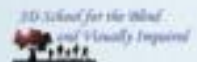


Human Resources/Finance Information Systems



Technology & Security Module



Procedure Manual



South Dakota Colleague System Procedures

South Dakota Colleague System Procedures

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Revisions with this update

Included the naming standards for Rules

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Menus

The **Production** menu looks like this—

Main Menu

1. R18 LIVE Colon Prompt
2. Schedule 25
3. Change Password
- X. Log Off

- 1. R18 LIVE Colon Prompt** [The Production Reporting account]
- 2. Schedule 25** [Allows users access to Schedule 25 for the Production Environment]
- 3. Change Password** [Allows users to change their password]
- X. Log Off** [Used to exit the system]

The **Test** menu looks like this—

Main Menu

1. R18 Test Colon Prompt
2. R17 TEST Colon Prompt
3. Pre-Merge Test Account
4. Schedule 25
5. Change Password
- X. Log Off

- 1. R18 Test Colon Prompt** – [The Test reporting account]
- 2. R17 TEST Colon Prompt** – [The R17 Test reporting account]
- 3. Pre-Merge Test Account** [The OLD test accounts; these accounts contain the ‘frozen’ copy of the production data used as input to the final production merge and NO CHANGES are to be made to data in these accounts. An access list is used to restrict access to these accounts. From this option users are taken to a second menu, from which they choose their university.]
- 4. Schedule 25** [Allows users access to Schedule 25 for the Test account]
- 5. Change Password** [Allows users to change their password]
- X. Log Off** [Used to exit the system]

South Dakota Colleague System Procedures

Setting Up Login IDs and Passwords for Users

Responsibility: RIS

Revised 1/9/13

Note: University Security Coordinators contact RIS when a new Unix ID needs to be added or an existing ID needs to be changed.

- A login ID and password are required to gain access to the Colleague servers
 - The Unix ID establishes the following information about each user:
 - Login Id
 - Password
 - Your new password must have:
 - maximum of 2 repeated characters
 - minimum of 2 characters not in old password
 - minimum of 2 alphabetic characters
 - minimum of 2 non-alphabetic characters
 - minimum of 6 characters in length
 - only the first eight characters is recognized, but a password can contain 256 characters
 - Passwords cannot contain these characters: () * ? < > / ; & ! [] { } | \$ \ ' ")
 - Password is case sensitive
- NOTE: The “rules” can be seen on screen by selecting the “Change Password” option, enter the old password, and then press <ENTER> at the “New Password” prompt.
- Password procedures:
 - Users will be required to change their passwords every 14 weeks. After the 12th week, users will be prompted to change their passwords. They will then have those two weeks plus an additional two weeks grace period to make that change. Total time lapse for a password is 16 weeks.
 - The account will be locked if no change is made to a password after the grace period. To reset the account, call the campus security coordinator who will contact the RIS system administrator.
 - When a user is requested to change their password on login, they MUST do so. Failure to comply will result in being locked out of the system after the fifth try. However, if they are trying to come up with a new password and it doesn't match the criteria, they will be able to repeat that process until they are successful. If the user gets locked out, call the campus security coordinator who will contact the RIS system administrator to have the ID reset.
 - When a user receives the message to change their password, they will have 60 seconds to begin typing before they are disconnected – but not locked out.

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- Passwords cannot be reused immediately. There is a 26-week wait period before a password can be recycled. Even then, the password cannot have been used within the last two iterations.
 - Initial attach point (home directory)
 - Operating system security rights
 - Command environment attributes
- RIS assigns IDs using a format of university abbreviation (b, d, n, m, s, u), six characters of the person's last name, first letter of the person's first name. [Example: dmaherj] If an ID in that format already exists, then RIS uses five characters from the last name and two from the first name. For hyphenated last names, RIS uses the first three letters from each of the last names.
- When a user leaves the university and no longer needs Colleague access, universities ask RIS to remove the Unix ID and universities remove the Opers record for that user.
- Since Staff records should never be removed, we will retain the staff record for a user in Colleague indefinitely on XSVM. For this reason, RIS will check to see if a new user would have a Unix ID that was previously used by someone else. Using the format above,
 - figure out what the new ID would be
 - compare that ID to the list of STAFF records already in Colleague. Using the example ID above, a sample query would be

```
:LIST STAFF WITH STAFF.INITIALS LIKE ...DMAHERJ... STAFF.INITIALS  
STAFF.LOGIN.ID  
LIST STAFF STAFF.INITIALS STAFF.LOGIN.ID 10:05:03 Jun 09 2006 1  
STAFF..... Staff Code Operator ID....
```

```
1069456 DMAHERJ DMAHERJ  
1 record listed
```

RIS will make sure that the new ID assigned does not already exist in the STAFF file.

Creating an Operator Definition and Devices Record

Responsibility: University

Creating The Opers Record

Step 1 - A unique Opers record for each user is needed.

Step 2 - The Opers record ID must be the same as the operating system login ID.

Step 3 - To add a new Opers record,

- Enter the System Operator Definition (SOD) screen in UT. At the Operator ID Lookup Prompt, enter the Opers Record ID you want to create. Enter 'A' to Add at the "Record not Found" prompt.
 - For additional information, see Chapter 5, *Operator Definition (SOD) of Run-Time Reference*.
 - Define the following fields:
 - Name: Required
 - The user name should be followed with a space, a dash, a space, and then the university identifier.
 - Any additional information the university would assign can be included after the university identifier.
 - For example: "Dave Hansen" would become "Dave Hansen - RIS".
 - Below is the valid list of university/center identifiers as of 8/15/03

List of Valid codes:

- BHSU
- DSU
- NSU
- SDSMT
- SDSU
- USD
- RIS
- BOR
- ESC
- EAC
- USDSU
- CUC
- Org Entity ID: is assigned when the user is assigned to the Resource database (used for Workflow). This field can be left blank.

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- User Interface: Enter UI in the first part of the field and an * under Initial Menu. The * is still required for Colleague access.
- Envision password: Leave blank
- Password Expiration Date: Leave blank
- Remember, you can assign the same security class to several users records.
- Security Classes: Enter the security classes for the Operator
R.ST.EVAL.QB – Access has been evaluated for Query Builder
R.ST.EVAL.IMPORT – Access has been evaluated for Import
 - Use of the ...EVAL... classes is optional.

R.ST.NO.QB – Disallows access to Query Builder
(SECLASS.WINT.QB = ‘No’)

R.ST.NO.IMPORT – Disallows access to Import
(SECLASS.WINT.IMPORT = ‘No’)

On ALL other security classes, SECLASS.WINT.IMPORT & SECLASS.WINT.QB is set to ‘Yes’.

These fields are set to ‘No’ on ALL security classes –

SECLASS.WINT.EXPORT
SECLASS.WINT.ADMIN.DB
SECLASS.ALL.TAB.SEQ
SECLASS.ALL.FLD.ACCESS
SECLASS.WINT.ADD.DB

These fields can be set by the universities – on RIS security classes the fields are set to ‘Yes’.

SECLASS.USER.FLD.ACCESS
SECLASS.USER.TAB.SEQ

- Maximum Login Retries: Enter 3
- Default Editor: Leave blank
- Use Help Servlet Override: Leave blank
- Finish from the SOD screen

Note: If the two required fields are not filled in, the system generates the following error when the Operator attempts to log into Colleague:
ACCESS DENIED. IMPROPERLY SET UP USER

Creating The Devices Record

Step 1 - The **Devices record ID must be the same as the operating system login ID**. A Devices record is not required for a user to access Colleague. The system will default to wyse50 emulation if no user-specific Devices record is present. If a user needs emulation

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other than wyse50 (for example VT100), then a user-specific Devices record which specifies VT100 should be set up for that individual.

Step 2 - To add a new Devices record,

- Enter the System Device Definition (SDD) screen in UT. At the Operator ID Lookup Prompt, enter the Devices Record ID you want to create. Enter 'A' to Add at the "Record not Found" prompt.
 - Define the following fields (there are no required fields on SDD):
Display type: Enter 'WYSE50'
Keyboard type: Enter 'K*WY50PC'
- Finish from the SDD screen.

Step 3 - Test the record.

- After you have created both Opers and Devices records for the user, log into the system as the user and access the application software.

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Deleting or Disabling an Operator Definition Record and a Devices Record

Responsibility: University

Note: Before deleting an OPERS record, close and reconcile all cashier sessions linked to the individual.

When a user's access is no longer needed, a university can either delete the OPERS record or disable it so it can no longer be used.

Step 1 - Run a list of the security classes the selected user was assigned.

- Print this list for reference when a replacement has been hired and the security request comes in to provide access for the new hire matching the access of the former employee.

Step 2 - Execute the application.

- In a Colleague UI session, change to the UT System Utilities Module.

Step 3 - Execute the Envision Run-Time System Operator Definition (SOD) screen.

Step 4 - Enter the ID of the obsolete operator definition.

- If you don't know the exact ID, use the '...' wild card lookup combination to narrow the list down.

Step 5 - If deleting the record, press the [RECORD DELETE] key.

- Envision Run-Time prompts you to press the [RECORD DELETE] key a second time to confirm. With Wyse50 emulation, Shift-F10 is Record-Delete. There is also a Record-Delete icon in the menu bar at the top of the UI session.

Step 6 - Press [RETURN] at the final prompt to delete the operator definition from the applications OPERS file.

Step 7 - If Disabling the OPERS record, remove the asterisk (*) from the UI line in the User Interface field, and add 'Obsolete' behind the user's name.

Step 8 - Make sure to contact RIS to remove the user's login privileges at the operating system level to ensure the user can no longer access the system.

Step 9 - Enter SDD to access the "Device" record for the selected user id.

Step 10 - Once you are sure the correct record has been selected, press <shift><F10> (twice) to delete the "Device" record from the system.

Creating Security Classes

Responsibility: University

Note: There will be sets of common and University security classes. The Security Coordinators at each university will develop standards for defining classes.

The University of South Dakota will be responsible for the security classes for SDPURC and ESC, Northern State University for BOR, South Dakota State University for CUC, and Black Hills State University for EAFB.

