

# iDRAC9 Telemetry Enhancements: Customizable Reports and Multiple Consoles

## Tech Note by

*Kim Kinahan  
Michael Brown  
Doug Iler*

## Summary

iDRAC9 telemetry enhancements include the ability to create user-defined custom reports and balance volume of streamed telemetry across more than one collection point.

iDRAC9 data streamed to an external ingress collector, from which tools like Splunk or ELK Stack can be used to aggregate data, examine trends, issue alerts, and generate timely reports.

## Introduction

The iDRAC9 firmware v4.40.10 in conjunction with the Datacenter license, now includes feature enhancements to the telemetry streaming function. These include the ability to create user-defined custom reports and direct data streams to more than one collection point.

Embedded with every PowerEdge server, the integrated Dell Remote Access Controller 9 (iDRAC9) enables secure and remote server access, regardless of operating system state or presence of hypervisor, and makes possible a range of server management tasks, including configuration, OS deployment, firmware updates, health monitoring and maintenance.

The iDRAC9, while providing out-of-band and agent-free systems management, connects to all critical server component and collects over 180 server metrics in near-real-time. These metrics include granular, time-stamped data for critical functions such as processor and memory utilization, network card, power, thermal, memory, and graphics processing, and more; they enable consistency and scaling as infrastructure needs grow.

iDRAC9 data is streamed to an external ingress collector, from which tools like [Splunk](#) or [ELK Stack](#) can be used to aggregate data, examine trends, issue alerts, and generate timely reports. Data collected from iDRAC9 by server administrators can be used to make better data center performance decisions and prioritize proactive maintenance.

## Customized Reporting

Building on prior capabilities, which included exposed time-series sensor data and JSON-enabled streaming telemetry data, version 4.40.10 of the iDRAC9 firmware has moved the DMTF Redfish schema-based

reporting beyond default reports and values, to include the creation of user-defined custom reports. This flexibility helps to potentially cut down the size of data sets and reports, whether by changing the collection time interval, using additional aggregation functions within reports (beyond average/maximum/minimum), eliminating unwanted metrics, using 24 custom report definitions (in addition to 24 existing report definitions), or limiting report content to a subset of the maximum 2,400 values per report.

## Support for Multiple Consoles

New iDRAC9 features also include, in response to customer feedback, the ability to send iDRAC9-streamed telemetry from one or many Dell EMC PowerEdge servers, to more than one collection console, for use by one or many organizations charged with overseeing data center operations. A total of eight separate collection consoles can be specified, which allows for reducing the rate and volume of telemetry data flowing to any one particular collector, and avoiding any “thundering herd” effect when formerly thousands of iDRAC9 servers could potentially fire off data at a particular collector on a non-randomized schedule. This feature improvement also allows for variations in data sampling rates and reporting schedules, tied to custom reports that drive requirements for sampling interval, metrics collected, and configuration parameters set. Through better distribution of streamed telemetry at the collector level, the greater the number of iDRAC9 servers that can be supported.

All changes to all reports are normally global, regardless of whether a report is a legacy report or a custom report, as all collectors see the changes, regardless of which particular collector initiated the change. By using specific report definition names, however, a particular collector can lay claim to that particular report definition.

New reports are created using functions supported by HTTP, including PATCH, POST, PUT, and DELETE, whereby a web server accepts enclosed data or a request to make partial changes or deletions to an existing resource. ‘Pre-canned’ reports included with iDRAC9 can be changed using the PATCH function. They cannot be deleted, however, using DELETE, as this merely resets the report back to factory default values. Standard DMTF Redfish semantics apply to all of these operations, as does Report URI, used for monitoring security policies. Report definitions can be deployed using the Server Configuration Profile feature (SCP). SCP enables changes to configuration, firmware and redeployment of the operating system through a single XML or JSON template; The SCP template can then be applied to multiple servers.

## Conclusion

As data centers grow in importance, servers proliferate, and differences between poorly-run and well-run facilities become readily apparent and thus consequential, iDRAC9, standard with all PowerEdge servers, provides an effective means of monitoring, analyzing, and acting upon data streamed from 180 or more monitored server performance indicators. The addition of feature enhancements to the latest iDRAC release make it now possible to create custom reports and balance the volume of streamed telemetry across more than one collection point.

These tools and more underscore how Dell EMC PowerEdge servers are compelling compute solutions. The inclusion of custom reports and support for multiple collectors, ease-of-monitoring, managing, updating, troubleshooting, and remediation of server performance, make for seamless and integrated server data collection, a key enabler of any well-run datacenter.



**PowerEdge DfD Repository**  
For more technical learning



**Contact Us**  
For feedback and requests



**Follow Us**  
For PowerEdge news