2017 7th Annual ESGF F2F Conference Agenda

2017 Earth System Grid Federation (ESGF) Face-to-Face Conference
(San Francisco, California, USA)

Registration:

Conference venue:
San Francisco Sheraton at Fisherman's Wharf, 2500 Mason Street, San Francisco, CA 94133, USA

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 4, 2017 to Dec 8, 2017—8:00 a.m. - 6:00 p.m. EST
Webinar Logistics:

- 2017 ESGF F2F - Sheraton Fisherman's Wharf, San Francisco, California
- Tuesday, Wednesday, Thursday, Friday
  (December 5, 2017 through December 8, 2017)
- 7:30 a.m. | Eastern Standard Time (San Francisco, GMT-08:00) | 11 hours
- US TOLL: +1-415-655-0001
- Global call-in numbers:
  https://llnl.webex.com/llnl/globalcallin.php?serviceType=MC&ED=515492142&tollFree=0
- Meeting number (access code): TBD
- Meeting password: esgf

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

Time	Topic
Monday, December 4, 2017	
2:00 p.m. – 4:00 p.m.	Pre-conference registration: Sheraton; Room TBD
5:00 p.m. – 6:00 p.m.	Social Activity: Meet and Greet (NO HOST) Sheraton-Fisherman's Wharf – Restaurant/Bar
Tuesday, December 5, 2017	
7:30 a.m. – 8:30 a.m.	Registration: Sheraton; Room TBD
8:00 a.m. – 8:30 a.m.	Coffee/tea reception and meet & greet

<table>
<tr><th>Time</th><th>Topic</th></tr>
<tr><td>8:30 a.m. – 8:35 a.m.</td><td>Welcome, safety, introduction, conference charge, and agenda overview (Dean N. Williams— Department of Energy [DOE] / Lawrence Livermore National Laboratory [LLNL])
How conference attendees contribute to the conference's final report (hand out last year's 2016 6th Annual ESGF F2F Conference Report)
Framing of the 2017 7th Annual ESGF F2F Conference</td></tr>
<tr><td>8:35 a.m. – 8:40 a.m.</td><td>DOE opening comments— (Justin Hnilo, U.S. DOE's Office of Biological and Environmental Research [BER] Program Manager for Data Management)</td></tr>
<tr><td>8:40 a.m. – 9:00 a.m.</td><td>State of the Earth System Grid Federation (ESGF) (Dean N. Williams—DOE/LLNL)</td></tr>
<tr><td colspan="2">Science Drivers: Project Requirements and Feedback
(A note from our sponsors)</td></tr>
<tr><td>9:00 a.m. – 12:00 noon
(3 hours)</td><td>Science Drivers
Session Discussion Lead — Dean N. Williams

<table>
<tr><td>9:00 a.m. – 9:30 a.m.</td><td>Karl Taylor and V. Balaji—Coupled Model Intercomparison Project, phase 6 (CMIP6) and the Working Group on Coupled Modeling Infrastructure Panel (WIP)</td></tr>
<tr><td>9:35 a.m. – 10:05 a.m.</td><td>Peter Gleckler, Duane Waliser, Denis Nadeau, Robert Ferraro, Karl Taylor, Luca Cinquini, Paul Durack—An Update on Observations for Model Intercomparison Project (obs4MIPs) from an ESGF perspective: progress plans and challenges</td></tr>
<tr><td>10:10 a.m. – 10:40 a.m.</td><td>Sébastien Denvil, Michael Lauatenschlager, Sandro Fiore, Francesca Guglielmo, Martin Juckes, Stephan Kindermann, Michael Kolax Wim Som de Cerff—Copernicus and H2020 Programme</td></tr>
<tr><td>10:40 a.m. – 10:55 a.m.</td><td>Break</td></tr>
<tr><td>10:55 a.m. – 11:25 a.m.</td><td>Jerry Potter, Laura Carriere, Judy Hertz—Collaborative REAnalysis Technical Environment Intercomparison Project (CREATE-IP)</td></tr>
<tr><td>11:30 a.m. – 12:00 noon</td><td>Dean N. Williams, Dave Bader, Renata McCoy—Energy Exascale Earth System Model (E3SM) Workflow</td></tr>
</table>

