



# **DSS Patient Search Tool**

## **User and Administrator Guide**

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## Revision History

Date	Revision Number	Description of Change	Author
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# Introduction

DSS Patient Search Tool was created under the VA's innovation program by Document Storage Systems Inc.

The VA provides search functionality within the Medical Notes and Laboratory sections of CPRS for text and data. Many of the other sections in CPRS contain a large amount of data, and do not have search functionality available for the VA health care providers. This causes extensive research and manual retrieval of data by health care providers, which is inefficient and time-consuming.

Search options and capabilities provided by DSS Patient Search Tool give clinicians the ability to obtain health care information that was previously unavailable or missed. DSS Patient Search Tool also helps to improve workflow, efficiency and health care provider's access to patient history.

This User and Administrator Guide describes the features and capabilities of DSS Patient Search Tool, and how to use them.

# Overview

The Search Tool is located to the right of the drop-down menus at the top left section of the CPRS screen:

Vista CPRS in use by: Programmer,One (172.19.100.95)		
File Edit View Tools Help Search		
<b>SEVENTEEN,PATIENT</b>	<b>Visit Not Selected</b>	Primary Care Team Unassigned
666-00-0017 Apr 07,1935 (77)	Provider: PROGRAMMER,ONE	

**Figure 1: DSS Patient Tool Bar**

If the **Search** button is disabled (greyed out), the user needs to contact the System Administrator to have the dynamic link library (dll) option added to the system.

DSS Patient Search Tool is organized into two main parts: Standard search and Advanced search. Both Standard and Advanced searches have essentially the same core capabilities, but Advanced allows searches that include date ranges where applicable, as well as additional search options that are specific to TIU Notes, Orders, and Reports.

The screenshot displays the 'CPRS Search Tool' window with the 'Standard Search' tab selected. The interface includes a menu bar (File, Options, Help) and a title bar. On the right, there are radio buttons for 'CPU Priority' (CPRS Search Tool, CPRS Application). The main area contains five search sections: 'TIU Notes', 'Problem Text', 'Consults', 'Orders', and 'Reports'. Each section has a 'Search Terms' input field, a 'Clear' button, a 'Max Results' dropdown (set to 200), and a 'Found:' label. The 'TIU Notes' section also includes a 'Filter by:' dropdown (Signed Notes (All), Unsigned Notes, Unsigned Notes) and a 'Sort by Date/Time:' dropdown (Ascending, Descending). The 'Orders' section has an 'Order Status:' dropdown (2. Active/Current). At the bottom, there are buttons for 'Clear All', 'Save Std Searches', 'Search', 'Cancel Search', and 'Close'. A status bar at the bottom right shows 'Total Found: 858 x 962'.

**Figure 2: Standard Search**

The screenshot displays the CPRS Search Tool interface with the 'Advanced Search' tab selected. The interface is organized into several sections for different types of searches: TIU Notes, Problem Text, Consults, Orders, and Reports. Each section contains a search term input field, a 'Max Results' dropdown (currently set to 200), and date range selection fields for 'Start Date' and 'End Date'. The TIU Notes section includes additional options for filtering by note type (Signed/Unsigned) and sorting by date/time (Ascending/Descending). At the bottom, there are buttons for 'Clear All', 'Save Adv Search', 'Search', 'Cancel Search', and 'Close'. A status bar at the bottom right indicates 'Total Found: 858 x 962'.

**Figure 3: Advanced Search**

The DSS Patient Search Tool has the following capabilities:

- 3 pull-down menus: **File**, **Options**, and **Help**.
- Search Terms and Quick Search which speed up a search.
- 3 tabs for searches: **Standard Search** (default view), **Advanced Search** and **Search Results**.
- Individual search areas which allow separate terms and date ranges (Advanced Search) for each of the six CPRS tabs (Discharge and Notes are included in TIU).
- The **Clear All** button clears all the search terms to start anew.
- The **Save Std Search** button saves the search terms for future use.
- The **Search** button initiates a search, and the **Cancel Search** button cancels the search.
- The CPU Priority section of the screen has two radio buttons, **Patient Record Search** and **CPRS Application**, which allow the user to prioritize their computer resources to perform a search or work in CPRS.

- The Filter By section of the screen has 3 radio buttons, **Signed Notes**, **Unsigned Notes**, **Uncosigned Notes**, which allow the user to filter and adjust the TIU returns.
- The **Order Status** drop-down menu allows the user to select the status of orders to be searched.
- The **Select Report** button allow the user to choose reports to run and search.
- The **Total Found** section of the status bar shows how many instances of the search term were found.

The five areas that can be searched are: **TIU Notes**, **Problem Text**, **Consults**, **Orders**, and **Reports**.

To perform a Standard search, search terms (words, values, etc.) are entered into the applicable text box of the desired search area, e.g., Consults. The **Search** button is then clicked, and the search is initiated. Any search terms that are found are presented on the **Search Results** tab as a “drillable” list; i.e., a tree-view, from which specific search results may be selected, with any found search terms displaying in bold font, and a user-selected color.

The Advanced search works just like the Standard search, but allows search results to be filtered by date-range.

DSS Patient Search Tool has the capability to perform searches with or without case-sensitivity, as well as whole word and partial word.

Search terms can be saved for future use, and are user specific. One of the search areas supported by DSS Patient Search Tool is CPRS Reports. User selected reports can also be saved for future use to avoid having to select report(s) of interest each time a report search is required.

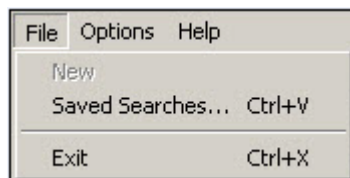
DSS Patient Search Tool offers users a selectable CPU Priority, which gives processor precedence to either CPRS or the Patient Search Tool, at the user’s discretion. This feature helps to ensure that the performance of CPRS is minimally impacted while DSS Patient Search Tool is running.

DSS Patient Search Tool also offers some time-saving features that allow for quicker search term entry when searching multiple areas of interest, as well as a way to search all areas at once by using a simple dialog box.



