# TeamSENTINEL Digital RF Server

Digital RF servers provide a platform to manage and access previously recorded wideband digital RF IQ data files. These wideband IQ files can be imported from a variety of RF sources, including teamSENTINEL sensors, or virtually any wideband recording system that can output industry standard IQ wideband data files.

Wideband IQ files are "ingested" into the teamSENTINEL Digital RF server by specifying a teamSENTINEL file type or by presenting a non-SENTINEL wideband IQ file to the system GUIs and describing input parameters such as sample-rate, bandwidth, time of interest, data type, etc. The original time and frequency references of the source IQ data is maintained at the level of precision as it was first recorded. When the necessary TNG resources are available, data ingested from TNG-compliant sensors can be used with other recorded TNG-compliant sensor data to potentially compute geolocation results for selected SOIs post-facto.

Once a wideband data file has been ingested into teamSENTINEL, it can be presented to the teamSOIGNE operator community as a teamSENTINEL static sensor (not actively recording new data). Operators connected to these static sensors can then review and process the previously recorded wideband IQ data using the same teamSOIGNE signal analysis GUIs used to access real-time teamSENTINEL sensors. As operators identify and characterize energy of interest, the metadata produced is automatically databased exactly as it would be on a live teamSENTINEL sensor.

Figure 16: teamSENTINEL Digital RF Server
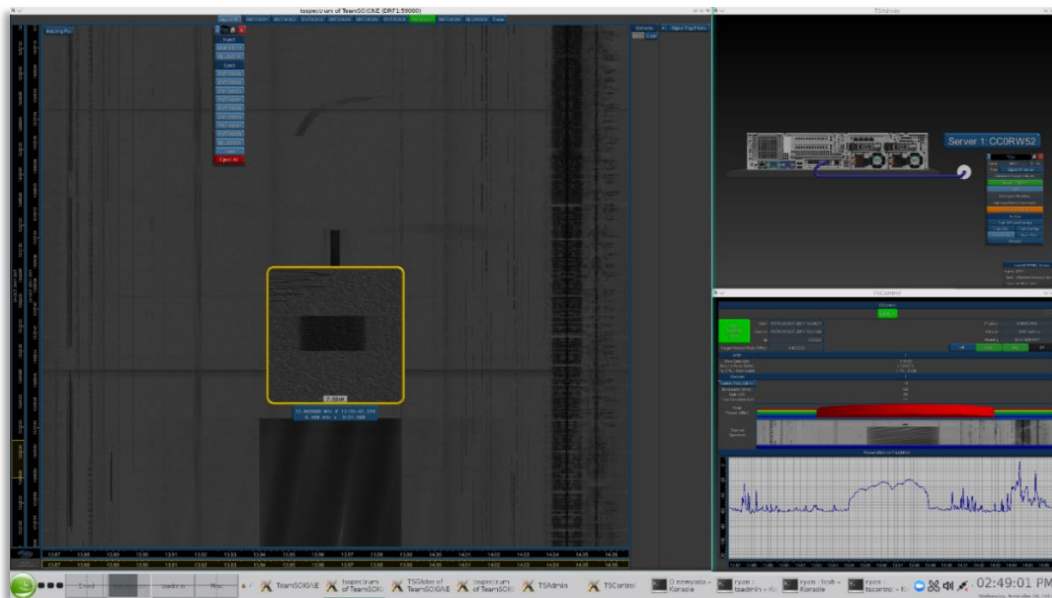
This type of sensor can be used to ingest, review and analyze snapshots of wideband data taken from any time or place in the world. Once loaded, analysts have as much time as they need to exploit the recorded data without the concern that the data will be overwritten.

For training classroom scenarios, data taken from a variety of RF environments can be completely characterized and incorporated into a customized curriculum. Students can then be assigned to find and identify signals that are unique to a specific RF environment prior to assignment to the live RF theater.