Intelligence, Surveillance and Reconnaissance (ISR) Processing and Exploitation is a sensor-agnostic cloud architecture that supports all aspects of imagery and intelligence analysis. Developed by Radiant Solutions to support all users regardless of available bandwidth, ISR Processing and Exploitation’s intelligent design co-locates computational resources with sensor data and uses low-latency network fabrics to deliver advanced SAR GEOINT processing and dissemination via a web browser.

**Features & Benefits**

- Cloud-native approach delivers near-real time access to GEOINT products to low-bandwidth users
- Sensor-agnostic architecture supports source data from any SAR sensor in SICD format
- Maximal use of AWS/C2S built-in components minimizes the amount of customer code and simplifies maintenance
- Enables future architectural evolution and seamless integration of new AWS/C2S capabilities (ECS, Batch, Lambda, etc.) by loosely coupling system-specific processing and workflow details
- Dockerized geo-processing workflow facilitates rapid deployment of emerging third-party algorithms
- Intelligent algorithms include convolutional neural networks (CNN) for automatic target recognition (ATR)
- Event-driven Notification Service sends alerts based on user-defined preferences for data and/or products

**DYNAMIC SCALING**

ISR Processing and Exploitation dynamically allocates, configures and scales computational resources based on current system loading and performance needs. Harvesting of real-time CloudWatch metrics enables ISR Processing and Exploitation to achieve desired processing times tailored for each mission need.

**COMMERCIAL BEST PRACTICES**

ISR Processing and Exploitation maximizes use of commercial tools and services, which minimizes the amount of custom code while also making the system easy to maintain.

- AWS CloudFormation, CloudWatch, Auto-scaling, Simple Workflow, S3 direct I/O
- Docker, ESRI ArcGIS Image Servers, MongoDB

![Low-latency SAR GEOINT processing, exploitation and dissemination](image-url)
ISR Processing and Exploitation Search ® Discovery service via NGA’s Map of the World

User-defined observation creation enables geo-location and mensuration

Notifications alert users to areas and products of interest

For more information about ISR Processing and Exploitation, contact: capabilities@radiantsolutions.com