Digital Video Recorder

Feature Reference

Date: July 02, 2021

Verifone®

Digital Video Recorder (DVR) Feature Reference

Revision History

Date	Description
October 31, 2017	Initial Documentation Release
March 8, 2018	Updated DVR interface partner Implementation Guide for Commander Site Controller and to use current format
July 02, 2021	Updated with C18 details

DIGITAL VIDEO RECORDER

Overview

Description

The Digital Video Recorder (DVR) feature provides a DVR interface to the Point of Sales (POS) System to detect and deter attendant fraud. The DVR broadcasts certain transactions performed on the POS terminal and displays these events with video images recorded at the time the events occurred. This provides video images of attendant actions coupled with a journal of events as recorded by the POS terminal.

The DVR configuration properties reside on the site controller and affect all POS terminals. These properties can be accessed through the Configuration Client.

To comply with PCI private IP addressing requirements, the Verifone Enhanced Zone Router disallows communication with public Internet addresses, and no longer openly routes or allows communication from or to IP addresses outside of the defined Verifone Zone.

192.168.31.x is reserved for the Verifone POS zone.

All device IP addresses that communicate with the POS Zone must be RFC1918 compliant, meaning they are any private addresses that fall in the following IP scope:

- *10.0.0.0 - 10.255.255.255*
- *172.16.0.0 - 172.31.255.255*
- *192.168.0.0 - 192.168.255.255*

Establishing communication between a store network device and a Verifone device in the POS Zone using the Verifone Enhanced Zone Router requires the following configurations:

- *Assign an RFC1918 compliant address to the store device.*
- *Configure the store router/firewall to allow the device to communicate to the EZR.*
- *Use Configuration Client to define a Device Specific Route to the device.*
- *Configure a Port Forwarding rule on the EZR for the device. (Requires both the device IP address and port number.)*

For detailed setup instructions, refer to the following documents:

- *Commander Site Controller Network Configuration Guide*
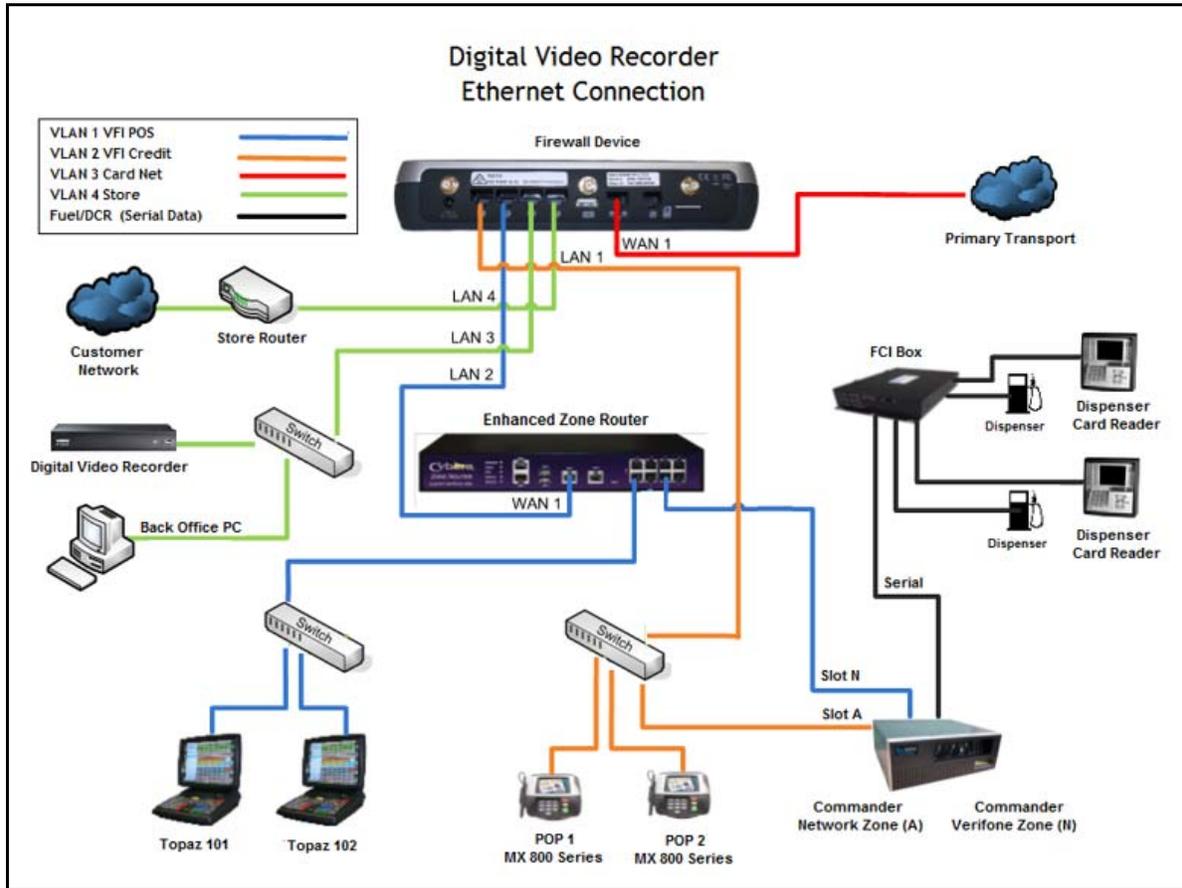- *Enhanced Zone Router Installation Guide*

