



**Users Guide**

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**Ribo 3.0**

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Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

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## Contents

# Introduction to Ribo

**Ribo** is a diagnostic utility tool that traces Tabular Data Stream™ (TDS) traffic flow between a TDS client and a TDS server.

The **Ribo** utility captures, translates, and displays the Tabular Data Stream (TDS) protocol flowing between a TDS client and a TDS server. TDS clients include jConnect™ for JDBC™, **isql**, Adaptive Server® Enterprise ODBC driver, and Open Client™. TDS servers include Adaptive Server Enterprise, Adaptive Server Anywhere, Sybase® IQ, and Open Server™.

See the TDS 5.0 Functional Specification at <http://www.sybase.com/detail?id=1040983> for more details.

You can use **Ribo** to:

- Capture a TDS protocol stream to a file.
- Translate a captured file to the TDS protocol's text representation.
- Capture a TDS protocol's stream to a file and translate the protocol's text representation to the screen or a GUI window.

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**Note:** Captured TDS protocol data saved to a file contains sensitive user authentication information and may contain confidential company or customer data. To protect this confidential data from unauthorized or accidental disclosure, the files containing captured data must be properly protected using file permissions or encryption.

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## Prerequisites

Before you use **Ribo**, set up the environment.

- Make sure that you have **execute** permission on the UNIX script. At the command prompt where the **Ribo** files are installed, type:

```
chmod +x Ribo
```

- Install JRE 1.4.2 or later.
- Set the JAVA\_HOME and RIBO\_HOME environment variables. For example:

```
set RIBO_HOME=c:\jutils-3_0\ribo
```

```
set JAVA_HOME=c:\jdk1.4.2
```

# Capture Data

Use the **Ribo** command line options to capture TDS protocol data and save that data to a file.

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On UNIX, Linux, or DOS command line, enter:

```
Ribo command_line_options
```

## Command Line Options

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Command line options and descriptions.

### Syntax

```
Ribo [-l listen_port] [-s server_host]  
[-p server_port] [-c capture_file_prefix]  
[-t trans_file_prefix] [-x charset]  
[-gui] [-d] [-f filter_file] [-h]
```

### Parameters

- **-l *listen\_port*** – the port on which to listen. The default is 5005.
- **-s *server\_host*** – the host name of the database server. The default is localhost.
- **-p *server\_port*** – the port number of the database server. The default is 2638.
- **-c *capture\_file\_prefix*** – specify the prefix added to the generated file name of the captured data. This file is used by Technical Support personnel to troubleshoot problems.

The default is `capX.tds`, where *X* is the generated file name.

- **-t *trans\_file\_prefix*** – translates captured data to the TDS protocol's text representation and saves it to a file.

Use this option to specify the prefix added to the generated file name of the translated data.

The default is `outX.tds`, where *X* is the generated file name.

- **-x *charset*** – lets you specify the default character set conversion to use when dumping TDS files.
  - The character set you specify must match Sybase supported character set.

- If **Ribo** finds character set information in the login record, this information overrides the *charset* you specify using **-x**.
- If you do not specify a character set using **-x**, and the TDS file contains no character set information, no character set translation is performed; text is written using the server's default character set.

See the *jConnect for JDBC Programmers Reference* or the *Adaptive Server Enterprise Installation Guide* for more details about character sets and conversion.

- **-gui** – invokes the **Ribo** GUI to:
  - Specify command line parameters
  - Start and stop the capturing process
  - View translated data “on the fly” as it is being analyzed
- **-d** – displays translated data while the data is being captured. If you are using the **Ribo** GUI, the data appears in a separate window. If you are not using the GUI, the data appears on the screen.
- **-f filter\_file** – specify a user-defined, previously saved filter.
- **-h** – displays help on **Ribo** usage.

### Examples

- **Example 1** – to use the listener port on local machine port 2638 and forward the data to another machine—*rubicon*, port 2525—enter:

```
Ribo -l 2638 -s rubicon -p 2525
```

- **Example 2** – to use the listener port on a local machine port 4000, display the data in the GUI as it is being captured, and filter the data using a script you have created named *myscript.filter*, enter:

```
Ribo -gui -l 4000 -f myscript.filter -d
```

## Translate Data

Analyze and save captured TDS protocol data to a file.

To analyze captured TDS protocol data and save the text representation of that data to a file, enter:

```
Ribo input_capture_file output_file
```

where:

- *input\_capture\_file* is the file from which to analyze previously captured data.
- *output\_file* is the file in which to save the translated data. If you do not specify an output file, the translated data is sent to standard output (stdout).

