## 2016 ESGF F2F Conference Agenda

## 2016 Earth System Grid Federation (ESGF) Face-to-Face Conference (Washington, D.C.)

**Registration:** <u>http://www.cvent.com/events/earth-system-grid-federation-esgf-</u> conference-2016/event-summary-8fc3ff0210f645da859a8c9a727c258b.aspx

## **Conference venue:**

Washington Marriott at Metro Center, 775 12th Street NW, Washington, DC 20005, US

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 5, 2016 to Dec 9, 2016—8:00 AM - 6:00 PM EST
Webinar Logistics:

- 2016 ESGF F2F Marriott Metro Center, Washington, DC
- Every Tuesday, Wednesday, Thursday, Friday (December 6, 2016 through December 9, 2016)
- 7:30 am | Eastern Standard Time (San Francisco, GMT-08:00) | 11 hours
- US TOLL: +1-415-655-0001
- Global call-in numbers: <u>https://llnl.webex.com/llnl/globalcallin.php?serviceType=MC&ED=515492142&t</u> <u>ollFree=0</u>
- Meeting number (access code): 801 978 147
- Meeting password: esgf

Note. After logging on, please send your full name and affiliation to Angela (jefferson9@llnl.gov) for remote conference registration.

Time	Торіс			
Monday, December 5,	Monday, December 5, 2016			
14:00 - 16:00	Pre-conference registration: Jr. Ballroom Salons 1 & 2			
17:00 - 18:00	Social Activity: Meet and Greet ( <u>NO HOST</u> ) <u>Cuba Libre</u> – 801 9 <sup>th</sup> St., NW A, Washington, D.C.			
Tuesday, December 6, 2016				
07:30 - 08:30	Registration: Jr. Ballroom Salons 1 & 2			
08:00 - 08:30	Coffee/tea reception and meeting and greet			

Time		Торіс
08:30 - 08:35	Welcome, safety, DOE/LLNL)	introduction, conference charge, and agenda overview (Dean N. Williams-
		ence attendees contribute to the conference's final report he 2016 ESGF F2F 6 <sup>th</sup> Annual Conference
08:35 - 08:40	DOE opening comm	ents—(Gary Geernaert, Director of the Climate and Environmental Sciences Division S. Department of Energy's [DOE's] Office of Biological and Environmental Research [BER])
08:40 - 09:00		System Grid Federation (ESGF) (Dean N. Williams—DOE/LLNL)
		ESGF Steering Committee (A note from our sponsors)
09:00 - 10:45	ESGF Steering C	
09.00 - 10.45		n Lead (Dean N. Williams)
	09:00 - 09:20	Justin Hnilo—Department of Energy (DOE) Office of Biological and Environmental Research (BER) Data Management
	09:25 - 09:45	Sylvie Joussaume—Infrastructure for the European Network of Earth System Modelling (IS-ENES2) Coordinator
	09:50 - 10:10	Tsengdar Lee—National Aeronautics and Space Administration
	07.50 - 10.10	(NASA) Headquarters High-End Computing Program
	10:15 - 10:35	Ben Evans—National Computational Infrastructure (NCI)
10:45 - 11:00	<ul> <li>system mo.</li> <li>What are the progress of What is you observation investment</li> <li>What is the What is the What are yes developme</li> <li>What are the metrics color What are yes (1 to 3 year)</li> <li>What is the What is the What</li></ul>	e estimated size of your distributed archive? our common developments, sharing of expertise, and accelerated
11:00 - 11:30	Steering Commi	ttee Town Hall Discussion
		n Lead (Dean N. Williams)
	<ul> <li>What is we</li> <li>What are the</li> <li>What data</li> <li>What do we were to be succeded.</li> <li>What are the these service.</li> <li>Which service.</li> </ul>	(Justin Hnilo, Sylvie Joussaume, Tsengdar Lee, Ben Evans) orking, and what is not? ne key challenges to your programs? services would address the identified challenges? What exists already today? e still need? What are the key characteristics that these services need to have ssful (i.e. integrated, easy to customize, etc.)? ne key impediments (on the data provider/service provider side) in delivering ces? vices should be developed with the highest priority, and what would be their e impact on science/programs?