Requirements

Supported Hardware Configurations

- Commander Site Controller with Topaz
- Commander Site Controller with Ruby2
- Commander Site Controller with C18
- RubyCi with Topaz
- RubyCi with Ruby2

Software Requirements

- Commander Site Controller - All Versions

LAN Diagram

Digital Video Recorder Ethernet Connection

VLAN 1 VFI POS
VLAN 2 VFI Credit
VLAN 3 Card Net
VLAN 4 Store
Fuel/DCR (Serial Data)

Firewall Device

Primary Transport

WAN 1

LAN 1

LAN 4

LAN 3

LAN 2

Customer Network

Store Router

FCI Box

Dispenser

Dispenser Card Reader

Enhanced Zone Router

Digital Video Recorder

Switch

Dispenser

Dispenser Card Reader

Back Office PC

WAN 1

Serial

Switch

Switch

Slot N

Slot A

Topaz 101

Topaz 102

POP 1 MX 800 Series

POP 2 MX 800 Series

Commander Network Zone (A)

Commander Verifone Zone (N)

Serial Diagram

Digital Video Recorder
Serial Connection

Serial DVR Configuration

Use the following defaults when connecting the DVR to the POS terminal:

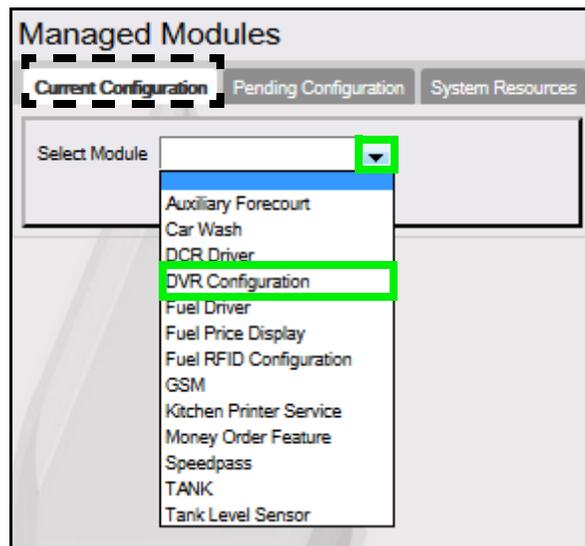| Port	COM5
Baud	9600
Data	8
Stop	1
Parity	None