Security Class Definition (SCD) Overview

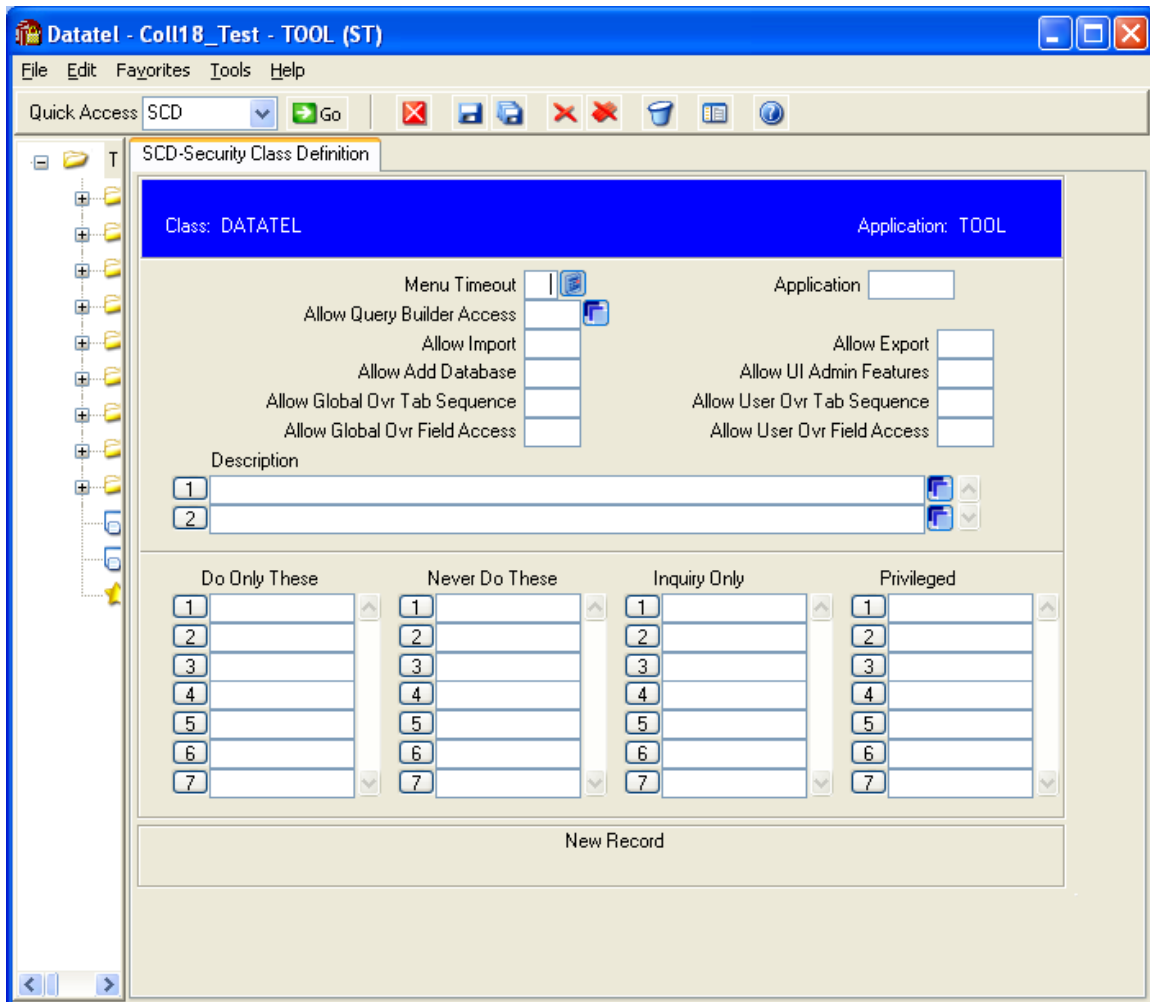
- Use the Security Class Definition (SCD) screen to establish security classes, the foundation of the process-level security system.
- The classes identify the processes available to the end users on your system within an application.
- If a security class restricts a process, end users in that class cannot see that process on a menu or run it.
 - An end user can only run the processes that his security class allows.
 - A security class name identifies each security class.
- You can assign this security class name to operator and device records, which means you can assign security by operator or by device.
 - Use the Operator Definition (SOD) and Device Definition (SDD) screens to define operator and device records.
- For switch-based systems, Envision assigns security according to an end user's login ID. This is how Colleague works in SD.
- For port-based systems, Envision assigns security classes according to a terminal's port number. SD does not assign security classes on SDD.
 - Device security works only with port-based systems.
- Four windows are available on the SCD screen for establishing the appropriate security.
- To create security classes, enter process or menu mnemonics in one or more of the following windows, as appropriate:
 - **Do Only These:** End users assigned security classes with mnemonics in Do Only These have access **only** to the items listed in this window. Be sure to include all process/menu mnemonics and LO (Logoff). Include XEX (Exit) if you want these end users to have access to it. Remember that XEX takes end users out of Envision and places them at the database management system level (the colon prompt).
 - **Never Do These:** End users assigned security classes with mnemonics in Never Do These **never** have access to the items listed in this window. End users with no security classes automatically have rights to all processes *except* any listed as privileged in another class; see below).
 - **Inquiry Only:** End users assigned security classes with mnemonics in Inquiry Only may only **view** field data for the processes listed in this window. They cannot change, delete, or add field data for these processes.

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- **Privileged:** End users assigned security classes with mnemonics in Privileged have **exclusive** rights to the items listed in this window. End users not assigned to this class cannot access these items unless they are assigned as privileged in another class. You can identify the same item as privileged in more than one security class. In SD, university security coordinators should not ever enter mnemonics in the Privileged column. That field is to be used only by RIS staff for RIS security classes.
- End users can have more than one security class.
- When multiple security classes are assigned to a user, Envision merges the security settings of each class and enforces the most restrictive access for the user.
- See the description of each window for an explanation of how Envision merges the settings for multiple security classes.
- Also remember that when you define security classes, you can only list mnemonics in these windows that are marked as subject to process-level security checks on the Menu Definition (SMD) screen. All mnemonics should be available for use on SCD. If they are not, contact RIS for resolution.
- Always enter 'N' in field 3 Allow Export

Sample Screen

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Query Language Retrieval Help

The table below provides information about the field and file names to use when you create queries to retrieve data shown or entered on this screen.

Where the Security Class Definition (SCD) Data Is Stored

To retrieve data from this field on the screen use this file and this field. Substitute an application for 'appl' in the lines below, e.g. ST.SECLASS, CORE.SECLASS, etc.

Security Class ID appl.SECLASS SYS.CLASS.ID
 Menu Timeout appl.SECLASS SECLASS.MENU.TIMEOUT
 Description appl.SECLASS SYS.CLASS.DESCRPTION
 Do Only These appl.SECLASS LIMITED.TO.PROCESS.LIST
 Never Do These appl.SECLASS PROHIBITED.PROCESS.LIST
 Inquiry Only appl.SECLASS INQUIRY.ONLY.PROCESS.LIST
 Privileged appl.SECLASS DENY.ACCESS.EXCEPT.TO.CLASS

Creating Security Classes

Step 1 - With the department manager, determine the classifications for your end users by job function.

- For example, data entry, managerial, or computer center staff.

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Step 2 - To add a new security class,

- Enter the Security Class Definition screen (SCD) from the application in which the mnemonics live (ST,CORE,CF,UT). Follow the SD naming standards for security classes when you create a new record.
- Fill in the appropriate fields. DO NOT enter anything in the Privileged column. If the user needs access to a secured mnemonic, contact RIS and they will provide the needed security class.
- For additional information, see Chapter 7, *Security Class Definition (SCD)* in *Run-Time Reference*.

Step 3 - Add the security class to the appropriate operators records through SOD.

- Remember, you can assign the same security class to several operators records.
- Enter the security classes for the Operator
 - R.ST.EVAL.QB – Access has been evaluated for Query Builder
 - R.ST.EVAL.IMPORT – Access has been evaluated for Import
 - Use of the ...EVAL... classes is optional.
 - R.ST.NO.QB – Disallows access to Query Builder (SECLASS.WINT.QB = ‘No’)
 - R.ST.NO.IMPORT – Disallows access to Import (SECLASS.WINT.IMPORT = ‘No’)

On ALL other security classes, SECLASS.WINT.IMPORT & SECLASS.WINT.QB is set to ‘Yes’.

These fields are set to ‘No’ on ALL security classes –
SECLASS.WINT.EXPORT
SECLASS.WINT.ADMIN.DB
SECLASS.ALL.TAB.SEQ
SECLASS.ALL.FLD.ACCESS
SECLASS.WINT.ADD.DB

These fields can be set by the universities – on RIS security classes the fields are set to ‘Yes’.

SECLASS.USER.FLD.ACCESS
SECLASS.USER.TAB.SEQ

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Process Security Classes

Responsibility: University

This is an overview of the options for security classes.

- The **Denial** fields show the list of classes which are not permitted to use the process.
- The **Access Only** fields show the list of security classes that have exclusive (privileged) rights to use the process. If a user does not belong to one of the listed classes, he or she cannot run the process.

Note: An empty list implies all classes.

- The **Inquiry Only** fields show the list of security classes that may only use the process in inquiry mode. Users belonging to any class in this list can view the data, but cannot change it.

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Sequential File BROWSE Shell (UTFB)

Responsibility: University

Overview

- Use the Sequential File BROWSE Shell (UTFB) process to view data records in a directory.
- In the BROWSE process, the screen acts as a 22-line, 80-character window into a record.
- Each page of a directory item is 150 characters wide and 66 lines long.
- You may use the BROWSE functions and commands to position your BROWSE window over any part of the directory item.
- The BROWSE functions and commands are as follows:
 - **Functions:**
 - **Window Page UP** - Backs up one page (goes from page 3 to page 2)
 - **Window Page DOWN** - Turns to the next page
 - **Window FWD** - Moves down 22 lines or to the bottom of the current page
 - **Window BACK** - Moves up 22 lines or to the top of the current page
 - **CLEAR** or **REFRESH** - Repaints the current screen
 - **Process HELP** - Shows this Help information
 - **CANCEL** , **EXIT** , or **FINISH** - Stops Browsing.
 - **Commands:**
 - **Lnnn** - Moves the BROWSE window to the left nnn columns
 - **L** - Moves the BROWSE window to the left 70 columns
 - **Rnnn** - Moves the BROWSE window to the right nnn columns
 - **R** - Moves the BROWSE window to the right 70 columns
 - **Unnn** - Moves the BROWSE window up nnn lines or to the top of the page
 - **U** - Moves the BROWSE window up 22 lines or to the top of the page
 - **Dnnn** - Moves the BROWSE window down nnn lines or to the bottom of the page
 - **D** - Moves the BROWSE window down 22 lines or to the bottom of the page
 - **P** - Moves to the next page
 - **PD** - Moves down (next) one page
 - **PU** - Moves up (prior) one page
 - **Pnnn** - Moves to page nnn
 - **@(c,x)** - Moves the BROWSE window so that the upper left corner is positioned at column c, line x on the current page.

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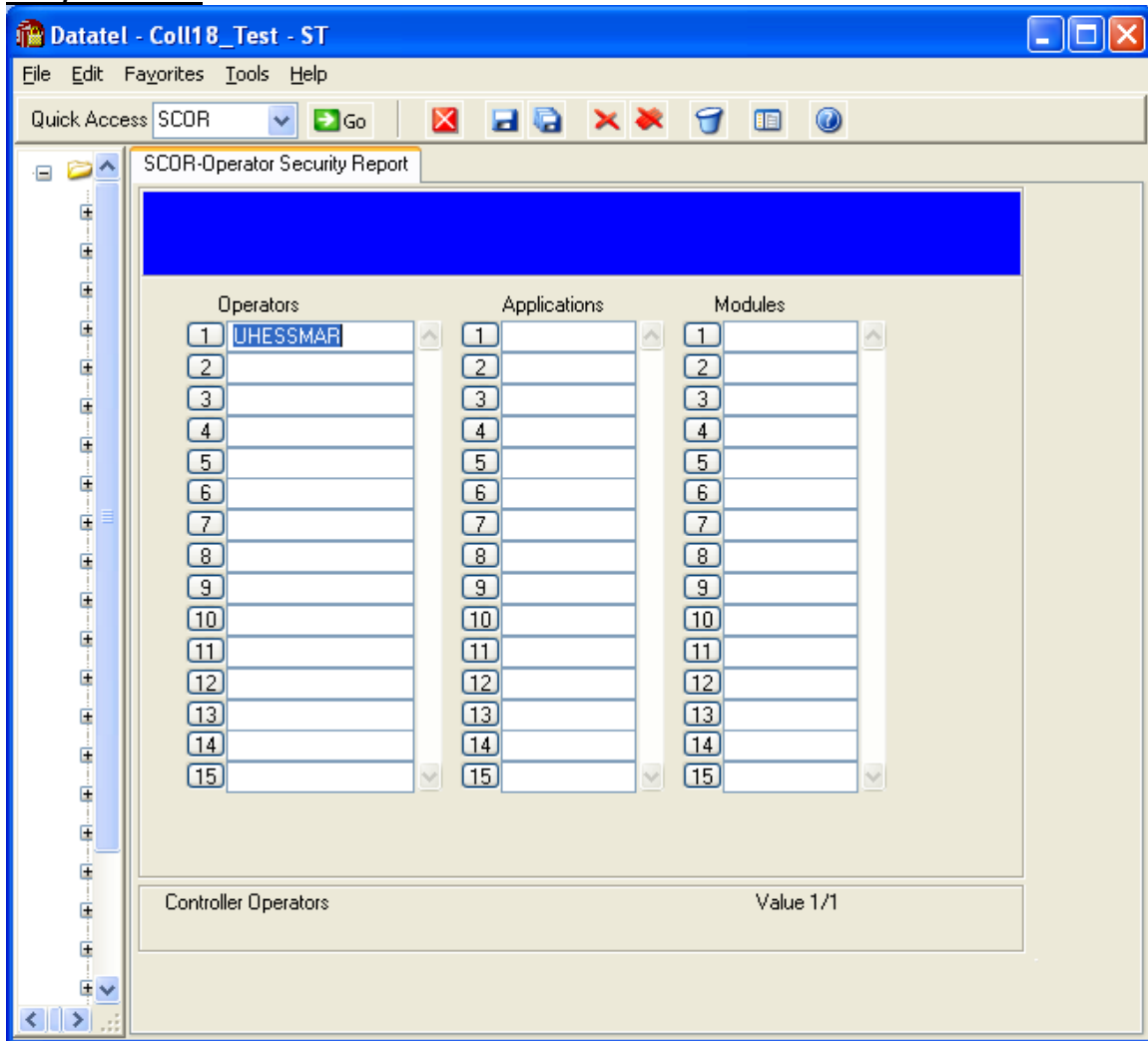
Operator Security Report (SCOR)

Responsibility: University

Overview

- The Operator Security Report will report on the secured processes that each selected operator may access.
- Operators may be selected individually, or all operators may be selected (this is the default).
- The scope of the report may be narrowed by selecting specific modules and/or applications that processes may belong to.