Time		Торіс	
11:30 - 17:30	Session Discussion	and Interoperability on Lead (Dean N. Williams)	
	ESGF working teams quickly report out on meeting 2016 projects requirements (work achieved over the past year, prioritized development, collaborations with other agencies, etc.)		
	11:30 - 11:40	CoG User Interface Working Team (Luca Cinquini—NASA/JPL)	
	11:45 - 11:55	Metadata and Search Working Team (Luca Cinquini—NASA/JPL)	
	12:00 - 13:30	Lunch	
	13:30 - 13:40	Publication Working Team (Sasha Ames—DOE/LLNL)	
	13:45 – 13:55	Node Manager and Tracking/Feedback Working Team (Sasha Ames— DOE/LLNL)	
	14:00 - 14:10	Stats and Dashboard Working Team (Alessandra Nuzzo— ENES/CMCC)	
	14:15 - 14:25	Identity Entitlement Access Management Working Team (Phil Kershaw—ENES/CEDA)	
	14:30 - 14:40	Compute Working Team (Charles Doutriaux—DOE/LLNL)	
	14:45 - 14:55	Errata Service (LEVAVASSEUR Guillaume—ENES/IPSL)	
	15:00 - 15:10	Quality Control Working Team: Data Citation Service for CMIP6—	
	15:15 - 15:25	Status and Timeline (Martina Stockhause—ENES/DKRZ)	
	15:15 - 15:25 15:30 - 15:45	Installation Working Team (Prashanth Dwarakanath—ENES/Liu) Break	
	$\frac{15:45 - 15:55}{16:00 - 16:10}$	Docker for ESGF (Luca Cinquini—NASA/JPL) International Climate Network Working Group (Eli Dart—DOE/ESnet)	
	10:00 - 10:10 16:15 - 16:25	Data Transfer Working Team (Lukasz Lacinski—DOE/ANL)	
	16:30 - 16:40	Security Working Team (George Rumney—NASA/GSFC)	
	16:45 - 16:55	Replication and Versioning Working Team (Stephan Kindermann— ENES/DKRZ)	
	17:00 - 17:10	Persistent Identifier Services (Tobias Weigel—ENES/DKRZ)	
	17:15 - 17:25	User Working Team (Torsten Rathmann—ENES/DKRZ)	
18:00 – 19:00	Jr. Ballroom S	alons 1 & 2 Room: Awards Ceremony + Live Entertainment	
17:30		Adjourn Day 1	
Wednesday, Decemb	er 7, 2016		
08:00 - 08:30	Coffee/tea recepti	ion and meeting and greet	
08:30 - 09:30	ESGF Progress a	and Interoperability Town Hall Discussion	
	• What tools	Session Discussion Lead (Dean N. Williams) have been identified during the previous discussions that should be made	
		ly accessible to the community?	
		working team tools addressing community needs?	
	What other	tools are there that could address key community needs?	
		d tools and services be made available in the future for the ESGF integrated	
	infrastructu What level	ore? of support would be expected from the science community?	
		e want to assess the maturity and capability (e.g. benchmarks or	
		cing) of the working team tools and services?	
		iny conventions that are needed for the working teams in respect to the many	