Questions for presenters to answer during their presentations
What are the key things that are difficult to do today and are impeding scientific progress or productivity and the sharing of data?
What are key development effort that you see are needed for the future success of your projects?
What is your timeline for data production and distribution from climate model and observations, high-performance computer, network, and storage facilities needs and investments?
What is the estimated size of your distributed archive?
What are your common developments, sharing of expertise, and accelerated developments?
What are the administrative/sponsor requirements that arise from your project (basically, metrics collection and reporting, persistent and digital object identifiers, deriving data, user publication [i.e., long-tail publication], etc.)?
What are your expected strategic roadmaps for the ESGF's short-term (1 to 3 years), mid-term (3 to 5 years), and long-term (5 to 10 years) development efforts?
What are known use cases and workflows to help describe your ESGF future needs?
Homework assignment
Before the conference adjourns, convert all known science drivers to use cases for ESGF development.</td></tr>
<tr><td>12:00 noon – 1:30 p.m.</td><td>Lunch</td></tr>
<tr><td>1:30 p.m. – 3:30 p.m.</td><td>Science Driver Town Hall Discussion</td></tr>
</table>

<table>
<tr><th>Time</th><th>Topic</th></tr>
<tr><td>(2 hours)</td><td>Session Discussion Lead — Dean N. Williams

Town Hall Panel: (Karl Taylor, V. Balaji, Peter Gleckler, Robert Ferraro, Sébastien Denvil, Michael Lautenschlager, Jerry Potter, Renata McCoy)
Questions to prepare for science driver presentation and discussion
What is working, and what is not working?
What are the key challenges to your programs concerning big data challenges?
What data services would address the identified challenges?
What exists already today?
What do we still need from ESGF?
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/programs?</td></tr>
<tr><td>3:30 p.m. – 3:45 p.m.</td><td>Break</td></tr>
<tr><td>3:30 p.m. – 5:30 p.m.
(2 hours)</td><td>Poster and Live Demonstration Session
Session Discussion Lead — Dean N. Williams

<table>
<tr><th>No.</th><th>Title</th><th>Name</th><th>Poster</th><th>Demo</th></tr>
<tr><td>1</td><td>The Earth Data Analytics Services (EDAS) Framework</td><td>Thomas Maxwell
Dan Duffy</td><td>Yes</td><td>Yes</td></tr>
<tr><td>2</td><td>PAVICS: A platform for the Analysis and Visualization of Climate Science – toward inter-operable multidisciplinary workflows</td><td>D. Huard
T. Landry
D. Byrns
B. Gauvin-St-Denis</td><td>Yes</td><td>Yes</td></tr>
<tr><td>3</td><td>OGC Testbed-13 Earth Observation Clouds</td><td>T. Landry
D. Byrns</td><td>Yes</td><td>No</td></tr>
<tr><td>4</td><td>Using the ESGF CWT-API in the context of the EUDAT-EGI e-infrastructure and the ENES climate4impact platform</td><td>Christian Pagé
Xavier Pivan
Asela Rajapakse
Wim Som de Cerff
Maarten Plieger
Ernst de Vreede
Alessandro Spinuso
Lars Barring
Antonio Cofino
Alessandro d’Anca
Sandro Fiore</td><td>Yes</td><td>Yes</td></tr>
<tr><td>5</td><td>Managing growth and complexity - technologies to meet the challenges of operating data, services and infrastructure at scale</td><td>Phil Kershaw
Jonathan Churchill
Alan Iwi
Bryan Lawrence
Neil Massey
Sam Pepler
Matt Pritchard
Matt Pryor
Ag Stephens</td><td>Yes</td><td>No</td></tr>
<tr><td>6</td><td>Ophidia: an interoperable ‘big data’ framework for climate change analytics experiments</td><td>Sandro Fiore
Charles Doutriaux
Cosimo Palazzo
Alessandro d’Anca
Zeshawn Shaheen
Donatello Elia</td><td>Yes</td><td>Yes</td></tr>
</table></td></tr>
</table>

