

# Sensors for Rules

## in the enCloud™ Management System

Encore Networks' cloud management system, enCloud™, provides management of connected Encore devices via a web portal. The enCloud management system supports Encore Networks' EN™ Routers (EN-400™, EN-1000™, EN-2000™, EN-3000™, and EN-4000™).

Rules can be added by a tier 1 user with administrator access or a tier 2 user with administrator access at the tier 2 customer account level. [Table 5-1](#) lists the sensors (parameters) used for enCloud rules.

**Note:** To use enCloud rules, see [Developing Rules](#).<sup>1</sup>

In the current release, the scope of a rule is at the tier 2 customer level—that is, a rule is developed at the customer account level, and the rule tests its condition on devices within that customer account. Rules that apply to a tier 1 account's entire customer base and rules that apply only to a specific tier 3 group cannot be created.

**Note:** [Table 5-1](#) is a non-exhaustive example of a sensor list. Sensor names in [Table 5-1](#) are spelled and capitalized as they appear in some enCloud sensor lists. The sensor names are listed here in alphabetic order. Some hardware profiles may list sensors in a different order. Values for sensors are those reported by the EN™ device, unless otherwise indicated.

Table 5-1. Sensors for enCloud Rules (Sheet 1 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
cell.APN	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The cellular access point name (APN) value		

1. See the [enCloud™ Management System Document Set](#) for a list of documents with information to set up your enCloud account.

Table 5-1. Sensors for enCloud Rules (Sheet 2 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
cell.IMEI	EN400	The cellular IMEI value		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
cell.ip	EN400	The IP address that the cellular network has assigned to the device's cellular interface		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
cell.MDN	EN400	The cellular telephone number (Mobile Directory Number)		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
cell.mode	EN400	The cellular mode in use	LTE	
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
Cell.Monthly Total Data	EN400	The total data used by the cellular port, as calculated by enCloud for the current billing cycle	bytes	Use this field for rules monitoring cell data usage.
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
cell.operator	EN400	The cellular wireless carrier (if known)		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
Cell.RSRP	EN400	The cellular Reference Signal Received Power (RSRP) reading <b>Note:</b> This sensor applies only to LTE networks.	dBm	
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			

Table 5-1. Sensors for enCloud Rules (Sheet 3 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
Cell.RSRQ	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The cellular Reference Signal Received Quality (RSRQ) reading <b>Note:</b> This sensor applies only to LTE networks.	dB	
cell.rx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes received through the cellular wireless connection since the device's last reboot	bytes	
cell.signal_strength	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	Signal strength (RSSI, received signal strength indication) of the primary cellular connection	dBm	
cell.SIM	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The cellular SIM ID		
Cell.SNR	EN2000 EN2000DS EN3000 EN4000	The cellular connection's signal-to-noise ratio	dB	
cell.status	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	Whether the cellular interface on the EN™ device is up or down; displayed as a green circle ( <b>on line</b> ) or red x ( <b>off line</b> )	● (green circle) or ✘ (red x)	
cell.tx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes transmitted through the cellular wireless connection since the device's last reboot	bytes	

Table 5-1. Sensors for enCloud Rules (Sheet 4 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
cell.uptime	EN400	The uptime of the cellular interface	seconds	
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
Configuration	EN400	The name of the configuration currently used by the device		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
DEVICE	User Activity	Indicates whether a user's action has affected a device.	Create Edit Delete Multiple Delete Activate Deactivate	
ERROR_CODE	EN400	The code for the last error reported by the device		This is closely related to the <b>Most Recent Error</b> field.
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
FEED	EN400	A programmable message from the device		
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			
GROUP	User Activity	Indicates whether a user's action has affected a group.	Create Edit Delete	
interval	EN400	The device's check-in interval—that is, how often the device sends data to the enCloud platform	seconds	
	EN1000			
	EN2000			
	EN2000DS			
	EN3000			
	EN4000			

Table 5-1. Sensors for enCloud Rules (Sheet 5 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
lan.ip	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The LAN IP address		
lan.rx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes received through the LAN port since the device's last reboot	bytes	
lan.status	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The status of the LAN Port (on line or off line); displayed as a green circle ( <b>on line</b> ) or red x ( <b>off line</b> )	● (green circle) or ✘ (red x)	The status is <b>off line</b> only if the port is explicitly disabled by a device task, not if the cable is merely unplugged.
lan.tx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes transmitted through the LAN port since the device's last reboot	bytes	
lan.uptime	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The uptime of the LAN port	seconds	
Most recent Error	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	This field contains a string returned by the EN™ device, describing the last error condition reported by the device.		This is closely related to the <b>Error Code</b> field.
OFFLINE	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	Whether the device is on line ( <b>green</b> ) or off line ( <b>red</b> ). If a device does not check in at the expected interval (as determined by the interval field), it is off line. The next time it checks in, it will be on line.	● (green circle) or ✘ (red x)	This condition is either true or false.

Table 5-1. Sensors for enCloud Rules (Sheet 6 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
PROFILE	User Activity	Indicates whether a user's action has affected a hardware (HW) profile.	Create Edit Delete Multiple Delete	
RULE	User Activity	Indicates whether a user's action has affected a rule.	Create Edit Delete Multiple Delete	
system.firmware	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The firmware version present on the EN™ device		
system.mode	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The Mode of Operation of the EN™ device	Cell Failover Cell Router Cell Passthrough VRRP Back-Up	
system.model	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The hardware (HW) profile	EN1000 EN2000 EN4000	
system.name	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The name of the device		
system.online	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The interface the EN™ device is using to access the internet	WAN Cell	
system.UID	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	System UID (the device's LAN MAC address)		

Table 5-1. Sensors for enCloud Rules (Sheet 7 of 7)

Sensor	Monitored Entity	Description or Definition	Default Unit of Measurement	Comment
System.uptime	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The total reported uptime (time since last reboot) of the EN™ device	seconds	
USE CASE	User Activity	Indicates whether a user's action has affected a tier 3 group.	Create Edit Delete	
USER	User Activity	Indicates whether a user's action has affected another user.	Create Edit Delete Multiple Delete Log In	
wan.ip	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The WAN IP address		
wan.rx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes received through the WAN port since the device's last reboot	bytes	
wan.status	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The status of the WAN Port (on line or off line); displayed as a green circle ( <b>on line</b> ) or red x ( <b>off line</b> )	● (green circle) or ✘ (red x)	
wan.tx_bytes	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The number of bytes transmitted through the WAN port since the device's last reboot	bytes	
wan.uptime	EN400 EN1000 EN2000 EN2000DS EN3000 EN4000	The uptime of the WAN Port	seconds	