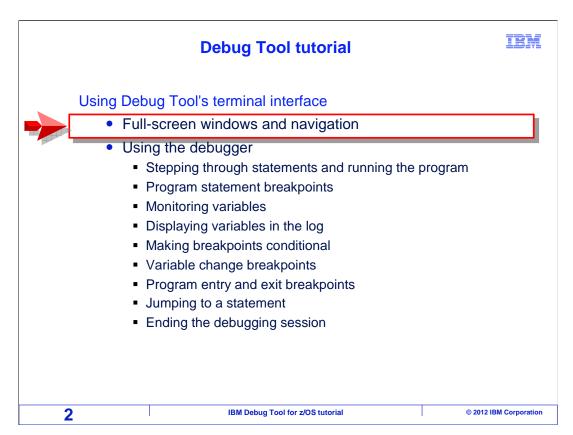
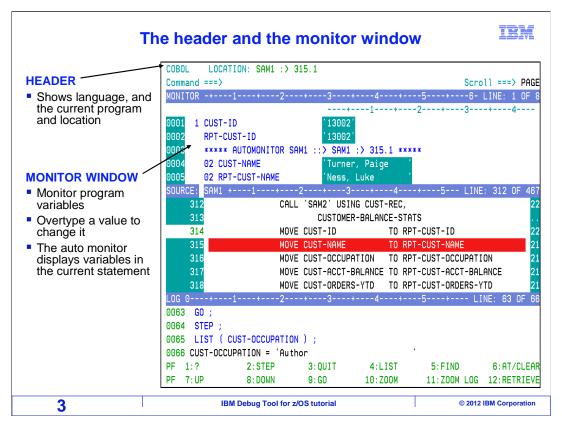


This is the tutorial for IBM Debug Tool for $z/OS^{@}$, one of the IBM $zSeries^{@}$ problem determination tools.

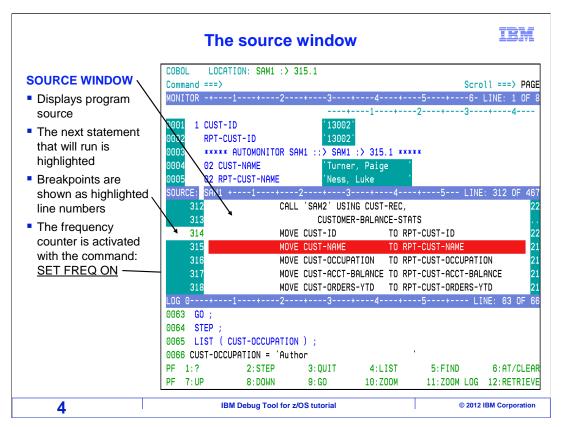


This section introduces you to Debug Tool's 3270 terminal interface, also known as the full screen interface".

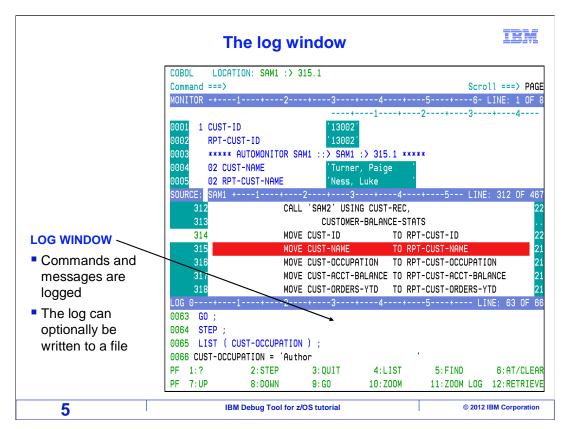
You will learn about the windows displayed in the Debug Tool 3270 interface, and how to navigate them. In the next sections you will see the commands that you need to know to perform most of the common debugging tasks.