Configuring DVR

Configuring with Commander Configuration Client

1. From the Configuration Client, go to: **Tools > Managed Modules**.
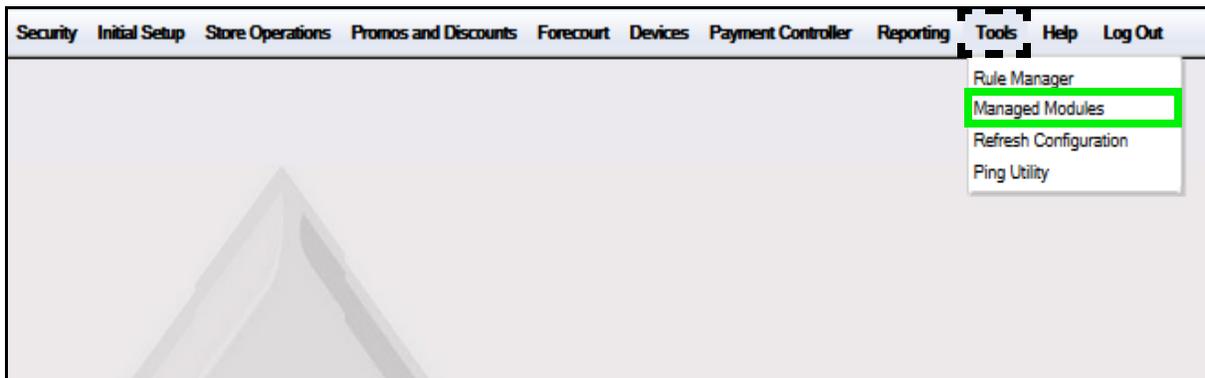
2. Select the **[Current Configuration]** tab.

3. Click on the *Select Module* drop down arrow.
4. Select **[DVR Configuration]**.

5. Configure the DVR parameters.

Parameter	Default Value	Description
DVR Configuration		
DVR Mode	True	Sets the mode of communication for the DVR interface. • Set to **[True]** to enable the DVR on Ethernet. • Set to **[False]** to enable the DVR on serial. • Set to **[Both]** to enable serial and Ethernet communications.
Multicast IP Address	230.0.0.1	IP multicast destination address, network setup dependent.
Multicast Port Number	14001	IP multicast destination port number, network setup dependent.
NOTE	*The values displayed are defaults. See site network system administrator prior to changing DVR values.*	

Additional Configuration

Additional DVR parameters will display on the DVR Configuration form based on the permissions assigned to the user accessing Configuration Client.

> **NOTE** *This function must be used with the aid of the Verifone Technical Support Center in order to modify these parameters.*

These permission settings can be viewed and adjusted in Security > Manage Users > Configure Roles.

Parameter	Default Value
DVR Configuration	
Use for Local UDP port connections	14000
Number of upstream hops allowed for multicast packet	1
NOTE *The values displayed are defaults. See the site's network system administrator prior to changing DVR values.*	

System Properties Configuration

Base 28 software and lower must configure DVRs by accessing the System Properties menu.

1. From Configuration Client, go to: Initial Setup > Systems Properties.
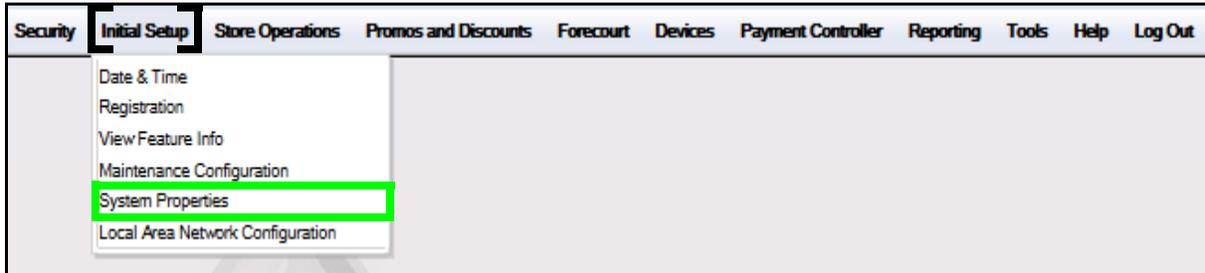
The Properties form displays.