Time	Topic				
			Jason Boutte Valentine Anantharaj Dean N. Williams Giovanni Aloisio		
	7	**Federated data usage statistics in the Earth System Grid Federation**	Alessandra Nuzzo Maria Mirto Paola Nassisi Katharina Berger Torsten Rathmann Luca Cinquini Sébastien Denvil Sandro Fiore Dean N. Williams Giovanni Aloisio	Yes	Yes
	8	**WPS based processing services for the Copernicus Climate Change Service (C3S)**	Stephan Kindermann Carsten Ehbrecht Ag Stephens Björn Brötz Wim Som de Cerff Maarten Plieger Sébastien Denvil	Yes	Yes
	9	**Diagnostics Package for the E3SM Model**	Chengzhu Zhang Zeshawn Shaheen Chris Golaz Jerry Potter	Yes	Yes
	10	**ESGF Errata Service**	Guillaume Levavasseur Atef Ben-nasser Mark A. Greenslade	No	Yes
	11	**DREAM Data Services for Biological Data and Beyond**	Sasha Ames Luca Cinquini Dean N. Williams	Yes	Yes
	12	**Community Data Analysis Tools**	Charles Doutriaux Denis Nadeau Dan Lipsa Dean N. Williams Aashish Chaudhary	Yes	Yes
	13	**Visual Community Data Analysis Tools (vCDAT)**	Matthew Harris Dan Lipsa James Crean Matthew Ma Charles Doutriaux Dean N. Williams Aashish Chaudhary	Yes	Yes
	14	**Integrating ES-DOC with the ESG Publisher**	Alan Iwi David Hassell Mark A. Greenslade Ag Stephens	Yes	Yes
	15	**Compute Working Team End-User Application Programming Interface**	Jason Boutte Charles Doutriaux	Yes	Yes
	16	**A compliance-checking framework for CMIP7**	Ag Stephens Antony Wilson Guillaume	No	Yes