# Drop-Down Menus

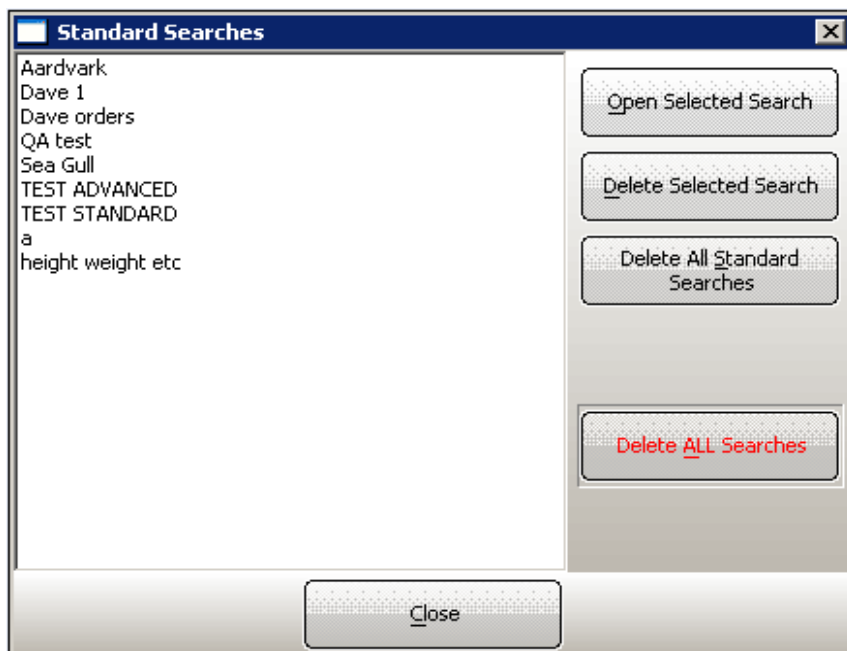
## File Menu



**Figure 4: File Menu**

The **File** drop-down menu has 2 active options, **Saved Searches** and **Exit**. The Saved Searches are lists (Standard or Advanced) of user defined search terms (not search results) for edit boxes corresponding to the TIU Notes, Problem Text, Consults, Orders, and Reports sections.

Clicking the **Saved Searches** option displays the Saved Searches screen, from which previously saved searches can be selected. Standard and Advanced searches are saved in separate lists. Which list is currently available depends upon which tab (Standard or Advanced) is currently active.



**Figure 5: Standard Searches Screen**

The Search screen has 4 buttons:

- **Open Selected Search** – Opens a selected Standard search.
- **Delete Selected Search** – Deletes a selected Standard search.
- **Delete All Standard Searches** – Deletes all Standard searches appearing in the list.
- **Delete All Searches** – Deletes All searches, both Standard and Advanced.

## Options Menu

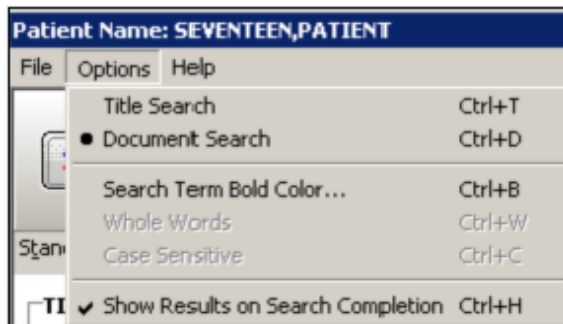


Figure 6: Option Menu

The **Options** drop-down menu has the following options:

- **Title Search** – Compares user-defined search terms against record titles. The text in the body of a record is not searched. Standard searches default to Title Search.
- **Document Search** – Compares user-defined search terms against the text in the body of records. The text in the title is not searched. Advanced searches default to Document Search, but can also do a Title Search.
- **Search Term Bold Color** – Opens a Color window which allows the user to set the color of the searched text within the document display.

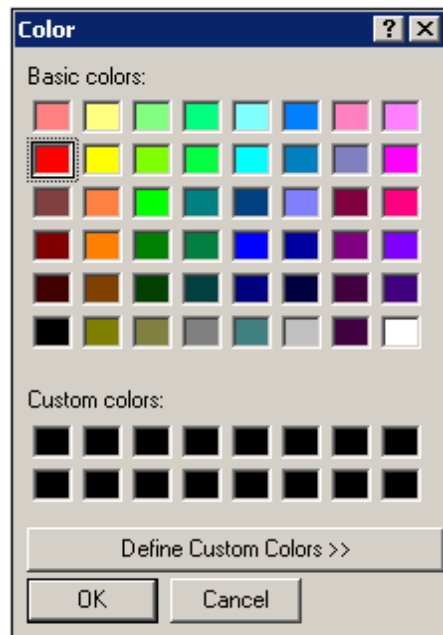


Figure 7: Color Window

- **Whole Words** – Forces the search to match the entire word search text.
- **Case Sensitive** – Forces the search to match upper and lower text case.
- **Show Results on Search Completion** – Displays the **Results** tab of the DSS Patient Search Tool when the search is complete.

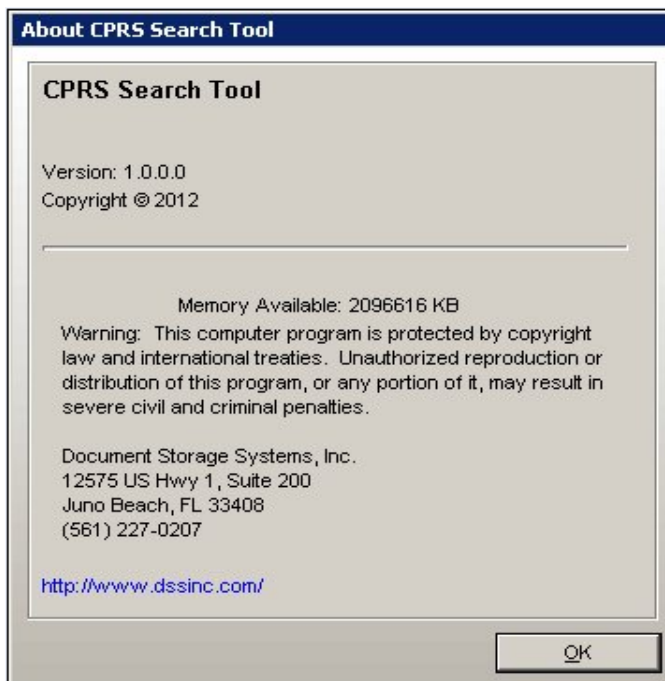
## Help Menu



**Figure 8: Help Menu**

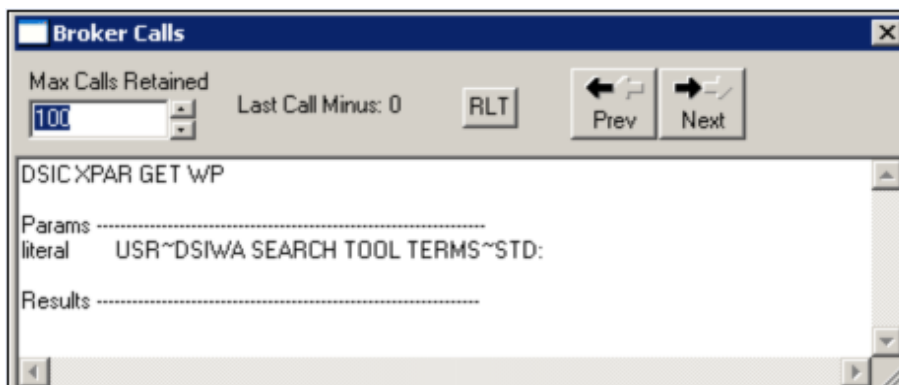
The **Help** drop-down menu has the following options:

- **About** – Provides information about the DSS Patient Search Tool including the version number.



