\_meeting\_time**
            1. **Make refresh only data >= 2009**
            2. **Remove NVL join on fully mep’d table**
            3. **Custom user\_attribute\_01 values**
         7. **F\_get\_grade\_change**
            1. **Remove NVL join on fully mep’d table**
            2. **Add WE mep join**
            3. **Remove PD join; use custom PD view**
            4. **Make refresh only data >= 2009**
            5. **Custom user\_attribute\_01 values**
         8. **F\_get\_academic\_outcome\_hnr**
            1. **Add WE mep join**
            2. **Remove PD join; use custom PD view**
            3. **Custom user\_attribute\_01 values**
         9. **F\_get\_course\_section**
            1. **Remove NVL join on fully mep’d table**
            2. **Make refresh only data >= 2009**
            3. **Remove EGOS and PTC mif values**
         10. **F\_get\_student\_course**
             1. **Change value for MEP in main select**
             2. **Hard-coded MEP joins, dynamic MEP joins not working**
             3. **Remove PD join; use custom PD view**
             4. **Make refresh only data >= 2009**
             5. **Adjust <MEP\_CONDITION\_1> replace**
             6. **Modified change table condition for custom chg\_table fix**
             7. **Custom user\_attribute\_01 and user\_attribute\_02 values**
         11. **P\_get\_student**
             1. **Filter subselects to refresh only >= 2009XX**
         12. **F\_get\_retention\_multi\_year**
             1. **Change joins in dynamic sql**
             2. **Change addend**
             3. **Custom user\_attribute\_01 values**
         13. **F\_get\_ret\_ind** 
             1. **Modify get\_retention\_seq\_like\_ind cursor for mep**
3. **Snapshot Extract Packages**
   1. **Edw\_empl\_degree\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Take out NVL on fully mep’d values**
         2. **Add MEP joins where needed**
         3. **Filter out certain IDs, not sure why, we did this when Stormo was here**
         4. **Change function call input parms from sysdate to eom\_date\_value in**
            1. **Get\_visa**
            2. **Get\_ra\_visa**
            3. **Mgkfunc.f\_calculate\_age**
         5. **Custom user\_attribute\_01 values**
   2. **Edw\_creg\_extr** 
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Take out NVL on fully mep’d values**
         2. **Add MEP joins where needed**
         3. **Remove MEP join from get\_course\_catalog & get\_course\_suppl**
         4. **Custom user\_attribute\_01 values**
         5. **Custom user\_attribute\_02 value**
            1. **Registration dim = countable indicator**
         6. **MEP function call to mskfunc.f\_der\_enrolled\_ind**
   3. **Edw\_apcourse\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Take out NVL on fully mep’d values**
         2. **Add MEP parameter to function call mskfunc.f\_degr\_enrolled\_ind**
         3. **Add MEP joins where needed**
         4. **Remove MEP joins where needed (get\_course\_catalog & suppl)**
         5. **Custom user\_attribute\_01 values**
         6. **Custom user\_attribute\_02 value**
            1. **Registration dim = countable indicator**
   4. **Edw\_employee\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Take out NVL on fully mep’d values**
         2. **Add in MEP joins where needed**
         3. **Weeded out data error while Stormo was here**
         4. **Add joins to EXISTS clause**
         5. **Change age function calls to eom\_date\_value from sysdate**
         6. **Change age in mgkfunc.f\_calculate\_age to eom\_date\_value**
         7. **Custom user\_attribute\_01 values**
   5. **Edw\_fa\_pstu\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Take out NVL on fully mep’d values**
         2. **Add MEP joins**
         3. **Change functions**
         4. **Custom user\_attribute\_01 values**
   6. **Edw\_fa\_stu\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Fix joins**
         2. **Custom user\_attribute\_01 values**
         3. **Take out NVL on fully mep’d values**
   7. **Edw\_oledger\_extr**
      1. **Package Spec**
         1. **All is well, no work needed**
      2. **Package Body**
         1. **Fix joins**
         2. **Custom user\_attribute\_01 values**
         3. **Take out NVL on fully mep’d values**
4. **Add virtual MIF columns (mif\_value\_vc) to all WFT tables where it does not exist**

select 'ALTER TABLE '|| object\_name ||  
 ' ADD MIF\_VALUE\_VC GENERATED ALWAYS AS   
(F\_GET\_MIF\_VALUE\_4\_VC(MULTI\_SOURCE\_KEY));'   
 from dba\_objects  
 where object\_type = 'TABLE'  
 and object\_name like 'WFT%'  
 and object\_name in  
 (select table\_name from all\_tab\_cols where column\_name = 'MULTI\_SOURCE\_KEY')  
 and object\_name not in   
 (select table\_name from all\_tab\_cols where column\_name = 'MIF\_VALUE\_VC');