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<tr><th>Time</th><th>Topic</th></tr>
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<tr><td></td><td></td><td>Levavasseur</td><td></td><td></td></tr>
<tr><td>17</td><td>Google Earth Engine and Project Jupyter</td><td>Tyler Erickson</td><td>No</td><td>Yes</td></tr>
</table>
Questions to address in your presentation and/or demonstration
• What is working and what is not working?
• What are the key challenges to your application concerning big data challenges within the ESGF infrastructure?
• How does your application/services integrate into ESGF?
• What do you still need from ESGF for software integration?
• What are the key impediments in delivering your application/services in ESGF (i.e. installation, customization, etc.)?
• What are the key characteristics or functionalities that your application/services offer the community within the ESGF infrastructure?
• Which services or functions are your application's highest development priorities, and what would be their measurable impact on science/programs (i.e., what is in store for the future)?
</td></tr>
<tr><td>6:00 p.m. – 7:00 p.m.</td><td>Awards Ceremony + Live Entertainment</td></tr>
<tr><td>7:00 p.m.</td><td>Adjourn Day 1</td></tr>
<tr><td colspan="2">Wednesday, December 6, 2017</td></tr>
<tr><td>8:00 a.m. – 8:30 a.m.</td><td>Coffee/tea reception and meet & greet</td></tr>
<tr><td>8:30 a.m. – 10:30 a.m.
(2 hours)</td><td>
International Climate Network Working Group, Replication / Versioning and Data Transfer Working Team Plenary Discussion
Session Discussion Leads and Presenters — Eli Dart, Lukasz Lacinski, Stephan Kindermann
<table>
<tr><td>8:30 a.m. – 8:45 a.m.</td><td>Eli Dart, Lukasz Lacinski, Stephan Kindermann—Presentation on data transfers and replication progress</td></tr>
<tr><td>9:35 a.m. – 10:20 a.m.</td><td>Group discussion</td></tr>
<tr><td>10:20 a.m. – 10:30 a.m.</td><td>Conclusion recap</td></tr>
</table>
Questions for the ICNWG (i.e., network) plenary discussion
• ICNWG network software and hardware integration requirements for Tier 1 and Tier 2 sites
• ICNWG network preparation services and tools (e.g., perfSONAR, Globus)
• Automated replication network requirements for ESGF (i.e., CMIP6 and other projects)
• ICNWG network security requirements
• ICNWG dashboard integration into ESGF dashboard
• Resource discovery and allocation services
• Identify key gaps, identify benefitting communities, and prioritize ICNWG future work
</td></tr>
<tr><td>10:30 a.m. – 10:45 a.m.</td><td>Break</td></tr>
<tr><td>10:45 a.m. – 12:00 noon
(1 hour & 15 minutes)</td><td>Compute and Data Analytics Working Team Plenary Discussion
Session Discussion Lead and Presenters — Charles Doutriaux and Daniel Duffy</td></tr>
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<tr><th>Time</th><th>Topic</th></tr>
<tr><td></td><td>
<table>
<tr><td>10:45 a.m. – 11:00 a.m.</td><td>Charles Doutriaux and Daniel Duffy—Presentation on server-side computing progress</td></tr>
<tr><td>11:00 a.m. – 11:50 a.m.</td><td>Group discussion</td></tr>
<tr><td>11:50 a.m. – 12:00 noon</td><td>Conclusion recap</td></tr>
</table>
Questions for server-side computing
• Define a scalable compute resource (clusters and HPCs) for ESGF data analysis
• Data analytical and visualization capabilities and services
• Performance of model execution
• Advanced networks as easy-to-use community resources (i.e., resource management)
• 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 next steps
• Analysis services when multiple data sets are not co-located (future work)
</td></tr>
<tr><td>12:00 noon – 1:30 p.m.</td><td>Lunch</td></tr>
<tr><td>1:30 p.m. – 2:40 p.m.
(1 hour & 10 minutes)</td><td>
Identity Entitlement Access Working Team Plenary Discussion
Session Discussion Lead — Philip Kershaw and Lukasz Lacinski
<table>
<tr><td>1:30 p.m. – 1:45 p.m.</td><td>Philp Kershaw and Lukasz Lacinski—Presentation on authentication and authorization and IdEA progress</td></tr>
<tr><td>1:45 p.m. – 2:30 p.m.</td><td>Group discussion</td></tr>
<tr><td>2:30 p.m. – 2:40 p.m.</td><td>Conclusion recap</td></tr>
</table>
Questions for authentication and authorization
• What tools have been identified for authentication and authorization (i.e., OAuth 2) and how well will they integrate with other projects (i.e., Copernicus, NASA DAACs, etc.)?
• What is needed for authentication and authorization integration with the ESGF software stack installation (i.e., address key needs)?
• What services must be made available today and in the future for authentication and authorization?
• What level of support would be expected from the science community?
• How do we want to assess the maturity and capability of authentication and aurthoization (e.g., benchmarks or crowdsourcing)?
• What are the future efforts to be expected from ESGF-IdEA?
</td></tr>
<tr><td>2:40 p.m. – 3:55 p.m.
(1 hour & 15 minutes)</td><td>
Status Update and Future Planning for ESGF User Interface, Search, and Dashboard Working Teams Plenary Discussion
Session Discussion Lead — Luca Cinquini, Guillaume Levavasseur, and Alessandra Nuzzo
<table>
<tr><td>2:40 p.m. – 2:55 p.m.</td><td>Luca Cinquini, Guillaume Levavasseur, and Alessandra Nuzzo—Status update and future planning for the ESGF UI, Search, and Dashboard Working Group</td></tr>
<tr><td>2:55 p.m. – 3:30 p.m.</td><td>Group discussion</td></tr>
<tr><td>3:30 p.m.</td><td>Break</td></tr>
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<tr><th>Time</th><th>Topic</th></tr>
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<table>
<tr><td>3:45 p.m.</td><td></td></tr>
<tr><td>3:45 p.m. – 3:55 p.m.</td><td>Conclusion recap</td></tr>
</table>
Questions
• Do you have any plan for engaging the user community to provide ongoing feedback for the user interface?
• How do you expect the search services to scale to support new data holdings in the next 5 years?
• Do you have any plans for federating the search services with other sites/agencies/institutions?
• How do you validate the metrics obtained from the dashboard, both for a single node, and across the whole federation?
</td></tr>
<tr><td>3:55 p.m. – 5:30 p.m.
(1 hour & 15 minutes)</td><td>
Installation and Software Security Working Team Plenary Discussion
Session Discussion Leads — William Hill, Prashanth Dwarakanath, Luca Cinquini, and George Rumney
<table>
<tr><td>3:55 p.m. – 4:05 p.m.</td><td>William Hill and Prashanth Dwarakanath—Presentation on Software Installation</td></tr>
<tr><td>4:05 p.m. – 4:15 p.m.</td><td>Luca Cinquini—Presentation on Software Container (i.e., Docker)</td></tr>
<tr><td>4:15 p.m. – 4:25 p.m.</td><td>George Rumney—Presentation of Software Security</td></tr>
<tr><td>4:25 p.m. – 5:20 p.m.</td><td>Group discussion</td></tr>
<tr><td>5:20 p.m. – 5:30 p.m.</td><td>Conclusion recap</td></tr>
</table>
Questions
• How close are you to have an operation version of the Docker/Cloud ESGF?
• Which services or functionality are still missing from this architecture?
• How do you plan to address security risks with this architecture?
• Is there a plan for migrating an operational system from the current shell-based installer to Docker/Cloud?
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<tr><td>5:30 p.m.</td><td>Adjourn Day 2</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">Thursday, December 7, 2017</td></tr>
<tr><td>8:00 a.m. – 8:30 a.m.</td><td>Coffee/tea reception and meet & greet</td></tr>
<tr><td>8:30 a.m. – 9:45 a.m.
(1 hour & 15 minutes)</td><td>
Publication, Quality Control, Metadata, and Provenance Capture Working Team Plenary Discussion
Session Discussion Leads — Sasha Ames and Heinz-Dieter Hollweg
<table>
<tr><td>8:30 a.m. – 8:40 a.m.</td><td>Sasha Ames—Presentation on Publication Progress</td></tr>
<tr><td>8:40 a.m. – 8:50 a.m.</td><td>Heinz-Dieter Hollweg—Presentation on Quality Control Progress</td></tr>
<tr><td>8:50 a.m. –</td><td>Group discussion</td></tr>
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<tr><th>Time</th><th>Topic</th></tr>
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<table>
<tr><td>9:35 a.m.</td><td></td></tr>
<tr><td>9:35 a.m. – 9:45 a.m.</td><td>Conclusion recap</td></tr>
</table>

