

CASE STUDY

PIPELINE UTILITY

THE STORY

A multinational pipeline enterprise could not stop for COVID-19 lockdowns. That said, essential personnel found themselves working from home, remotely – decidedly outside of the radio coverage area. In order to keep everything flowing smoothly, personnel needed to be able to access the company's radio system remotely.

INDUSTRY

Utility

APPLICATION

Radio over IP
LMR Coverage Expansion

THE CHALLENGE

The COVID-19 lockdowns and remote working mandates meant that many previously on-site workers found themselves outside the company's radio network coverage area. It was essential to business and operations to expand connectivity to the radio network so that remote workers could regain that radio access.

Fortunately, to meet the pre-pandemic logistical challenges of running a pipeline successfully, the company had already integrated a JPS RoIP (Radio over IP) network extension solution in a multicast implementation over their company network. What does that mean? That means that audio transmitted by a radio over the air is received by a RoIP gateway, in this case an NXU-2A, and digitized or converted to RoIP so it can be sent over an IP network. Some users will then set up another NXU to reconvert the RoIP audio back to radio audio for another radio system, but in this case the initial conversion to RoIP allows this customer to send the RoIP audio to other device types, such as Push-to-Talk over Cellular (PoC). By leveraging widely available cellular broadband coverage and/or WiFi, the customer could seamlessly provide remote employees with access to radio audio.

STORY

In the age of COVID-19, the pipeline's essential personnel found themselves working from home, remotely – decidedly outside of the radio coverage area.



Challenge

Expand radio coverage to remote working locations.



Solution

Deploy JPS NXU-2As and adopt a PoC application to communicate remotely.



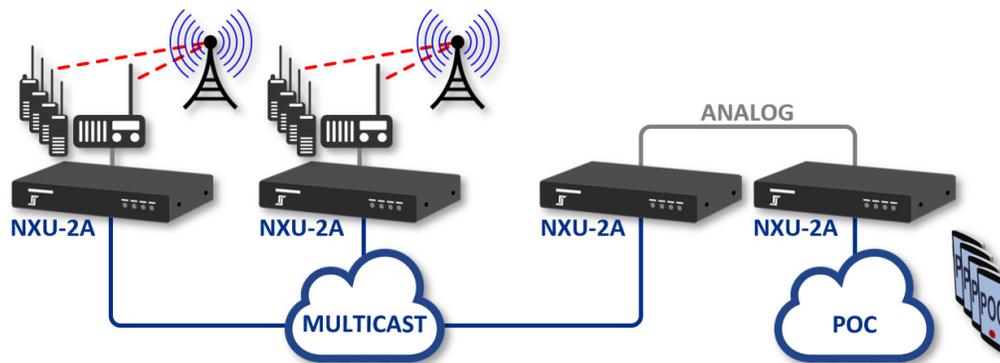
Benefits

Provide effective and economical solution, agnostic to radio make/model.

THE SOLUTION

JPS engineers developed the RoIP protocol and the NXU to live up to their names - to extend a communications network by sending radio audio over IP. In fact, this customer had already been using both for years before COVID-19. In light of the pandemic, it was just a matter of retooling a few things. Namely, the NXUs would be used to provide remote access to the radio systems using iOS, Android, and PC clients running the PoC application.

In addition to the fairly straightforward matter of providing a gateway between individuals using PoC devices and this customer's Land Mobile Radio (LMR) system, a few more tweaks were necessary to provide the complete access this utility company needed. While control stations are normally used for LMR connectivity, that alone was not an option for an audio integration into this customer's NXU multicast network. This did not pose any additional problems, however, since all audio was already being converted to and from RoIP and running through NXU gateways. All that needed to be done was to create the appropriate radio talkgroups on the JPS VIA application to allow essential personnel to access their radio system audio, as well as the other communications capabilities that VIA provides.



THE RESULT

After successful testing, the solution was implemented. This was the first implementation using multicast JPS RoIP gateways as the audio source for a PoC application. It has proven such a success that the customer is still using it even after lockdowns were lifted.



KEY BENEFITS



Effective and economical radio system agnostic solution.



Remote access when physical access is limited.



Effective productivity and instant communications with remote workers.