**Figure 9: About Screen**

- **Show Broker History** – Technical support may ask the user to show the Broker History when tracking down a problem.



**Figure 10: Broker Calls Screen**

## Pop-Up Menu

To access the pop-up menu, right-click anywhere in the screen. The menu displays the following options:

- Select All
- Copy Selection to Clipboard
- Find

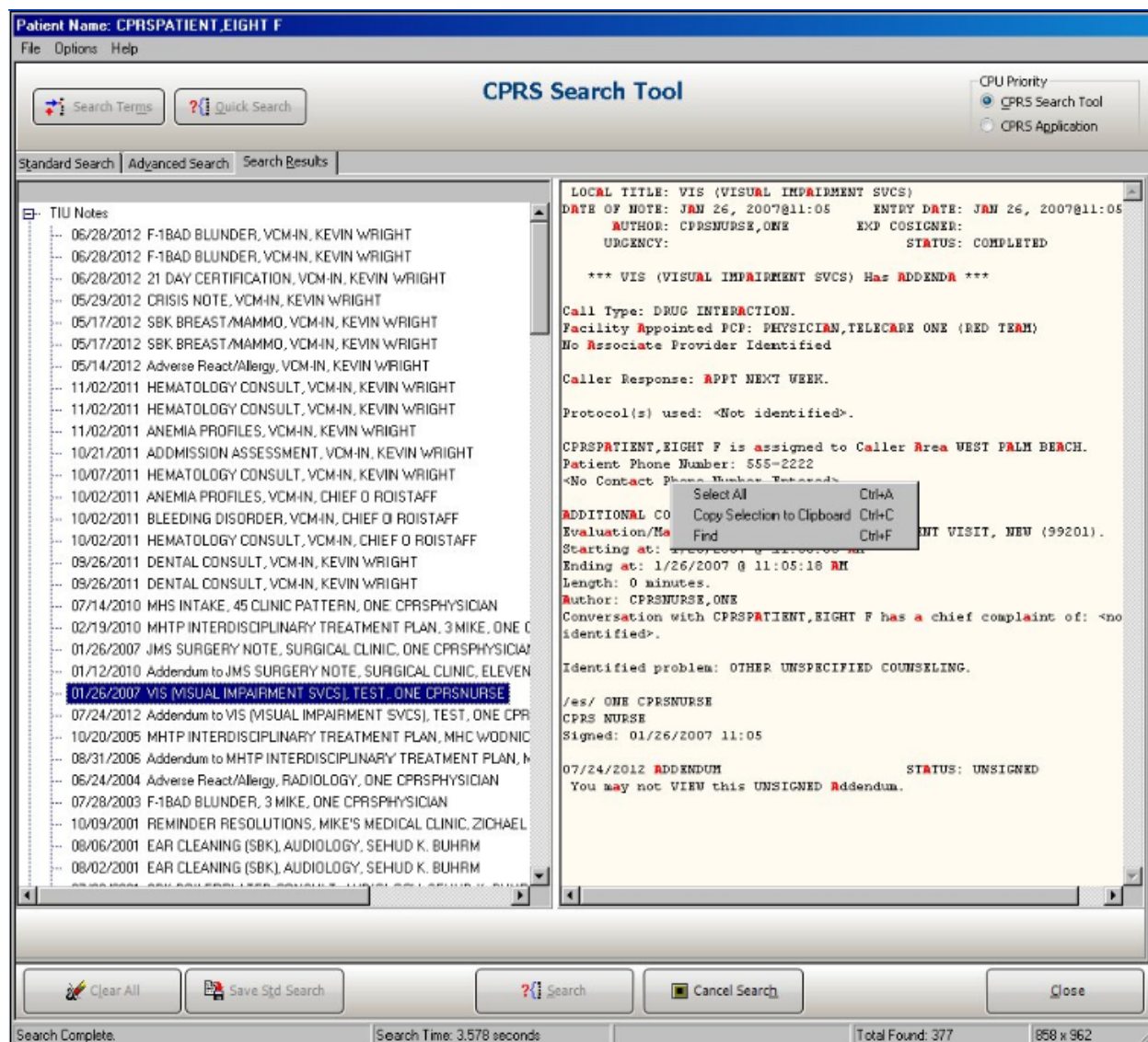
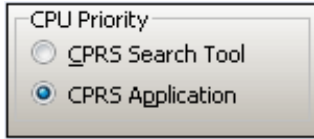


Figure 11: Pop-up Menu

## **CPU Priority**

The DSS Patient Search Tool shares CPU allocation with CPRS. To speed the search tool retrieval, priority can be set to the DSS Patient Search Tool at the upper right of the DSS Patient Search Tool screen. This setting also affects the speed of the document processing on the Display Pane of the **Search Results** tab.



**Figure 12: CPU Priority**

# Performing a Search

## Standard Search Tab

To perform a standard search:

1. Select the **Standard Search** tab on the DSS Patient Record Search screen.
2. Choose any TIU filters, display preferences, or document classes.
3. Click in the **Search Terms** field and type in key words to search for, separated by a space. Then choose the number of instances to display.
4. Active Orders is the default status. The user can select order statuses using the drop-down menu.
5. If the user has search terms for reports, select the reports to run.

The screenshot shows the 'CPRS Search Tool' window with the 'Standard Search' tab selected. The interface includes a menu bar (File, Options, Help) and a toolbar with 'Search Terms' and 'Quick Search' buttons. On the right, there are 'CPU Priority' options: 'CPRS Search Tool' (unselected) and 'CPRS Application' (selected). The main area is divided into sections for different document types: 'TIU Notes', 'Problem Text', 'Consults', 'Orders', and 'Reports'. Each section has a 'Search Terms' text field, a 'Max Results' dropdown (set to 200), and a 'Found:' label. The 'TIU Notes' section also includes a 'Filter by:' dropdown with options 'Signed Notes (All)' (selected), 'Unsigned Notes', and 'Unsigned Notes', and a 'Sort by Date/Time:' dropdown with 'Ascending' and 'Descending' (selected). A 'Document Class:' dropdown is set to 'Progress Notes'. The 'Orders' section has an 'Order Status:' dropdown set to '2. Active/Current'. The 'Reports' section has a 'Select Reports' button. At the bottom, there are buttons for 'Clear All', 'Save Std Searches', 'Search', 'Cancel Search', and 'Close'. The status bar at the bottom right shows 'Total Found: 858 x 962'.