2. Scroll down to the DVR files (property list is in alphabetical order).

3. Select and adjust the DVR files.

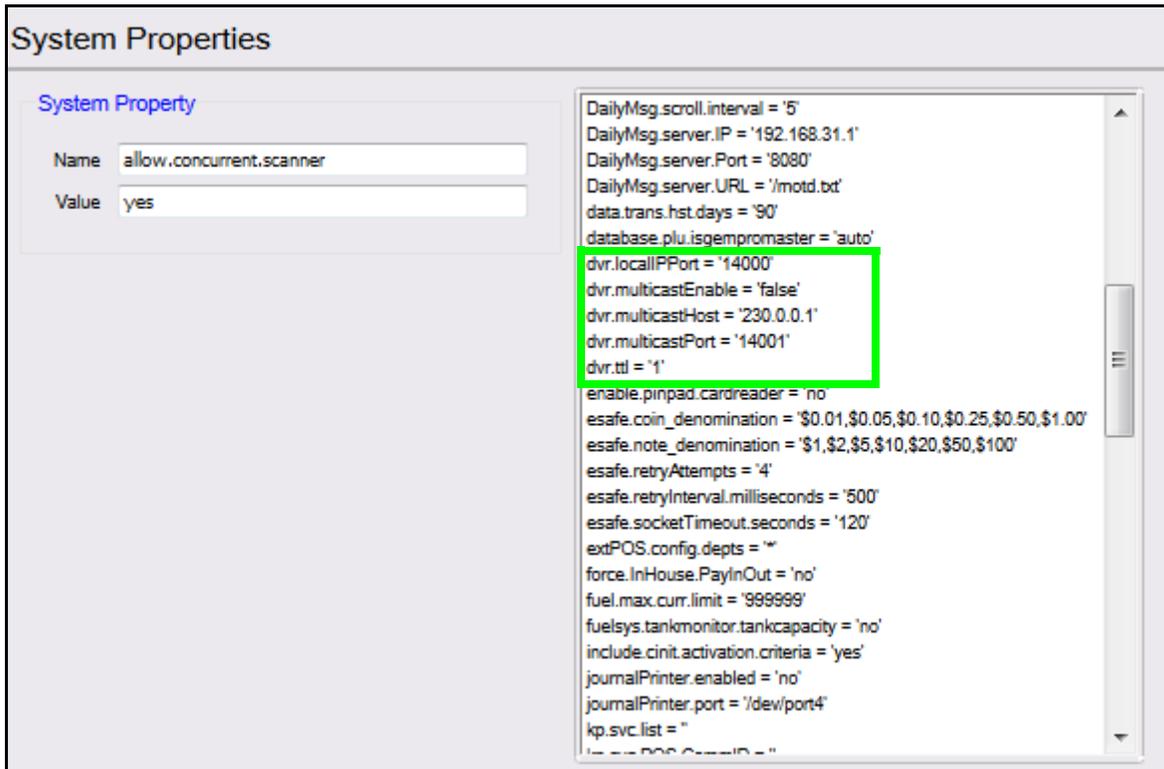| System Property	Default Value	Description
DVR Configuration		
dvr.multicaseEnable	true	Sets the mode of communication for the DVR interface. • Set to **[True]** to enable the DVR on Ethernet. • Set to **[False]** to enable the DVR on serial. • Set to **[Both]** to enable serial and Ethernet communications.
dvr.multicastHost	230.0.0.1	IP multicast destination address, network setup dependent.
dvr.multicastPort	14001	IP multicast destination port number, network setup dependent.
dvr.localPPort	14000	Use for Local UDP port connections.
dvr.ttl	1	Number of upstream hops allowed for multicast packet.
NOTE	*The values displayed are defaults. See the site's network system administrator prior to changing any DVR values.*	