Sample Screen



Process Security Report (SCPR)

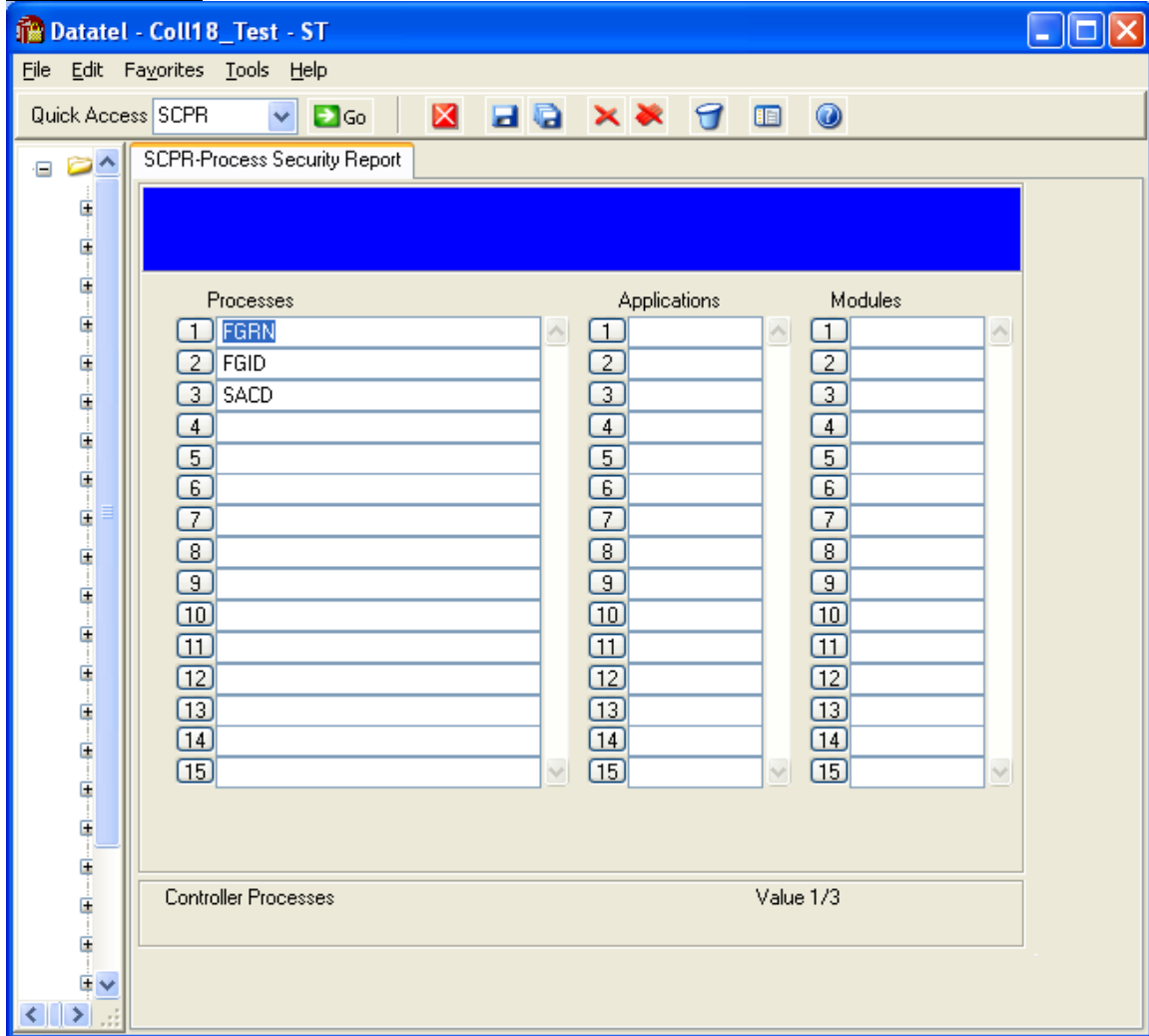
Responsibility: University

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Overview

- The Process Security Report will report on the Operators who have access to any given process.
- Processes may be specified individually, or may be selected by the applications and/or modules that they belong to.

Sample Screen



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Colleague Contact if Problems

RIS Contact Procedures for problems with the Datatel Colleague system

When a user experiences a problem, their first contact should be the campus technical contact. These individuals are Roxy Schmit at BHSU, John McNary at DSU, Virginia Shanley at NSU, Barb Dolan at SDSMT, Joe Moore at SDSU and Kent Anderson at USD. If the problem is one that the campus technical contact can not figure out, they will send it to RIS, normally Suzanne Preszler or Carolyn Jensen. If RIS can not resolve the problem, the problem will be sent to Datatel Solution Center. Typically Datatel's Solution Center responds within 24 hours. If Datatel must fix a problem in their code or provide a program to correct some resulting erroneous data, an update will be sent. RIS will load this update into the test environment. Occasionally, an update does not fix the problem and another update is provided. It is imperative that we in South Dakota test these updates against our data until we are assured that the problem is fixed, and then the update is installed into production.

Colleague and WebAdvisor problem reporting outside regular business hours

BIT provides off-hours support for the SDBOR administrative systems. We have provided them with a list of contacts for each system (Colleague, Banner, OS & Network) and when they receive a problem report, they use the call list to reach RIS staff.

The procedures for the BIT phone system and staffing is as follows -

When users call the BIT Help Desk number after regular business hours, the message first informs the caller about their office hours and then provides options. One of the options is 'Press Zero for Immediate Assistance'. Users need to choose that option to have the call transferred to the Machine Room. If they leave a voice mail message at the Help Desk number, they will not receive a response until the next business day. Those messages aren't checked by the Machine Room staff after hours.

When the call is transferred to the Machine Room, it rings to a series of phones/numbers in different locations, transferring after about 6 rings from one to the next; the caller is unaware that the call is being transferred to another phone. There is no option to leave a voice mail message because BIT's goal is to have every call answered by a live body. Operators have a portable phone which they are supposed to use when they are in places where they cannot hear the phone, like the printer room. If one line is busy, the call will be transferred to the next phone, which means that occasionally the operator will be on one line when another line is ringing. Callers will never receive a busy signal. Because of the way the phones are transferred, callers need to let the phone ring at least 12 - 15 times to allow the operator to switch from one call to the other or return to the room where the phone is ringing. Someone is in the BIT Machine Room 24 hours a day, 7 days a week.

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Callers should press Zero and let the phone ring a minimum of 15 times before they hang up. If callers get no response when following this procedure after hours, they need to note the date and time of their call and the number of times the phone rang. BIT needs this information to correct any problems on their end.

BIT has added an additional phone in the printer room that will ring at the same time as the first number in the main room. This should help prevent calls from being missed when the operator fails to take the portable phone when they are out of earshot of the main phone.

South Dakota Colleague System Procedures

Security Review

Responsibility: RIS

Timeframe: Every 6 months

1. Verify that only the appropriate staff have the RIS Z...ADMIN... security classes.
 - a. SORT UT.OPERS WITH SYS.USER.CLASSES LIKE Z...ADMIN...
2. Verify that only RIS security classes have entries in the Privileged column.
 - a. :SORT ST.SECLASS WITH DENY.ACCESS.EXCEPT.TO.CLASS
 - b. SORT CORE.SECLASS WITH DENY.ACCESS.EXCEPT.TO.CLASS
 - c. SORT CF.SECLASS WITH DENY.ACCESS.EXCEPT.TO.CLASS
 - d. SORT UT.SECLASS WITH DENY.ACCESS.EXCEPT.TO.CLASS
 - e. SORT TOOL.SECLASS WITH DENY.ACCESS.EXCEPT.TO.CLASS
 - f.
 - g. Any security classes listed should be RIS created or Datatel delivered classes.
3. Verify that the flags at the top of SCD are set correctly. This applies to all security classes in ST, CORE, CF, UT, TOOL.
 - a. SECLASS.WINT.EXPORT – No on all
 - b. SECLASS.WINT.ADMIN.DB – No on all except Z.UT.ADMIN
 - c. SECLASS.ALL.TAB.SEQ – No on all
 - d. SECLASS.ALL.FLD.ACCESS – No on all
 - e. SECLASS.WINT.ADD.DB – No on all except Z.UT.ADMIN
 - f. SECLASS.WINT.IMPORT – Yes on all except R.ST.NO.IMPORT
 - g. SECLASS.WINT.QB – Yes on all except R.ST.NO.QB
 - h. SECLASS.USER.FLD.ACCESS & SECLASS.USER.TAB.SEQ – Univ Security Coordinators set appropriate for user; on RIS classes these fields will be ‘Yes’
4. Verify that valcode tables are set to Inquiry Only, except for those created by a university (Xx...).
5. FTP ID Review
6. Colon Prompt Access Review
7. FA Account Review
8. Unix ID removal list

Responsibility: University Security Coordinators

Timeframe: Yearly in October

1. Review who has access to see SSN on Colleague screens. If the user should NOT see SSN, they should have the security class R.CORE.SSN.F.

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2. Review who has access to modify the Section Number on SECT. If the user should NOT be able to access the field, they should have the security class R.ST.SEC.NO.INQ.F.
3. Review who has access to QueryBuilder. When the record has been reviewed, assign them the security class R.ST.EVAL.QB. If the user should NOT be able to access QB, they should have the security class R.ST.NO.QB.
4. Review who has access to Import. When the record has been reviewed, assign them the security class R.ST.EVAL.IMPORT. If the user should NOT be able to access QB, they should have the security class R.ST.NO.IMPORT.
5. Identify 'dangerous' processes and review who has access to them.
 - a. Processes no one should assign
 - b. Processes only a few people should run
6. Dept change review
 - a. Compare Banner to Datatel on departments
7. Users that haven't used their accounts lately

South Dakota Colleague System Procedures

Data Cleanup/Integrity

Responsibility: Home University

Timeframe: as needed

On the University Data Administrators call in 2005, we discussed how to recover when a University inadvertently updates data for a student that doesn't belong to them. The inadvertent update could be the result of data entry or could be the result of a batch update. In a merged environment like Datatel Colleague, even a very small mistake in a batch update job can cause records to be processed for students that belong to one of the other Universities. While our goal is to never make a mistake, we all realize mistakes happen. When a mistake of this nature is identified, here are the correct procedures to follow:

1. Communicate the mistake
 - a. Notify the University Data Administrator for each university affected. The University Data Administrator will forward the info to the other University data administrators. Copy Carla Reihe, the System Data Administrator.
 - b. Notify the appropriate statewide group. If it's a technical problem ITS will notify the Tech Group. There are statewide groups for Financial Aid, Registrar, AR, and Admissions.
2. Data cleanup will be done by the home university, not the university that made the mistake. This will insure that the appropriate audit trail is available.
 - a. Only clean up the data for our home location students
 - b. There may be times when we decide that RIS or the University that made the mistake will do the cleanup, but this will not be the standard procedure.

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Adding Computed Columns on DCC

Revised 05/2008

Responsibility: University

Revised
05/05/08

DCC (Tools ->ST) is used to create computed columns. DCC adds the field to RT.FIELDS, appl.CDD, and the Unidata dict and compiles the field.

