Subreports

Crystal Reports provides us with the flexibility and report capabilities through the use of additional reports embedded directly within an original main report. These embedded reports are called Subreports. Multiple subreports can be embedded within a main report.

Purpose of Subreports

Subreports are created for various purposes. A few examples are listed here:

- Data can be presented in two (or more) different ways in a single report:

For example, on a Detail Rep Report, management wants to present a high-level summary for a count of students but also needs the ability to review the details for each individual student. This will allow the summary and detail to be on the same report.

- The inclusion of a summary field in the report that is unrelated to the established grouping in the main report.

For example, Transcripts use a subreport to display Degrees awarded as a summary. This will also allow the display of multiple degrees awarded in a sequence.

Adding Subreports to Your Reports

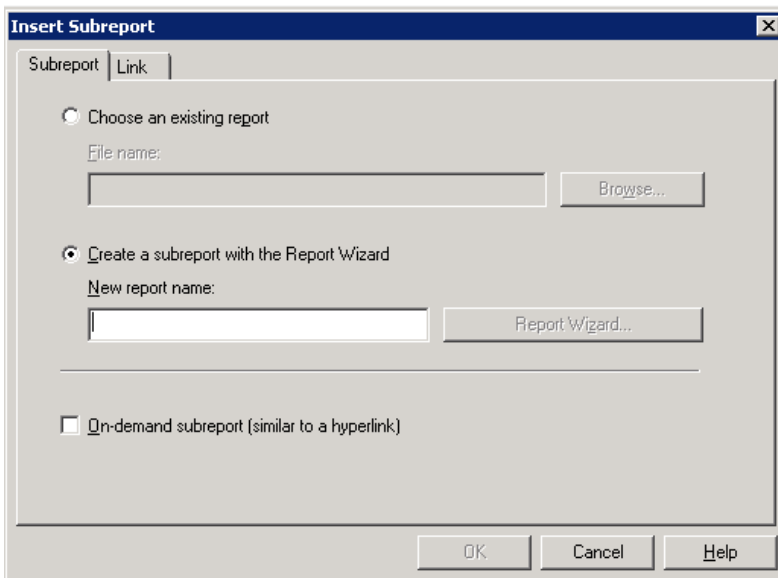Adding a subreport to your main report is as easy as adding any other Crystal Report object.

1   Navigate to Insert > Subreport.
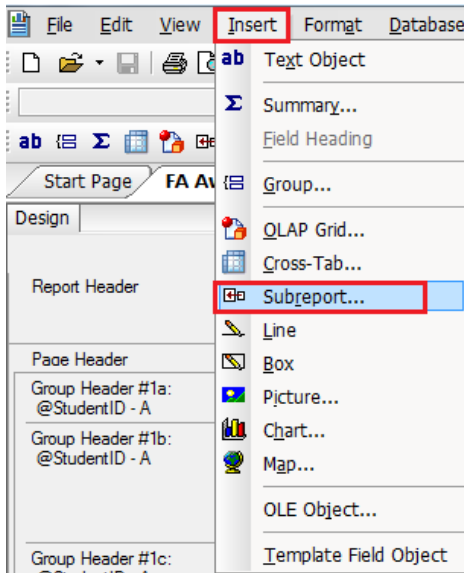
Once the Subreport is selected, a screen to insert the subreport will open. There are two (2) tabs to that screen:
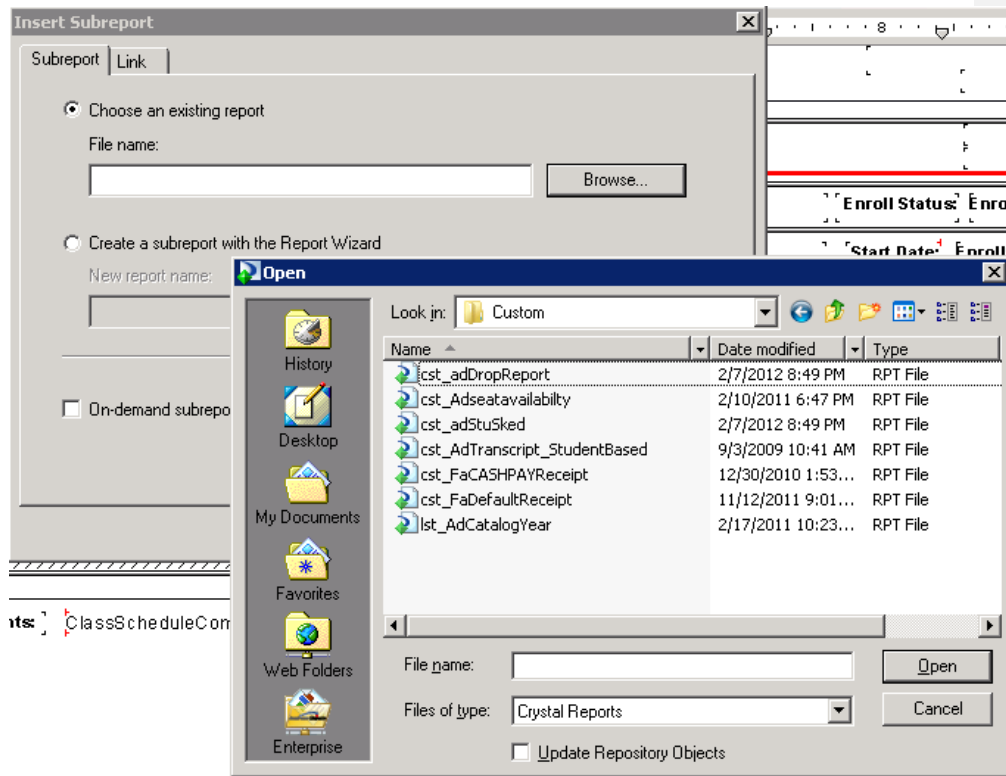
1. Subreport tab
2. Link tab

Subreport tab

The Subreport tab has two options:

- Choose an existing report

This will let you choose an existing report as subreport. Reports can be created independent of the main report and embedded inside. The same report can be embedded as multiple Subreports, which allows reusability. While using this option, a change made to the report will be passed on to all the places where this subreport is embedded.

Insert Subreport

Subreport | Link

⦿ Choose an existing report

File name:

[   ]   Browse...

◯ Create a subreport with the Report Wizard

New report name:

[   ]

☐ On-demand subrepo

□ Enroll Status: Enrol

□ Start Date: Enroll

Open

Look in: [Custom]

Name ▲	Date modified	Type
cst_adDropReport	2/7/2012 8:49 PM	RPT File
cst_Adseatavailabilty	2/10/2011 6:47 PM	RPT File
cst_adStuSked	2/7/2012 8:49 PM	RPT File
cst_AdTranscript_StudentBased	9/3/2009 10:41 AM	RPT File
cst_FaCASHPAYReceipt	12/30/2010 1:53...	RPT File
cst_FaDefaultReceipt	11/12/2011 9:01...	RPT File
lst_AdCatalogYear	2/17/2011 10:23...	RPT File

History
Desktop
My Documents
Favorites
Web Folders
Enterprise

File name: [   ]   Open

Files of type: [Crystal Reports]   Cancel

☐ Update Repository Objects

ts: ClassScheduleCom

Once the option is clicked, the browse button is enabled, which allows the selection of a saved report. The report can be pasted in the appropriate section on the main report, once selected.

