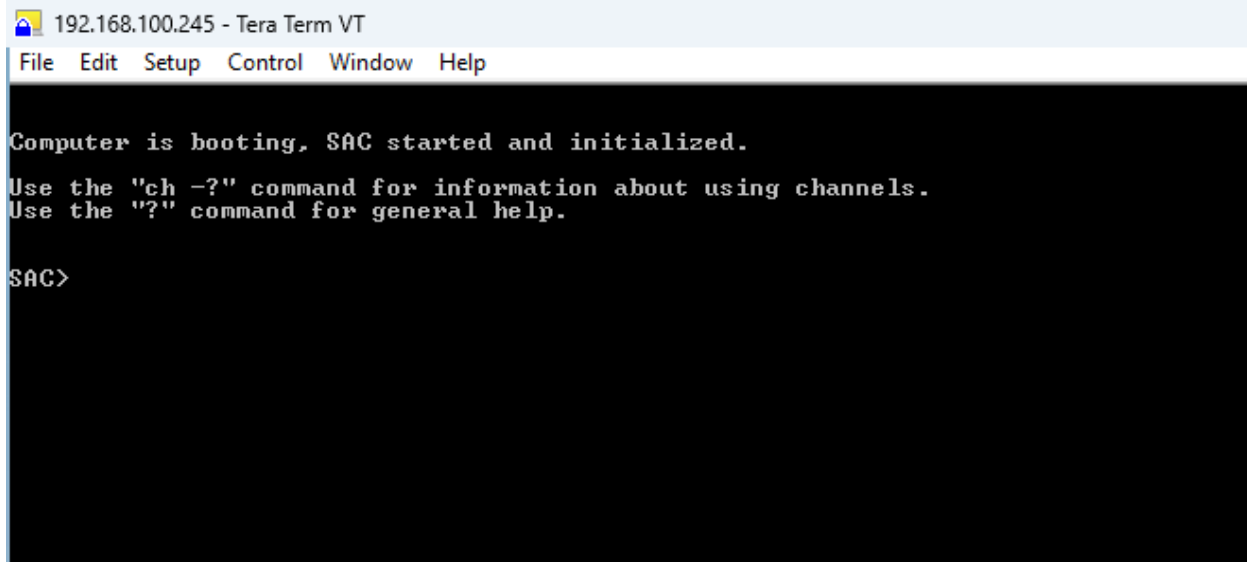


Accessing a Windows Server PowerShell (EMS) or BIOS via Serial Port Using a WTI Device

PowerShell (EMS) SAC Command prompt



192.168.100.245 - Tera Term VT

File Edit Setup Control Window Help

Computer is booting, SAC started and initialized.
Use the "ch -?" command for information about using channels.
Use the "?" command for general help.

SAC>

BIOS Setup



192.168.100.245 - Tera Term VT

File Edit Setup Control Window Help

Dell Inc. (www.dell.com) - PowerEdge 1850

Intel Xeon Processor Processor Speed: 2.80 GHz	BIOS Version: A06 Service Tag : DNJ9771
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System Time 11:44:13
System Date Tue Nov 04, 2025

Diskette Drive A: 3.5 inch, 1.44 MB

System Memory 16384 MB ECC DDR2
Video Memory 16 MB
System Memory Testing Enabled
Redundant Memory Disabled

OS Install Mode Off
CPU Information <ENTER>

Boot Sequence <ENTER>
Hard-Disk Drive Sequence <ENTER>
USB Flash Drive Emulation Type Auto

Up,Down Arrow to select | SPACE,+, - to change | ESC to exit | F1=Help

Requirements

- [WTI DB-9F to RJ45 Adapter \(DX9F-DTE-RJ-CISCO-SUN\)](#)
- Cat5 RJ45 straight cable

Hardware Setup

1. Connect the DB-9F to RJ45 adapter to the serial port on the Windows Server.
2. Connect one end of the Cat5 RJ45 straight cable to the adapter and the other end to the WTI device's serial port.

The connection allows the WTI device to access the Windows Server console through the serial interface.

Windows Server Configuration

Step 1: Windows Server BIOS Setting

1. Press F2 during startup (for Dell PowerEdge Server) or use the designated key for your server model.
2. Navigate to **System Setup → Serial Communication → Console Redirection → Serial Port 1**
3. Configure **Baud Rate** to **115200**.
4. Save changes and exit the BIOS setup.

Step 2: Enable PowerShell (EMS) (Emergency Management Services)

1. Login to Windows Server
2. Run this as an administrator PowerShell or Command prompt:
 - `bcdedit /ems {current}` on
 - `bcdedit /emssettings EMSPORT:1 EMSBAUDRATE:115200`

This enables EMS on COM1 at 115200 baud. You can adjust the port and speed if needed.

Step 3: Enables Serial Console for Boot Loader

- `bcdedit /set {bootmgr} displaybootmenu yes`
- `bcdedit /set {bootmgr} timeout 10`
- `bcdedit /set {bootmgr} bootems yes`

Explanation:

- Enables EMS on the current boot entry.
- Sets the serial port to COM1 and speed to 115200
- Shows the boot menu so you can interrupt startup via serial

Using the PowerShell (EMS) / SAC Console

In the SAC console, you can manage the server with basic text commands.

Examples:

help

cmd

reboot

shutdown

ch -si 1

- Typing cmd opens a Windows command shell session.
- You can switch between sessions using ch -si <number>.

WTI Device Configuration

1. Access the WTI device via its CLI and issue /p2 (2 is the port number).
2. Change the serial port parameters as below:

Baud rate: 115200

Data bits: 8-None

Stop Bits: 1

Handshakes: None

3. Hit Esc to save the changes.

Verification

Once both sides are configured:

1. Open a serial session from the WTI device to the connected port by issuing the command /c2.
2. Reboot the Windows Server.
3. The BIOS setup screen or PowerShell (EMS) SAC command prompt or boot messages should now appear in your terminal session.