The screenshot shows the 'DCC-Define Computed Column' form in the 'Datatel - Coll18_Test - TOOL (ST)' application. The form is titled 'DCC-Define Computed Column' and has a 'Quick Access' bar with 'DCC' and a 'Go' button. The main area is divided into several sections:

- Purpose:** 1 Major
- Bundle:** USER
- Demand Columns:** 1 ACPG.MAJORS
- Demand Processes:** 1
- Computed Column:**
 - 1 string[] xIResult1;
 - 2 key xKeyAcadPrograms for file AcadPrograms;
 - 3 xKeyAcadPrograms = vApplAcadProgram; xIResult1 = v
- Logical File Name:** APPLICATIONS
- Display Size:** 5
- Format Used:** 5L
- Justification:** L Left
- Conversion String:**
- Report Header:** 1 Major
- Output Mask:**
- Single/Multivalued:** M Multi
- Association Name:**
- Reference File Name:** 1
- Reference File Key:**
- Generate?:** No
- Available to:**
- Run-Time:** Yes
- Database:** Yes

At the bottom, there is a 'Controller Purpose' field with the value '1/1'.

Process Description:

Use the Define Computed Column (DCC) form to create a computed column. Computed columns are fields or columns that allow you to store a formula that is used to dynamically calculate data. This is especially useful for information you need in a report, a rule, or a Communications Management document, where the actual calculation is not included in the logic of a program. Follow the SD naming standards for computed columns when you create a new CC.

Important: For Oracle and SQL Server databases, computed columns that return a

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multi-valued result are limited as follows:

- * Run-time evaluation of the computed column (in Rules and Communications Management).
- * Multi-valued computed columns are functions that are callable only from within other computed columns. They're unavailable for direct use through a query. Only single-valued computed columns are visible to the end user as a function.

For Oracle and SQL Server databases, all query results derived from either computed columns used in ad-hoc queries or selection criteria within a Colleague process must be single-valued. These single-valued computed columns can invoke multi-valued computed columns to yield results internally. However, the value returned to the user must remain a single-value.

View information in the DCC form header to see whether the computed column has been generated successfully for run-time use and/or for database use.

Fields Description:

Purpose:

Short description of the computed column.

Bundle:

Always enter "USER".

Demand Columns:

Id fields and fields computed column will use.

Demand Processes:

Subroutines computed column will use.

Computed Column:

Click on one of the buttons to the right of the field to detail to the computed column editing screen. Enter the code for the computed column. When you've finished entering/editing the computed column code, press the F9 key to save and return to the main DCC screen.

Logical File Name:

File where computed column will reside.

Display Size:

Size of the return value.

Justification:

Right or left.

Conversion String:

Conversion, used primarily for dates and \$ amounts (D2/, MD2, etc.).

Report Header:

Name of the report (often is the same as Purpose).

Output Mask:

Free-form field used when the CDD is displayed.

Single/Multivalued:

Select the return type – Single, Multi, Assoc

Association Name:

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Name of the associated field. Ties multivalue fields together. Used with grouping and ordering.

Reference File Name:

Contains name of a file in which to create a reference to the current field.

Reference File Key:

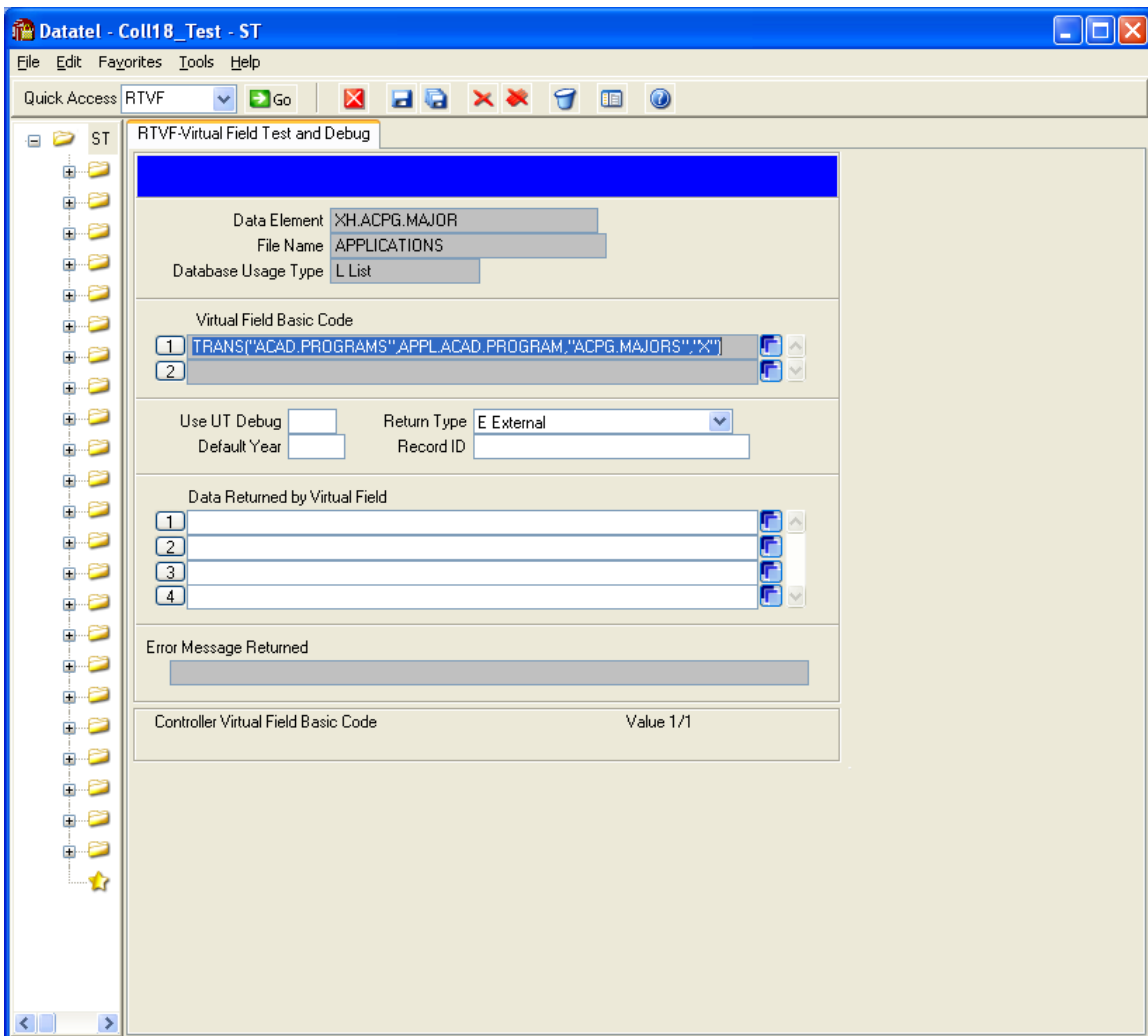
Contains a field from the reference file to identify a record in this file.

Generate:

Enter Yes and press the enter key to generate.

Go to the colon prompt to test the field at the database level.

Using RTVF (ST) to test the computed column in runtime



Fields Description:

Date Element:

Computed column to be tested.

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File Name:

File data is being returned from. Not editable.

Database Usage Type:

Not editable. Informational description of the field.

Virtual Field Basic Code:

Not editable. Contains the definition of the field from DCC.

Use UT Debug:

Leave blank.

Return Type:

Select one of the options to determine how the data is going to be returned.

External:

Returns the value of the field after specified conversion, fill, format and mask have been applied.

Internal:

Returns the internal value of the field, for example, the internal date (12444 instead of 01/25/02 or 10000 instead of 100.00)

Translated:

Returns the translation of the field using the validation file/valcode table. In the case of the validation file, it looks like it will always default to the first field on the file. For a valcode table, it returns the valcode description. The result does not include the original code.

Code:

Returns the field and its translation using the validation file/valcode table. Same as Translated, but the result includes the original code, a space, and the translation. Internal, External, Translated, Code Default Year:

Record ID:

Enter id value to return data from File.

Data Returned by Virtual Field:

Data from File that is returned.

Error Message Returned:

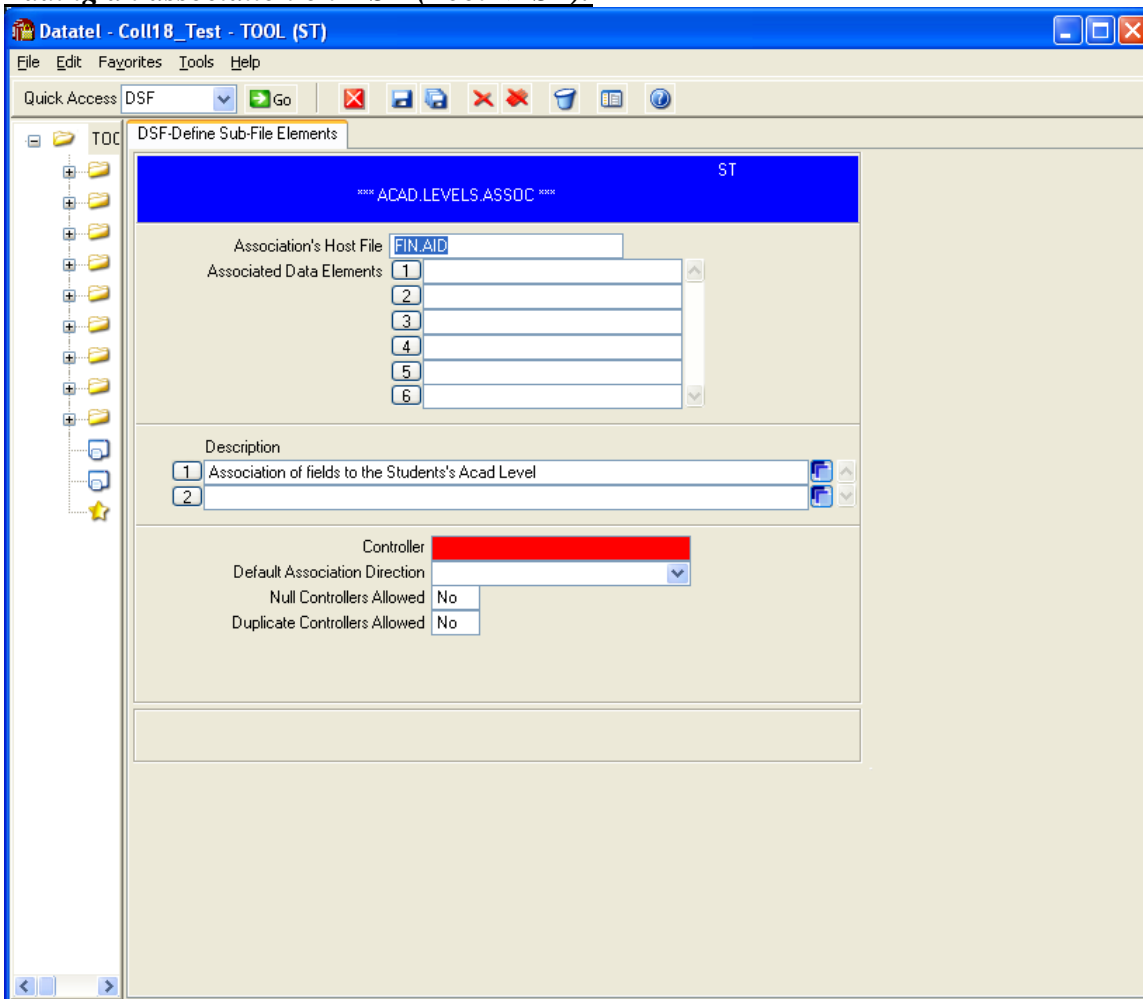
Displays any error messages.

Adding an association on DSF (Tool -> ST)

If the field is part of an association, the association needs to be added/updated on DSF and RDEL. There is a bug in DSF (#15128.41), so RIS may need to edit DATABASE.USAGE.TYPE of the ST.CDD records for the fields (change I to A) before they can be added to an association on DSF, which adds the association to the CDD. At the RT level, it works better to add the association to each individual field on RDEL, instead of using RDSF.

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Adding an association on DSF (Tool -> ST):



Process Description:

The Define Sub-file Elements (DSF) screen defines an association among multi-valued fields. A sub-file, or association, treats related multi-valued groups of data as a single entity. Each data element in the group is maintained so that its relationship to the other elements remains constant.

