

# LRGS Client Getting Started Guide

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(National Oceanic and Atmospheric Administration)  
(National Environmental Satellite Data Information Service)

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# 1 Download LRGs Client

The LRGs Client software is also called “OPEN DCS”, for Open Source Data Collection System. A link to the latest version can be found on the DCS website at:

<https://dcs1.noaa.gov>

You do not need to login to your DADDS account to download the client.

The client software is written in 100% Java. This means it will run on any modern operating system. It has been well tested on many versions of Unix, Linux, Windows, and Macintosh OS X.

## 2 Install Java (If Necessary)

A Java Runtime Environment (JRE) is necessary to run the LRGs Client Software. To check to see if Java is installed, open a terminal window in linux/unix, or a DOS “cmd” window on Windows. Type the following command:

```
java -version
```

If Java is installed, you will see a version message. LRGs Client requires Java version 1.5 or higher. If this is the case, skip the rest of this section.

If Java is *not* installed you will see an error telling you that the command is not recognized. The exact wording of the message will vary depending on the operating system and shell you are running.

If Java is either A.) Not Installed, or B.) a very old (pre 1.5) release, THEN you have to install Java. Point your web browser to:

<http://java.sun.com>

There are downloads and instructions there for installing Java on most operating systems. After installing, rerun the “java –version” command and verify that you now have an up to date JRE.

## 3 Run the Installer

The OPEN DCS Software is distributed as a wizard-GUI installer. The version number is embedded in the file name. At the time of this writing the latest release is 5.2 and the installer file is called:

```
opendcs-install-5-2.jar
```

The file you download from NOAA/NESDIS may have a newer version number.

Many Java programs are distributed in files with a “.jar” extension, which stands for Java Archive. On most operating systems you can simply double-click the file after downloading. On some operating systems you may need to open a terminal/command window and then:

- CD (change Directory) to the folder where you downloaded the file.
- Then run this command:  

```
java -jar opendcs-install-5-2.jar
```
- (Again, if you downloaded a later version, please use the name of the file you downloaded).

The installer will guide you through the various configuration choices.

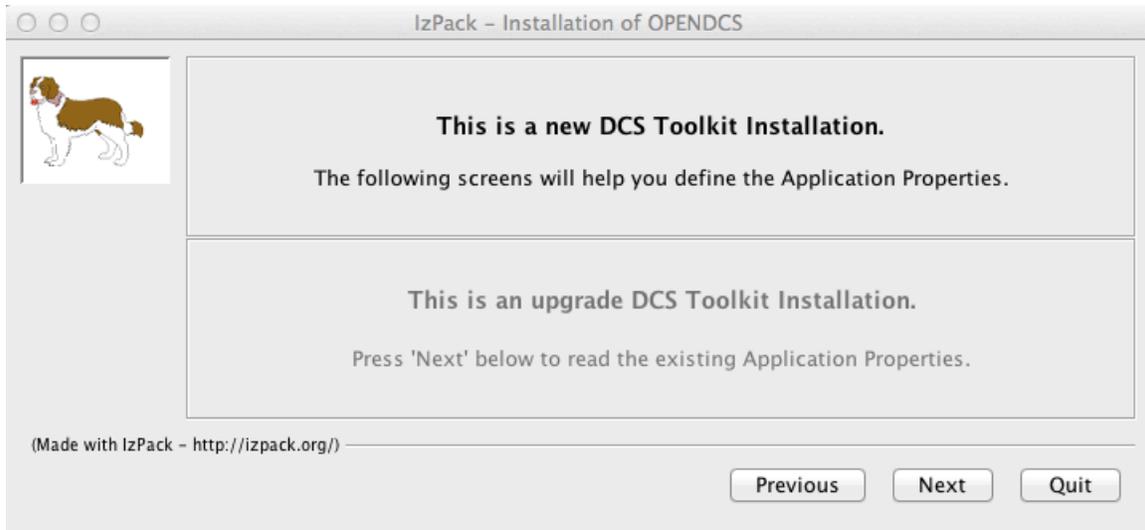
The first screen allows you to choose an installation location:



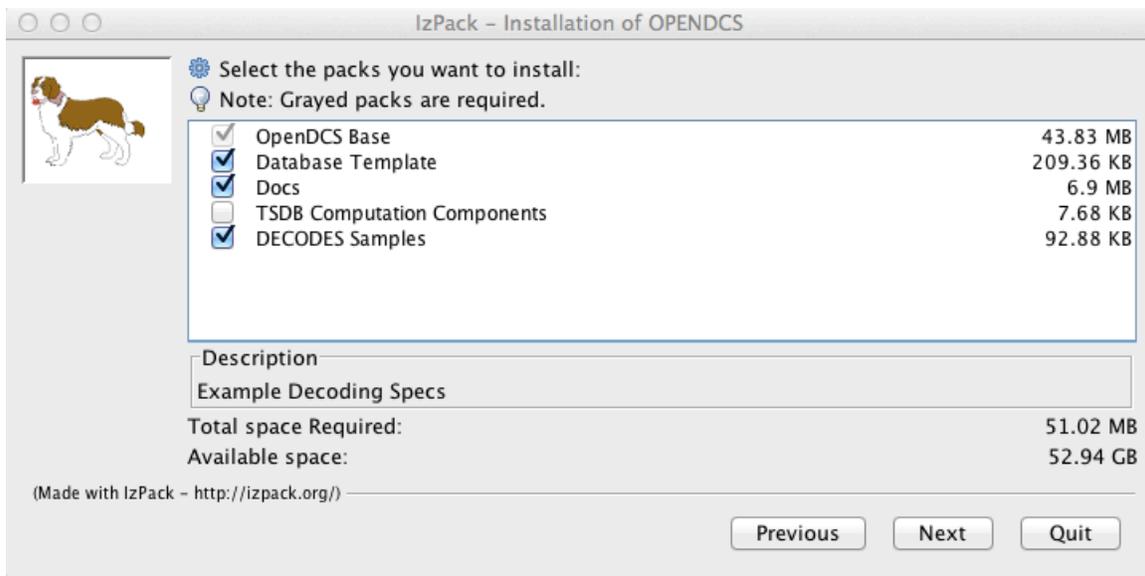
On Windows, the OPENDCS software will not need to write to the registry. So, even if you do not have administrative writes on your computer, you may still be able to install it (but check with your friendly IT representative first).

Please choose a directory name that does not have embedded spaces. Thus, please do not install it under “C:\Program Files”.

The next screen tells you whether this is new installation or an upgrade to a previous installation. For upgrade installations, the installer will not overwrite configuration files.



The next screen allows you to select the “packs” to be installed:



Some of the components (in particular the TSDB Computation Components) are only useful for U.S. Government Database Systems like USBR HDB or CWMS. But installing everything will not cause any harm.

The next screens show you the installation progress. Everything should complete without errors.

Important! Please go all the way through the screens until you get to the final screen with the “Done” button in the lower right corner. Aborting out of the installation before it is complete will render the software unusable.

## 4 Contact Wallops CDA to get an LRGs User Name

You will need a valid account in order to pull DCP data from the public servers at Wallops or Sioux Falls. To get an account, call your friendly DCS operator at (757) 824-7450. Be prepared to provide:

- Name
- Email Address
- Organization
- Telephone Number
- Preferred 6-character user name
- Preferred initial password

The operator will create an account on the primary LRGs, with host name “cdadata.wcda.noaa.gov”. You should be able to connect to this server immediately. Within 24 hours the name will be propagated to the other public LRGs servers.

## 5 Start the OPENDCS Software

On a Windows machine, the installer will create shortcuts for “opendcs” under your start menu. On other systems, start the software with the commands:

- First CD to the directory where you installed the software
- Type the command:

```
bin/launcher_start
```

On Windows, you can also start a DOS CMD window and then

```
CD C:\OPENDCS (or wherever you installed!)  
BIN\LAUNCHER_START
```

You should see a “launcher” bar along the left side of your screen as shown below. From here you can start the various tools:

- LRGs Status – Starts the LRGs Real Time Status Display. You can use this to check the availability and status of an LRGs Server
- Retrieval and Decoding (feature coming soon)
- DCP Message Browser – This is an interactive GUI for browsing DCP messages on an LRGs server
- Network List Maintenance – Editor for the old-style “.nl” network list files.
- DECODES Database Editor – DECODES is a powerful program for decoding DCP messages and converting data to a variety of standard formats or Databases.
- Setup – Various setup parameters

The lower half of the launcher bar, labeled “HDB Database Components” is specific to USBR (U.S. Bureau of Reclamation) HDB (Hydrologic Database). Please do not use these features unless you are using USBR HDB.

