ESGF Earth System Grid Federation	***Partnerships for development of next-generation software for distributed access and analysis of simulated, observed, and reanalysis data from the climate and weather communities.***

Registration: http://www.cvent.com/events/earth-system-grid-federation-esgf-conference-2015/event-summary-89df663c495a4c03b52523abc05df8be.aspx

Conference venue: Marriott Hotel, 350 Calle Principal, Monterey, California 93940
Remote participation: Indicate on registration form that you wish to participate remotely and an email will be sent with information you need to join Webinar.
Date: Dec 8, 2015 to Dec 11, 2015—8:00 AM - 6:00 PM PST
Webinar Logistics: Please register for 5th Annual Earth System Grid Federation Conference on December 8, 9, 10, 11, 2015 8:00 AM PST at:

- Tuesday: acme-gotomeeting1@lists.llnl.gov
- Wednesday – Friday: acme-gotomeeting2@lists.llnl.gov

After registering, you will receive a confirmation email containing information about joining the webinar.

Joint DOE, NASA, NOAA, NSF, IS-ENES, and ANU/NCI Conference

Time	Topic
Tuesday, December 8, 2015	
08:00 – 08:30	Continental breakfast and meet and greet
08:30 – 08:40	Welcome, introduction, and safety (Dean N. Williams) Conference charge (Dean N. Williams) • How conference attendees are to contribute to the conference's final report • Framing of the ESGF F2F Annual Meeting
08:40 – 08:45	DOE opening comments (Justin Hnilo – Program Manager for DOE BER CESD's Data and Informatics)
08:45 – 09:00	Overview of the Conference Agenda (Dean N. Williams)
Science Drivers Project Requirements and Feedback	
9:00– 11:30	**Science Drivers** Session Discussion Lead (Dean N. Williams)

	• Example use case requirements from each of the major supporting projects 1. WCRP CMIP and WGCM Infrastructure Panel (WIP) Requirement (Karl Taylor - DOE/LLNL) 2. DOE Accelerated Climate Modeling for Energy (Dave Bader - DOE/LLNL) 3. Obs4MIPs (Peter Gleckler – DOE/LLNL) 4. IS-ENES and CORDEX (Sébastien Denvil - ENES/IPSL) 5. CREATE-IP (Jerry Potter - NASA/GSFC) • What are the key things that are difficult to do today and are impeding scientific progress or productivity? • What is your timeline for data production and distribution? • What is the estimated size of your distributed archive? • What are the administrative/sponsor requirements that arise from each project (basically metrics collection and reporting)? • Homework assignment before the conference is to convert all known science drivers to use cases • Must have abstracts for each presentation
11:30 – 12:00	**Science Driver Town Hall Discussion** Town Hall Panel: (Dave Bader, Sébastien Denvil, Peter Gleckler, Jay Hnilo, Tsengdar Lee, Jerry Potter, Karl Taylor) • What is working, what is not? • What are the key challenges that scientists encounter? • What data services would address the identified challenges? What exists already today? What do we still need? What are the key characteristics that these services need to have to be successful (i.e. integrated, easy to customize, etc.)? • What are the key impediments (on the data provider / service provider side) in delivering these services? • Which services should be developed with the highest priority and what would be their measurable impact on science?
12:00 – 13:30	**Lunch**
13:30 – 14:30	**Continue Science Driver Town Hall Discussion** Town Hall Panel: (Dave Bader, Sébastien Denvil, Peter Gleckler, Jay Hnilo, Tsengdar Lee, Jerry Potter, Karl Taylor)
14:30 – 15:30	**Required Data Center and Interoperable Services** Session Discussion Lead (Michael Lautenschlager) • Example use case requirements from each of the major supporting data centers 1. ANU/NCI - Ben Evans 2. ENES/DDC/DKRZ – Stephan Kindermann 3. DOE/PCMDI - Dean N. Williams 4. ENES/IPSL - Sebastien Devil 5. ENES/CEDA - Phil Kershaw • What are the key things that are difficult to do today and are impeding scientific progress or productivity? • What is your timeline for data production and distribution? • What is the estimated size of your distributed archive? • What (or which) projects do you support? • Scaling? For example, can we make our data access services such as TDS elastic so that they scale out to meet demand? • What about provision of hosted processing – be it cloud services, batch computing, or other deployed alongside data center archives? • What about mobility of workloads and data: how can new technologies like containers enable us port whole workloads and data between infrastructures? Linked to that there is a whole new area about how we can attach persistent identifiers and associate metadata to workloads and data to make them repeatable and allow them to be referenced and cited. • Homework assignment before the conference is to convert all known data center drivers and interoperable services to use cases