Figure 13: Standard Search Tab

6. Click the **Search** button.

To search for terms (from either Standard or Advanced search) on **Reports**, first select the reports to run and then search. Clicking the **Select Reports** button on the Reports area of the DSS Patient Search Tool opens the following window which is identical to the CPRS **Reports** tab selection. The instructions are on the window.

**Standard Searches**

This form allows you to select which reports you would like to include in your search.  
 The search term(s) you enter will be applied to All selected reports.  
 To select a single report, click a report in the left pane, then click the '>' button to add it to your list.  
 To deselect a single report, click a report in the right pane, then click the '<' button to remove it from your list.  
 To deselect ALL reports at the same time, click the 'Delete All' button.

\*\*\* Remote Reports are NOT supported at this time \*\*\*

Available Reports	Selected Reports
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Clinical Reports               <ul style="list-style-type: none"> <li>Health Summary</li> </ul> </li> <li><input checked="" type="checkbox"/> HDR Reports</li> <li><input checked="" type="checkbox"/> Dept. of Defense Reports               <ul style="list-style-type: none"> <li>Imaging</li> <li>Graphing (local only)</li> <li>Lab Status</li> <li>Blood Bank Report</li> </ul> </li> <li><input checked="" type="checkbox"/> Anatomic Pathology               <ul style="list-style-type: none"> <li>Dietetics Profile</li> <li>Nutritional Assessment</li> <li>Vitals Cumulative</li> <li>Procedures (local only)</li> <li>Daily Order Summary</li> <li>Order Summary for a Date Range</li> <li>Chart Copy Summary</li> <li>Outpatient RX Profile</li> <li>Med Admin Log (BCMA)</li> <li>Med Admin History (BCMA)</li> <li>Surgery (local only)</li> <li>Progress Notes</li> </ul> </li> <li><input checked="" type="checkbox"/> Progress Notes</li> <li><input checked="" type="checkbox"/> Event Capture</li> </ul>	<ul style="list-style-type: none"> <li>Abnormal</li> <li>All Outpatient</li> <li>All Problem List</li> <li>Chart Copy Summary</li> <li>Chem &amp; Hematology</li> <li>Comp &amp; Pen Exams</li> <li>Cytology</li> <li>Daily Order Summary</li> <li>Expanded ADT</li> <li>Full Report</li> <li>Health Summary</li> <li>Orders Current</li> <li>Progress Notes</li> <li>Treatments Provided</li> </ul>

**Figure 14: Select Reports**

## Search Terms Button

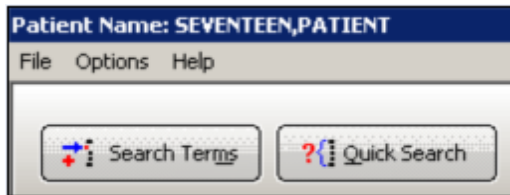


Figure 15: Search Terms

The **Search Terms** button (upper left of the DSS Patient Search Tool) opens the following window. This is a fast way to enter search terms if they are the same for each area. The instructions are displayed in the window.

1. Click the **Search Terms** button.
2. Type in the terms in the **Search Terms:** box.
3. Select any or all of the CPRS areas to apply the terms to.

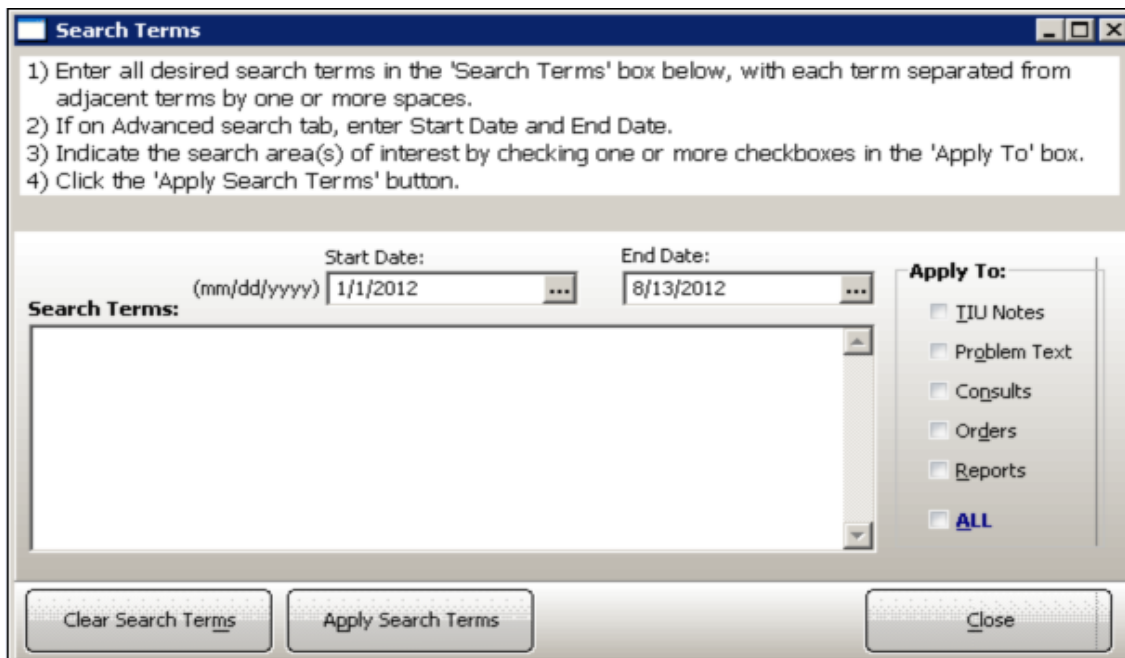


Figure 16: Search Terms Window

4. Click the **Apply Search Terms** button.



## Quick Search Button

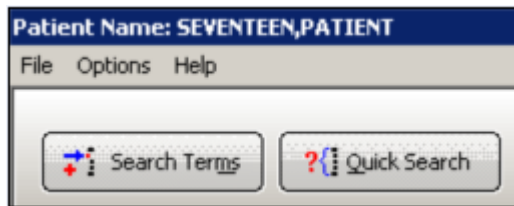


Figure 17: Quick Search

The **Quick Search** button (upper left of the DSS Patient Search Tool) opens the following window. This is the fastest way to perform a search for terms. The instructions are displayed in the window.