1. Edit IA\_ADMIN.MGKUTIL.p\_initfacttable
   1. Edit cursors such that they do not populate the mif\_value\_vc virtual column, else you will get an ORA-54013 every time the fact table is initialized
      1. C\_getvc2cols
         1. AND column\_name <> 'MIF\_VALUE\_VC'
      2. Columns\_c
         1. AND COLUMN\_NAME <> 'MIF\_VALUE\_VC';
2. **Make Copy of mapping projects in OWB**
   1. **Edw\_student\_c**
   2. **Edw\_general\_c**
   3. **Edw\_financial\_aid\_c**
3. **Modify & Deploy Mappings in/from your new copied area**
   * + 1. **Edw\_financial\_aid\_c**
          1. **EDWMGR**

**Edw\_fa\_appl\_dim\_person\***

**Edw\_fa\_awd\_ap\_dim\_person\***

**Edw\_fa\_awd\_ay\_dim\_person\***

* + - 1. **Edw\_general\_c**
         1. **EDWMGR**

**Edw\_banner\_comm\_dim\_person\***

**Edw\_hold\_dim\_person\***

**Edw\_institution\_dim\_inst\***

**Edw\_dim\_warehouse\_entity**

**Load Side**

**Add table operator for GTVVPDI**

**May have to add Oracle Data Module for ODSSRC (Banner Location)**

**Make new joiner, joining GTVVPDI to SPRIDEN**

**Join the new joiner with the old joiner**

**Make sure to set the join condition to 1=1**

**Modify the deduplicator to be spriden\_pidm + gtvvpdi\_code**

**Point the gtvvpdi\_code to user\_attribute\_01**

**Refresh Side**

**Same as the other, only set the properties on wdt\_warehouse\_entity.user\_attribute\_01 to YES/NO/NO/YES so a merge won’t break.**

**MODIFY JOB WITHIN ADMIN\_UI! Do not let it run the RAP entity load portions, only the ODS ones. Just take out the steps 2-4 in the parameter settings**