- Create a subreport with the Report Wizard

This option will let you create a subreport using the wizard. This report can then be embedded in the main report. Once this option is checked and a name given to the subreport, the "Report Wizard" button will get enabled. "Standard Report Creation Wizard" opens up on clicking the "report wizard" button. Now you can provide appropriate connection information.
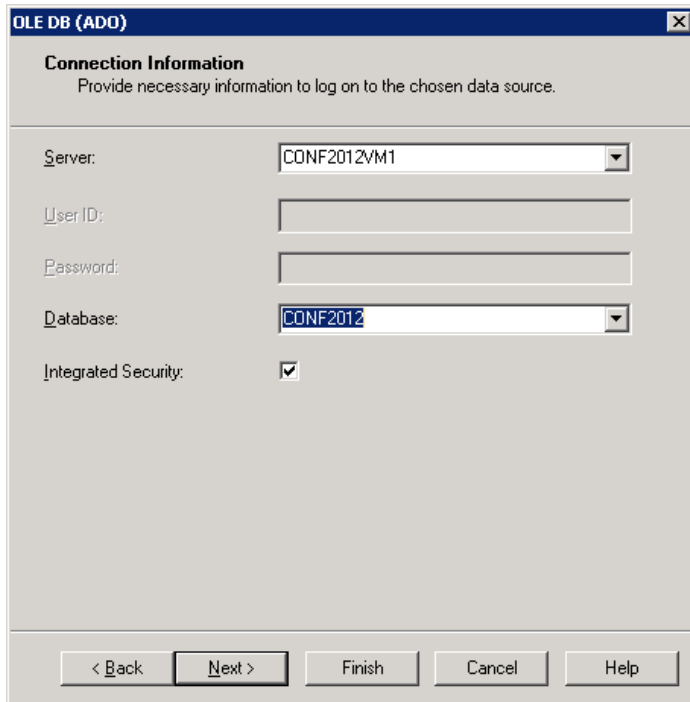
1   Select OLE DB (ADO) in the next screen, click Next.
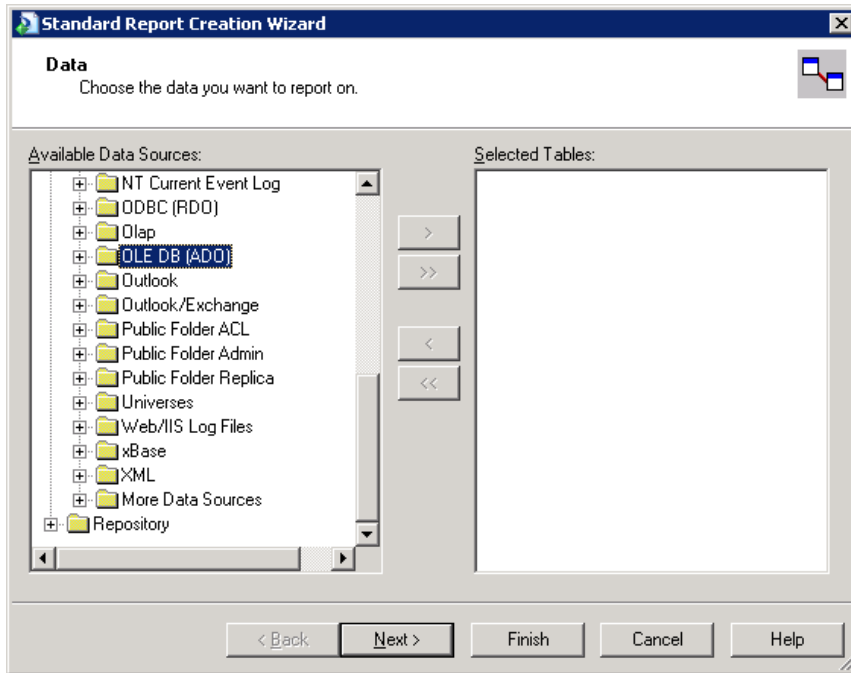
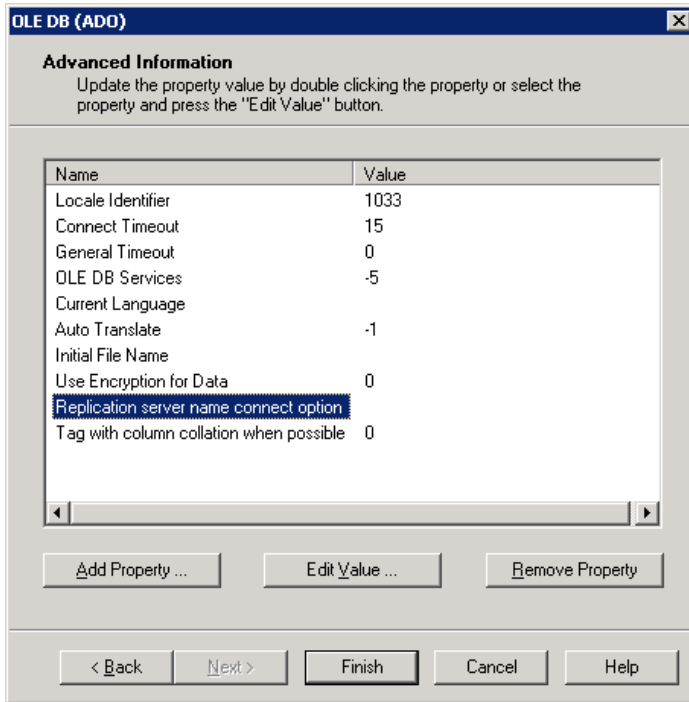**2** Select Microsoft OLE DB Provider for SQL Server, click Next.
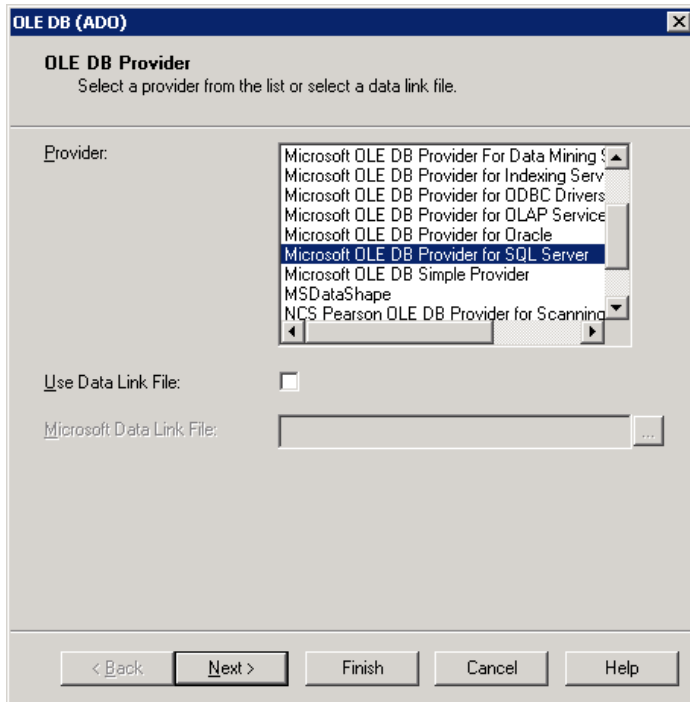
3 Provide the connection information and click <u>N</u>ext.