Using the DVR

Data Format

The data format sent to the serial device or found in the data portion of the UDP multicast datagram can be seen in the example below:

```
MM/DD/YY HH:MM:SS RRR String from application
|<--------22-------->|<---Variable length --->|

Where:
MM/DD/YY  - Date
HH:MM:SS  - Time (24-hour Format)
RRR       - Register ID (0001 - 999)
```

> **NOTE** *The data stream is not buffered. Therefore, if the connection is lost, the data is also lost.*

Broadcast Events

The following events are currently broadcasted:

• All Transaction Lines - The following is a typical transaction:

```
03/01/06 14:58:49 101                          MILK   1        2.79
03/01/06 14:58:49 101                          EGGS   1        0.89
03/01/06 14:58:50 101                         BREAD   1        1.29
03/01/06 14:58:51 101 T|                       BAGEL   1        0.99
03/01/06 14:58:52 101                            O J   1        0.89
03/01/06 14:58:52 101                     FREE TICKT   1       -1.00
03/01/06 14:58:52 101                               TOTAL      5.92
03/01/06 14:58:55 101                                CASH      6.00
03/01/06 14:58:57 101 ST# 1       TILL XXXX DR# 1 TRAN# 1010020
03/01/06 14:58:57 101 CSH: CORPORATE           03/01/06 14:58:57
```

• Safe Drops:

```
03/01/06 15:18:00 101 Entering Safe Drop --Drawer Opened
03/01/06 15:18:15 101
03/01/06 15:18:15 101 Safe Drop
03/01/06 15:18:15 101       Ref#12345    CASH        50.00
03/01/06 15:18:15 101
03/01/06 15:18:15 101 ST# 1       TILL XXXX DR# 1 TRAN# 1010020
03/01/06 15:18:15 101 CSH: CORPORATE           03/01/06 15:18:15
```

• ID Checks (Passed, failed or skipped):

```
03/01/06 15:01:32 101 Fri Nov 11 15:01:32 EST 1960
03/01/06 15:01:32 101 TL           CASE PR.BEER   1          21.99
```

• User Login (Successful or Failed) - Not currently implemented.

• Transaction Suspend/Recall:

Suspend:

```
03/01/06 14:59:54 101                          MILK   1        2.79
03/01/06 14:59:54 101                          EGGS   1        0.89
03/01/06 14:59:55 101                          BREAD  1        1.29
03/01/06 14:59:55 101                          EGGS   1        0.89
03/01/06 14:59:58 101   TRANSACTION SUSPENDED #1010014
```

Recall:

```
03/01/06 15:00:54 101                          MILK   1        2.79
03/01/06 15:00:54 101                          EGGS   1        0.89
03/01/06 15:00:54 101                          BREAD  1        1.29
03/01/06 15:00:54 101                          EGGS   1        0.89
03/01/06 15:00:55 101   TRANSACTION RECALLED # 1010015
03/01/06 15:00:56 101                          TOTAL          5.86
03/01/06 15:00:58 101                          CASH           6.00
```

• Error Correct:

```
03/01/06 15:24:05 101 ************ ERROR CORRECT *************
03/01/06 15:24:05 101                          BREAD  1        1.29
03/01/06 15:24:05 101 ****************************************
```

• Void Ticket:

```
03/01/06 14:56:36 101 T                        BAGEL  1        0.99
03/01/06 14:56:36 101                          O J    1        0.89
03/01/06 14:56:37 101                          EGGS   1        0.89
03/01/06 14:56:38 101 VOID TICKET 1010088
03/01/06 14:56:38 101 ST# 1      TILL XXXX DR# 1 TRAN# 1010088
03/01/06 14:56:38 101 CSH: CORPORATE           03/01/06 14:56:38
```

• No Sale:

```
08/21/06 16:30:10 102             No Sale
08/21/06 16:30:10 102 ST# AB123 TILL XXXX DR# 1 TRAN# 1020001
08/21/06 16:30:10 102 CSH: CORPORATE           08/21/06 16:30:10
```