## Capturing and Translating Data Using the GUI

The output file displays:

- SQL statements sent to the server
- Parameters sent to the server
- Results returned from the server

### Examples

- To use the listener port on local machine port 2638 and translate the TDS protocol data on the fly as the data is being captured, enter:

```
Ribo -l 2638 -t
```

The data is saved to `outX.tds` where `X` matches `capX.tds`.

- To translate captured TDS protocol data, enter:

```
Ribo cap0.tds tds0.out
```

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**Note:** Captured TDS protocol data saved to a file contains sensitive user authentication information and may contain confidential company or customer data. To protect this confidential data from unauthorized or accidental disclosure, the files containing captured data must be properly protected using file permissions or encryption.

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### See also

- *Command Line Options* on page 2

## Capturing and Translating Data Using the GUI

Use the **Ribo** graphical user interface (GUI) to capture and translate data.

1. Invoke the **Ribo** GUI using the listener port on local machine port 2638:

```
Ribo -gui -l 2638
```

If you have specified the listener port, server host, and server port during **Ribo** start-up, these parameters are automatically filled in for you in the **Ribo** window.

2. Select **File > Preferences**.
3. In the **Ribo Settings** window, accept or change the values. These values correspond to the command line parameters.

If you have specified a value for these parameters when you invoke **Ribo** at the command line, those values appear in the window.

If you do not specify these parameters, the program displays the default values.



Field	Description
Capture File Prefix	Corresponds to the <b>-c</b> <i>capture_file_prefix</i> parameter. Specify the prefix added to the generated file name of the captured data.
Translate File Prefix	Corresponds to the <b>-t</b> <i>trans_file_prefix</i> Specify the prefix added to the generated file name of the translated data.
Translation Filter File	Corresponds to the <b>-f</b> <i>filter_file</i> parameter. Display the file name of the filter you specified when you invoke <b>Ribo</b> at the command line.
Translate to a File	Corresponds to the <b>-t</b> <i>trans_file_prefix</i> Select this option to translate captured data to the TDS protocol's text representation and save it to a file with the prefix you specified.
Display Translation in a Window	Corresponds to the <b>-d</b> parameter. Select this option to display translated data in the GUI while the data is being captured.

4. Click **OK**.
5. Click **Start Capture**.

To stop the capture process, click **Stop Capture**. You must stop the capture process to change the host, ports, or preferences.

6. When done, click **End**.

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**Note:** Captured TDS protocol data saved to a file contains sensitive user authentication information and may contain confidential company or customer data. To protect this confidential data from unauthorized or accidental disclosure, the files containing captured data must be properly protected using file permissions or encryption.

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#### See also

- *Command Line Options* on page 2
- *Using Filters* on page 5

## Using Filters

You can create a filter to display specified or all details of the TDS protocol data. If you do not specify a filter file name, the default filter is used.

Select a default filter.

## Using Filters

1. To see the default filter selections, enter:

```
Ribo -gui -l 4000 -d
```

2. In the Ribo window, select **File > Edit Filter**.

In the Default Filter Selection window:

- The left column shows token types.
- The right column shows details for some or all tokens. Selected items are highlighted and represent the token details you want to see from the TDS protocol data.

**Table 1. Available Tokens Details**

Items	Description
TOKEN Details	Information about the single-byte token itself, like its hexadecimal value and whether it is fixed or variable length. If you do not select (highlight) this detail, only the token name is dumped.  Pertains to all tokens.
LENGTH Details	Information about the various length fields found within a token, including the overall token length.  Pertains to all tokens.
SQL_TEXT Details *	Text of a SQL query. This item overrides DATA Details.  Pertains only to LANGUAGE tokens.
DATA Details	All details of the token beyond what is specified by TOKEN Details. This is what the TDS 5.0 Specification calls the “data stream” that follows the token itself.  Pertains to all tokens.
VERBOSE_CAP Details	Specifies that the flags in a CAPABILITY token are to be dumped in “verbose” format, which indicates the name of each flag and its value. If you do not select this detail, flags are dumped as hexadecimal.  Pertains only to CAPABILITY tokens.
PASSWORD Details	Specifies that the password in the login record is to be dumped. If you do not select this detail, the password is dumped.  Pertains only to the login record.
ROW Details *	Row data of a ROW, PARAMS, ALTROW or KEY token. If you do not select this detail, the data is not dumped. Specifying this detail overrides DATA Details.  Pertains only to ALTROW, KEY, PARAMS, RPC, RETURN_VALUE and ROW tokens.

