# Troubleshooting Using iDRAC7 Video Capture Features

This Dell white paper provides instructions on using the video capture feature from iDRAC7 to aid in troubleshooting.

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## **Executive summary**

This paper provides information about the iDRAC7 video capture feature on Dell PowerEdge 12<sup>th</sup> Generation servers. This capability provides a valuable troubleshooting tool for administrators who are not physically present at the system. This is an enterprise feature, and is in *addition* to the last crash screen capture offered previously. Video capture provides a better understanding of an issue as opposed to only a screen capture.

## Introduction

Using iDRAC7 for remote troubleshooting lets users diagnose potential issues. The video capture feature assists with remote debug by displaying the last screen while booting into the operating system.

This document covers:

- Minimum system requirements
- Installing Video Capture Player
- Using boot captures

Playing back the screen of the final seconds prior to an error occurring on a system is crucial information in troubleshooting the root cause of boot failures.

### Setup and minimum system requirements

- Dell iDRAC7 Enterprise License
- 12G Dell PowerEdge Server Lines
  - o 200-500 Series
  - o 600-900 Series
- iDRAC7 Video Capture Player (if viewing boot capture files offline)
  - $\circ$   $\;$  Java 5 Update 7 or later installed on the host system
- Java 6 or later installed (if viewing directly within iDRAC7 Virtual Console)

# Navigating the iDRAC7 to confirm an Enterprise License is installed

A minimum requirement is the installation of an Enterprise License on the iDRAC7 to use the Video Capture Troubleshooting Feature. The easiest way to verify that the Enterprise license is installed is to look at the title bar (See Figure 1). If it specifies, Enterprise, it is installed.

Browse to the iDRAC7 GUI and verify Enterprise License is installed as seen in Figure 1:

	ATED DELL CONTRO	. REMOTE LLER 7 Enterprise			Support   About   Logout
System PowerEdge R620 root, Admin	Licenses	To manage changes to or purch	ase new licenses visit the License Self-Si	ervice Portal	
-Power / Thermal -Alerts -Setup -Troubleshooting Licenses -Intrusion		Status Device iDRAC OK	Device Description	Device Options	
IDRAC Settings     IDRAC Settings     Network     User Authentication     IDRAC Firmware Update     Sessions     Hardware		Device Description Device qdl	IDRAC7 IDRAC	Device ID	
Batteries Fans - CPU - Front Panel - Network Devices - Power Supplies - Removable Flash Media - Storage - Physical Disks - Virtual Disks - Controllers - Endource		OK Description: DRAC7 Enterprise License Entitlement ID License Type License Options: Select.	qd Perpetual	. Expiration	

#### Figure 1. Verifying iDRAC7 Enterprise license.

# Managing and using boot captures

From the same menu where you obtained the Video Capture Player, the Boot Captures are organized for ease of access and playback.

View the video recordings of the last three boot cycles either directly from the iDRAC7 Virtual Console or offline using the video capture player. A boot cycle video logs the sequence of events for a boot cycle. When the host system is rebooted, the boot cycle video file captures up to 2 MB of booting details. The boot cycle videos are arranged in the order of latest to oldest as seen in Figure 2.

You have the ability to save any of the last three boot cycle videos for offline viewing.

Note: If iDRAC7 is reset, the boot capture video is not available as it is stored in RAM and is deleted.

	ATED DELL REMOTE S CONTROLLER 7 Enterprise Support   About	Logout
System PowerEdge R620	Identify Diagnostics Post Code Last Crash Screen Video Capture	
	Video Capture	?
- Power / Thermal - Alerts - Setup	Boot Captures Instructions: Use boot capture to play or save the last 3 boot capture recordings. To view saved videos download, the Video Capture Player (see below).	
Troubleshooting Licenses	Boot capture 1 (latest)         Fri Oct 12 09:40:19 2012           Boot capture 2         Fri Oct 12 07:41:55 2012	
TIDRAC Settings     Network     User Authentication     IDRAC Eirmunas Lindet	C Boot capture 3 (oldest) Fri Oct 12 06:28:44 2012	
Sessions	pave Play	
	Crash Captures Instructions: Use crash capture to play or save the last crash capture recording. To view the saved video, download the Video Capture Player (see below).	
Network Devices Power Supplies Removable Flash Media	No Recording Available.	
	Download Video Capture Player Instructions: Nownload the Video Capture Player to view the saved video captures. The download is a zio file containing videoniaver eve (for windows), videoniaver sh (for Linux), and videoniaver isr containing	
Controllers	the background files needed for the players. videoplayer.zip	
( )	Download	

#### Figure 2. Managing boot captures.

Playback of the boot screens occur at a rate of 1 frame per second.





## Installing the Video Capture Player for offline viewing

A prerequisite for viewing any boot capture video in an offline mode is the installation of a local video capture player. You can save a local copy of a boot capture for future use. The *Save* option prompts you to indicate the location to which to save the boot capture file (\*.dvc file extension).