4   Click Finish in the next screen.
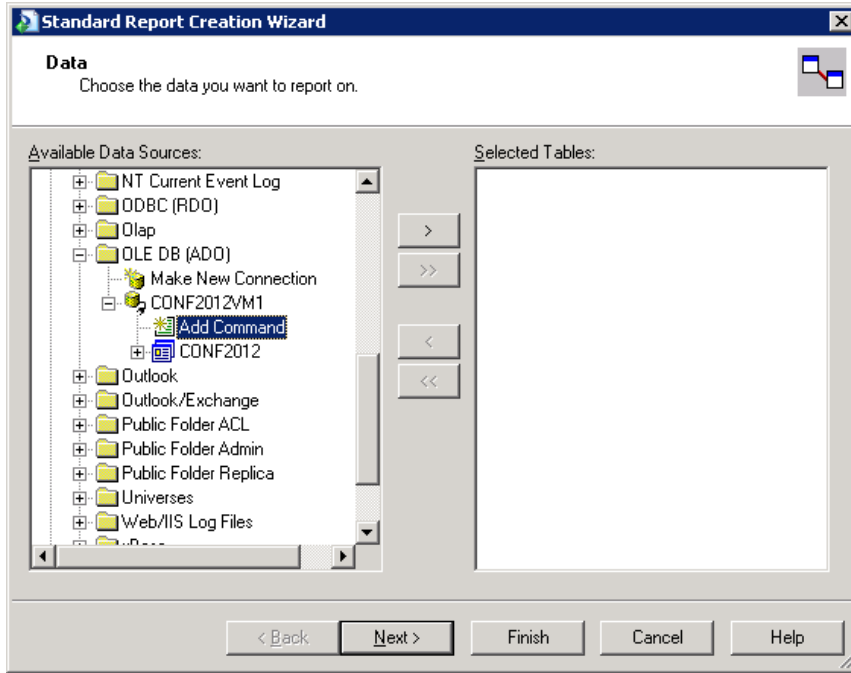

5

The connection information is now established. The next step is to add the command and database object that the report will use.

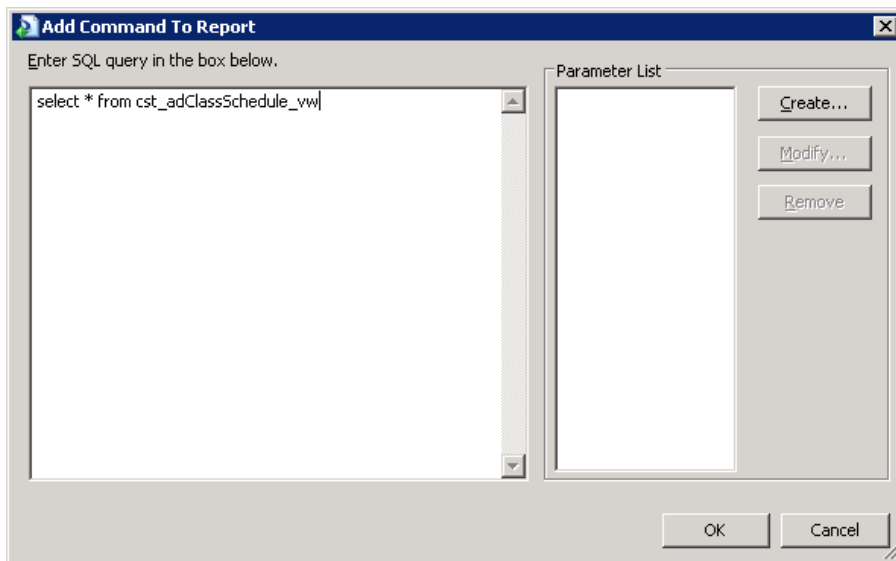**6**   Double-click Add Command or click Add Command and the ">" button.

This will open a window where the command can be typed. A command is a call to the database. This can be a View or a Stored Procedure.

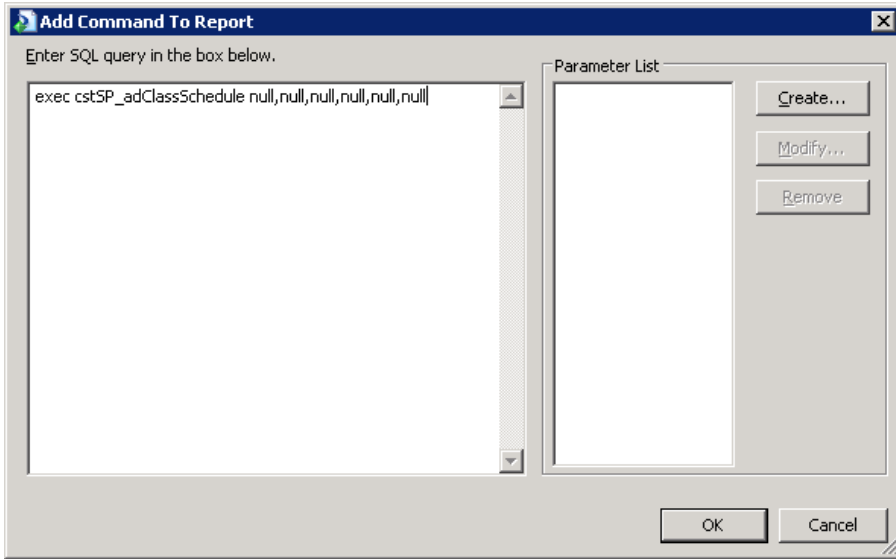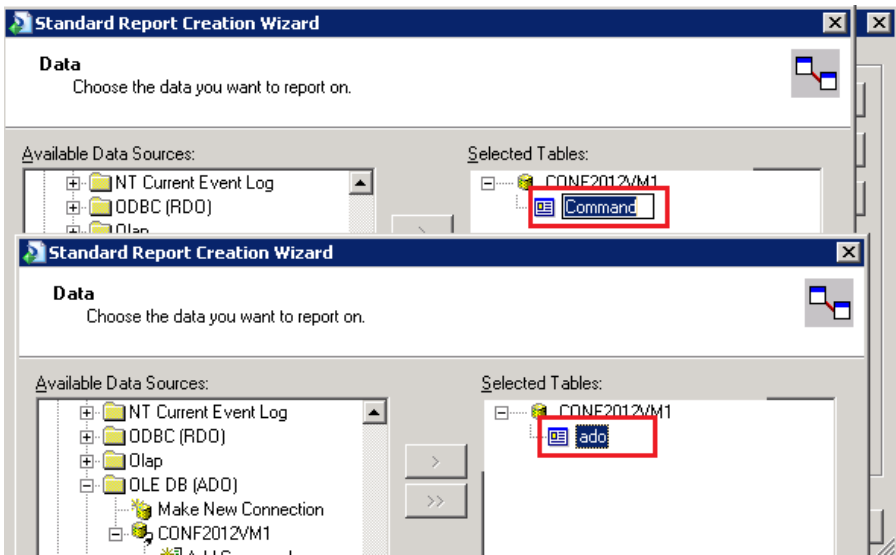**7**   Type your command in the window.