Sub-files are usually processed in Envision processes through windows. Each multi-valued field is specified as a member of a window group; Envision maintains the integrity among multi-values. Even if a member of a sub-file is not specified in a process, Envision will still maintain the multi-valued element to ensure integrity among the multi-values.

For example, if a sub-file is defined to contain a person's former names (first, middle, and last), each full name group should be treated as one entity. The combination of FORMER.LAST, FORMER.FIRST, and FORMER.MIDDLE should be processed together and never separately, since each component field is dependent on the other components. If in an Envision process only FORMER.FIRST and FORMER.LAST are in a window, the Envision process

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automatically pulls in FORMER.MIDDLE and processes it in the background. This processing maintains the integrity among the multi-values.

One field among the associated fields is defined as the key to the sub-file. This key contains data that is the most unique among the other association members. From the above example, FORMER.LAST is the sub-file key, since it is most likely to contain the most unique data among the association members.

Field Descriptions:

Association's Host File:

All the association's data elements must be located in one logical file. For convenience in using association members in a database management system (DBMS) query language report, a phrase (PH) entry in the file's dictionary is updated each time an association's structure changes.

Associated Data Elements

These are the data elements that are defined in a window on the screen. The difference between the window definition and the association is one of display and file storage. The window definition tells how to display the data on the screen; that is, within a window of specified dimensions, and in a specified sequence. The association definition tells how to store the data in a file. It links certain data elements together into a sub-file.

Note: Only use the DSF screen when you are working with records whose database usage type is Association. If the field does not have the correct database usage type, you may not be able to add the field to the association. Contact RIS, who will correct the field so it can be added to an association.

Description:

Description of the association. Detail to use a text editor as an alternate way to enter the information. Only the first line of the description is stored in the field's dictionary record.

This field appears on both the Database Element Linkages (DEL) and the Database Element Presentation (DEP) forms. Use this field as a means to communicate when application specialist and database designer/administrator roles are filled by different people.

Controller:

Because an association links its multi-values together in a set way, it can be considered as a sub-file of records stored within a single record. Envision file specifications require that one of the members of an association be declared as its primary or key field, often called the controller.

This key member is declared in two places:

1. in this field

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2. by placing it as the first field in the list of members.

It's recommended that you always list the controller as the first field in the association elements list. Like keys, association controllers should uniquely identify their other members, and should not contain nulls. This, however, is a recommendation, and not an Envision requirement.

Default Association Direction:

An association may have a default sort order. This is used by the Generator whenever a FOR_EACH ASSOCIATED... Envision statement is used to add values to the sub-file. When processing the sub-value on a screen or in a report, this default sort order has no effect on the appearance of the data.

Sort Order options:

AL Ascending Left
DR Descending Right
AR Ascending Right
DL Descending Left

Null Controllers Allowed:

Entering "Y" here allows end users to enter an associated data element value with a null-valued controller. This is not an appropriate way to handle data, since it results in having no way to uniquely identify each group of the association. Therefore, this is not a recommended practice. The default value for this field is "N". For windows in screen processes, your entry can be overridden on the Screen Window Characteristics (SWC) screen.

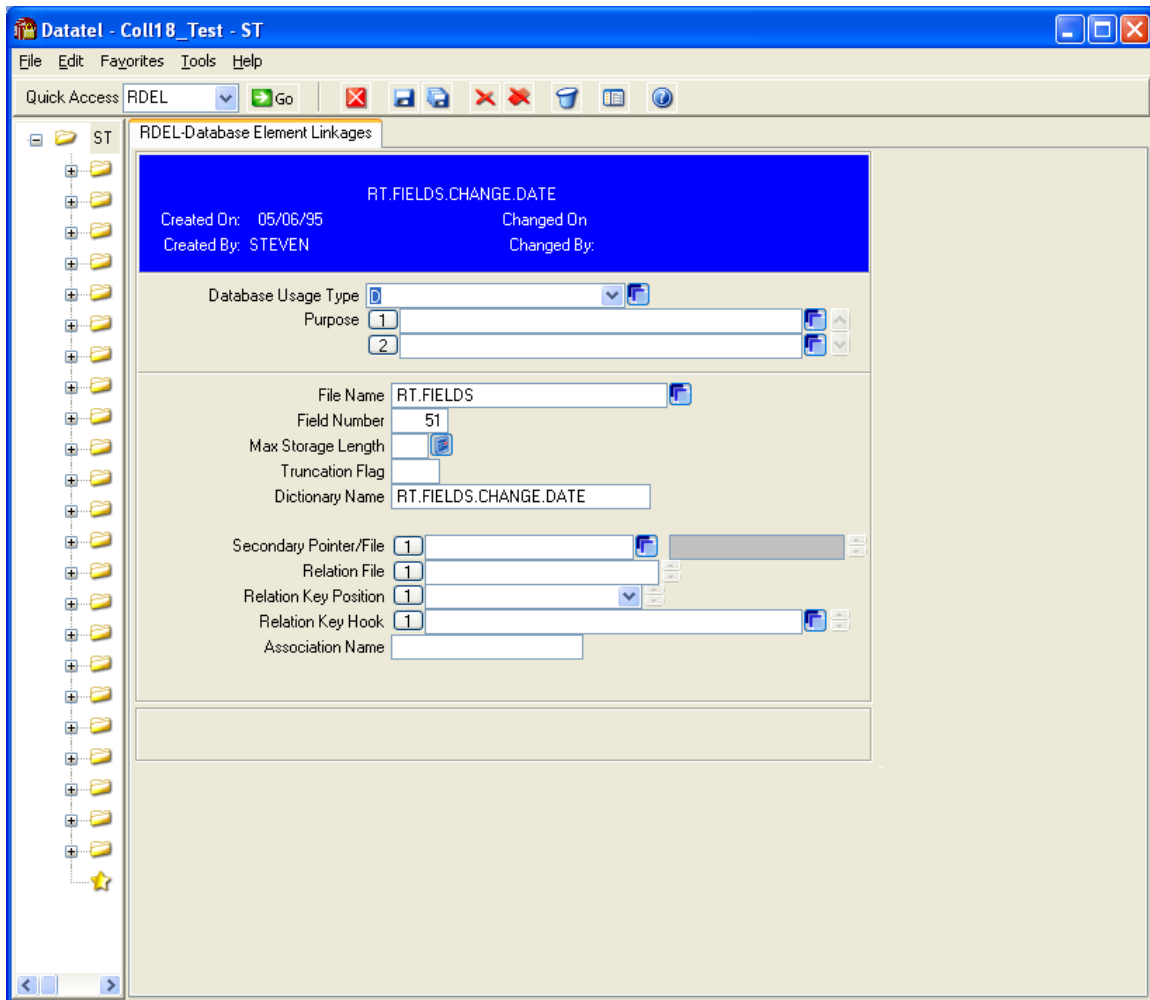
Duplicate Controllers Allowed:

Entering "Y" allows duplicate values to be entered for a controller. Allowing duplicate controllers is like allowing duplicate keys for a file. This is not usually an appropriate way to handle data, since it results in having no way to uniquely identify each group of the association. Therefore, this is not a recommended practice. The default value for this field is "N". Your entry can be overridden on the Screen Windows Characteristics (SWC) screen.

Adding an association at the RT level:

Sometimes fields need to be added to an association at the RT level on RDEL or RDSF, especially when it is not defined on DCC.

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Process Description:

Database Element Linkages (RDEL) defines or changes a field's relationship to a file. It can also change the database usage type of a field. From this screen you can view information about all the foreign key relationships for a field.

You may detail to the Data Element Presentation (RDEP) screen in update mode, from the Database Usage Type field on this screen. You may also detail, in inquiry-only mode, to the File Element Inquiry (RFEI) screen from the File Name field on this screen. In addition, from the Secondary Pointer / File field, you may detail to the menu, listing the File Element Inquiry (RFEI) screen and the Database Element Linkages (RDEL) screen, and access these screens in inquiry-only mode.

The File field, next to the Secondary Pointer field, displays the corresponding file name for the data element present in the Secondary Pointer field.

Field Descriptions:

Database Usage Type:

Required field consisting of a Valcode LookUp with the following values:

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- K Key
- L List
- A Associated
- D Data
- Q Q Pointer
- X Pointer
- T Text

Pointers to other file keys are only valid for X and Q types. Choosing X or Q updates the pointers into the RT.FILES, SV.POINTERS, or MV.POINTERS fields.

The data entered here determines:

- if the field is multi-valued
 - if pointers are allowed
 - how the RT.FILES record for the FILE.NAME field is updated and how that record is used in conjunction with Data Elements in RT.FIELDS during rules processing and database extraction in the S.GET.DATA subroutine.
- This information should default in from the RT field definition that already exists.

Purpose:

Multi-valued and free-form description. Colleague displays this description on resolution screens when looking up data elements. To enter the data, detail to the UTED screen. Data should be entered in Upper/Lower case text.

This information should default in from the RT definition that already exists.

File Name:

Name of the file where this element resides. You may detail from this field, to the File Element Inquiry (RFEI) screen, in inquiry-only mode.

This information should default in from the RT definition that already exists.

Field Number:

Required if you're not identifying a virtual field. The File Name and the Database Usage type must be entered. Used for extraction of the appropriate data from the database. If the value is omitted, the data cannot be retrieved unless you are defining a virtual field.

This information should default in from the RT definition that already exists.

Only Numeric data can be entered. When the data is extracted from the database it will look to the specified file and extract the data from the field number entered here. If this is a record key, you must enter the Key Piece that this represents.

For example, a key of ENGL*00002 has two key pieces:

- 00002 is key piece 2 so any data element which represents this key piece with a database usage type of K would have a field number of 2.

Max Storage Length:

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Maximum length of this field when the data is in internal format.

This information should default in from the RT definition that already exists.

Truncation Flag:

Used to show if the input should be truncated on entry.

When it's set to Yes, the length will always be truncated to the value in RTFLDS.MAX.STORAGE.LENGTH. It's almost always set to No.

This information should default in from the RT definition that already exists.

Dictionary Name:

Required field that must be in upper case without spaces. The data element name is defaulted. When a name other than the name of the data element is entered in this field, the dictionary record created for this data element will use it instead.

This information should default in from the RT definition that already exists.

Secondary Pointer/File:

Required. Enter a data element with a database usage type of either K (Key), X (single value pointer), or Q (multi-valued pointer). From this field you may detail to the menu (in inquiry mode), listing the File Element Inquiry (RFEI) screen and the Database Element Linkages (RDEL) screen.

LookUp is performed against the RT.FIELDS file. Enter data in upper-case letters only. An error message will occur if this record is not on file. All data elements that point to other data elements will be updated into a list in the RT.FILES of pointers. There are MV and SV pointers. All files pointed to will also be updated into a list in RT.FILES file. This list is derived from any field with a pointer.

The File field (next to Secondary Pointer field) displays the corresponding file name for the data element present in the Secondary Pointer field.

This information should default in from the RT definition that already exists.

Relation File:

You must first define any Relation file in the system before using the File Specifications (RFS) screen.

If this data element can be used as part of a key to another file, enter the name of that file here. When data is requested from that other file, this data field (in conjunction with the primary record key) will be used to access that relation file. Only enter data if this points to a key part in a relation file. The data is used when extracting data from a relation file and the primary view is not of that relation. This field is used together with the field Relation Key Position. LookUp is performed against the RT.FILES file. All data is converted to upper case and validated against the RT.FILES file.

This information should default in from the RT definition that already exists.

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A "Record not found" message will appear if the entered file isn't defined.

Relation Key Position:

A RELATION file must be specified before data can be entered on this field because the RELATION file depends on it. The validation table RELATION.FIELDS is used and contains 1-5 and "L". If "L" is selected, the lower ID is placed first and the Higher ID is second in the relationship. This is used for PERSON relationships.

This data is used when the data is extracted from the database and the Relation Key or Join Key file needs to derive the key. The selection of L will put the lower ID first when using Numeric IDs.

This field sets up the data elements in Colleague. The data entered here is used to determine the RELATION file key.

This information should default in from the RT definition that already exists.

Relation Key Hook:

This field is only stored when CDD elements are converted from the Development CDD to the Runtime CDD. This data is used during the conversion to try to determine what the Relation Key field is. A Detail to the UTED screen would be used if this field were found on any screen.