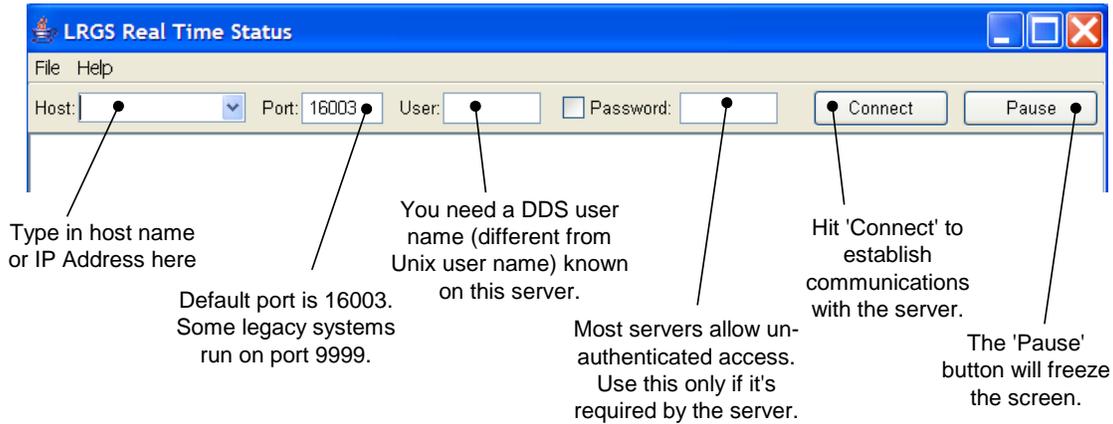


# 6 Check the Status of an LRGs

There are four public LRGs servers available to you:

- cdadata.wcda.noaa.gov
- cdabackup.wcda.noaa.gov
- lrgseddn1.cr.usgs.gov
- lrgseddn2.cr.usgs.gov

Click the “LRGS Status” button on the launcher or run the “rtstat” command. At the top of the screen you specify which of the above LRGs servers you want to connect to:



The main part of the screen describes the status of messages going into and out of this particular LRGs:

**LRGS: drot1.wcda.noaa.gov**  
 UTC: August 19, 2005 01:39:59 (Day 231)  
 (Time reported by LRGs)  
 System Status: Running  
 LRGs Version: 5.0

**Archive Statistics**

Messages In Storage: **154428**    Oldest Msg Time: **08/18 15:42:05**    Next Idx #: **23966**

**Hourly Data Collection Statistics**

	Hour:	18-19	19-20	20-21	21-22	22-23	23-0	0-1	1-2
DOMSAT (Good/ParErr):	0	10568 / 59	11651 / 69	11933 / 84	11557 / 75	11540 / 72	10282 / 63	0	0
GOES DRGS (Good/ParErr):	0	0	0	0	0	0	0	0	0
DDS Recv (Good/ParErr):	0	47904 / 286	11658 / 69	11920 / 84	11568 / 74	11523 / 73	11960 / 77	8107 / 49	
Archived (Good/ParErr):	0	47664 / 277	11650 / 68	11935 / 83	11557 / 74	11540 / 71	11930 / 74	8107 / 49	

**Downlink Statistics**

Downlink Name	Last Msg Rcv Time	Link Type	Last Seq Num	Link Status	Link Params
DomsatRecv	08/19 00:49:54	DOMSAT	43112	Active	
DDS-Recv.Main	08/19 01:39:52	DDS	-1	Active	
DRGS-Recv.Main	(none)	DRGS	-1	Active	
DDS:DROT	08/19 01:39:52	DDSCON	-1	Real-Time	
DDS:CDADATA	(none)	DDSCON	-1	Ready	

**Client Statistics**

Slot	Host Name	Client Type	User	Msg Count	Last Activity Time	Status
0	216.83.203.98-0	DDS-CLI	wcdas	0	08/19 01:39:58	running

