##

DELL(TM) Windows(R) Debugger Utility 1.0 README

##
Version 1.0
Release Date: February 2010

NOTE: This readme provides information for Dell Windows Debugger Utility 1.0.

##

TABLE OF CONTENTS

##

This file contains the following sections:
* Overview
* Criticality
* Minimum Requirements
* Installation
* Known Issues

##

Overview

##

The Dell(TM) Windows(R) Debugger Utility (DWDU) allows you to remotely debug
the Windows kernel, and monitor Windows boot sequence, on the server through
the Dell Remote Access Controller (DRAC). To do debugging, the DWDU launches
tools like Windows debugger (WinDbg) or KD to perform remote debugging.

##

CRITICALITY

##

2 - Recommended

##

MINIMUM REQUIREMENTS

##

You can install DWDU on both 32-bit and 64-bit Microsoft(R) Windows(R) operating
systems.

DWDU supports the following types of RACs that support IPMItool SOL connection:

- Dell Remote Access Controller 5 (DRAC 5)
- Integrated Dell Remote Access Controller 6 (iDRAC6) Enterprise for blade servers
- Integrated Dell Remote Access Controller 6 (iDRAC6) Enterprise for rack and tower
  servers

Microsoft .NET 2.0 SP1 or higher versions with latest updates is required
for the DWDU application to work correctly.
WinDbg/KD kernel debuggers from Microsoft website.
Null-modem emulator from the SourceForge website.

##

Installation

##
On the Client Machine:
- Install DWDU
- Install Null-modem Emulator
- Install Windows Debugger Utility
Installing the DWDU
You can install DWDU in one of the following methods:
     • Using DWDU installer (.msi) file
     • Using Command Line Interface (CLI)
     Installing DWDU Using Installer (.msi) File
             To install DWDU using the Installer (.msi):
             1. Download DWinDbg.msi from the Dell
                website at support.dell.com.
             2. Double-click DWinDbg.msi, Welcome to setup window is displayed
             3. Click Next, License Agreement page is displayed
             4. Select 'I Agree' radio-button and click Next.
             5. Select the path for the installation
             6. Select 'Everyone' or 'Just me' and click 'Next'.
             7. After the installation is complete, click 'Close'.
     Installing DWDU Using Command Line Interface (CLI)
             To install the DWDU using CLI, run the following command
             at the command prompt:
             msiexec /I <path>/<package name>.msi
             where, <path> is the location of the DWDU installer, and
             <package name> is the DWDU installer file name.
             The Welcome window is displayed. Perform steps 3 to 7
             provided in the "Installing DWDU using Installer (.msi) File"
             section.

Installing the Null-modem Emulator
     To install the Null-modem emulator:
     1. Download the Null-modem emulator setup from the website
             "http://sourceforge.net/projects/com0com/files/."
     2. Double-click setup.exe.
     3. Click 'Next', and then click 'I Agree'.
     4. Select all the components and click 'Next'.
     5. Select the installation folder and click 'Install'.
     6. Click 'Next', and then click 'Finish'. The Found New Hardware Wizard
        is displayed.
     NOTE: For more information, see Null-modem emulator readme.

Installing New Hardware and Adding Emulator Pair
To install the new hardware:
1. On the Found New Hardware Wizard, click 'Next' to install
   the drivers for the default port.
2. Click 'Finish'.
3. Repeat the steps 1 and 2 to install the other default port.
        NOTE: For more information, see Null-modem Emulator readme.
To add CNCA1 and COM8 pair:
1. Open the Null-modem emulator.
2. Click 'Add Pair' and change the port names to CNCA1 and COM8.
3. Click 'Apply' and close the Null-modem Emulator.
4. On the Found New Hardware Wizard, click 'Next' to install the
   drivers for the port CNCA1.
5. Click 'Finish'.
6. Repeat the steps 4 and 5 to install the drivers for the other
   port COM8.

Installing Windows Debugger Utility
To install the Windows Debugger Utility (WinDbg):
1. Download the WinDbg setup from the website:
        "http://www.microsoft.com/whdc/devtools/debugging/installx86.mspx."
2. Double-click setup.exe.
3. Click 'Next', and then click 'I Agree'.
4. Click 'Compete'.
5. Click 'Install'.
NOTE: For more information, see "http://msdn.microsoft.com/en-us/library/cc267445.aspx."

On the Dell Server:
- Setup BIOS
- Enable Debugging
- Set boot configuration
- Enable Serial Over LAN and IPMI Over LAN in DRAC/iDRAC6
Setting up BIOS on Dell Server
You can set the BIOS configuration according to the following:
Serial Communication   : On without Console Redirection
External Serial Connector   : COM1
Failsafe Baud rate   : 115200
Redirection After Boot   : Enabled

For BMC-only servers, you can set the configuration according to the
following:
Serial Communication   : On with Console Redirection Via Com2
External Serial Connector   : Com2
Failsafe Baud Rate   : 115200
Remote Terminal Type   : VT100/VT220
Redirection After Boot   : Enabled

Enabling Debugging on Dell Server
To enable debugging on the Dell server, you must modify the boot configuration
data. Enabling the debugging varies for each Windows operating system.
For more information,
see "http://technet.microsoft.com/en-us/library/cc498727.aspx" and Microsoft help.

Setting Boot Configuration
Set the following:

Baud rate : 115200
COM port : COM2 for all rack and tower servers and COM1 for blade servers

Enabling Serial Over LAN and IPMI Over LAN in DRAC/iDRAC
You must enable Serial Over LAN and IPMI Over LAN in DRAC/iDRAC configuration.
For more information, see the following documents available on the Dell Support
website at support.dell.com/manuals:
    - Integrated Dell Remote Access Controller 6 User's Guide
    - Dell Remote Access Controller 5 User's Guide

##
Known Issues
##

* In a BMC-only server, the tool is slow when compared to DRAC in 9G. This is
  because the same channel is shared by both the console redirected data and
  Windows debug data. Also, to establish WinDbg session, you must set the BIOS to
  Serial Communication: On with console Redirection through COM2.
  Due to the slow connection, there is no support for 9G BMC.

* DWDU does not debug 8G Servers. This is because; 8G supports IPMI1.5 that
  supports only lan interface. The IPMItool is designed to work with lanplus interface
  to establish SOL connection that DWDU uses. Therefore, there is no support for 8G.

* Sometimes, there are issues when establishing/disconnecting DWDU sessions.
  This is because, after you stop DWDU connection, it sometimes takes longer for the
  DRAC SOL channel to completely end. During such conditions, try reconnecting
  after 3-4 minutes.

* DWDU connection is established only once with iDRAC for blade servers (10G/11G).
  This is because, once the SOL connection is established, you cannot end it.
  To end it, you must enable the SOL in DRAC to reset the iDRAC for blade servers.

* Active Directory login is not supported using DWDU. This tool works only with
  DRAC user name or IP address.

##

February 2010