
I Didn't Know You Could Do That

Monitoring your CSS Hardware

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Can I Monitor my CSS Hardware?

You've licensed a CSS machine running on your Dell server. How will you know if the server is experiencing hardware problems?

If you didn't buy the server from Unisys, it is yours to monitor and support, how can you do that?

Fortunately Dell has a processor built into their servers to do that. Its called a DRAC or Dell Remote Access Controller.

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The **Dell Remote Access Controller** or **DRAC** is an [out-of-band management](#) platform on certain [Dell](#) servers. The platform may be provided on a separate [expansion card](#), or integrated into the [main board](#); when integrated, the platform is referred to as **iDRAC**.

It uses mostly separate resources to the main server resources, and provides a browser-based or command-line interface (or both) for managing and monitoring the server hardware.

It can do lots of cool things like, allowing you to remotely power up and down the server, but this presentation is about it's monitoring capabilities.

MCP DRAC Hardware Alert

Priority: 3 - Moderate
Configuration item: <server DNS name>
Assignment group: MCP Platform Services
Assigned to:

Description: System Host Name: <server name>
Event Message: The chassis is open while the power is off.
Date/Time: Wed, 11 Sep 2019 13:30:11 -0700
Severity: Critical

Detailed Description: The chassis is open while the power is off. System security may have been comprised.
Recommended Action: Close the chassis and verify hardware inventory. Check system logs.
Message ID: SEC0033

System Model: PowerEdge R730
Service Tag: JYDTOM2
Power State: OFF
System Location: Slot 1 (2 U)

You may recall this from my presentation on Monday

We set up iDRAC monitoring because our CSS machines are not monitored by Unisys.

We want to know things like if the fan is failing, or any other hardware component, so we can failover to our DR system, and get the prod system repaired.

Earlier this month we were upgrading our network cards on a server at a remote data center, and in the middle of the upgrade we got an incident task to work.

What?

It turns out the iDRAC noticed that someone had pulled the skins off our machine while it was powered down, and was mucking with the hardware.

That sounded like a security problem.

I'll show you how to do this on Wednesday.

It's getting warm in here

Description: System Host Name: PUTUTOWIN

Event Message: The system board Inlet temperature is greater than the upper critical threshold.

Date/Time: Wed, 26 Jun 2019 09:34:39 -0700

Severity: Critical

Detailed Description: Ambient air temperature is too warm or one or more fans may have failed.

Recommended Action: Check system operating environment and review event log for fan failures.

Message ID: TMP0103

System Model: PowerEdge R730

Service Tag: JYDT0M2

Power State: ON

System Location: Slot 1 (2 U)

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If a fan goes out on your server, and no one is there to here it, does your server still burn up?

You bet it does!

The event tells you the symptom – inlet temperature is too high

Probable cause – one of your fans may have failed

What to do about it

My network card's a little flakey

Description: System Host Name: PUTUTOWIN

Event Message: The FC Slot 2 port 2 link is not functioning either because the FC cable is not connected or the FC device is not functioning.

Date/Time: Wed, 18 Sep 2019 06:56:47 -0700

Severity: Warning

Detailed Description: The FC controller port link identified in the message is not functioning either because the FC cable is not connected or the FC device is not functioning.

Recommended Action: Do the following: 1) Make sure that the FC port is enabled. 2) Make sure the Activity/Speed LEDs are lit if the physical port has LEDs. 3) Check the FC cable and FC cable connections for proper installation. 4) Check that the attached FC switch is functioning.

Message ID: FC102

System Model: PowerEdge R730

Service Tag: JYDT0M2

Power State: ON

Operating System: Microsoft Windows Server 2012 R2, Standard x64 Edition

System Location: Slot 1 (2 U)

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Email triggers Service Now incident

* Short description ?

MCP DRAC hardware alert

Number

ITASK1206169

State

Closed Complete

Configuration item ?

pututo.u.washington.edu

Priority ?

3 - Moderate

Location ?

Template

Parent

INC1374691

* Assignment group ?

MCP Platform Services

Assigned to ?

Work Notes List ?

Disable notifications

Oncall Rota ?

mdss_mcp_oncall

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We have our SMTP server set up to map emails from the DRAC to our Service Now instance.

It uses the service tag to determine the ITIL CI.

A give CI will have a specific default priority.

In this case the CI is not a production server, so the priority is 3, which tells Service now we just need an email for this one.

If it is a more urgent priority, we would have the on call rotation notified.

Give your DRAC an IP address and DNS name.

The screenshot shows the Dell iDRAC configuration interface. The left sidebar contains navigation links: System, Overview, Setup, iDRAC Settings, User Authentication, and Hardware. The main content area is titled 'Network' and includes sections for 'Common Settings', 'Auto Config', and 'iDRAC Settings'. A red box highlights the 'Common Settings' section, which contains the following fields:

Attribute	Value
Register iDRAC on DNS	<input checked="" type="checkbox"/>
iDRAC iDRAC Name	<input type="text" value="iDRACName"/>
Auto Config Domain Name	<input type="text" value="iDRACName.com"/>
Static iDRAC Ethernet Name	<input type="text" value="iDRACName.com"/>

Below the 'Common Settings' section is the 'Auto Config' section, which includes a table with the following data:

Attribute	Value
Enable DHCP Provisioning	<input checked="" type="checkbox"/>

The 'iDRAC Settings' section includes a table with the following data:

Attribute	Value
iDRAC Enable	<input checked="" type="checkbox"/>
Static IP Address	<input type="text" value="10.14.178.123"/>
Static Gateway	<input type="text" value="10.14.178.123"/>
Static Subnet Mask	<input type="text" value="255.255.255.0"/>
Use DHCP to obtain DNS server addresses	<input checked="" type="checkbox"/>


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So, how do you do it?