This information should default in from the RT definition that already exists.

Association Name –

This is the only field that needs to be updated when adding an association:
Colleague will use this association to build an additional dictionary record with a type of PH (for phrases) which contains all data fields in the association. Colleague will also put the name of the association into the data field dictionary record. The entered data is automatically changed to upper case.

If the field needs to be defined as a Pointer "Q", the Database Usage Type for the field needs to be changed. The secondary pointer field (the data element key that the field points to) also needs to be added.

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Naming Standards for Student Information System

Updated 05/05/2008

Naming standards are required for several reasons:

1. We must be able to identify which items are SD additions and which are Datatel-delivered items.
2. We must be able to identify the university that originated the item when items from different universities are in the same file.
3. Users can quickly determine what the item is as well as who created it.

There are a number of items that SD universities create for use with Datatel's Colleague Student System. These currently include: security classes, subroutines, computed columns, sentences, paragraphs, Envision and UniBasic reports/programs, pointers, SAVEDLISTS, FTP files, and Hold files. Each of these items has its own unique naming convention, as well as specific locations within the Colleague system where that item "lives". Both aspects of these items will be covered in the sections that follow.

I. Security Classes

Security classes are created by university security coordinators via the SCD screen in the Datatel module where the mnemonics to be included in the security class reside. The format of the security class is

university identifier. *module.userdept.sourcedept.description* where
university identifier is B, D, N, M, S, U, or R
module is the Colleague module where the security class is created,
The module name is repeated because the module name before
the hyphen does not show up on the resolution lookup screen.
userdept identifies the group of users that will be assigned the class, ex. FA
for the Financial Aid group, or REG for the registrar's office,
sourcedept identifies the group of users that maintain the data. This
optional part of the security class name is used when the security
class crosses offices, ex, the FA office queries screens maintained
by the Registrar's office. Ex. B.ST.FA.REG.QUERY
description identifies the security class purpose, function or type of user.
This portion of the security class name is free-form

The maximum length for a security class name is 20 characters. Security classes from all universities are shared; they live in one set of appl.SECLASS files.

II. VOC entries (Sentences, Paragraphs, Envision and Unibasic Subroutines, and UniBasic reports)

Location of VOC Items

Each university has two university-specific directories where the items pointed to by VOC entries are created and stored. Each item in these two directories must have a corresponding entry in the common VOC file, if it is to be referenced from Colleague or at the colon prompt. The two university-specific directories are: *XH.&university1* and *X&university.VOCLIB*, where &university is B, D, M, N, S, U or H (RIS). For BHSU,

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those two directories are: XH.B1 and XB.VOCLIB in both test and live. The directory XH.&university1, or XH.B1 in our example, is where items are stored that *are* cataloged, such as UniBasic programs. The directory X&university.VOCLIB, or XB.VOCLIB, is where items that *are not* cataloged are stored, such as paragraphs.

A. Sentences and paragraphs are not cataloged; therefore, they are located in the university VOCLIB, ex. XB.VOCLIB. They must also have corresponding entries in the common VOC. The three-line VOC entry tells the system where to find the item to run. The VOC entry should have the same name as the sentence or paragraph.

All Sentence and Paragraph VOC entry items have the same naming convention of:

Xuniversity.itemtype.description where all VOC entries must begin with an X to denote they are SD created,

University identifies the originator or owner of the item:

B for BHSU

D for DSU

N for NSU

M for SDMT

S for SDSU

U for USD

H for RIS

E for ESC

C for Common or Shared

itemtype identifies what the item is:

P for paragraph

R for report

T for sentence

description use the file name if the *item is a file*, else free-form

description used to further clarify the purpose of the item

For example, to create a DSU paragraph called XD.P.TESTPARA, DSU would:

1) Create the paragraph in the university Test VOCLIB.

```
AE Xuniversity.VOCLIB sentence or paragraph name
:AE XD.VOCLIB XD.P.TESTPARA
001: PA
002: SELECT STUDENT.ACAD.CRED WITH STC.CRED.TYPE = 'T' 'T' \
003: SAVING EVAL "STC.PERSON.ID:*:STC.ACAD.LEVEL:*:@ID" TO 1
004: SELECT STUDENT.ACAD.LEVELS WITH STA.STUDENT.ACAD.CRED\
005: BY.EXP STA.STUDENT.ACAD.CRED \
006: SAVING EVAL "STA.STUDENT:*:STA.ACAD.LEVEL:*:STA.STUDENT.ACAD.CRED
TO 2"
007: MERGE.LIST 1 DIFF 2
008: SAVE.LIST XD.FML.TESTLIST
009: <enter>
: FI <enter to save>
```

2) Create the VOC entry for this item in Test so that it looks like this:

```
:AE VOC XD.P.TESTPARA
001: R (R tells system this is a remote pointer)
002: XD.VOCLIB (this is where to find the item)
003: XD.P. TESTPARA (name of the item)
```

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When universities have tested these items in test and are ready to have them moved to production:

- ftp the item to XH.university.FTP.DIR in production (university=BHSU, DSU, NSU, SDMT, SDSU, USD),
- copy the item to X&.VOCLIB in production
- create the VOC pointer

If the paragraph is for WebWizard, then the paragraph needs to be published for WebWizard.

For Paragraphs, at the colon prompt in Test, universities should type

```
:WWIZ.PUBLISH.P
WWIZ.PUBLISH.P
You are publishing a paragraph
Paragraph: XH.AIRFORCE
Enter the title of the report: AIR FORCE (Universities choose text for the title)
You can enter a look and feel template to use.
Enter * to select your campus template (D-DEFAULT).
Enter ! to select the installation default
Enter the template of the report: H-DEFAULT (Universities choose the name of the
template)
Security is turned on for this report.
This means you must be logged in to see the report.
To turn off security, enter "N" or just press enter to stay secure.
> <E> (Universities choose whether security is 'Yes' or 'No')
XH.AIRFORCE was published.
Publishing completed
```

Universities need to contact RIS when a paragraph needs to be published in Production.

VOC item entries that are used as pointers for university menu mnemonics cannot exceed 18 characters in length.

B. Envision and Unibasic Subroutines and programs are cataloged; therefore, their source code and object code are located in the university XH.&university1 directory. They must also have corresponding entries in the common VOC. The two-line VOC entry tells the system where to find the object code to execute. The VOC entry should have the same name as the subroutine or UniBasic program.

All Subroutines and Unibasic report VOC entry items have the same naming convention of:

Xuniversity.itemtype.description where all VOC entries must begin with an X to denote they are SD created,

university identifies the originator or owner of the item:

- B for BHSU
- D for DSU
- N for NSU
- M for SDMT
- S for SDSU
- U for USD
- H for RIS
- E for ESC
- C for Common or Shared

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itemtype identifies what the item is:

- B for UniBasic program
- G for UniBasic subroutine
- S for Envision subroutine
- W for WebWizard program

description use the file name if the *item is a file*, else a free-form description used to further clarify the purpose of the item.

Envision and Unibasic programs, subroutines and WebWizard programs must adhere to these programming rules:

1. All OPEN statements should be followed by READONLY.
2. Use of any version of the WRITE command is only allowed for university FTP directories, *_HOLD_* or *SAVEDLISTS*.
3. Use of the DEL and DELETE commands is only allowed for university FTP directories, *_HOLD_* or *SAVEDLISTS*.
4. ABORT, CLEARFILE, and PCPERFORM can not be used.

For example, if NSU were to create a Facilities program, NSU would:

1) Create the subroutine in the university source directory in Test

```
AE universitydirectory subroutine or program name
:AE XH.N1 XN.G.FAC.BLDG.LIST
001: BLDG.CNT = 0
002: OPEN "", "BUILDINGS" READONLY TO F.BLDGS ELSE STOP 'CANNOT OPEN BUILDINGS
FILE'
003: EXECUTE "SELECT BUILDINGS BY BLDG.DESC TO 1"
004: READNEXT BLDG.ID.PTR FROM 1 ELSE PRINT "Initial prime of BUILDINGS file
failed. "
005: LOOP
006: READ BLDGS FROM F.BLDGS, BLDG.ID.PTR ELSE PRINT "Cannot read BUILDINGS
record"
007: WRITSEQ BLDGID.PTR TO F.OUTPUT.FILE ELSE NULL
008: READNEXT BLDG.ID.PTR FROM 1 ELSE GO TO EXIT:
009: REPEAT
010: EXIT:
:FI <enter>
```

2) Compile the code with the XBASIC command in Test

```
:XBASIC XH.N1 XN.G.FAC.BLDG.LIST <enter>
```

3) Catalog the member locally with the XCATLG command in Test

```
:XCATLG XH.N1 XN.G.FAC.BLDG.LIST <enter>
```

which will create a VOC entry in the VOC that looks like this:

```
:AE VOC XN.G.FAC.BLDG.LIST
001: C
002: /datatel/shared/work/NEVLIB/N1.SOURCE <-- aka XH.N1
```

4) If the subroutine is referenced by a computed column, then compile the computed column in Test on DCC and at the colon prompt.

```
:CD filename (example PERSON) computedcolumnname (example XH.PERS.BLDG.LIST) <enter>
```

5) If the program is for WebWizard, then the program needs to be published for WebWizard in Test.

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For Programs, at the colon prompt in Test universities should type

:**WWIZ.PUBLISH.B**
WWIZ.PUBLISH.B

You are publishing a BASIC program
Catalogued program: **XH.TEST**
Enter the title of the program: **Section Rpt** (Universities choose this text)
Security is not turned on for this report
To turn on security, enter "Y" or just press enter to accept.
> <E> (Universities choose whether security is 'Yes' or 'No')

XH.TEST was published.
Publishing completed

When universities are ready to have these items moved to production, they should contact RIS via an email request and RIS will move the specified item to production. If the program is for WebWizard, please provide the report Title and whether security should be 'Yes' or 'No'. When moving one of these items to production, RIS will:

- 1) place a copy of the source item in the university XH.&university1 directory in Prod,
- 2) place a copy of the source item in the shared XH.RELEASE.CAMPUS directory in Prod,
- 3) compile the member - the object code will reside in XH.RELEASE.CAMPUS in Prod,
- 4) catalog it, which creates a VOC pointer in the common VOC
- 5) copy the VOC pointer to all the VOC files in Prod
- 6) copy a VOC pointer for the item in the university XH.&university1 directory to all the VOCs in Test and
- 7) if the program is to be run via WebWizard, publish the program to WW

Universities do not have access to edit members in XH.RELEASE.CAMPUS; therefore a copy of the source code is placed in the XH.&university1 directory where universities can access copies of their source code currently in production.

After the item is moved to production, all universities can utilize it in production and test.

If a university would like to modify another university's subroutine or program:

1. contact RIS to move the other university's item to the shared library for all to see, if it's not already in shared,
2. create a copy of the item in the university XH.&1 directory saving it to a different name with your university prefix,
3. test, then ask RIS to move your item to production.

III. Computed Columns, including Pointers

Computed Columns are created on DCC in the dictionary of the ~~the in which~~ they are to reside (with the exception of fields in the .ACYR files – see above). Creating the item on DCC will populate that item into the UniData dictionary and RT.FIELDS, RT.FILES & RT.FIELDS.ASSOC.

Revised 05/05/08

All computed columns have the same naming convention of:

3/18/11 – last update

- 40 -

Revisions approved through the Module → Module Coord Committee → UDA/SDA

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X+universityidentifier.file prefix.description where all entries must begin with an X to denote they are SD created,

University identifier identifies the originator or owner of the item:

B for BHSU
D for DSU
N for NSU,
M for SDMT
S for SDSU
U for USD
H for RIS
E for ESC,

File prefix is the file prefix of the file in which the virtual field is placed in.

Description is free-form description used to further clarify the purpose of the item.

Naming Example:

XM.APPL.STU.ACT.ADV.LN.S (computed column in the Applications dict to get advisors from Students file)

For example, to create a computed column at the colon prompt called XH.BLDG.DESC in the XH.BUILDINGS file that pulls bldg description info from the BUILDINGS file:

- 1) Create the computed column on DCC
- 2) Set the 'Gen' field to 'Y' and finish from DCC to save and compile the computed column.
- 3) Test the computed column in RTVF with a record id.
- 4) If the computed column is to be used in Safari, then contact RIS to move the virtual field to the CDD dictionary in test. Once the CDD dictionary has been populated with the computed column, you can then test the field in Safari after RIS has copied the respective CDD dictionary to the corresponding Safari dictionary. RIS repopulates Safari dictionaries only when a university requests it.