Questions for publications, QC, metadata, and provenance capture plenary discussion
• Data integration and advanced metadata capabilities
• Data and metadata collection and sharing capabilities for possible provenance
• Data Quality and ancillary information
• Data preparation services and tools
• Authentication and security
• Local and remote publication services
• 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 ESGF node 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?
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<tr><td>9:45 a.m. – 10:45 a.m.
(1 hour)</td><td>
Machine Learning Plenary Discussion
Session Discussion Lead — Sookyung Kim, TBD?
<table>
<tr><td>9:45 a.m. – 9:55 a.m.</td><td>Sookyung Kim—Presentation on Community Machine Learning</td></tr>
<tr><td>9:55 a.m. – 10:05 a.m.</td><td>Sébastien Denvil, Sandro Fiore, Philip Kershaw—Copernicus and H2020 Program Machine Learning Efforts</td></tr>
<tr><td>10:05 a.m. – 10:35 a.m.</td><td>Group discussion</td></tr>
<tr><td>10:35 a.m. – 10:45 a.m.</td><td>Conclusion recap</td></tr>
</table>
Questions for the machine learning plenary discussion
• What problems machine learning and deep learning methodologies can solve in climate domain?
• What can it not solve?
• What is the recent metrics in deep learning which can applied to climate data?
• What exist already in climate community using artificial intelligence?
• What is the highest priority problem using machine learning in climate community?
• What are the key challenges to ESGF implementing machine learning algorithms?
• How can we solve these challenges with respect to programs?
• How can we solve data labeling and scalability issue?
</td></tr>
<tr><td>10:45 a.m. – 11:00 a.m.</td><td>Break</td></tr>
<tr><td>11:00 a.m. – 12:00 noon
(1 hour)</td><td>
Diagnostics Plenary Discussion
Session Discussion Lead — Zeshawn Shaheen, Tom Landry, others
<table>
<tr><td>11:00 a.m. – 11:10 a.m.</td><td>Zeshawn Shaheen—Presentation on the Community Diagnostics Package</td></tr>
<tr><td>11:10 a.m. – 11:20 a.m.</td><td>Copernicus—Presentation on Copernicus Diagnostics (TBD)</td></tr>
<tr><td>11:20 a.m. – 11:30 a.m.</td><td>Tom Landry—Presentation on Canada Diagnostics</td></tr>
<tr><td>11:30 a.m. –</td><td>Group discussion</td></tr>
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<table>
<tr><th>Time</th><th>Topic</th></tr>
<tr><td></td><td>
<table>
<tr><td>11:50 a.m.</td><td></td></tr>
<tr><td>11:50 a.m. – 12:00 noon</td><td>Conclusion recap</td></tr>
</table>

Questions for the diagnostics plenary discussion

What are the key diagnostics challenges that scientists encounter?
What diagnostics capabilities would address the identified challenges?
What diagnostics exists already today?
What diagnostics are still need?
What are the diagnostics impediments for resource providers (i.e., hardware) and software developers to provide these missing capabilities?
Which diagnostics requirements need to be addressed with the highest priority and what would be their measurable impact on science?