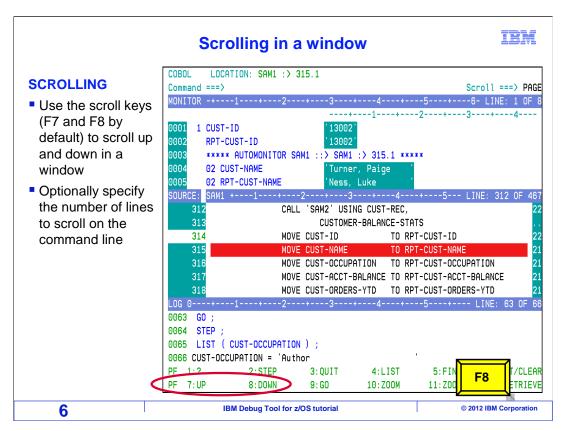
When the debugger starts, there are three windows and a header displayed. The header is at the top of the screen, that shows the name of the program currently running and the current statement number in the program. Just below the header is the monitor window. You can use the monitor to watch variable values. There are commands you can use to add variables to the monitor, as you will see. Once you put a variable in the monitor, you can watch it change as the program runs. You can also turn on a function called the auto monitor. When the auto monitor is on, variables referenced by the current statement are shown automatically. If a variable is in the monitor window, you can change its value by overtyping it.



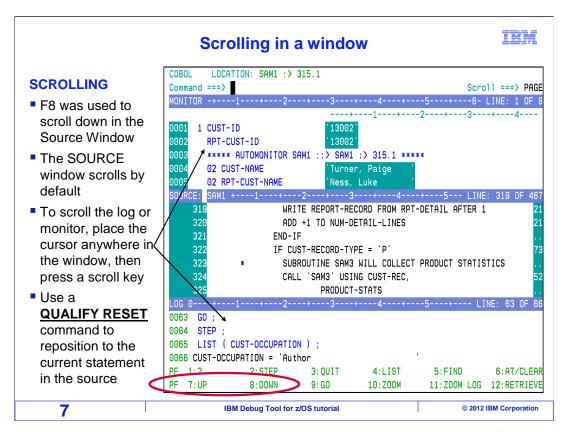
The source window is in the middle of the screen, and it displays program source statements. Notice that one of the statements is highlighted in red. That is the current statement, which is the next statement that will run. The area to the left of the program statements is called the prefix area, and you can enter line commands there. You can use line commands to perform tasks such as setting breakpoints. In this example, there is a breakpoint set at statement 314. Statement breakpoints are shown with their line numbers highlighted. Also notice the statement frequency counts which are shown to the right of the statements. You can turn on the frequency counter with the command "set frequency on".



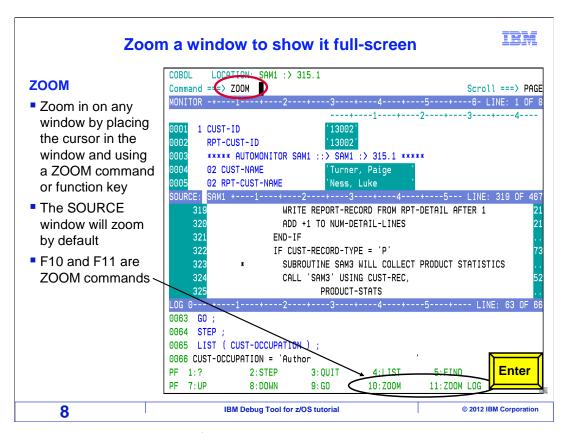
The log window is at the bottom of the screen. Commands and actions that you enter are logged in the log window. As a result, Debug Tool automatically keeps an ongoing script of your session. You can even optionally save your log into a file. In addition to commands and actions, you can also display items in the log such as program variable values, program statements, and settings.



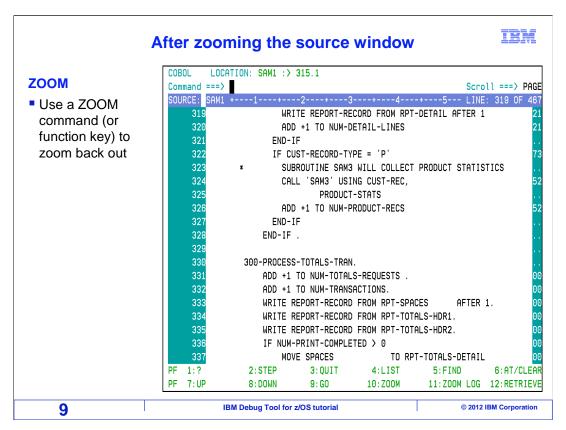
Notice that the F7 and F8 keys are set to up and down by default. You can use these keys to scroll up and down in any of the windows. By default, if you leave your cursor on the command line, the source window scrolls. In this example, F8 is pressed.