Note: The object used in this screen should already exist in the database. Command window can either use a View or Stored Procedure.

8   Click OK.

9 Change the name of the command from "Command" to "ado." This step is required for proper functioning of subreports in CampusVue Student.

10 Click Next and choose columns needed on the subreport.
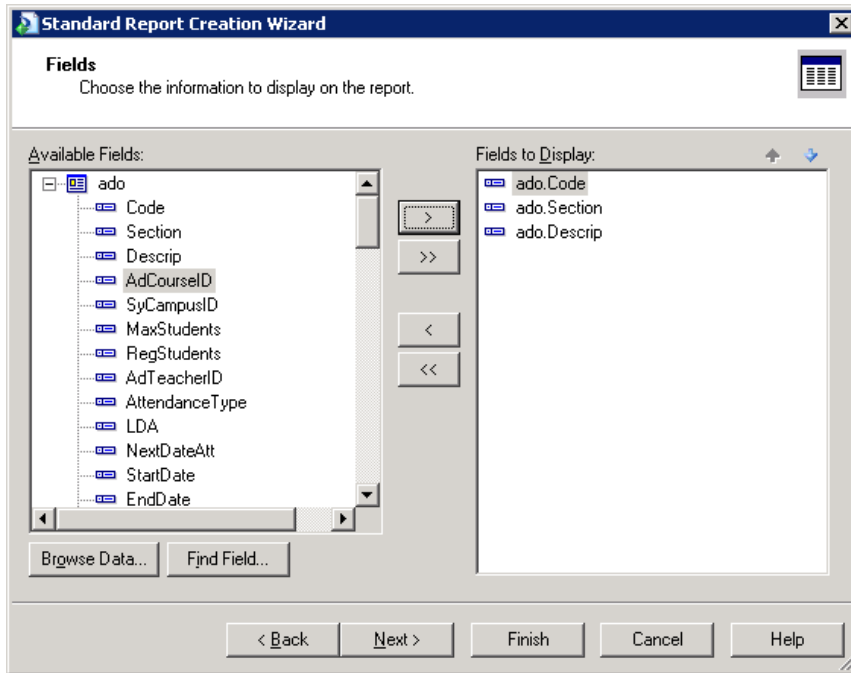
11 Click Finish.

At this point the subreport is ready to be added to the parent report. The report can be pasted in the appropriate section.

Using both the methods described above, subreports can be added to the main parent report. Once the report is added, a proper link between the main parent and subreport needs to be established.

CampusVue Student supports subreports that use either Views or Stored Procedures.

View Subreport

View subreports use Views as the database object. There are several CampusVue Student reports that use view subreports.

Create the subreport using one of the two options mentioned above. In addition to the above steps, CampusVue Student requires special tags that need to be added as part of the main report for the subreport to be considered and for parameters to get passed from the main report to subreport.

Syntax in the subreport tag when using a View:

Add a yellow tag or text box to the report footer.

1   Follow this syntax: tag <SUBREPORTVIEWS>

    a.   View name
    b.   Followed by a 'pipe'
    c.   Followed by the field name used to link the sub-report to the main report
    d.   Followed by a pipe
    e.   For Multiple sub-reports: add a colon then use the same syntax just described above for each sub-report
    f.   Does NOT end with a colon

Example:
<SUBREPORTVIEWS>rpt_AdClassBookDetails_vw|AdClassSchedID|:rpt_AdStuSkedSub1_Vw|AdClassSchedID|

`<SUBREPORTVIEWS>rpt_AdClassBookDetails_vw|AdClassSchedID|:rpt_AdStuSkedSub1_Vw|AdDependentClassSchedID|`

Examples:

Reports > Academic Records > Student Schedule

Reports > Academic Records > Drop Report

Stored Procedure Subreport

Stored Procedure subreports are those that use Stored Procedures as the database object. There are several CampusVue Student reports that use Stored Procedure subreports.

Create the subreport using one of the two options mentioned above. In addition to the above steps, CampusVue Student requires special tags to be added as part of the main report for the subreport to be considered and for parameters to get passed from the main report to subreport.

Syntax in the subreport tag when using a Stored Procedure:

Add a yellow tag or text box to the report footer.

2 Follow this syntax: tag <SUBREPORTPROCS>

    a. the procedure name
    b. followed by a 'pipe'
    c. followed by the field name used to link the sub-report to the main report
    d. followed by an <XML> tag
    e. followed by a pipe
    f. For Multiple sub-reports: add a colon then use the same syntax just described above for each sub-report
    g. Ends with a colon

Example:
<SUBREPORTPROCS>proc_faPellTk1sub_rpt|FaStudentAidID<XML>|:proc_faPellTk2sub_rpt|FaStudentAidID<XML>|:

```
<SORT*>                          <SELECTION>
rptRFMSPellID=Campus Pell ID*    <Stored Procedure=dbo.proc_faPellTrack_rpt>
StudentName=Student Name*        [syCampus.rptRFMSPellID]  (Range)  "Reporting PELL RFMS ID"
                                 [proc_faPellTrack_rpt.FundSourceType] (multi) "Fund Source Ty
                                 [syStudent.syCampusID]  (Table:syCampus.syCampusID)  "CAI
                                 [FaStudentAid.AwardYear] (Table:faYear.FaYearID) "AWARD YE

<SUBREPORTPROCS>proc_faPellTk1sub_rpt|FaStudentAidID<XML>|:
                proc_faPellTk2sub_rpt|FaStudentAidID<XML>|:
```
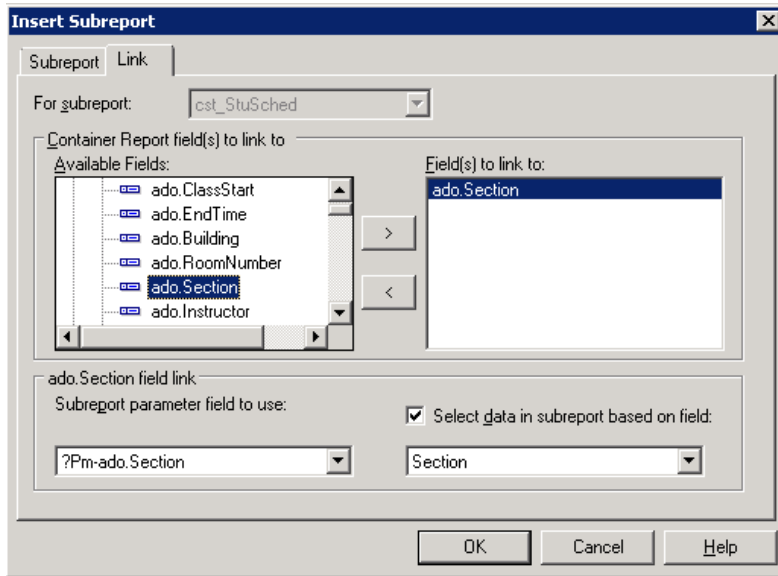
Examples:

Reports > Financial Aid > COD Disbursement Analysis

**Reports > Financial Aid > COD Grant Tracking Report**

Note: Only XML Parameters can be passed using the <SUBREPORTPROCS> tag

Link

The main report is connected to the subreport by assigning proper links between the reports using the Link tab.

The field that needs to be linked is selected in the Available Fields box and the appropriate field name is then selected in the Fields to link to: box. Links used in the main report have to match the link provided in the link section.
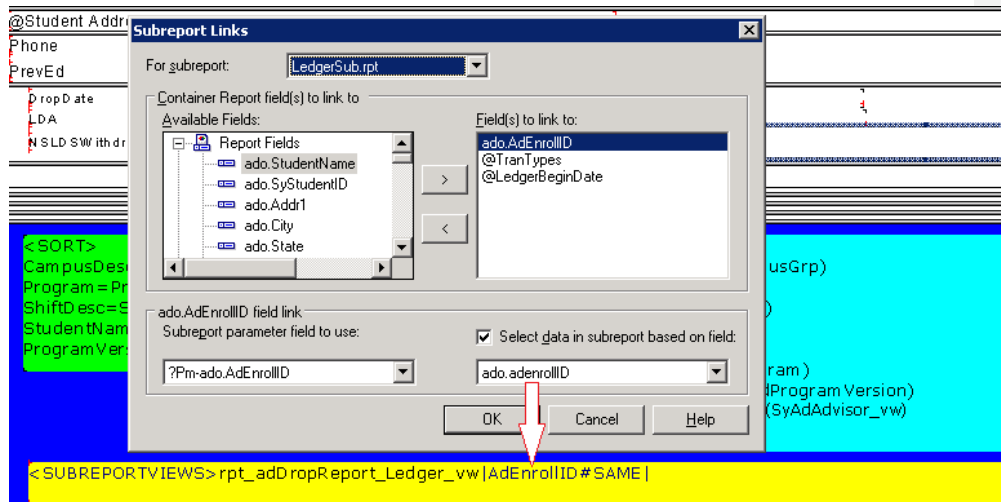
There can only be one link provided in the tag section. However, you can have multiple links as part of the link section to tie the data between reports.

Subreports can have more than one link to the main report as long as those fields exist in both the main and the sub, although is not required to type the extra field names used to link in the yellow box in Main report footer. To add an additional sub-report link, find the field in the left pane and click the ">", it will find the matching name in the sub-report automatically for you if they are named the same. This can be done in the Sub-report links screen.

#SAME

#Same is the syntax that is used when the subreport needs to use the same selection as the main report.

Syntax Usage

<SUBREPORTVIEWS>Rpt_FACODImportResponseSub_vw|FaBatchExpImpID#SAME|

<SUBREPORTVIEWS>rpt_adDropReport_Ledger_vw|AdEnrollID#SAME|

Using #SAME causes the sub-report to pull its data based on the main reports parameter selection. This was necessary for subreports that need to have the same parameter as the main report.

Example: **Reports > Academic Records > Drop Report**

```
<SORT>
CampusDescrip=Campus*
Program=Program*
ShiftDesc=Shift*
StudentName=Student Name*
ProgramVersion=Program Version
```

```
<SELECTION>
syCampus.SyCampusID(SyCampusGrp)
AdEnroll.DropDate()
AdEnroll.NSLDSWithdrawalDate()
Adenroll.LDA()
SyStudent.AmRepID(AmRep)
AdProgram.AdProgramID(AdProgram)
AdEnroll.AdProgramVersionID(AdProgramVersion)
SyAdAdvisor_vw.SyAdAdvisor_vwID(SyAdAdvisor_vw)
```

```
<SUBREPORTVIEWS>rpt_adDropReport_Ledger_vw|AdEnrollID#SAME|
```

## Workshop - Make a Custom Report and add a View Subreport

Scenario: You are asked to add all the addresses for a student in **Admissions > Lead Master Listing Summary Report**. A standard report should not be modified, so you want to make a copy of it.

The student could have multiple addresses. The addresses can be included as part of the main view and main report. But if there are multiple addresses present for the student, the student data will be duplicated on the report and the view. To overcome this, we can create a subreport. Data can be well presented using the subreport.

Step 1

Creating custom report from standard Report.

1   In CampusVue Student, navigate **to Setup > Report Maintenance > Standard** tab; click on Admissions.

2   Find the Lead Master Listing Summary report; select the report.

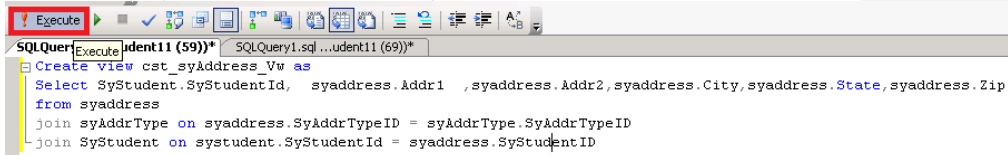**3**   Click Edit to open the report in Crystal Reports.
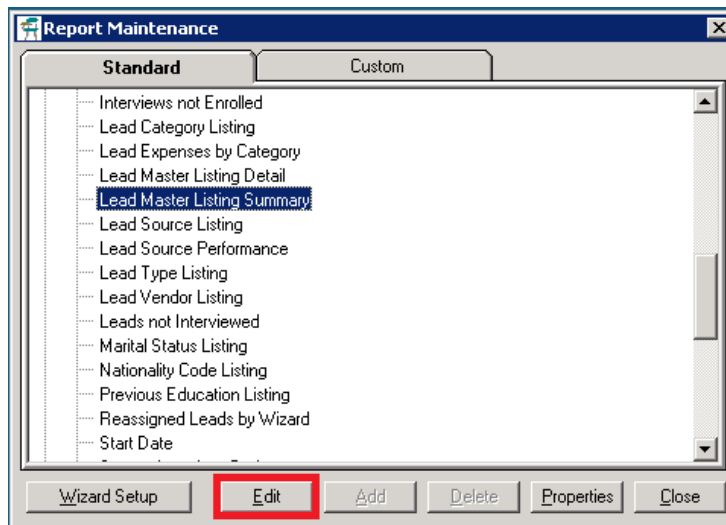
Note: Another way to open a report is to open Windows Explorer, browse to the standard reports folder in CampusVue Student at C:\Program Files\CMC\C2000\Reports. Double-click on the file called "rpt_AmLeadMasterListingSum.rpt" to open it in Crystal Reports. You can get the report name from the properties button in the Report Maintenance screen in CampusVue Student.