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<tr><td>12:00 noon – 1:30 p.m.</td><td>Lunch</td></tr>
<tr><td>1:30 p.m. – 3:00 p.m.
(1 hour & 30 minutes)</td><td>
CMIP6 Data Node Operations Team (CDNOT) Plenary Discussion
Session Discussion Lead — Sébastien Denvil

<table>
<tr><td>1:30 p.m. – 1:50 p.m.</td><td>Sébastien Denvil—What is CDNOT and what is it we want to achieve</td></tr>
<tr><td>1:50 p.m. – 2:50 p.m.</td><td>Group discussion</td></tr>
<tr><td>2:50 p.m. – 3:00 p.m.</td><td>Conclusion recap</td></tr>
</table>

Questions for the Cloud plenary discussion

What are the ESGF services and tools that are needed for CDNOT to be successful
Should CDNOT’s mode of operation be made more widely accessible to other projects and the community?
What is the distinction between CDNOT and ESGF?

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<tr><td>3:00 p.m. – 4:30 p.m.
(1 hour & 30 minutes)</td><td>
Node Manager and Tracking / Feedback Notification Plenary Discussion
Session Discussion Lead — Sasha Ames and Tobias Weigel

<table>
<tr><td>3:00 p.m. – 3:10 p.m.</td><td>Sasha Ames—Presentation on the Node Manager</td></tr>
<tr><td>3:10 p.m. – 3:20 p.m.</td><td>Tobias Weigel— Presentation on PID Services and Tracking/Feedback</td></tr>
<tr><td>3:20 p.m. – 4:05 p.m.</td><td>Group discussion</td></tr>
<tr><td>4:05 p.m. – 4:20 p.m.</td><td>Break</td></tr>
<tr><td>4:20 p.m. – 4:30 p.m.</td><td>Conclusion recap</td></tr>
</table>

Questions for the node manager and notification plenary discussion

What are the key challenges for the node manager and notification?
What 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

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<table>
<tr><th>Time</th><th>Topic</th></tr>
<tr><td></td><td>measurable impact on science?</td></tr>
<tr><td>4:30 p.m. – 5:30 p.m.
(1 hour)</td><td>User Support and Documentation Plenary Discussion
Session Discussion Lead — Matthew Harris

<table><tr><td>4:30 p.m. – 4:40 p.m.</td><td>Matthew Harris —Presentation on the User Support for the Community</td></tr><tr><td>4:40 p.m. – 5:20 p.m.</td><td>Group discussion</td></tr><tr><td>5:20 p.m. – 5:30 p.m.</td><td>Conclusion recap</td></tr></table>
Questions
What level of support and documentation are needed for ESGF services, tools and the community?
What do support and documentation do data provider and users want to see from ESGF?
What type of support and documentation is there for ESGF (i.e., FAQs, Jupyter Notebook, online tutorials, presentations)?
Where are the support tools and documentation located?
What can we expect in the future in terms for user support and documentation?</td></tr>
<tr><td>5:30 p.m.</td><td>Adjourn Day 3</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">Friday, December 8, 2017</td></tr>
<tr><td>8:00 a.m. – 8:30 a.m.</td><td>Coffee/tea reception and meet & greet</td></tr>
<tr><td>8:30 a.m. – 10:00 a.m.</td><td>ESGF Executive Committee Breakout Meeting
Discuss of the construction of the annual conference report
Discuss meeting location and time of the next ESGF F2F conference
Discuss strategic and implementation documents
Working Teams Meeting
All working teams discuss conference findings for their area of annual reporting</td></tr>
<tr><td>10:00 a.m. – 10:15 a.m.</td><td>Break</td></tr>
<tr><td>10:15 a.m. – 12:00 noon</td><td>ESGF Development Teams Report Back on Conference Findings
Session Discussion Lead — Dean N. Williams
ESGF Team Leads findings on conference feedback
Prioritize the feedback
Open discussion</td></tr>
<tr><td>12:00 noon</td><td>Adjourn Day 4</td></tr>
<tr><td>12:00 noon – 1:30 p.m.</td><td>Lunch</td></tr>
<tr><td>1:30 p.m. – 5:30 p.m.</td><td>General Code Sprint (optional)
Working Teams and Leads</td></tr>
<tr><td>5:30 p.m.</td><td>Conference Adjourn Day 4</td></tr>
<tr><td colspan="2">Concludes the 7th Annual ESGF F2F Conference</td></tr>
</table>