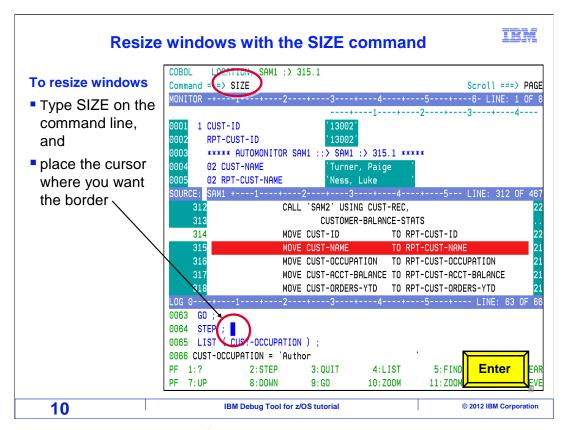
And the source window was scrolled down. If you put your cursor in one of the other windows before you press F7 or F8, the window selected by the cursor will scroll instead.



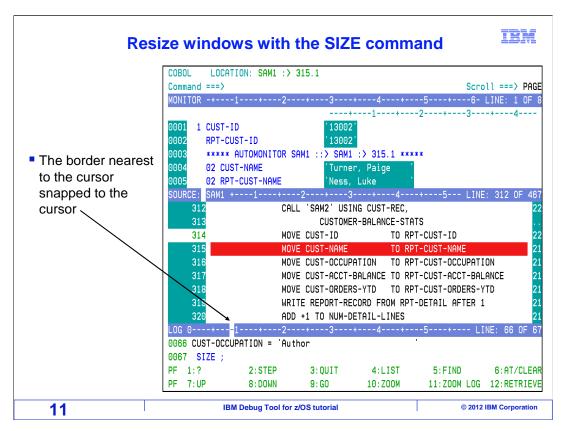
You can also zoom in and out of any window. To zoom to a window, type the zoom command, then place the cursor in the window you want to zoom, then press Enter. If you leave the cursor on the command line, the source window is zoomed. Also notice that a couple of function keys, F10 and F11, are set to the zoom and zoom log commands. In this example, the zoom command is typed on the command line, and enter is pressed.



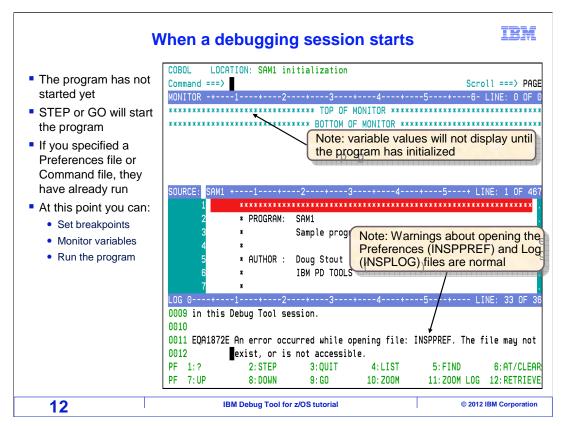
That zoomed in on the source window. Zooming on a window means expanding that window to the full screen, which can make it easier to work with. To zoom back out, just use the Zoom command again, or the Zoom key, F10. When you zoom out, you will see all three windows again.



You can also change the sizes of the windows, by moving the border lines. First, type "size" on the command line, then place your cursor where you want the border to be. The current border line nearest the cursor, in this example the one between the source and log windows, will be the one that moves. Press Enter.



And the border line was snapped to the cursor, which in this case changed the sizes of the source and log windows..



This is an example of a Debug Tool session when it first starts. In most cases, Debug Tool will pause the application before the initialization of the main program. The main program has not yet started. Be aware that variables do not exist until the program initializes. Program initialization will occur automatically as soon as you run or step into the program. At this point, you can set breakpoints, add variables to the monitor window, change your Debug Tool settings, step, and run the program.

That is the end of this section, which described the windows in the 3270 interface and how to navigate them. Continue with the next section to learn about the basic debugging commands.

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