	CONTROLLER 7 Enterprise	Suppo	ort   About   Logo
System PowerEdge R620 root Admin	Identify Diagnostics Post Code La	Video Capture Video Capture	
	Video Capture		■ C ?
Server Power / Thermal Alerts	Boot Captures		
-Setup	Instructions: Use boot capture to play or save	the last 3 boot capture recordings. To view saved videos download, the Video Capture Player (see below).	
Licenses	<ul> <li>Boot capture 1 (latest)</li> </ul>	Thu Nov 1 17:50:04 2012	
<ul> <li>Intrusion</li> <li>iDRAC Settings</li> </ul>	C Boot capture 2	Thu Nov 1 17:36:02 2012	
Network	C Boot capture 3 (oldest)	Thu Nov 1 13:30:33 2012	
<ul> <li>User Authentication</li> <li>iDRAC Firmware Upo</li> <li>Sessions</li> </ul>		Save	Play
Hardware Batteries			-
Fans	Crash Captures		
Front Panel	Instructions: Use crash capture to play or sav	ve the last crash capture recording. To view the saved video, download the Video Capture Player (see below).	
-Network Devices -Power Supplies	No Recording Available.		
Remova J Do you wa	ant to open or save <b>bootcapture_77.dvc</b> (1.91 N	MB) from 172.31.190.21? Open Save 🔻 Cancel	×

#### Figure 4. Saving a local copy of a boot capture file

To obtain the Video Capture Player, navigate to the troubleshooting section of the iDRAC7 GUI and click on the Video Capture Tab as seen in Figure 5. You can download the Video Capture Player from within the iDRAC7 GUI. The Video Capture Player download button provides a .zip file of the player for use on your management station.

#### Figure 5. Obtaining the Video Capture Player from the iDRAC7.

System PowerEdge R620	Identify Diagnostics	Post Code Last	Crash Screen Video Capture		
root, Admin	Video Capture		Windows Internet Explorer	3	€ C ?
Power Thermal     Aders     Setup     Firobleshooting     Ucenses     Initusion     PoRAC Settings     Network     User Authentication     URAC Settings     Network     User Authentication     URAC Firmware Updat     Setsion	Boot Captures Instructions: Use boo Boot capture C Boot capture C Boot capture	ot capture to play or save th e 1 (latest) e 2 e 3 (oldest)	What do you want to do with videoplayer.zip? Size: 1.08 MB From: 172.31.590.21 Open The file won't be saved automatically. Save Save Save as Cancel	apture Player (see below).	Save Play
<ul> <li>Fanis</li> <li>Fanis</li> <li>CPU</li> <li>Front Panel</li> <li>Network Dexces</li> <li>Power Supplies</li> <li>Removable Flash Media</li> <li>Storage</li> <li>Physical Disks</li> <li>-Vintual Disks</li> <li>-Controllers</li> <li>-Endosures</li> </ul>	Crash Captures Instructions: Use ora No Recording Availal Download Video Cap Instructions: Downlo the background files ne videoplayer.zip	ish capture to play or save to ble. pture Player ad the Video Capture Player seded for the players.	the last crash capture recording. To view the saved video, download the Vi ro view the saved video captures. The download is a zip file containing vid	deo Capture Pilsyer (see below). eeoplayer exe (for windows), videoplayer sh (for Linux), and	videoplayer jar containing

The .zip contains a player for Windows and Linux: videoplayer.exe (for Windows), videoplayer.sh (for Linux). Launch the respective player for your operating system.

In Figure 6, the Windows player (videoplayer.exe) is launched. Choose *Open* from the *File* menu. In the Navigation window, browse to the location of the boot capture file (\*.dvc file) saved in the earlier step.

File Playback		
Open		
Exit		
7		
D Vi/tual Console		1
File Playback		_
D Playback Controls	<u>×</u>	
Frame:		
	0%	
D Open		
Look In:	videoplayer 🗖 🖬 🛱 🗖 🐯 🖿	
bootcaptur	re_77.dvc	
File Name:		
Files of Type:		
ries of <u>Type</u> .		
	Open Cancel	
		-

Figure 6. Launching the Video Capture Player to view the boot capture offline.

The Video Capture Player, as seen in Figure 7, has the necessary playback controls for the video analysis of a system boot up.

D Virtual Console
File Playback
F2 = System Setur F10 = Lifecycle Controller F11 = BIOS Boot Manager F12 = PXE Boot Two 2.50 GHz Six-core Processors, Bus Speed:7.20 GT/s, L2/L3 Cache:1.5 MB/15 MB
System running at 2.50 GHz System Memory Size: 16.0 GB, System Memory Speed: 1333 MHz, Voltage: 1.35V
Dell Serial ATA AHCI BIOS Version 1.0.2 Copyright (c) 1988–2012 Dell Inc.
Playback Controls
DVC 15 Frame: 23
1%

#### Figure 7. Video Capture Player controls from the iDRAC7.

## Summary

The Dell iDRAC7 provides remote troubleshooting capabilities that enhance the management of PowerEdge Servers. This document provides information on minimum requirements in using the Dell iDRAC7 remote video capture troubleshooting capabilities. Dell continues to listen to customer needs and to respond to customer requests by providing expanded tools to help pinpoint and remediate issues quickly with tools like iDRAC7 Video Capture.