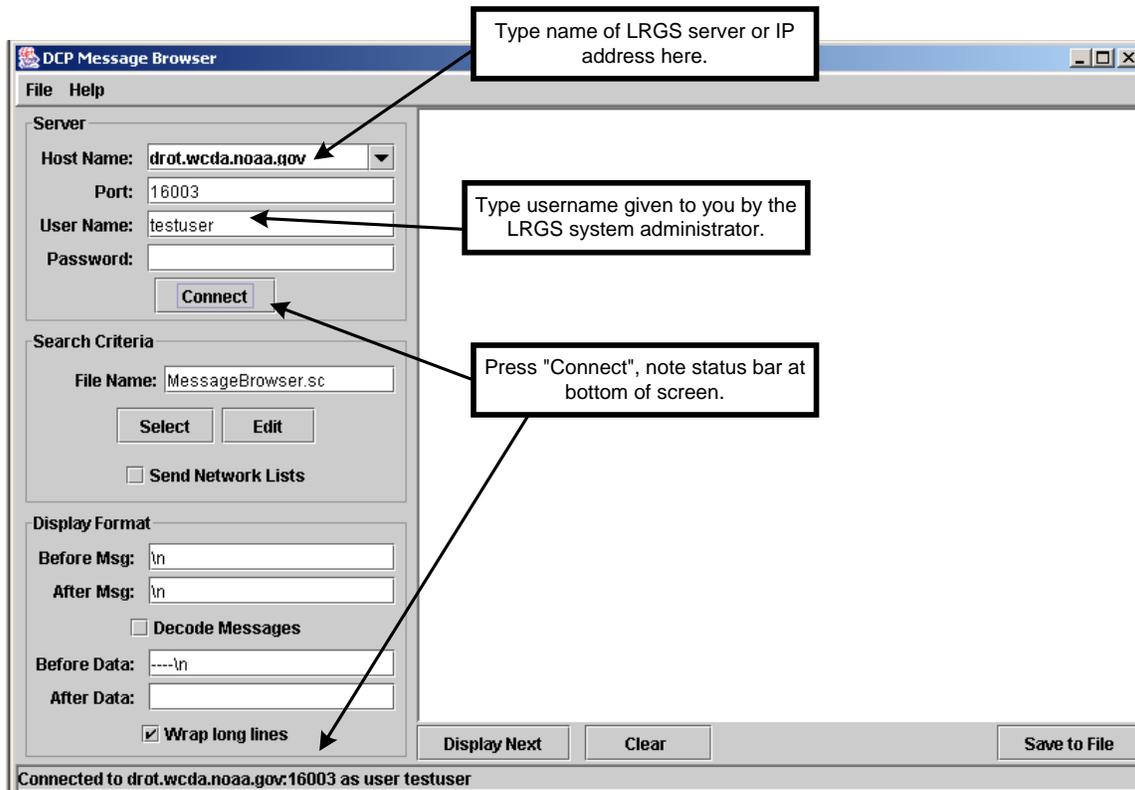
Callouts on the left side of the screenshot:

- Messages in the 30-day archive (points to Archive Statistics)
- 8-hour snapshot of data collection stats (points to Hourly Data Collection Statistics)
- Detailed status on all message inputs (points to Downlink Statistics)
- Stats on clients currently connected to this server (points to Client Statistics)

## 7 Browse DCP Messages in the GUI

Click the “DCP Message Browser” button on the launcher (or run the “msgaccess”) command.

This program allows you to interactively retrieve, view, and download DCP messages from an LRGS server.



The usual workflow for this program is as follows:

1. Specify which server you want to connect to and supply a user name.
2. Hit “Connect” and verify the status bar on the bottom that you are indeed connected.
3. Hit the “Edit” button under Search Criteria. This is where you specify which data you are interested in.
4. Hit either the Display Next or Display All buttons at the bottom to view one message at a time, or to retrieve all messages that pass your criteria.
5. (Optional) Hit “Save to File” in the lower right corner. Specify a file name in which to save the data on your local disk.

The 3<sup>rd</sup> step allows you to edit a “Search Criteria” screen. This is shown below:

**Time Range** Under LRGs Time Range enter a beginning and end. You can enter strings like “now – 1 day”, “now – 4 hours”, etc., or you can enter specific date/time values using the Julian day in the following format: YYYY/DDD HH:MM:SS (where DDD is the day of year).

The above example shows retrieval for the last hour.

**Network Lists:** You can enter one or more network list names in the space provided. A network list is a list of DCP addresses in a file.

**DCP Names:** If you are using DECODES you can enter in symbolic names for your DCPs.

**DCP Addresses:** Enter one or more 8-hex-character DCP Addresses in the space provided

**GOES Channels:** Enter one or more GOES Channels in the space provided. You can also specify a spacecraft (east or west) and a baud rate (100, 300, or 1200).

**Data Source(s):** Legacy field. Not supported in OPENDCS.

After specifying the criteria you can hit File – Save to make it permanent, or just leave the editor screen up but move it aside.

## 8 Download DCP Messages from Command Line

There is a command line program you can use to download DCP data without the GUI. You can use this for automated downloads. The program is called “getDcpMessages”. To run it, open a terminal (or DOS CMD) window and:

- CD to where the OPENDCS software is installed
- Type:

```
bin\getDcpMessages
```

The program takes many arguments. Run it with “-x” on the command line to get a list of arguments and an explanation of their meaning.

## 9 What to Do Next

If you want to use DECODES see the DECODES manual in the “doc” subdirectory after installing the OPENDCS software.

If you need assistance, a supported version of the software is available from Sutron Corporation. Call Sutron at (703) 406-2800 and ask for Tempest sales or Tempest tech support. The supported version is called “DCS Toolkit”. Sutron also offers a full featured time series database product called Tempest Hydro-Met Analysis System.