4   To make a copy of the report, go to **File > Save As,** double-click on the Custom Reports folder; change the name from "rpt_AmLeadMasterListingSum.rpt" to "cst_ AmLeadMasterListingSum.rpt".

Step 2

Create View for the subreport.

1 Open SQL Management Studio and connect. Click F8 to open the Object Explorer.

2 Create a view to pull the address for the subreport.

3 Copy the text of the view to SQL Management Studio and click Execute.

```
Create view cst_syAddress_Vw as
Select SyStudent.SyStudentId
,SyAddress.Addr1
,SyAddress.Addr2
,SyAddress.City
,SyAddress.State
,SyAddress.Zip
from SyAddress
```

join syAddrType on syaddress.SyAddrTypeID = syAddrType.SyAddrTypeID
join SyStudent on systudent.SyStudentId = syaddress.SyStudentID

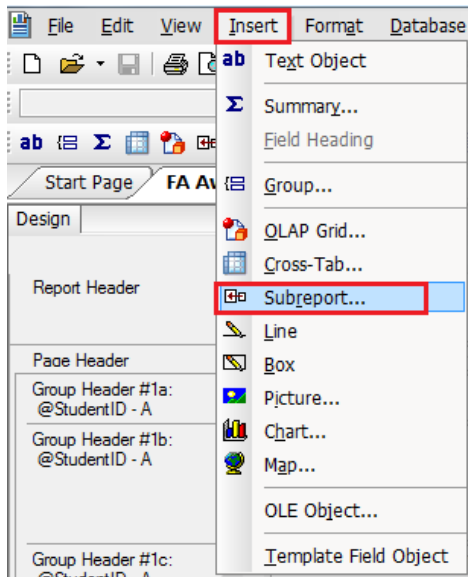## Step 3

Add Subreport and subreport tag.

1 Go to **Setup > Report Maintenance > Custom > Admissions; b**rowse to the custom reports folder.

2 Double-click the report file cst_ AmLeadMasterListingSum.rpt.

3 Locate the Details section and insert a new detail section.
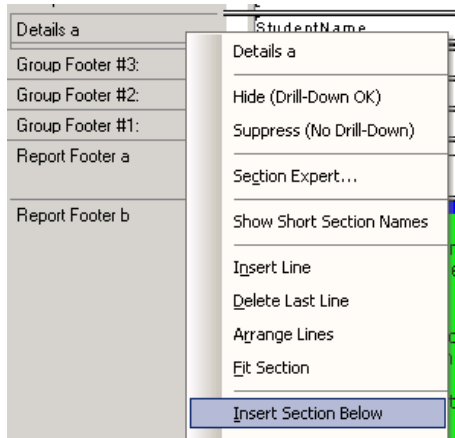
4   Insert a subreport.

5   Provide a name to the new report and click on Report Wizard.
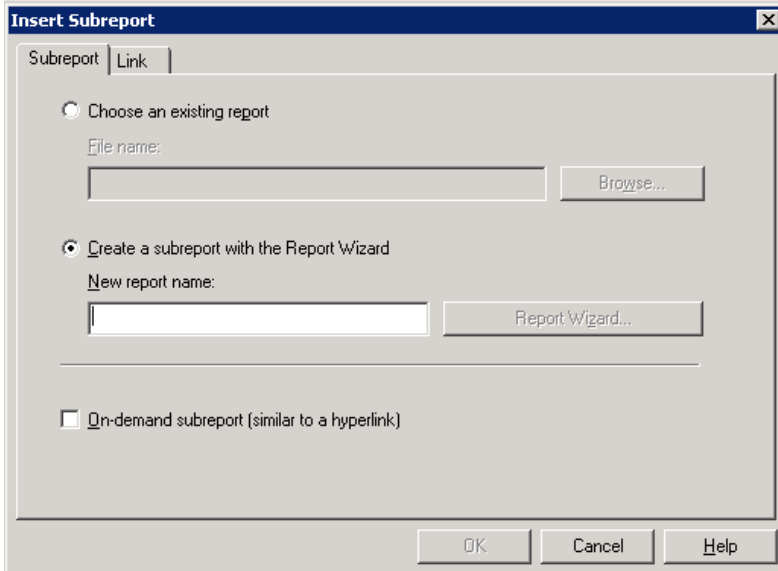
6 Follow the screen and enter the connection information as described in the above sections. Add a command and enter "Select * from cst_syAddress_vw" in the command.
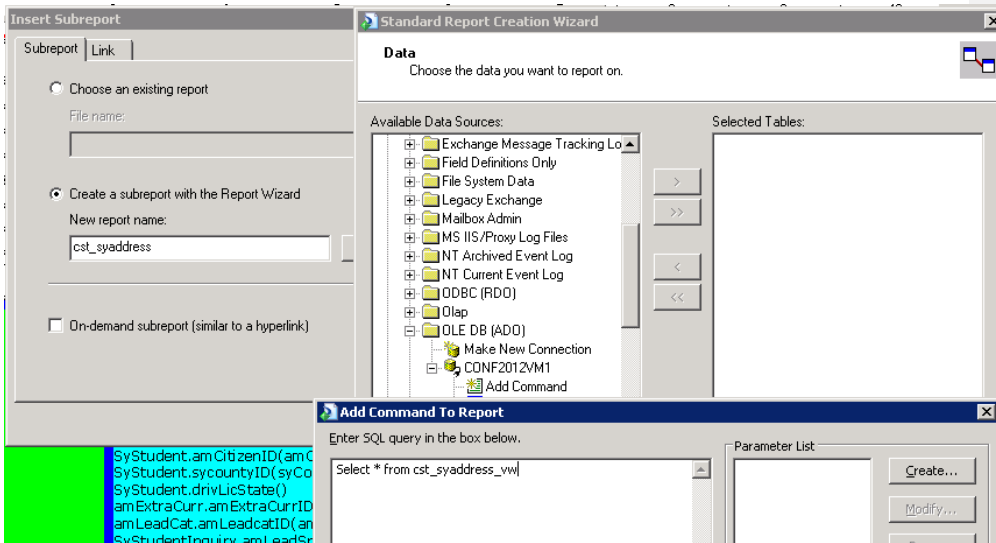
7 Change the name of the command to ado.
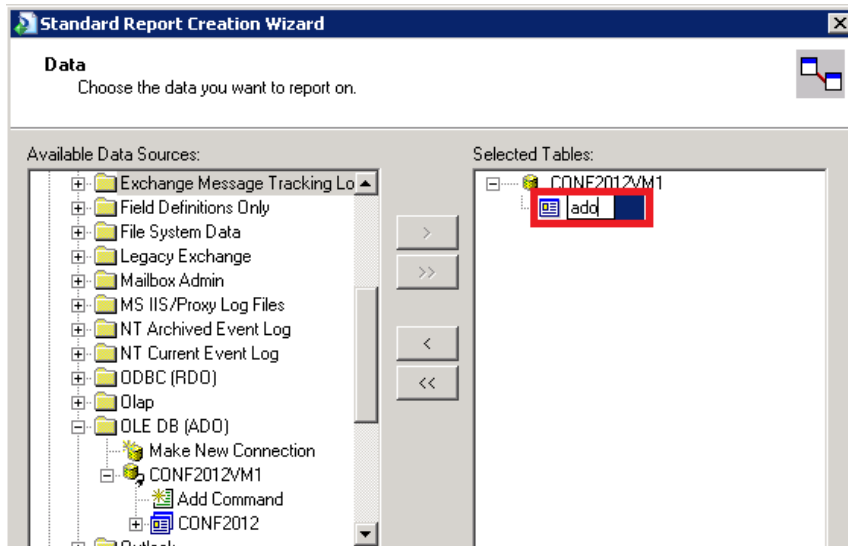
8 Select the required fields to be placed on the report.
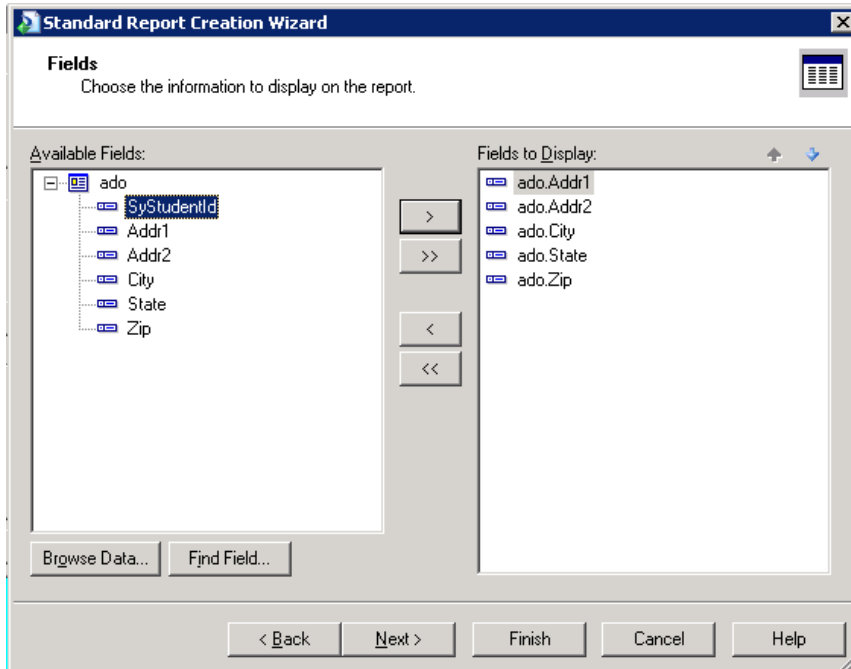
9 Click Next.