* + - * 1. **EDWSTG**

**Edw\_institution\_wkeys**

**Missing join on wdt\_institution.user\_attribute\_01 = wtt\_institution\_clean.multi\_source\_wv**

* + - 1. **Edw\_student\_c**
         1. **EDWMGR**

**Edw\_post\_second\_dim\_inst\***

**Edw\_pros\_stud\_dim\_inst\***

**Edw\_sschl\_subj\_dim\_inst\***

**Edw\_acad\_otcom\_hnr\_dim\_person\***

**Edw\_acad\_outcome\_dim\_person\***

**Edw\_admin\_dim\_person\***

**Edw\_adms\_appl\_dim\_person\***

**Edw\_adms\_attr\_dim\_person\***

**Edw\_adms\_cohort\_dim\_person\***

**Edw\_adms\_dec\_dim\_person\***

**Edw\_adms\_rate\_dim\_person\***

**Edw\_adms\_recr\_dim\_person\***

**Edw\_adms\_reqr\_dim\_person\***

**Edw\_advisor\_dim\_person\***

**Need to add deduplicator between wtt\_advisor\_clean & pivot**

**Need to add filter between set operator & wdt\_person (final table) where person\_uid <> 0**

**Edw\_athletic\_dim\_person\***

**Edw\_cmb\_adms\_src\_dim\_person\***

**Edw\_contact\_dim\_person\***

**Edw\_crs\_inst\_dim\_person\***

**Edw\_fedbk\_dim\_person\***

**Edw\_grade\_change\_dim\_person\***

**Edw\_interest\_dim\_person\***

**Edw\_interest\_dim\_person\_ext\***

**Edw\_post\_second\_dim\_person \***

**Edw\_post\_second\_dim\_person\_ext\***

**Edw\_pros\_stud\_dim\_person\***

**Edw\_race\_dim\_person\***

**Edw\_recr\_attr\_dim\_person\***

**Edw\_recr\_cohort\_dim\_person\***

**Edw\_sschl\_subj\_dim\_person\***

**Edw\_student\_course\_dim\_person\***

**Edw\_student\_dim\_person\***

**stud\_actvty\_dim\_person\***

**Edw\_stud\_atrib\_dim\_person\***

**Edw\_stud\_chrt\_dim\_person\***

**Edw\_stud\_crse\_attr\_dim\_person\***

**Edw\_test\_dim\_person\***

**Edw\_test\_dim\_person\_extend\***

**Edw\_stud\_progress\_agg\_insert**

**Add join to wdt\_warehouse\_entity.user\_attribute\_01 = mst\_base\_student.mif\_value in JOINER**

**Need to drag these fields into the joiner from their respective table operators**

**Add join to wdt\_person.user\_attribute\_01 = wft\_student.mif\_value\_vc**

**Need to add mif\_value\_vc to the joiner, follow the flow all the way back to wft\_student, where you have to type it into the table operator since it’s a VC. Make sure you make it flow to both sides of the union all**

**Note: This one may not validate, deploy anyway, you just have to type the value into the join condition in DRIVING TABLE JOINER**

* + - * 1. **EDWSTG**

**Edw\_post\_second\_wkeys**

**Missing join on wdt\_institution.user\_attribute\_01 = wtt\_post\_secondary\_clean.multi\_source\_wv**

**Edw\_pros\_stud\_wkeys**

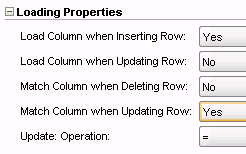
**Missing join on wdt\_institution.user\_attribute\_01 = wtt\_post\_secondary\_clean.multi\_source\_wv**

**Edw\_student\_course\_wkeys**

**Bug – they join user\_attribute\_01 to user\_attribute\_02. Have submitted 2 bugs to Ellucian (6/9/2014 and 10/15/2015) but they’ve done nothing about it**

**Go into WDT\_COURSE\_SECTION dimension lookup editor in the mapping and change the join**

* + - 1. **Edw\_employee\_c**

**\*Edit Loading Properties in the dimension table operator for user\_attribute\_01 to read as such:**   


1. **Cleansing**
   1. **Run LOAD\_DIM\_CLEANSING and simply fix up errors. W\_prefix usually holds MEP value, sometimes you need to adjust the cleansing rule with a join. Pretty basic stuff here.**
2. **Indexes**
   1. **Run context of this script: M:\SRP\new\_indexes\new\_indexes\_for\_nvl.sql**

|  |  |
| --- | --- |
| Run this in ODST | 10:25 AM |
| then run it's ouput in ODSD | 10:25 AM |
| SELECT DBMS\_LOB.SUBSTR (DBMS\_METADATA.GET\_DDL ('INDEX', index\_name, owner),                         4000,                         1)           AS create\_statement   FROM dba\_indexes WHERE     table\_owner IN ('EDWSTG', 'EDWMGR')        AND INDEX\_NAME NOT IN (SELECT MGBINDX\_INDEXNAME FROM mgbindx)        AND INDEX\_NAME LIKE '%CCCS%' |  |

1. **Edit FinAid Prompts – they are showing per school per year instead of simply per year**
   1. **Admin UI > Set Up Parameters > Mapgroup EDW OP (& OP-P) (internal code) > Aid Year In > edit the SQL  
      SELECT 'ALL' || ' - ' || 'All Aid Years' sel\_year\_code FROM dual UNION select distinct year\_code||' - '|| substr(year\_code\_desc,instr(year\_code\_desc,'2'),2)||substr(year\_code,1,2)||'-'||'20'||substr(year\_code,3,2) sel\_year\_code from mgt\_year\_type\_definition where year\_type = 'AIDY' ORDER BY sel\_year\_code DESC**
2. **Turn off logging on all input/clean/wkeys/fact tables**

