

Application Notes

NEXEDGE® Repeater Control

Scenario

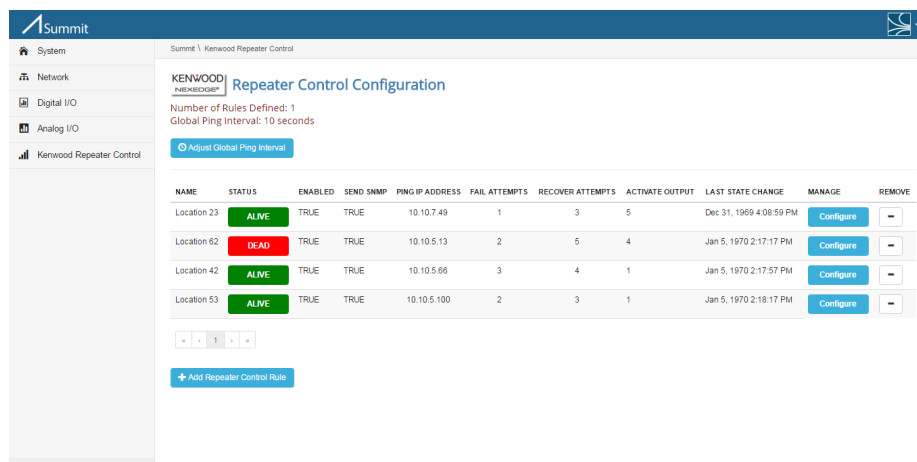
Kenwood trunked radios have, as a network option, an IP link to each of the trunked sites for wide area roaming and calling capabilities. When a repeater site experiences poor IP connectivity, the group of radios that are registered on the site can become stranded and may be unable to talk to the rest of the trunking system. They may remain registered on the site with poor connectivity, even though there are other sites available that they could register on this scenario may occur, until the connectivity is re-established, or the repeater is shut down to allow them to register on another site. Shutting down the repeater can be done manually, by pushing a button, or automatically by using TASC Systems new intelligent remote terminal unit (RTU), the Summit.

TASC Systems Solution

The Summit is an advanced remote platform designed to easily integrate to a wide-variety of operation management systems including Apex software. It provides intelligent sensor processing, filtering, logic control and logging. The Summit provides support for a broad-range of sensors and devices, with 100 digital and analog input/output ports. The Summit has been designed for easy deployment.

The Summit's powerful Crest software, can also incorporate application-specific software modules. TASC Systems and their partners have created a Crest application module to ameliorate issues of repeaters with failing IP connections. Crest's "NEXEDGE® Repeater Control" module continuously monitors the IP network used to connect that site, and if there is a detected drop in connectivity, the Summit can automatically remove the repeater from the network, freeing the radios to register with other repeaters.

The status of the network is determined by having the mSummit continuously ping out to a known node - such as the host router for the link network used by the radios. This provides an indication of when a stable connection is and is not available.



Summit \ Kenwood Repeater Control

KENWOOD Repeater Control Configuration

Number of Rules Defined: 1
Global Ping Interval: 10 seconds

Adjust Global Ping Interval

NAME	STATUS	ENABLED	SEND SNMP	PING IP ADDRESS	FAIL ATTEMPTS	RECOVER ATTEMPTS	ACTIVATE OUTPUT	LAST STATE CHANGE	MANAGE	REMOVE
Location 23	ALIVE	TRUE	TRUE	10.10.7.49	1	3	5	Dec 31, 1969 4:08:59 PM	Configure	-
Location 62	DEAD	TRUE	TRUE	10.10.5.13	2	5	4	Jan 5, 1970 2:17:17 PM	Configure	-
Location 42	ALIVE	TRUE	TRUE	10.10.5.66	3	4	1	Jan 5, 1970 2:17:57 PM	Configure	-
Location 53	ALIVE	TRUE	TRUE	10.10.5.100	2	3	1	Jan 5, 1970 2:18:17 PM	Configure	-

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Add Repeater Control Rule

The Summit can be also programmed to automatically shut down the radio upon detection of failed pings. Conversely, once connectivity is restored to an acceptable level, the Summit will automatically turn the radio back on so that the radios may register on it again. The Summit's convenient web interface allows users to easily configure the number of pings to failure, the number of pings to recovery and time between each ping.