10 Choose any Grouping required on the report.
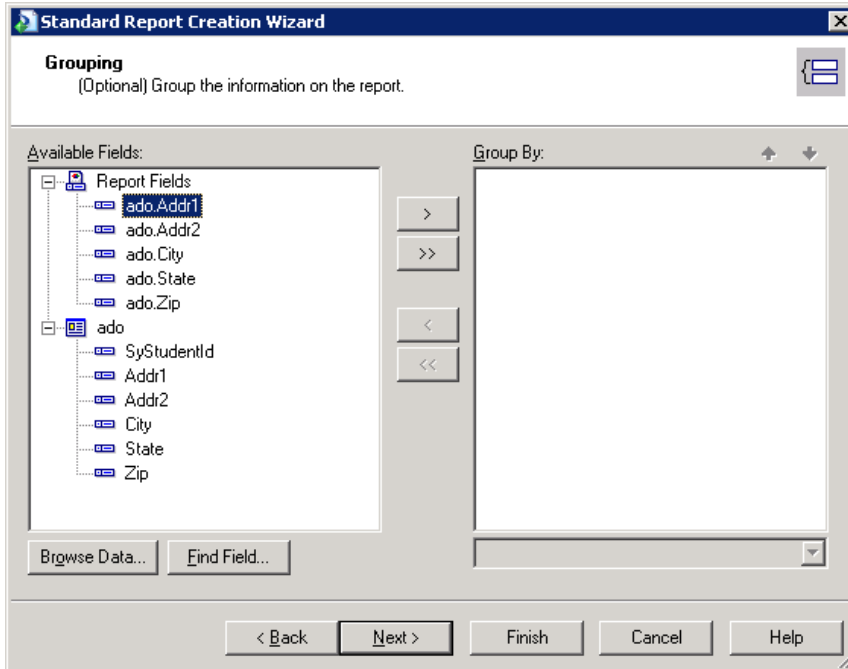
11 Click Finish.

12 Click the Link tab to link the main report with the subreport.
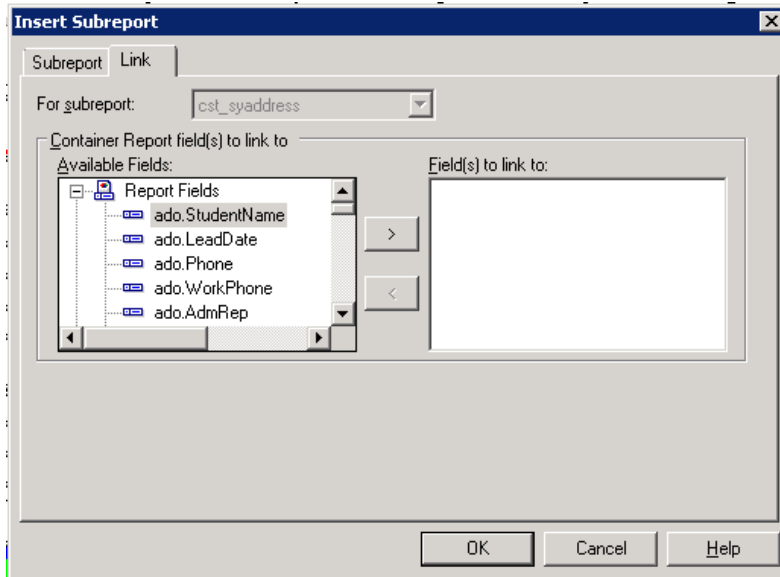
13 Choose a unique combination to link the two reports. For this example, systudentid is the unique field.