1. Click the **Quick Search** button.
2. Type in the terms in the **Search Terms:** box.
3. Select a Start Date.

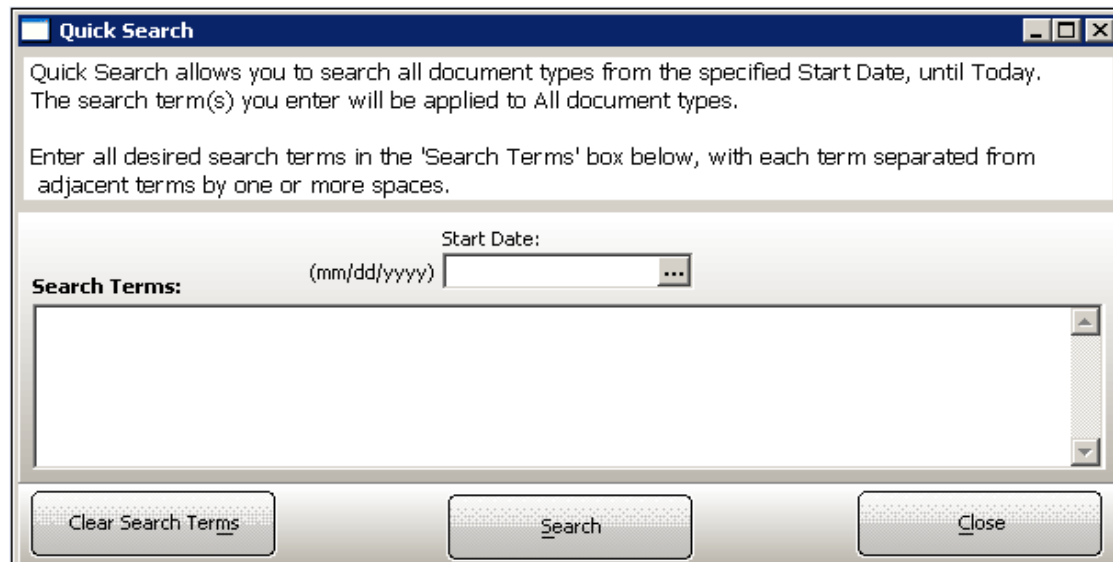


Figure 18: Quick Search Window

4. Click the **Search** button.

## Save Search Button

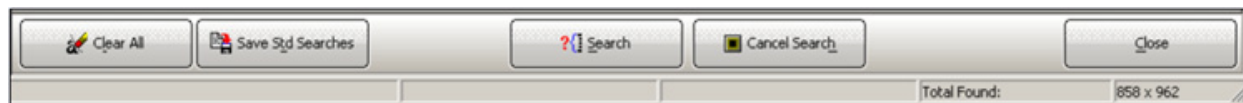


Figure 19: Save Standard Search

Once a search has been entered, it can be saved for future use. Saved searches are specific to the **Standard Search** or **Advanced Search** tab. Clicking the **Save Std Search** button (or the **Save Adv Search** button if on the **Advanced Search** tab) opens the naming prompt. Once saved, the search is available from the **File** drop-down menu (see the Drop-Down Menus section for more information).

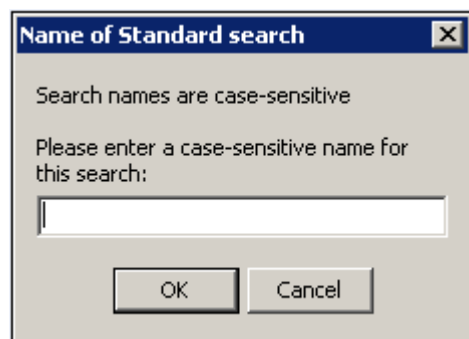
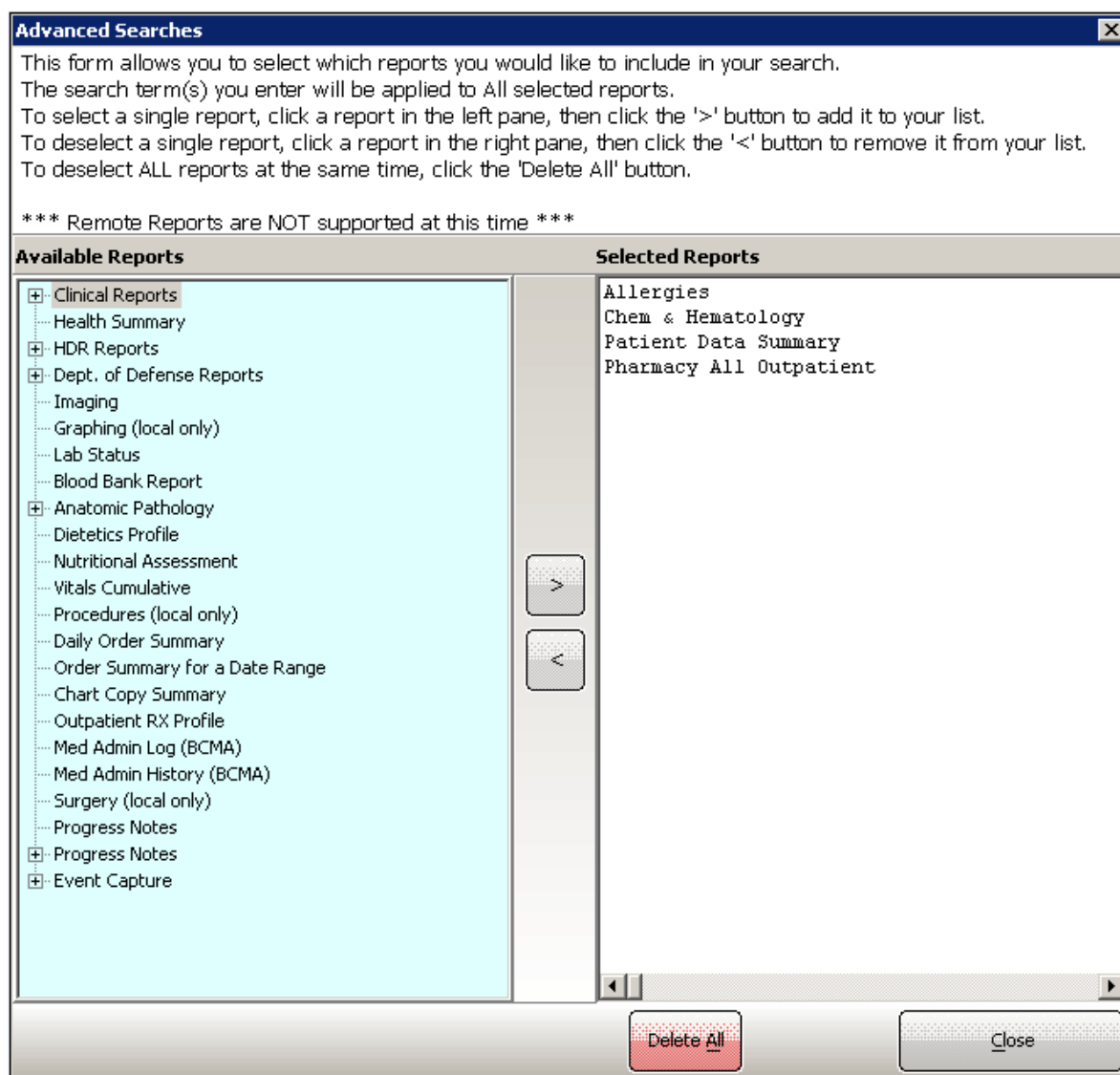