15:30 – 15:45	**Break**
15:45 – 16:15	**Continue Required Data Center and Interoperable Services** Session Discussion Lead (Michael Lautenschlager)
16:15 – 17:00	**Data Center Town Hall Discussion** Session Discussion Lead (Ben Evans) Town Hall Panel: (Ben Evans, Stephan Kindermann, Dean N. Williams, Sebastien Devil, Phil Kershaw) • Data integration and advanced metadata capabilities • Data and metadata collection and sharing capabilities • Data quality, uncertainty quantification & ancillary Information • Use of broader ontology for discovery and use of project data sets • Data discovery and access, data downloading and subsetting services and capabilities • Data preparation services and tools • Authentication and Security • Local and remote publication services • Local and remote catalog and search services, data transfer services • Human computer interface (i.e., User Interface, APIs, etc.) • Resource discovery and allocation services • Workflow services (link together scientific or project execution) • Computing services • Exploration services (includes analytics and visualization) • Identify key gaps, identify benefitting communities, and prioritize
17:00	**Adjourn Day 1**
Wednesday, December 9, 2015	
08:00 – 08:30	Continental breakfast and meeting and greet
08:30 – 10:00	**Advanced Computational Environments and Data Analytics** Session Discussion Lead (Daniel Duffy) 1. Overview of the CWT and target milestones (Daniel Duffy - NASA/GSFC) 2. WPS Overview and Demo (Charles Doutriaux - DOE/LLNL 3. Analytics as a Service Framework (Thomas Maxwell - NASA/GSFC) 4. Ophedia (Sandro Fiore - ENES/CMCC) 5. WPS Service and Back-end (Maarten Plieger - ENES/KNMI) • What are the key challenges that scientists encounter? • What capabilities would address the identified challenges? What exists already today? What do we still need? • What are the impediments for resource providers and software developers to provide these missing capabilities? • Which requirements need to be addressed with the highest priority and what would be their measurable impact on science? • Overall integration? • Define what are the key things that are difficult to do today and are impeding scientific progress or productivity • Homework assignment before the conference is to convert all known data center drivers to use cases

10.00 – 10:15	**Break**
10:15 – 12:00	**Computational Environments and Data Analytics Town Hall Discussion** Session Discussion Lead (Charles Doutriaux, Thomas Maxwell, Sandro Fiore, Maarten Plieger) • Define a scalable compute resource (clusters and HPCs) for projects' data analysis • Data analytical and visualization capabilities and services • Analysis services when multiple data sets are not co-located • Performance of model execution • Advanced networks as easy-to-use community resources • Provenance and workflow • Automation of steps for the computational work environment • Resource management, Installation and customer support • Identify key gaps, identify benefitting communities, and prioritize
12.30 – 13:30	**Lunch**
13:30 – 16:30	**ESGF Development for Data Centers and Interoperable Services** Session Discussion Lead (Luca Cinquini) ESGF working team report out on meeting projects' requirements; give work achieved over the past year; prioritized development; roadmap; needed resources for meeting goals; collaborations with other agencies; etc. • CoG User Interface Working Team (Cecelia Deluca and Sylvia Murphy - NOAA/ESRL) • Compute Working Team (Charles Doutriaux - DOE/LLNL; Daniel Duffy - NASA/GSFC) • Dashboard Working Team (Paola Nassisi - ENES/CMCC) • Data Transfer Working Team (Luckasz Lacinski (DOE/ANL; Rachana Ananthakrishnan-DOE/ANL) • Support Working Team (Matthew Harris - DOE/LLNL; Torsten Rathmann – ENES/DKRZ) • Identity Entitlement Access Team (Philp Kershaw - ENES/BADC; Rachana Ananthakrishnan-DOE/ANL) • Installation Working Team (Nicolas Carenton - ENES/IPSL) and Prashanth Dwarakanath - ENES/Liu) • International Climate Network working Group (Eli Dart and Mary Hester - DOE/ESnet) • Metadata and Search Working Team (Luca Cinquini - NASA/JPL) • Node Manager Working Team (Sasha Ames - DOE/LLNL; Prashanth Dwarakanath - ENES/Liu) • Persistent Identifier Services (Tobias Weigel - ENES/DKRZ; Stephan Kindermann - ENES/DKRZ) • Provenance Capture Working Team (Bibi Raju - DOE/PNNL) • Publication Working Team (Sasha Ames - DOE/LLNL; Rachana Ananthakrishnan - DOE/ANL) • Quality Control Working Team (Martina Stockhause - ENES/DKRZ; Katharina Berger - ENES/DKRZ) • Replication Working Team (Stephan Kindermann - ENES/DKRZ; - Tobias Weigel ENES/DKRZ) • Software Security Working Team (Prashanth Dwarakanath (ENES/Liu) • Tracking/Feedback Notification Working Team (Sasha Ames - DOE/LLNL; Sandro Fiore - ENES/CMCC) • User Support Working Team (Torsten Rathmann - ENES/BADC; Matthew Harris - DOE/LLNL) • Version Working Team (Stephan Kendermann - ENES/DKRZ; - Tobias Weigel ENES/DKRZ)
16:30	**Adjourn Day 2**
Thursday, December 10, 2015	
08:00 – 08:30	Continental breakfast and meeting and greet

