NOAA/NESDIS ESPDS: Enterprise Product Generation & Distribution for NESDIS

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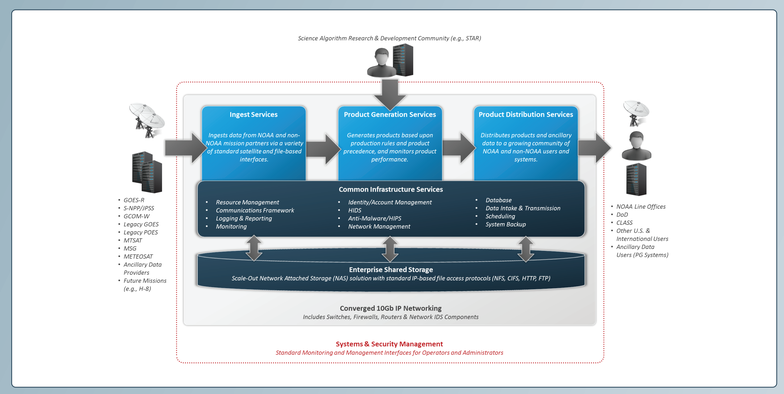
What Is ESPDS?

- Environmental Satellite Processing and Distribution System
- Developed by the NESDIS Office of Satellite Ground Services (OSGS)
- Modernizes the ***Product Generation (PG), Product Distribution (PD), and Infrastructure (INF)*** segments of the NESDIS Environmental Satellite Processing Center (ESPC)
- Provides a single ***enterprise*** solution that meets the needs of existing (legacy), GOES-R, S-NPP/JPSS, and GCOM-W, with ***scalability*** to meet future environmental satellite needs (e.g., H-8, Sentinel)
- Provides environmental satellite data and services to a growing user community including NOAA Line Offices, DoD, and other U.S. and International users

ESPDS Enterprise Architecture



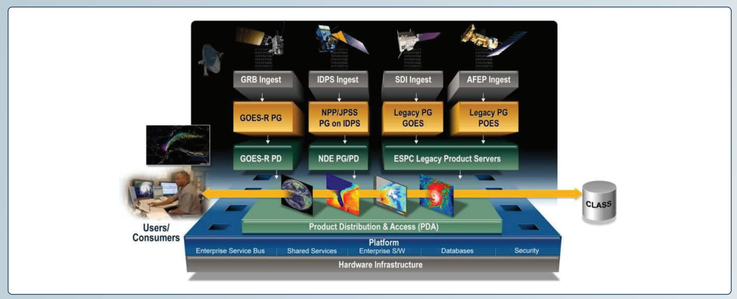
- ESPDS provides an enterprise Service Oriented Architecture (SOA), where multiple satellite missions leverage common infrastructure and processing services, ***reducing redundancy and costs***
- Enterprise User Portal provides ***user self-service*** subscription and search capabilities across ***all NESDIS products***
- Common Infrastructure Services and Enterprise Shared Storage reduce redundant, recurring costs and ***simplify operations, maintenance, monitoring, and security***

To learn more, see the upcoming oral presentation:

J12.3 NOAA/NESDIS ESPDS:
Transition of Science Algorithms into Enterprise Product Generation Operations

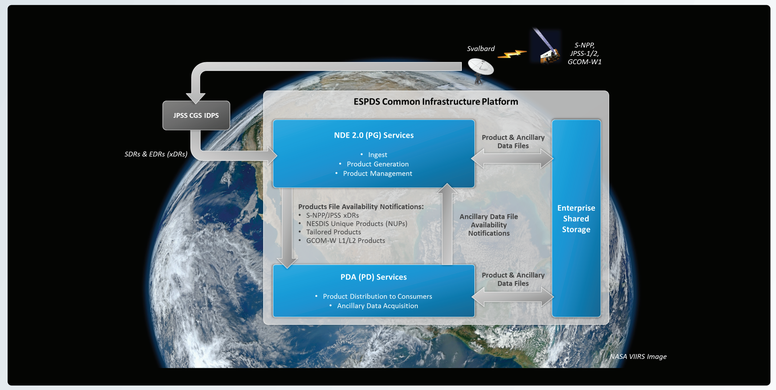
Thursday, 14 January 2016, 2:00PM | Room 252/254

NOAA Product Distribution & Access (PDA)



- Data agnostic collection of enterprise product distribution services within the ESPDS common infrastructure platform
- ***Supports the enormous increase in data volumes*** while continuing support for legacy interfaces
- ***Streamlines data flow by centralizing distribution***
- ***Extensible*** to future interfaces and missions, and ***scalable*** to accommodate future data volumes without redesign
- Supports ***tailoring*** of data and products ***on a per-user/subscription basis***
- Provides ***User Self-Service*** for access to data and products, ***enabling users to acquire just the data they need***

NOAA Product Generation (PG)



- NOAA Data Exploitation (NDE) 2.0 provides an Enterprise Product Generation (PG) framework implemented in a SOA within the ESPDS common infrastructure platform
- Facilitates research to operations for new and updated algorithms
- Data agnostic, execute algorithms for any platform/instrument (***"algorithm as a service" concept***)
- Delivered Algorithm Package (DAP) provides a ***standard algorithm packaging specification*** for "plug-and-play" algorithm integration in Enterprise PG
- ***Established PG solution*** for S-NPP (***operational since 2014***), JPSS-1/2, GCOM-W1, and can be leveraged for other NOAA or non-NOAA missions

Science Algorithm Integration Process