Figure 20: Name of Search

## Advanced Search Tab

The **Advanced Search** tab (second tab top left) has identical features to the Standard Search, but offers start and stop date ranges for all areas. The **Search Terms** and **Quick Search** buttons also prompt for date ranges, but otherwise function the same as in the Standard Search. Advanced searches can be saved in the same manner as a Standard search, but are visible from the **File** drop-down menu only on the **Advanced Search** tab.

1. Select the **Advanced Search** tab.
2. Choose any TIU filters, display preferences, or document classes.
3. Click in the **Search Terms** field and type in key words to search for, separated by a space. Then choose the number of instances to display.
4. Select a Start Date and End Date for the search.



**Figure 21: Report Selection**

5. Click the **Search** button.

## Cancel Search Button

To cancel a search in progress, click the **Cancel Search** button on the lower bar. Selecting a different patient in the CPRS also cancels a search.



Figure 22: Cancel Search Button

## Close Button

To close the DSS Patient Search Tool without closing CPRS, click the **Close** button in the lower right of the DSS Patient Search Tool window. Both applications close if CPRS is closed after the user receives a Warning Message stating that the search data will not be saved.



Figure 23: Close Button

## Search Results Tab

Selecting the **Search Results** tab displays any available search results. If the **Show Results On Search Completion** option is selected on the **Options** drop-down menu, the tab automatically displays. The **Results Pane** (left side of the screen) displays documents returned by the search in an expandable outline form. Selecting a document in the results pane displays the text in the **Details Pane** (right side of the screen) with the search term text in a bold, colored font.

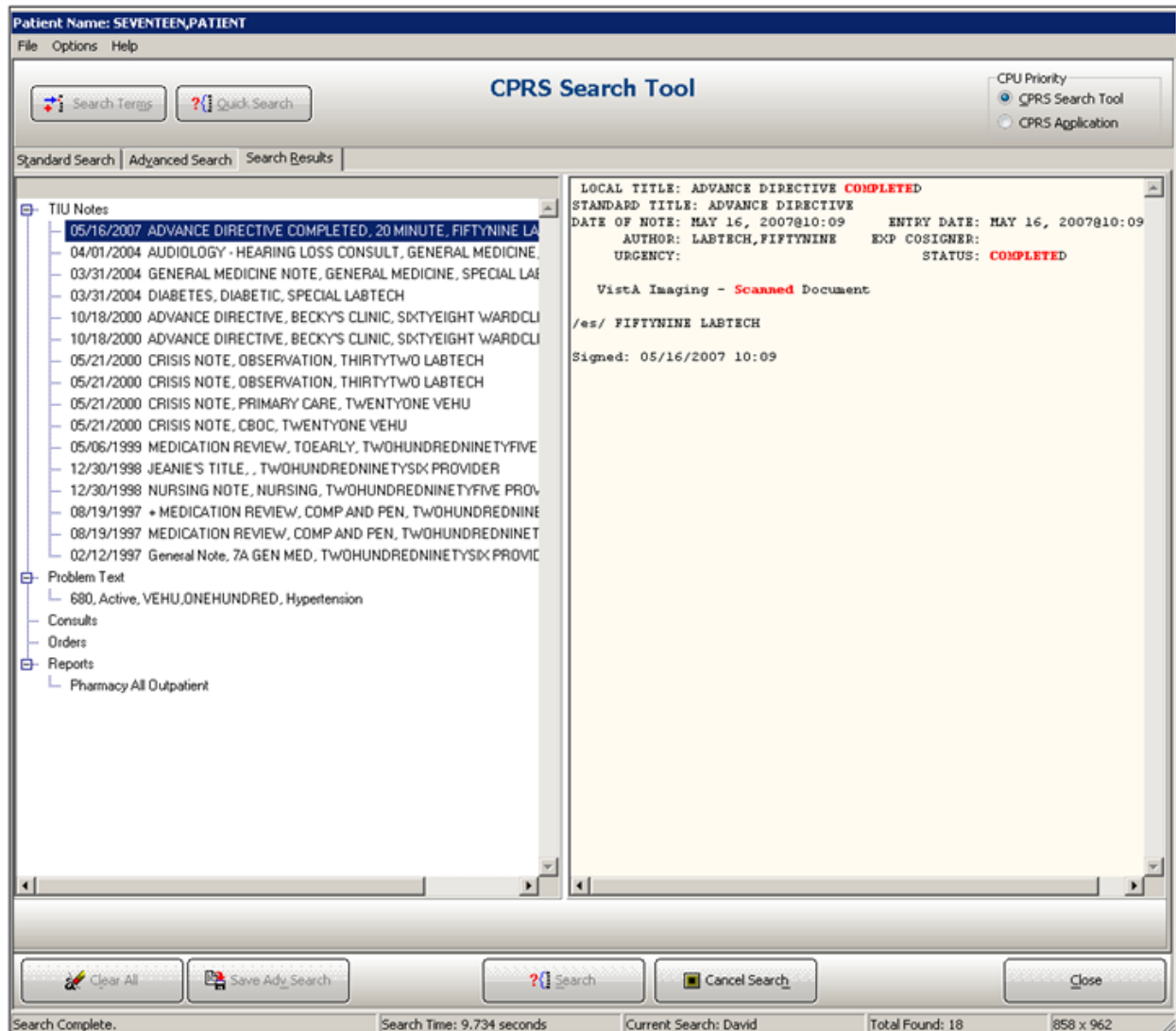


Figure 24: Search Results Tab

# Administrator Guide

## **Minimum Requirements**

The minimum software requirements for the DSS Patient Search Tool are:

- CPRS v1.0.27.90 (modified for DSS Patient Search Tool)
- DSSPatientRecordSearch.DLL version 1.0 or higher in the same directory as CPRSChart.exe (v1.0.27.90)
- Required Namespace: DSIWA
- KIDS Build DSIWA\_CPRS\_SEARCH\_TOOL\_1\_0.KID

## **Configuration Guide for the VA Sandbox**

### **CPRS Location**

On the VA Sandbox, the CPRSChart.exe (v1.0.27.90) file is located in S:\Innovation-259. There may be various versions of CPRSChart in that directory. The most current version, and the one pointed to by a Sandbox desktop shortcut is CPRSChart.exe.