**select 'alter table '||owner||'.'||table\_name||' nologging;'**

**from dba\_tables**

**where (table\_name like 'WTT%INPUT'**

**or table\_name like 'WTT%CLEAN'**

**or table\_name like 'WTT%WKEYS'**

**or table\_name like 'WFT%')**

**and owner in ('EDWSTG')**

**and logging = 'YES';**

**select 'alter table '||owner||'.'||table\_name||' nologging;'**

**from dba\_tables**

**where (table\_name like 'WTT%INPUT'**

**or table\_name like 'WTT%CLEAN'**

**or table\_name like 'WTT%WKEYS'**

**or table\_name like 'WFT%')**

**and owner in ('EDWMGR')**

**and logging = 'YES';**

1. **Set cleansing rule for user\_attribute\_01 for all dimensions\***

**\*note: there are new dimensions in 8.5, namely ending in “\*\_Extension”, such as person\_extension, test\_extension, etc.**

**a) go to Admin UI > Options > Set Up and Maintain Cleansing Processes > Set Up and Maintain Cleansing Data Elements**

**b) select the proper dimension from the drop down**

**c) select “USER\_ATTRIBUTE\_01”**

**d) set cleansing rule name to MULTI\_SOURCE and check “cleansing enabled”**

**e) run cleansing rules**

1. **Set parallel to the level we have it in PROD on all input/clean/wkeys tables. Run this in prod, then run what it builds in DEV/TEST/Whatever**

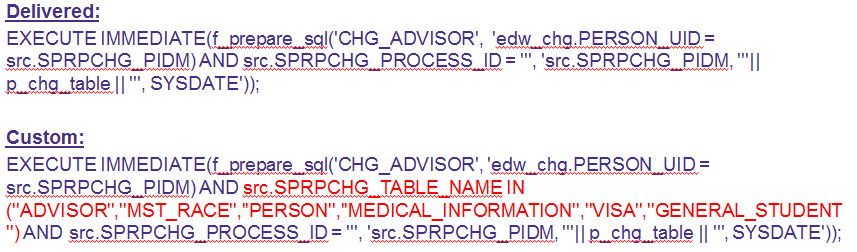
**select 'alter table '||owner||'.'||table\_name||' parallel (degree '||degree/2||');'**

**from dba\_tables**

**where owner in ('EDWMGR','EDWSTG')**

**and (table\_name like 'WTT%INPUT' or table\_name like 'WTT%CLEAN' or table\_name like 'WTT%WKEYS' or table\_name like 'WDT%')**

**and degree > 1;**

1. **Add ACADEMIC\_PERIOD field to CHG\_STUDENT\_COURSE table (Note: not a MEP change, but is a customization**
   1. **Add academic\_period varchar2(6) column to chg\_student\_course**
   2. **Modify odsmgr.maintain\_edw\_change\_records**
      1. **Change all references to chg\_student\_course to insert a term, also add the proper joins**
   3. **Modify the change table condition in edw\_student-extr.f\_get\_student\_course to join on term**
   4. **Modify edwstg.edw\_general\_extr.p\_insert\_student\_crse\_chg\_rec**
      1. **Add term to list of values to insert on both sides of the union**
   5. **Modify edwstg.maintain\_edw\_error\_records procedure**
      1. **Add condition to CASE block for chg\_student\_course to join on term**
   6. **Modify edw\_general\_extr.p\_delete\_fact\_records**
      1. **Add condition to CASE block for chg\_student\_course to join on term**
2. **Customize ODSMGR.MAINTAIN\_EDW\_CHANGE\_RECORDS (not a MEP change, but is a customization for CCCS). Point of this is to limit records we update to only those who have really changed data that the EDW is concerned with**
   1. **Change each insert to a chg\_\* table so that it only does so for the proper sprpchg\_table\_name values. Example:**
3. **Customize what gets refreshed in the wide load**
   1. **Admin UI -> Options -> Set Up Parameters**
   2. **Internal Group = ETL Control Group**
   3. **Edit each of the following**
      1. **LOAD\_EDW-P-W-2-1**
      2. **LOAD\_EDW-P-W-2-2**
      3. **LOAD\_EDW-P-W-2-3**
      4. **LOAD\_EDW-P-W-5**
   4. **For each of those in 15(a), you need to set the toggle (external code) to N where we don’t want to refresh that mapping at night**
   5. **After an upgrade, the upgrade script will add a duplicate row for the mapping if you had external code set to N – the new row will be set to Y – delete the Y row**