Items	Description
FORMAT Details *	Format data of a PARAMFMT, ROWFMT, or ALTFMT token. Specifying this detail overrides DATA Details. Pertains only to ALTFMT, PARAMFMT, ROWFMT, RPC and RETURN_VALUE tokens.
RPC Details *	Overrides DATA Details for DBRPC tokens. Pertains only to DBRPC tokens.
CURSOR Details *	Overrides DATA Details for all CURSOR tokens. Pertains only to CURCLOSE, CURDECLARE, CURDELETE, CURFETCH, CURINFO and CURUPDATE tokens.
EED Details *	Overrides DATA Details for EED tokens. Pertains only to EED tokens.

**Tip:** Selecting items marked with an asterisk (\*) when you have not selected DATA Details causes the details to be dumped for certain tokens. That is, these details override DATA Details.

**Note:** Every token that occurs legally in TDS version 5.0 or later is recognized by **Ribo**. See the TDS 5.0 Functional Specification at <http://www.sybase.com/detail?id=1040983>.

### See also

- *Command Line Options* on page 2
- *Capturing and Translating Data Using the GUI* on page 4

## Creating a Customized Filter

You can modify the default filter selections to meet your requirements.

1. In the Edit Filter dialog, select and click the tokens to modify. Double-click to unselect the tokens to modify.
2. Type the file name under which to save your customized filter. The file name can consist of alphanumeric and special characters, and does not require an extension; for example, `TDS_1.filter` or just `TDS1`.
3. Click **Save**.
4. Click **OK**, then specify the location to which to save the filter.

## Using a Customized Filter

Start a customized filter from the command line.

## Obtaining Help and Additional Information

To use a customized filter that you have created, enter:

```
Ribo -l 4000 -gui -f TDS_1.filter -d
```

where `TDS_1.filter` is the customized filter file name.

### See also

- *Command Line Options* on page 2

## Obtaining Help and Additional Information

Use the Sybase Getting Started CD, Product Documentation site, and online help to learn more about this product release.

- The Getting Started CD (or download) – contains release bulletins and installation guides in PDF format, and may contain other documents or updated information.
- Product Documentation at <http://sybooks.sybase.com/> – is an online version of Sybase documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. In addition to product documentation, the Web site also has links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, Community Forums/Newsgroups, and other resources.
- Online help in the product, if available.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

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**Note:** A more recent release bulletin, with critical product or document information added after the product release, may be available from the Product Documentation Web site.

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## Technical Support

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Get support for Sybase products.

If your organization has purchased a support contract for this product, then one or more of your colleagues is designated as an authorized support contact. If you have any questions, or if you need assistance during the installation process, ask a designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

## Downloading Sybase EBFs and Maintenance Reports

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Get EBFs and maintenance reports from the Sybase Web site.

1. Point your Web browser to <http://www.sybase.com/support>.

2. From the menu bar or the slide-out menu, under **Support**, choose **EBFs/Maintenance**.
3. If prompted, enter your MySybase user name and password.
4. (Optional) Select a filter from the **Display** drop-down list, select a time frame, and click **Go**.
5. Select a product.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as an authorized support contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click **My Account** to add the “Technical Support Contact” role to your MySybase profile.

6. Click the **Info** icon to display the EBF/Maintenance report, or click the product description to download the software.

## Sybase Product and Component Certifications

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Certification reports verify Sybase product performance on a particular platform.

To find the latest information about certifications:

- For partner product certifications, go to [http://www.sybase.com/detail\\_list?id=9784](http://www.sybase.com/detail_list?id=9784)
- For platform certifications, go to <http://certification.sybase.com/ucr/search.do>

## Creating a MySybase Profile

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MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1. Go to <http://www.sybase.com/mysybase>.
2. Click **Register Now**.

## Accessibility Features

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Accessibility ensures access to electronic information for all users, including those with disabilities.

Documentation for Sybase products is available in an HTML version that is designed for accessibility.

Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Sybase HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. Documents that comply with Section 508

## Obtaining Help and Additional Information

generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.

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**Note:** You may need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

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For information about how Sybase supports accessibility, see the Sybase Accessibility site: <http://www.sybase.com/products/accessibility>. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.

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