### **Patient Record Search Tool DLL Location**

The DSS Patient Search Tool is implemented as a .DLL (dynamic link library), which is launched from the CPRS main menu by clicking the **Search** button.

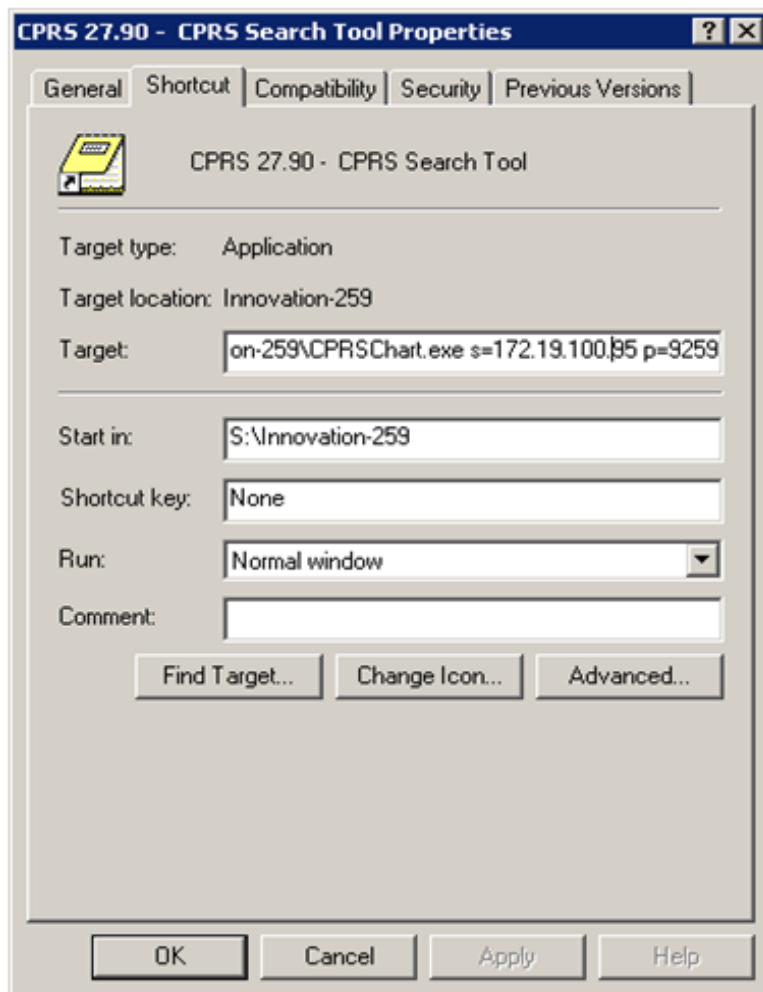
The .DLL filename is DSSPatientRecordSearch.dll. This file must reside in the same directory as CPRSChart.exe (v1.0.27.90). On the VA Sandbox, that directory is S:\Innovation-259. Both CPRSChart.exe (v1.0.27.90) and DSSPatientRecordSearch.dll must be physically located in that directory.

## Create a Desktop Shortcut to CPRS 27.90

Create a Desktop shortcut to CPRSChart.exe (v1.0.27.90). Right-click and select the **Properties** option from the drop-down menu. In the DSS Patient Search Tool Properties screen, select the **Shortcut** tab and enter the following:

**Target:** S:\Innovation-259\CPRSChart.exe s=172.19.100.95 p=9259

**Start In:** S:\Innovation-259



**Figure 25: Shortcut Tab**

To run CPRSChart.exe, double-click the Desktop shortcut. Attempting to run it by double-clicking the CPRSChart.exe file in the Innovation-259 folder will not work. This is because CPRS needs the Server and Port numbers from the Shortcut Properties (above).

## Cache Terminal Instructions

To get a Terminal session, SSH must be used. Terminal from the Caché Cube menu will NOT work. To initiate a Terminal session on the VA Sandbox, do the following:

1. From the **Start** menu, under **All Programs**, select **Attachment Reflections, Host – UNIX**, and **Open VMS**.
2. Select the **Connection Setup...** option from the **Connection** drop-down menu.