Time		Торіс
09:30 - 11:30	<ul> <li>working tea</li> <li>What do we</li> <li>What do th</li> <li>What stand that will all first day?</li> <li>What is need</li> </ul>	of service, monitoring, maintenance, and metrics is needed for each of the am data services and tools? orking teams want to see from others? e scientists want to have access to with regard to the working teams? ards and services that needs to be adopted within the compute environment ow projects to participate in multi-agency data initiatives discussed on the eded for data sharing across the multi-international agencies? <b>utational Environments and Data Analytics</b> n Lead (Robert Ferraro)
	09:30 - 09:40	Overview of the Compute Working Team and Target Milestones (Daniel Duffy—NASA/GSFC, Charles Doutriaux—DOE/LLNL)
	09:45 - 09:55	Compute Working Team (CWT) End-User Application Programmer's Interface (API) (Jason Boutte—DOE/LLNL, Charles Doutriaux— DOE/LLNL)
	10:00 - 10:10	The Climate Data Analytic Services (CDAS) Framework (Thomas Maxwell, Dan Duffy—NASA/GSFC)
	<u>10:15 - 10:25</u> 10:30 - 10:40	Ophedia big data analytics framework (Sandro Fiore—ENES/CMCC) PAVICS: A Platform to Streamline the Delivery of Climate Services (David Huard, Tom Landry, Blaise Gauvin-St-Denis, David Byrns— CRCM)
	10:45 - 11:00	Break
	11:00 - 11:10	Server-side Computing Services provided by IS-ENES through the climate4impact Platform (Christian Page, Wim Som De Cerff, Maarten Plieger, Manuel Vega, Antonia S. Cofino, Lars Barring, Fokke De Jong, Ronald Hutjes, Sandro Fiore—ENES/Copernicus)
	11:15 - 11:25	CAFE: A framework for collaborative analysis of distributed environmental data (Hao Xu—China/Tsinghua University)
	11:30 - 11:40	Embedded Domain-Specific Language and Runtime System for Progressive Spatiotemporal Data Analysis and Visualization (Cameron Christensen, Shusen Liu, Giorgio Scorzelli, Ji-Woo Lee, Peer-Timo Bremer, Valerio Pascucci—University of Utah)
	<ul> <li>What capal What do w</li> <li>What are the these missi</li> <li>Which requires the their measu</li> <li>What is the</li> <li>What are the progress or</li> </ul>	he key challenges that scientists encounter? bilities would address the identified challenges? What exists already today? e still need? he impediments for resource providers and software developers to provide ng capabilities? hirements need to be addressed with the highest priority and what would be trable impact on science? He key things that are difficult to do today and are impeding scientific productivity? signment before the conference is to convert all known data center drivers to
11:45 - 12:10	Computational E	Cnvironments and Data Analytics Town Hall Discussion n Lead (Robert Ferraro)
	Fiore, Maarten Pli	(Charles Doutriaux, Daniel Duffy, Jason Boutte, Thomas Maxwell, Sandro leger, David Huard, Christian Page, Cameron Christensen) alable compute resource (clusters and HPCs) for projects' data analysis

Time		Торіс
12.10 - 13:30	<ul> <li>Analysis see</li> <li>Performand</li> <li>Advanced</li> <li>Provenance</li> <li>Automation</li> <li>Resource m</li> </ul>	tical and visualization capabilities and services ervices when multiple data sets are not co-located ce of model execution networks as easy-to-use community resources e and workflow n of steps for the computational work environment nanagement, installation, and customer support y gaps, identify benefitting communities, and prioritize Lunch
13:30 - 17:45	Coordinated Eff	orts with Community Software Projects
15.50 - 17.45		on Lead (Sébastien Denvil)
	13:30 - 13:40	CMIP6 Standards Enabling Management, Search and Interpretation of Model Output (Karl Taylor—DOE/LLNL)
	13:45 – 13:55	CMIP6 ESGF Tier 1 and Tier 2 Nodes (Sebastien Denvil—ENES/IPSL, Michael Lautenschlager—ENES/DKRZ)
	14:00 - 14:10	CMIP6 "Impact" on Scientific Community (Sergey Nikonov, V. Balaji, Aparna Radhakrishnan, Daniele Schneider, Hans Vahlenkamp— NOAA/GFDL)
	14:15 - 14:25	Control Vocabulary Software Designed for CMIP6 (Denis Nadeau, Karl Taylor, Sasha Ames—DOE/LLNL)
	14:30 - 14:40	Developing a Vocabulary Management System for Data Reference Syntax using Linked Data Technologies in the Climate Information Platform for Copernicus (CLIPC) Project (Ruth Petrie, Phil Kershaw, Ag Stephens, Antony Wilson—ENES/CEDA)
	14:45 - 14:55	DKRZ ESGF Related Infrastructure and CMIP6 Services (Stephan Kindermann, Michael Lautenschlager, Stephanie Legutke, Katharina Berger, Martina Stockhause—ENES/DKRZ)
	15:00 - 15:10	The IPCC DDC in the context of CMIP6 (Martina Stockhause, Michael Lautenschlager, Stephan Kindermann—ENES/DKRZ)
	15:15 - 15:25	Persistent Identifiers in CMIP6 (Merret Buurman, Tobias Weigel, Stephan Kindermann, Katharina Berger, Michael Lautenschlager— ENES/DKRZ)
	15:30 - 15:45	Break
	15:45 – 15:55	ES-DOC and ES-DOC Services (Atef Ben Nasser, Mark Greenslade— ENES/IPSL)
	16:00 - 16:10	National Computational Infrastructure's Research Data Services: Providing High-Quality Data to Enable Climate & Weather Science (Claire Trenham, Kelsey Druken, Adam Steer, Jon Smillie, Jingbo Wang, Ben Evans—NCI/ANU)
	16:15 - 16:25	Automating Data Synchronization, Checking, Ingestion and Publication for CMIP6 (Ag Stephens and Alan Iwi—ENES/CEDA)
	16:30 - 16:40	Input4MIPs: Boundary Condition and Forcing Datasets for CMIP6 (Paul J. Durack—DOE/LLNL, Karl Taylor—DOE/LLNL, Sasha Ames—DOE/LLNL)
	16:45 - 16:55	An Update on the ESGF Needs for Obs4MIPs (Peter Gleckler— DOE/LLNL)
	17:00 - 17:10	Recent Climate4impact Developments: Provenance in Processing and Connection to the CLIPC Portal (Maarten Plieger, Wim Som de Cerff, Andrej Mihajlovski, Ernst de Vreede, Alessandro Spinuso, Christian Page, Ronald Hutjes, Fokke de Jong, Lars Barring, Antonio Cofino, Manuel Vega, Sandro Fiore, Alessandro d'Anca—ENES/KNMI)