14 Select SyStudentID in Available Fields and then click the arrow (>) button.
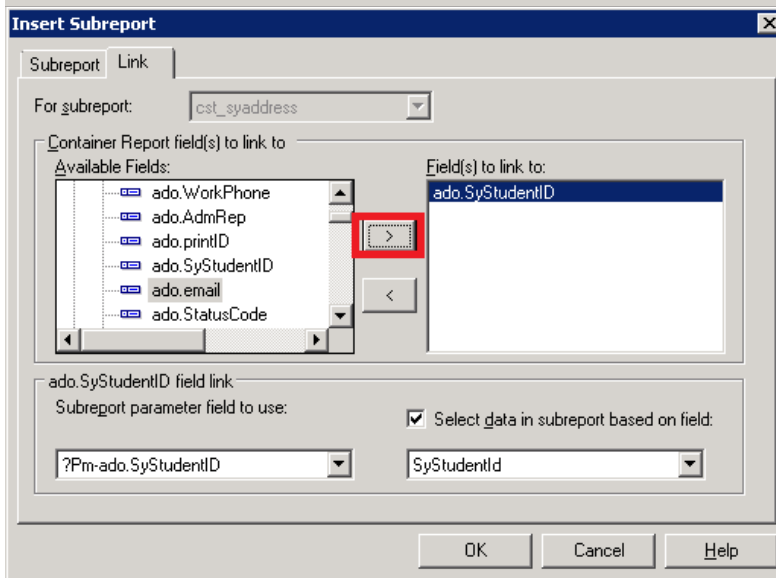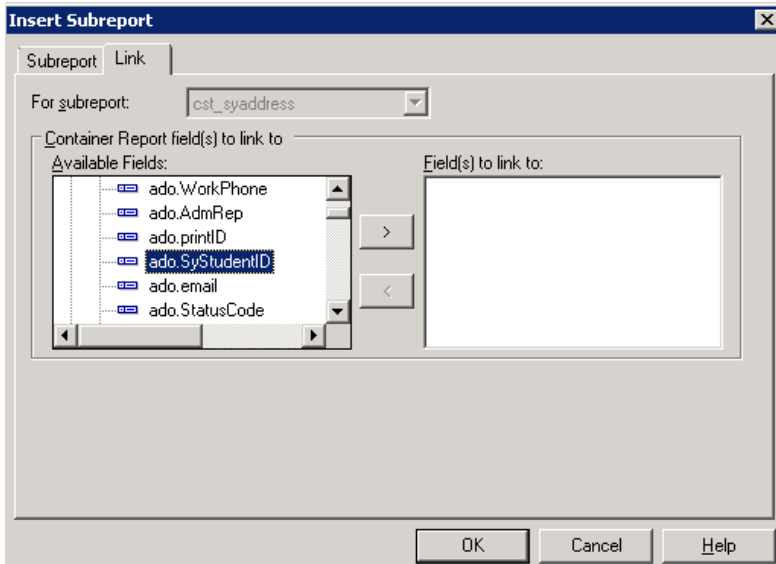
15 The appropriate link is selected between the two reports. If the column names between the reports are not the same, it will not choose a field and you have to select a field from the drop-down list.

16 Click OK and place the subreport in the Details section.

17 If you forget to link the report or if you want to change the subreport link, you can right-click on the subreport and choose Change Subreport Links.
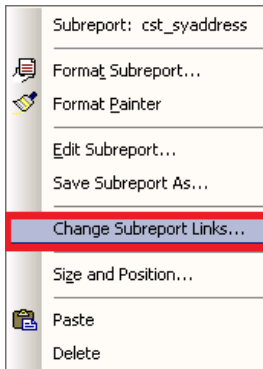
The subreport is now added to the main report.

Subreport tag

The next step is to add the tag to the footer.
Add a yellow tag or text box to the report footer.

> **Commented [A1]:** Should this read object instead of box?
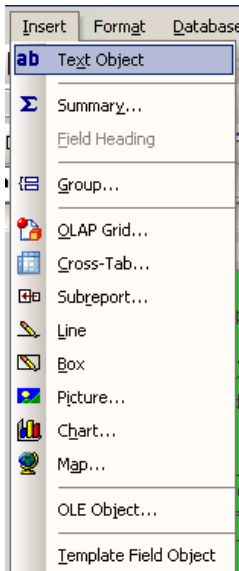
1   Follow this syntax: tag <SUBREPORTVIEWS>

    a.   View name – cst_syaddress_vw
    b.   Followed by a 'pipe'
    c.   Followed by the field name used to link the sub-report to the main report –
       SyStudentId
    d.   Followed by a pipe
    e.   <SUBREPORTVIEWS>cst_SyAddress_vw|SyStudentID|

```
<SUBREPORTVIEWS>cst_SyAddress_vw|SyStudentID|
```

Now the subreport is ready to be tested.

Test the report.

2   Go to **Reports > Admissions > *Lead Master Listing Summary Custom;** select the required
   selection and hit preview.

The report executes successfully and you can see the address added for each student.

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│ ▣ Report Selection: Lead Master Listing Summary Custom                        [X] │
├─────────────────────────────────────────────────────────────────────────────────┤
│ ┌─ Report Preference ──────────────────┐   Sort Variables        Selected Sort Order│
│   Preference Name [_____] [▼]    Shift         ▲       Campus         ˄  │
│                                             Program      [>>]     Student Name       │
│   [ Load ] [ Save ] [ Save As ] [ Remove ]  Admission Rep                          │
│                                             Status        [<<]                   ˅  │
│                                             Start Date    ▼                         │
└─────────────────────────────────────────────────────────────────────────────────┘
│  Campus Selection        Selection        Student Groups      Employer Groups      │
│ ┌──────────────────────────────────────┐                                          │
│   Campuses      │ Campus Groups          Selected Campuses                         │
│ ┌──────────────────────────────────┐   ┌──────────────────────────────────────┐  │
│ │CAMPUS MANAGEMENT - BOSTON (CMC-BOS)│  │CAMPUS MANAGEMENT CORPORATION (MAIN)  │  │
│ │CAMPUS MANAGEMENT - DETROIT (CMC-DET)│ │                                      │  │
│ │CAMPUS MANAGEMENT - FLORIDA (CMC-FLA)│ │                                      │  │
│ │CAMPUS MANAGEMENT - PITTSBURGH (CMC-PIT)│                                     │  │
│ │CAMPUS MANAGEMENT - TAMPA BAY (CMC-TB)│  │                                      │  │
│ │CAMPUS MANAGEMENT CORPORATION (MAIN)│ [>>]                                    │  │
│ │                                    │   │                                      │  │
│ │                                    │ [<<]                                    │  │
│ │                                    │   │                                      │  │
│ └──────────────────────────────────┘   └──────────────────────────────────────┘  │
│                                          [Clear Campus Selection] [Continue][Cancel]│
│  Student ID to Print [Student ID        ▼]                                         │
└─────────────────────────────────────────────────────────────────────────────────┘
```

| BABIONE, RODRICK | 105656 | rodrick.babione@fakedomain.com | BAD NUMBR | 10/19/2007 | DALLAS MORENO | (100) 555-6867 |

Addr1	Addr2	City	State	Zip
6071 Cherry Hill Road		PITTSBURGH	PA	15212