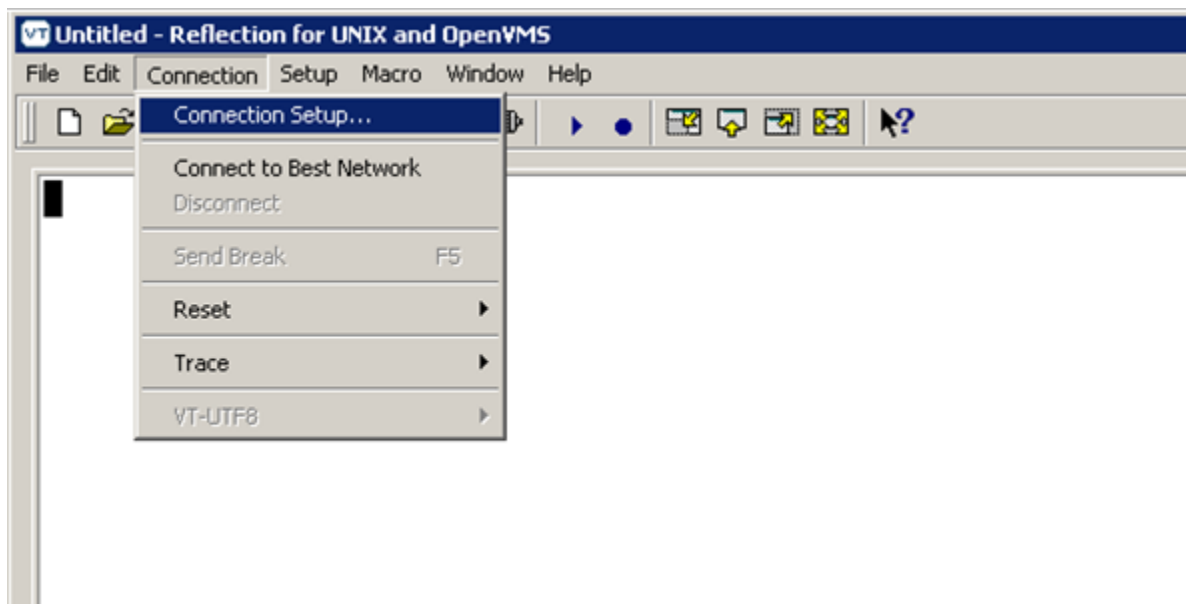


Figure 26: Connection Setup

3. Change to **SECURE SHELL**.

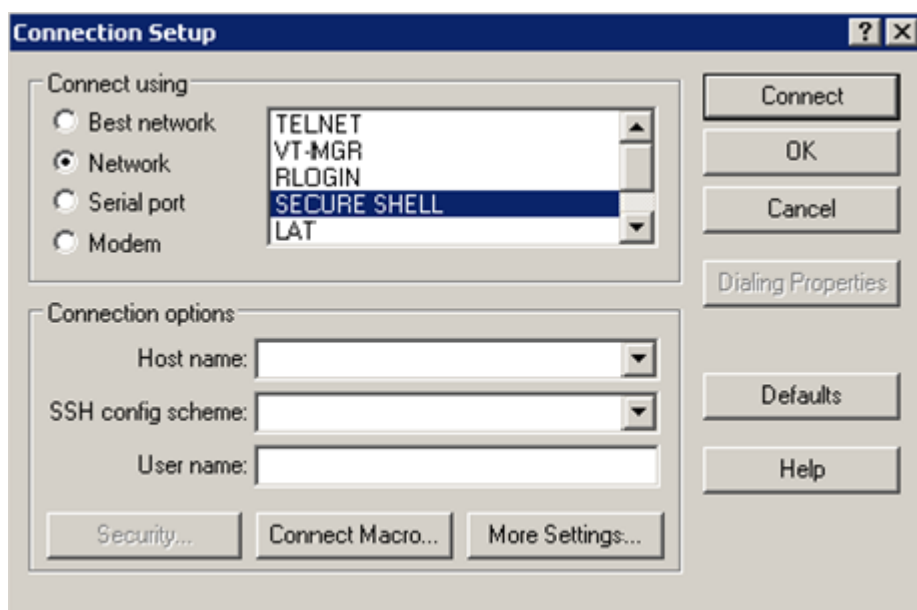
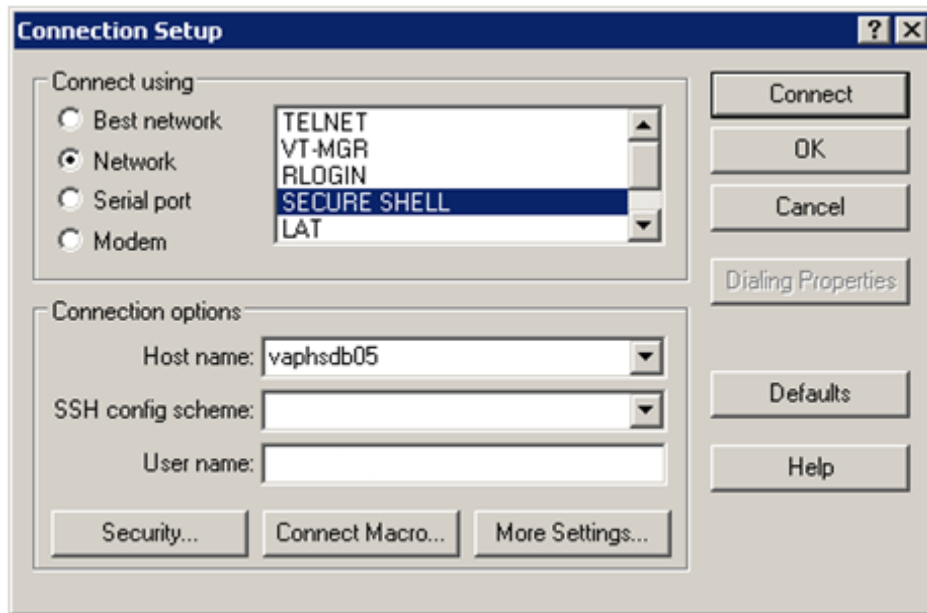


Figure 27: Secure Shell



4. Use **vaphsdb05** for the Host name.

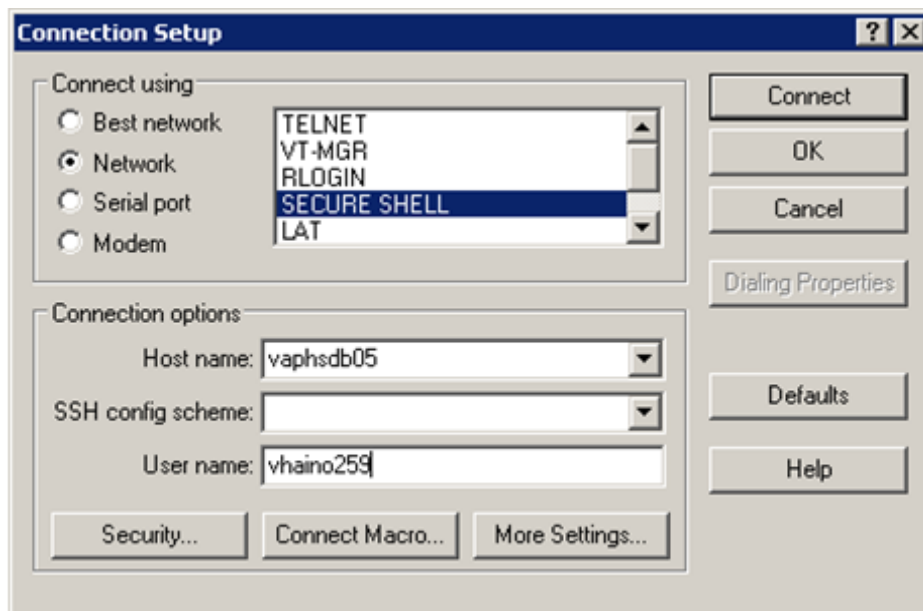


**Figure 28: Host Name**

5. Click **Connect**. If a “Host Key Authenticity” message displays, click **Always**.
6. Log in with:

**Username:** vhaino259

**Password:** vhaino259



**Figure 29: Username**

## **CPRS Logins on the VA Sandbox**

The following CPRS Access/Verify Codes are pre-configured for general use on the VA Sandbox:

VistA Administrator

**Access code:** 01vehu

**Verify code:** vehu01

Doctor/Provider

**Access code:** 1radiologist

**Verify code:** radiologist1

Pharmacist

**Access code:** 1pharmasist

**Verify code:** pharmasist1

VistA Programmer

**Access code:** 1programmer

**Verify code:** programmer1