

On 11/29/2020 at approximately 1337 hours, we became aware of a South Host outage. The preliminary diagnosis of the outage was a conflict between the A and B sides of the South Host which was resulting in a battle for control between the two servers. This conflict resulted in PSAPs on the South Host being unable to answer calls in their PSAPs. ESI-net contingency and overflow routing policies continued to function and calls were delivered to North Host PSAPs for those PSAPs who had initiated overflow policy to a North Host PSAP via an MOA. The North Host continued to function as expected throughout the pendency of this event. Because South Host PSAPs remained logged into the South Host, overflow routing policy was followed, resulting in calls being presented for 3 ring cycles on 3 individual 911 voice paths before the call was overflowed to the first overflow route. The call would then be presented to that PSAP and the same process followed. Because the majority of the first and second overflow routes were South Host PSAPs, long ring times were experienced resulting in multiple abandoned calls being created. ESI-net continued to function as expected and text remained up and functional for the vast majority of the PSAPs throughout the incident.

A root cause analysis was performed in regard to this event. The results of that analysis determined that an IP address that was mistakenly assigned when a North Host PSAP was brought onto the system was creating DNS queries to be sent to the South Host that the host could not resolve. The South Host was configured by Motorola to pass this query through an Intrado firewall to an Intrado DNS server. This allowed the DNS queries to be resolved from the time that the misassigned IP address was put into service until the time of the service impacting event. At that time, the Intrado firewall went down and the DNS queries could no longer be passed from the South Host to the Intrado DNS server. This resulted in the two sides of the Vesta Host to begin passing the DNS query back and forth in a loop. This loop resulted in the Host suffering operational malfunction. Once the misassigned IP address was corrected and alarms were cleared, service returned to normal at approximately 1640 hours.

Corrective actions taken to mitigate reoccurrence of this event included:

1. Review of all assigned IP addresses within the network to ensure that no other misassignments existed.
2. Failed Intrado firewall was replaced.
3. Motorola identified a software fix to mitigate the looping behavior noted between the two sides of the Vesta Host.