When the computed column has been tested and is ready to be moved to production, users need to add the field on DCC in production and gen it. All universities will be able to use the virtual field from any of the three dictionaries in both test and prod. RIS will populate the Safari dictionaries at the request of the university. Once the Safari dictionaries have been updated, all universities can access the virtual field in Safari.

If the computed column is needed as a pointer, users are to contact RIS via email to request that RIS change the computed column to a pointer; they will add the information to the Secondary Pointer Field. Send RIS the name of the field and the file that the field originates in and the field that it is a pointer to.

IV. SAVEDLISTS, HOLD and FTP Files

All SAVEDLISTS, HOLD and FTP Files have the naming convention of:

X+universityidentifier.userinitials(or application area).description where all entries must begin with an X to denote they are SD created,

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University identifier identifies the originator or owner of the item:

B for BHSU
D for DSU
N for NSU
M for SDMT
S for SDSU
U for USD
H for RIS
E for ESC

User Initials or Application are the initials of the creator of the SAVEDLIST or HOLD file or the abbreviation of the application that uses the file

Description is free-form description used to further clarify the purpose of the item.

Naming Examples are:

XB.DTT.NEW.STU
XM.KEF.APPL.IDS
XS.AR.BILLS

V. University Menu Mnemonics

All university menu mnemonics have the naming convention of:

XCZZ where

X all entries must begin with an X to denote they are SD created,

C *University identifier* identifies the originator or owner of the item:

B for BHSU
D for DSU
N for NSU
M for SDMT
S for SDSU
U for USD
H for RIS
E for ESC
F for SDPURC (UC)

ZZ free-form numbers and/or letters.

Naming Examples are:

XMRG for SDSM&T
XNA1 for NSU
XB01 for BHSU

If a custom process uses the same mnemonic that a university is currently using or could use, the university will need to use another mnemonic.

Example: The mnemonic XUFA is a process delivered by Datatel as a result of the STUDENT Project. USD will not be able to use this mnemonic.

A VOC pointer is required before RIS can create a menu mnemonic. VOC item entries that are used as pointers for university menu mnemonics cannot exceed 18 characters in length.

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To create a menu mnemonic, send an email to RIS including the mnemonic chosen for the VOC pointer, the menu mnemonic to which it should be added, and the description of the mnemonic. The description of the mnemonic cannot exceed 28 characters.

V. Rules

The 1997 version of the rules naming standards required that the first position of the rule be the office indicator and that the 2nd position be the type of rule i.e. Common, Institution or Master. Positions 3 – 8 were free format.

To support the necessity to smart-code the rules in the merged system, the rules naming standards will be changed to be consistent with the correspondence code naming structure as detailed below.

<u>Position</u>	<u>Comments</u>
1	University or Common identifier B BHSU D DSU E Enrollment Services Center N NSU M SDSMT S SDSU U USD C Common
2	Module identifier A Admissions/Recruiting B Accounts Receivable/Cash receipts/Billing C Communication Mgmt D Degree Audit F Financial Aid G Registration L Residence Life R Academic Records S R25/S25 U Curriculum Management
3	Last digit of the year if the rule is year-specific, or
3-4	Last digit of year and term indicator if the rule is term-specific
3-8	As specified for common and master rules.
3-8	Free format for institutional rules (except 4-8 or 5-8 for time-specific rules).

Example 1: xRCLASS - A rule for classifying students
x = University identifier or C for common

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R = Academic Records
CLASS = name of this rule

Example 2: xASCHEID - A rule to assign admissions representatives
x = University identifier or C for common
A = Admissions/Recruiting
SCHEID = Rule for assigning to Michele Scheid

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System Lock Up

Responsibility: University

If you encounter a record lock with another user, proceed as follows:

Step 1 – Write down the ID displayed on your screen when Colleague hits a record lock.

Step 2 – Determine who the user is

- If you have colon prompt access, access the colon prompt by starting a terminal UI session, and type WHOIS to get the name of the user. Proceed to Step 3.
- If you do not have colon prompt access, contact your university Colleague security coordinator. They can type WHOIS to get the name of the user. The menu mnemonic XRWI will also give you the name of the user. Proceed to Step 3.

Step 3 – Contact the user

- If the name is familiar, call the individual and ask them to cancel from the screen.
- If the name of the user is not familiar to you, proceed to Step 4.

Step 4 – Contact your university Colleague security coordinator

- They can bring up the staff record for the individual on the Staff and Volunteers (XSVM) screen. The Operator ID in field 2 begins with a university identifier (B,D,N,M,S,U) or E for ESC, F for SDPURC, C for CUC, H for RIS or R for Board of Regents.
- If the neither you or the security coordinator know who the user is, the security coordinator should contact the security coordinator at the user's campus for assistance.

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Secure File transfer

The simplest option for secure file transfer between campuses at this time is the use of SFTP (secure FTP). There are many types of SFTP clients; these range in price from free to a minimal cost. Many SSH clients come with a file transfer option. Below are some examples

www.ssh.com has a free ssh/sftp client

www.winscp.net has a free sftp client

www.putty.nl has a free sftp client

Please note that there are numerous solutions available and some, all, or none of the above may be supported by your campus. Please check with the IT department at your location to find a supported solution. The standard port 22 is used for our SSH/SFTP services.

To obtain an ID for secure file transfer via SFTP users will need to contact their Datatel Security Coordinator. The SFTP login and password will be the same as the Datatel user id and password. The same user id/pwd can be used to access both Datatel and Banner.

Hosts

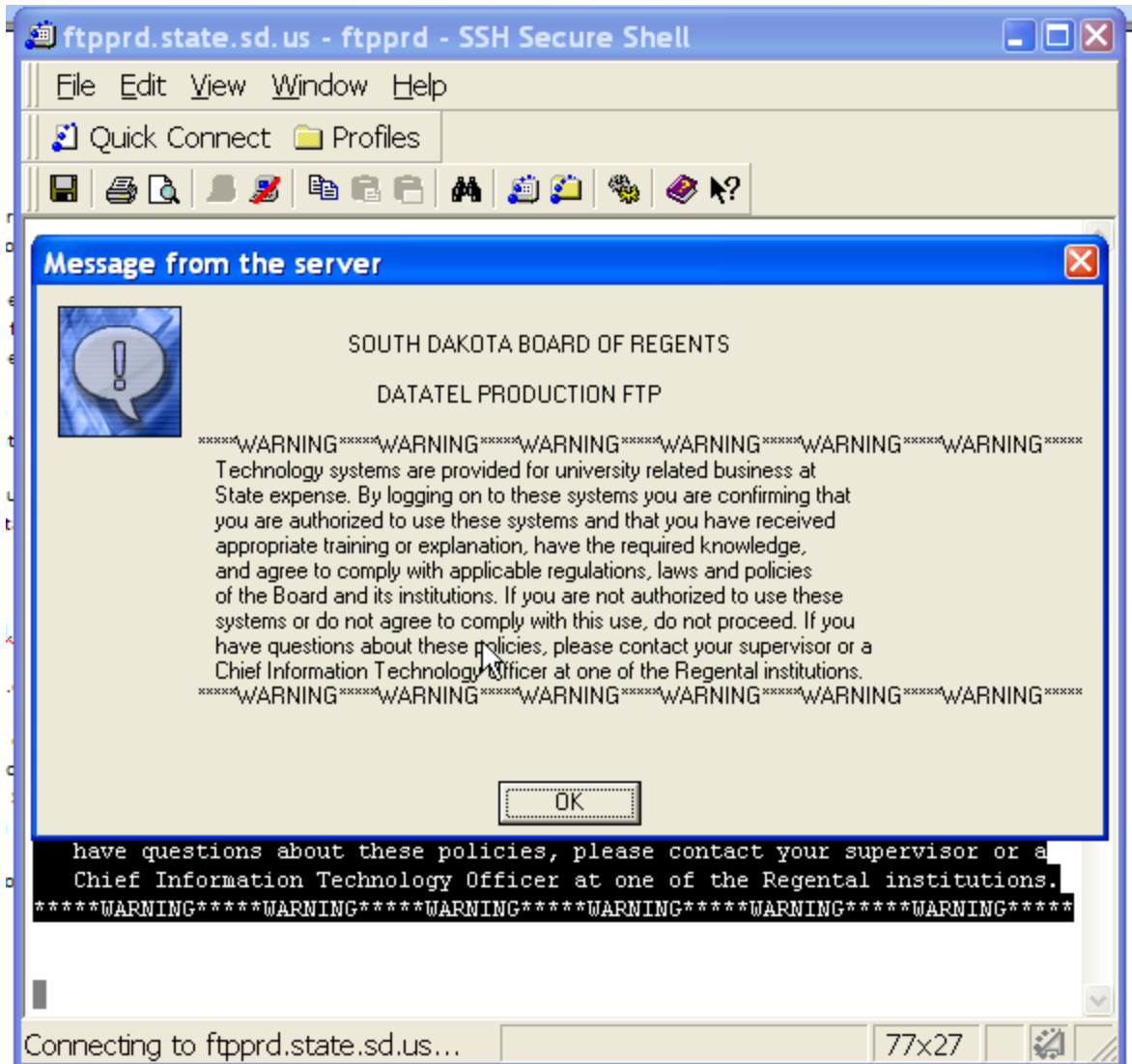
PROD – ftpprd.state.sd.us

TEST – ftpdev.ris.sdbor.edu

Below are screenshots of what the login process will look like using the client from ssh.com. One thing to note is that when initially using your id/pwd you will have to login using the SSH terminal session. This is because of the requirement to change your initial password which cannot be done thru the SFTP Session. Also, upon successfully changing your password, you will be disconnected from the server. This is normal behavior and you then need to reconnect and login with your NEW password.

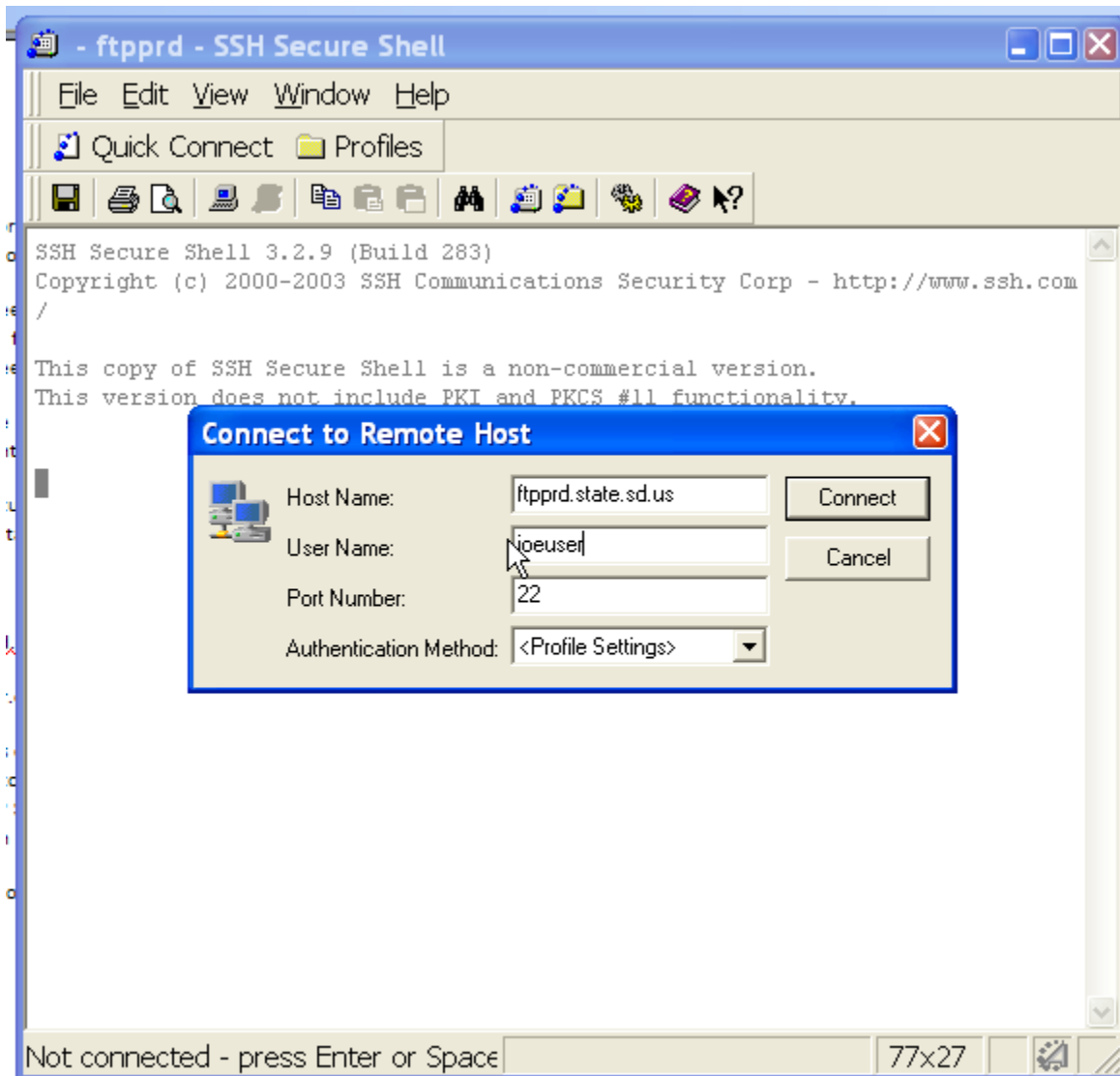
SSH Terminal Session login. The first screen you will see is the warning we place on all SDBOR services, click OK to acknowledge.