Time		Торіс
	17:15 – 17:25	Federated Data Usage Statistics in the Earth System Grid Federation (A. Nuzzo, M. Mirto, P. Nassisi, K. Berger, T. Rathmann, L. Cinquini, S. Denvil, S. Fiore, D. N. Williams, G. Aloisio—ENES/CMCC)
	17:30 - 17:40	Large-Scale Data Analytics Workflow Support for Climate Change Experiments (S. Fiore, C. Doutriaux, D. Palazzo, A. D'Anca, Z. Shaeen, D. Elia, J. Boutte, V. Anantharaj, D. N. Williams, G. Aloisio— ENES/CMCC)
	<ul> <li>What is yo</li> <li>What stand</li> <li>ESGF to particular</li> </ul>	Your efforts help the ESGF community of users? ur timeline for releasing your efforts? lards and services need to be adopted within the environment that will allow articipate in early adoption? bu funded for longevity?
17:45		Adjourn Day 2
Thursday, December 08:00 – 08:30		on and meeting and greet
08:30 - 10:15		orts with Community Software Projects
		n Lead (Sébastien Denvil)
	08:30 - 08:40	THREDDS Data Server: OPeNDAP and Other Tales from the Server- Side (Sean Arms—Unidata)
	80:45 - 08:55	A Hybrid Provenance Capture Approach to Scientific Workflow Reproducibility and Performance Optimization (Todd Elsethagen, Eric Stephan, and Bibi Raju—DOE/PNNL)
	09:00 - 09:10	QA/QC at the DKRZ (Heinz-Dieter Hollweg—ENES/DKRZ)
	09:15 - 09:25	Web Processing Services and ESGF: the Birdhouse System (Stephan Kindermann, Carsten Ehbrecht, Nils Hempelmann—ENES/KNMI)
	09:30 - 09:40	Synda (synchro-data) (Sébastien Denvil—ENES/IPSL)
	09:45 - 09:55	Globus Update (Rick Wagner—University of Chicago and DOE/ANL)
	10:00 – 10:10	BASEJumper: Publishing HPSS datasets via ESGF (Sam Fries, Sasha Ames, and Alex Sim—DOE/LLNL)
	<ul> <li>What is yo</li> <li>What stand</li> <li>ESGF to particular</li> </ul>	our efforts help the ESGF community of users? ur timeline for releasing your efforts? lards and services need to be adopted within the environment that will allow articipate in early adoption? ou funded for longevity?
10:15 - 10:45		ware Projects Town Hall Discussion
	Session Discussion	n Lead (Sebastien Denvil)
	<ul> <li>Nadeau, Sam Frie</li> <li>What stand projects to</li> </ul>	(John Caron, Todd Elsethagen, Maarten Pileger, Ag Stephens, Denis s, A. Nuzzo, Cameron Christensen, Sandro Fiore, Denis Nadeau) lards and services need to be adopted within the environment that will allow participate in multi-agency data initiatives? d these tools and services be made available in ESGF's future in an integrated
10:45 - 11:00	•	Break
11:00 - 12:00	Live Demonstrat Session Discussion	