08:30 – 12:00	**ESGF Development for Data Centers and Interoperable Services Town Hall Discussion** Session Discussion Lead (Robert Ferraro) ● What tools have been identified during the previous discussions that should be made more widely accessible to the community? ● Are these working teams address community needs? ● What other tools are there that could address key community needs? ● How should tools and services be made available in the future for the ESGF integrated infrastructure? ● What level of support would be expected from the science community? ● How do we want to assess the maturity and capability of tools (e.g. benchmarks or crowdsourcing) of the working team tools and services? ● Are there any conventions that are needed for the working teams in respect to the many projects? ● What level of service, monitoring, maintenance and metrics needed for each of the working teams data services and tools? ● What do working teams want to see from others? ● What do the scientists want to have access too in regards to the working teams? ● What standards and services that needs to be adopted within the compute environment that will allow projects to participate in multi-agency data initiatives discussed on the first day? ● What is needed for data sharing with across the multi-international agencies?
12.30 – 13:30	**Lunch**
13:30 – 14:30	**Coordinated Efforts with Community Software Projects** Session Discussion Lead (Sebastien Denvil) 1. TDS (John Caron - U.S.A.) 2. Science DMZ for ESGF Supernodes (Eli Dart - DOE/ESnet) 3. NDN (Christos Papadopoulos - Colorado State) 4. CMOR3 (Denis Nadeau - DOE/LLNL) 5. Synda (synchro-data) (Sébastien Denvil - ENES/IPSL) 6. Globus (Rachana Ananthakrishnan - DOE/ANL) 7. On-demand streaming of massive climate simulation ensembles (Cameron Christensen - Univ. of Utah) ● How will your efforts help the ESGF community of users? ● What is your timeline for releasing your efforts? ● What standards and services need to be adopted within the environment that will allow ESGF to participate in early adoption? ● How are you funded for longevity?
14:30 – 15:00	**Community Software Projects Town Hall Discussion** Session Discussion Lead (Dean N. Williams) Town Hall Panel: (John Caron, Eli Dart, Christos Papadopoulos, Denis Nadeau, Sebastien Denvil, Rachana Ananthakrishana, Cameron) ● What standards and services need to be adopted within the environment that will allow projects to participate in multi-agency data initiatives? ● How should these tools and services be made available in ESGF's future in an integrated way?
15:00 – 17:00	**Team Discussion and Across Team Discussions**
17:00	**Adjourn Day 3**

Friday, December 11, 2015	
08:00 – 08:30	Continental breakfast and meeting and greet
08:30 - 10:00	**ESGF Development Teams Report Back on Conference Findings** Session Discussion Lead (Dean N. Williams) • All supported projects report back on their conference findings • All ESGF team leads report back on their conference findings • All community software projects report back on their conference findings
10:00 – 10:15	**Break**
10:15 - 12:00	**ESGF XC and WIP Breakout Meeting** • Discuss of the construction of the annual report • Meeting location and time of the next ESGF F2F meeting **Working Teams Meeting** • All working teams discuss conference findings for their area for the annual report
12:00 – 13:30	**Lunch**
13:30 – 17:00	**General Data Code Sprint** Session Discussion Lead (Working Team Leads)
17:00	**Adjourn Day 4**

Poster Session

Not sure which day(s) yet!	Poster Session
2 – 3 hours	**Poster Session** Session Discussion Lead (Dean N. Williams) Posters: 1. Climate4Impact Portal (Maarten Plieger – KNMI) 2. CDAS (Thomas Maxwell - NASA/GSFC) 3. ACME Workflow (Matthew Harris - DOE/LLNL) 4. HPSS connections to ESGF (Sam Fries and Alex Sim DOE) 5. DREAM (Dean Williams - DOE/LLNL) 6. CDMS3 (Denis Nadeau - DOE/LLNL) 7. UV-CDAT (Aashish Chaudhary - Kitware) 8. CDATWeb (Matthew Harris - DOE/LLNL) 9. NetCDF4/HDF5 (Ben Evans - NCI/ANU) 10. PROV (Ben Evans - NCI/ANU) 11. CF (Karl Taylor DOE/LLNL) 12. ES-DOC (Mark Greenslade (ENES/IPSL) 13. DRS (Ag Stephens and Guillaume Levavasseur and WIP)

	14. Data Citation Service (Martina Stockhause - ENES/DKRZ) 15. PCMDI's Metrics Package (Paul Durack - DOE/LLNL; Peter Gleckler - DOE/LLNL) 16. DOE UVCMetrics (Jeff Painter -DOE/LLNL; Brian Smith - DOE/ORNL) 17. Climate Variability and Diagnostics Package (Eric Nienhouse – NSF/NCAR) 18. ESMValTool (Stephan Kindermann - ENES/DKRZ) 19. CMIP6 Errata as a New ESGF Service (Guillaume Levavasseur - ENES/IPSL; Sebastien Denvil - ENES/IPSL) 20. Enabling In Situ Analytics in the Community Earth System Model via a Functional Partitioning Framework (Valentine Anantharaj - DOE/ORNL) ● How will your efforts help the ESGF community of users? ● What is your timeline for releasing your efforts? ● What standards and services need to be adopted within the environment that will allow ESGF to participate in early adoption? ● How should these tools and services be made available in ESGF's future in an integrated way? ● How are you funded for longevity?