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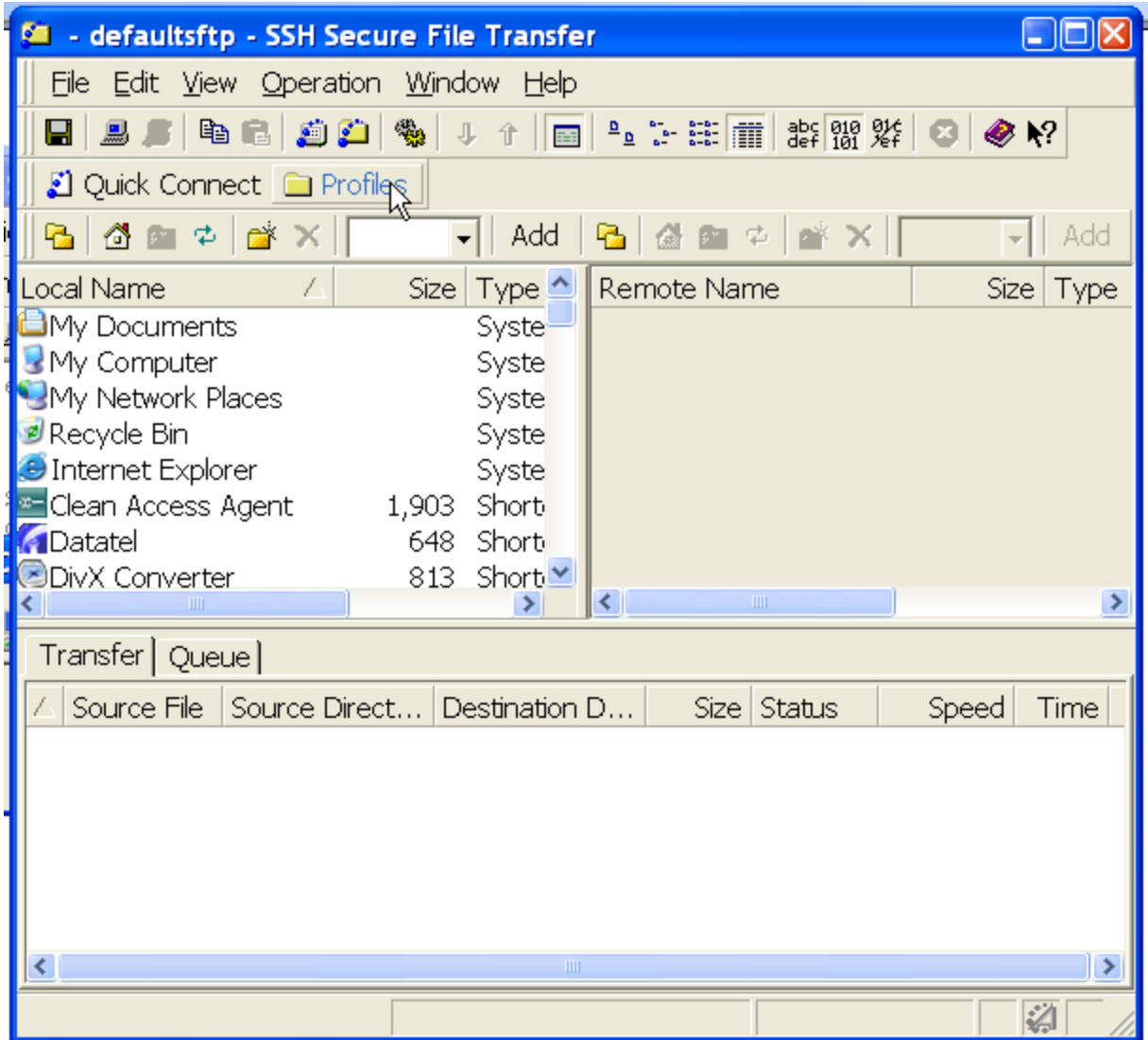
You will then be prompted for the hostname, your id and password and a port number. We use the standard port 22.

South Dakota Colleague System Procedures

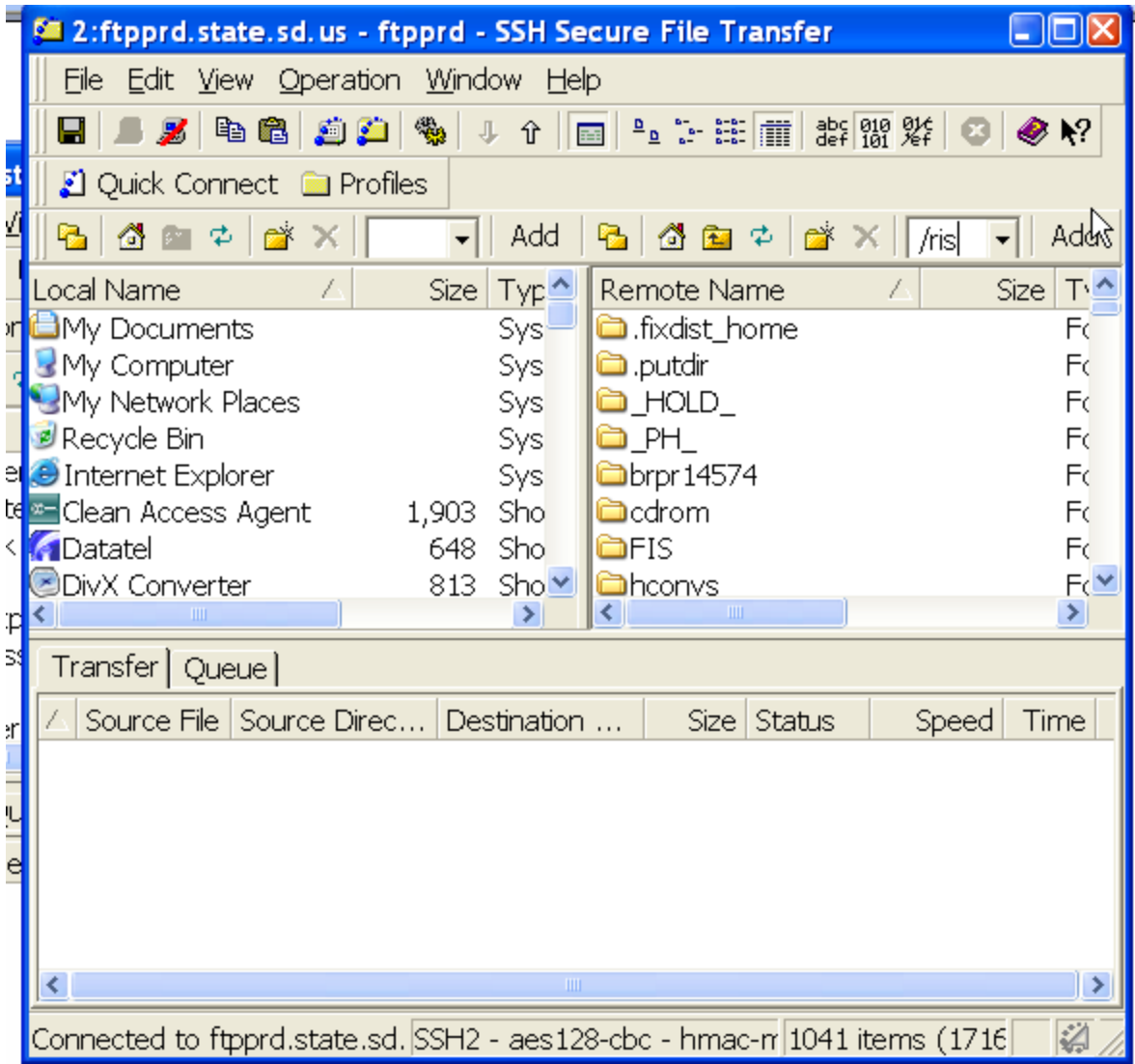


SFTP Session Login – Once you have initialized your password with the SSH Terminal session, you can then open the SFTP Session. Both Sessions will share the same SSH session.

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Once you have the SFTP Session established your starting point will be your home directory. All users home directories are the /campus.

Definition and relationship of directory structure within FTP, Banner, and Datatel systems. Using NFS links we have joined certain areas of Banner and Datatel to the FTP server so that files can be moved thru both systems via your FTP login. Below is a summary of those relationships from the perspective of each server.

FTP	Target	Desc
/campus	DATATEL:/campus/CAMPUS-FTP	n/a Coll to FTP link.
/campus/HOLD	DATATEL:/.../_HOLD_	FTP to Coll HOLD link
/campus/FIS	BANNER:/u03/setconv/campus/FIS	FTP to Banner/Campus FIS area
/campus/HR	BANNER:/u03/setconv/campus/HR	FTP to Banner/Campus HR area
/campus/HRFIS/shared-data	BANNER:/u03/setconv/shared-data	FTP to Banner Shared area
/campus/ODS/	ODS:/u03/shared_data/campus	FTP to ODS Campus area
/campus/ODSS/	ODS:/u03/shared_data/	FTP to ODS Shared area

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Appendix – Security Request Form

REGENTS INFORMATION SYSTEMS
STUDENT INFORMATION SYSTEM
USER ID REQUEST FORM

INSTITUTION:

BHSU DSU NSU SDSD BOR ESC RIS
SDMT SDSU USD SDSBVI CUC SFC

USER INFORMATION:

DEPARTMENT:

LAST NAME:

FIRST NAME:

CURRENT ID:

in: DEV PROD

COMMENTS:

SYSTEM ACCESS REQUESTED:

(Mark as many items as needed)

GROUP ACCESS REQUESTED:

(Mark as many items as needed)

PRODUCTION	<input type="checkbox"/>	FTP	<input type="checkbox"/>		PROD		DEV
DEVELOPMENT	<input type="checkbox"/>	FTP	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
		AE	<input type="checkbox"/>	HR/FIS	<input type="checkbox"/>		
			<input type="checkbox"/>			<input type="checkbox"/>	
SCHED25	<input type="checkbox"/>		<input type="checkbox"/>				
TOOL KIT	<input type="checkbox"/>		<input type="checkbox"/>				
WebWizard	<input type="checkbox"/>		<input type="checkbox"/>				
				ESCFA	<input type="checkbox"/>		<input type="checkbox"/>

If this is a TEMPORARY ID, please indicate the ending date: ___ / ___ / ___

For which access: All: Specific: _____

CAMPUS SECURITY COORDINATOR

DATE

Signature (if mailing) or password (if electronic)

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4/23/2013