Time		Торіс		
12.00 - 13:30		Lunch		
14:30 - 15:00	Poster Se	ession		
		Discussion Lead (Luca Cinquini)		
	Posters:			
	1.	ADAGUC open source visualization in climate4impact using OGC standards (Maarten Plieger, Ernst de Vreede—ENES)		
	2.	Community Data Management System (CDMS) (Denis Nadeau, Charles		
		Doutriaux, Dean N. Williams—DOE/LLNL)		
	3.	Community Diagnostics Package (Zeshawn Shaheen, Charles Doutriaux, Samuel		
		Fries—DOE/LLNL)		
	4.	ESGF Compute Working Team End-User Application Programmer's Interface (Jason Jerome Boutte and Charles Doutriaux—DOE/LLNL)		
	5.	Earth System Model Development and Analysis using FRE-Curator and Live		
		Access Servers: On-demand analysis of climate model output with data		
		provenance (Aparna Radhakrishnan, V.Balaji, Roland Schweitzer, Serguei		
		Nikonov, Kevin O'Brien, Hans Vahlenkamp, Eugene Francis Burger—		
	6.	NOAA/GFDL) Toward a high-performance data analysis platform for impact analysis (Wim		
	0.	Som de Cerff, Sandro Fiore, Maarten Plieger, Alessandro D'Anca, Giovanni		
		Aloisio, KNMI, CMCC Foundation—ENES/CMCC)		
	7.	Web Processing Services and ESGF: the birdhouse system (Stephan		
		Kindermann, Carsten Ehbrecht, Nils Hempelmann—ENES/CEDA)		
	8.	Climate4Impact Portal (Maarten Plieger—KNMI)		
	<u>9.</u> 10.	ACME Workflow (Sterling Baldwin—DOE/LLNL) HPSS connections to ESGF (Sam Fries—DOE/LLNL)		
	10.	Distributed Resource for the ESGF Advanced Management (DREAM) (Dean N.		
		Williams and Luca Cinquini— DOE/LLNL)		
	12.	Community Data Analysis Tools (CDAT) (Charles Doutriaux, Sam Fries,		
		Aashish Chaudhary, Dean N. Williams— DOE/LLNL)		
	13.	Visual Community Data Analysis Tools (VCDAT) (Matthew Harris and Sam Fries—DOE/LLNL)		
	14.	Climate Forecast (CF) Convention (Karl Taylor—DOE/LLNL)		
	14.	ES-DOC (Mark Greenslade—ENES/IPSL)		
	16.	Agreement on Data Management and Publication Workflow (Sasha Ames—		
		DOE/LLNL)		
	17.	Data Citation Service (Martina Stockhause—ENES/DKRZ)		
	18.	PCMDI's Metrics Package (Paul Durack—DOE/LLNL)		
	19.	DOE UVCMetrics (Jim McEnerney and Jeff Painter—DOE/LLNL)		
	20.	ESMValTool (Stephan Kindermann—ENES/DKRZ)		
	21.	CMIP6 Errata as a New ESGF Service (Guillaume Levavasseur—ENES/IPSL)		
	22.	A NASA Climate Model Data Services (CDS) End-to-End System to Support		
		Reanalysis Intercomparison (Jerry Potter—NASA/GSFC)		
	23.	CAFE: A framework for collaborative analysis of distributed environmental data		
		(Eric Xu—China/Tsinghua University)		
	• Ho	w will your efforts help the ESGF community of users?		
		hat is your timeline for releasing your efforts?		

Time	Торіс	
	• 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?	
15:00 - 17:00	How are you funded for longevity (i.e., funding source)? Team Discussion and Cross-Team Discussions	
15:00 - 17:00	<ul> <li>Poster session feedback</li> </ul>	
	Open discussion	
17:00	Adjourn Day 3	
Friday, December	9, 2016	
08:00 - 08:30	Coffee/tea reception and meeting and greet	
08:30 - 10:00	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	
	<ul> <li>All working teams discuss conference findings for their area for the annual report</li> </ul>	
10:00 - 10:15	Break	
10:15 - 12:00	ESGF Development Teams Report Back on Conference Findings	
	Session Discussion Lead (Dean N. Williams)	
	ESGF Team Leads findings on conference feedback	
	Open discussion	
12:00	Adjourn Day 4	
	Concludes the 6 <sup>th</sup> Annual ESGF F2F Conference	
13:30 - 17:00	General Code Sprint (optional)	
	Working Teams and Leads	