You configure your iDRAC from the BIOS, typically when you first install your server.

Give it a DNS name and IP configuration

Login to your DRAC HTTPS://10.18.178.144/login.htm



Integrated Dell Remote
Access Controller 8 Enterprise

Login 

PUTUTOWIN-RM | PowerEdge R730
Type the Username and Password and click Submit.

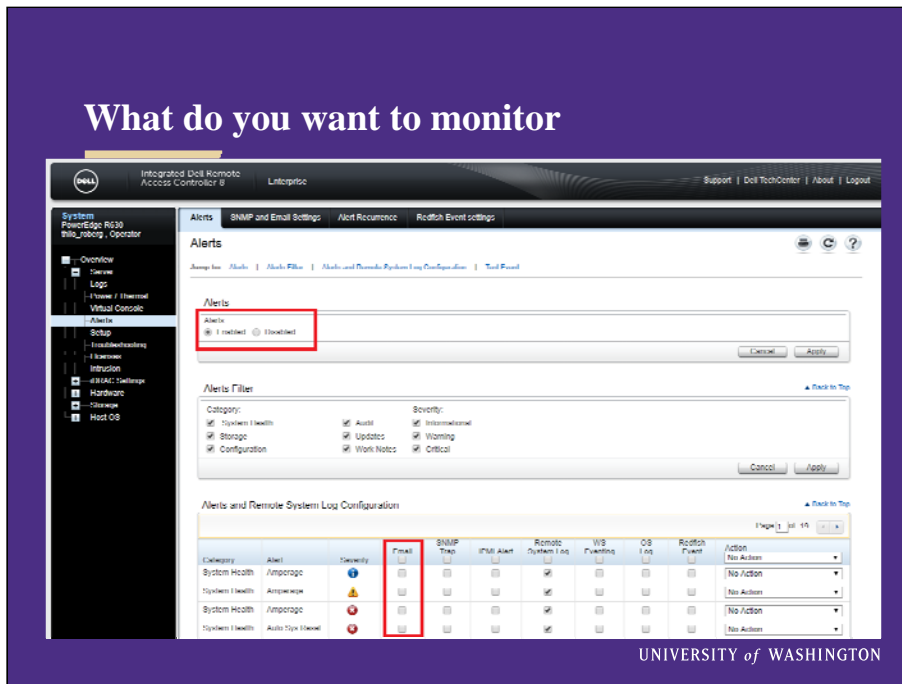
Username: Password:

Domain:

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Connect to your DRAC from a browser

What do you want to monitor



A user can monitor for events related to all major hardware components such as power supplies, fans, RAID cards, as well as environmental factors like air and CPU temperatures. A System event Log (SEL) keeps accurate historical records of the events, allowing an administrator to spot recurring patterns and take action before a failure occurs. You can even configure it to tell you when you need to take action.

Within the Alert section of the iDRACs of the MCP systems there are over 150 categories of alerts that can be selected to be reported on.

Check the ones you want to send you an email.

There are other cool interfaces like SNMP, IPMI, and assorted logging options

You can also tell it to reboot, power cycle, or shutdown if one of these events happens.

Tell it where to send the email and what SMTP server to use

The screenshot shows the Dell iDRAC web interface. The left sidebar contains a navigation menu with options like Overview, Settings, Power/Thermal, Virtual Console, Alerts, and iDRAC Settings. The main content area is titled 'Alerts' and 'SMTP and Email Settings'. It features a table for 'Destination Email Addresses' with columns for 'Email Alert Number', 'State', 'Destination Email Address', and 'Send Email'. The first row, 'Email Alert 1', is selected, and its 'Destination Email Address' field contains 'email@address.xyz'. Below this table is the 'SMTP (E-mail) Server Address Settings' section, which includes fields for 'SMTP (Email) Server IP Address or FQDN / DNS Name', 'Username', 'Password', and 'SMTP Port Number' (set to 25). Red boxes highlight the 'Destination Email Address' field and the 'SMTP (E-mail) Server Address Settings' section.

Email Alert Number	State	Destination Email Address	Send Email
Email Alert 1	<input checked="" type="checkbox"/>	email@address.xyz	Send
Email Alert 2	<input type="checkbox"/>		Send
Email Alert 3	<input type="checkbox"/>		Send
Email Alert 4	<input type="checkbox"/>		Send

SMTP (E-mail) Server Address Settings

Attribute	Value
SMTP (Email) Server IP Address or FQDN / DNS Name	192.168.0.1
Username	
Password	
SMTP Port Number	25

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That's it. There is a test interface at the bottom you can use to trigger an email.

Complete How To At:

<https://www.dell.com/support/article/us/en/04/sln309388/dell-idrac-how-to-configure-the-email-notifications-for-system-alerts-on-idrac-7-8-and-9?lang=en>