perfSONAR Task Force Update
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Outline

- perfSONAR tack force history
- Current activities
- Future work

perfSONAR task force history

- **The perfSONAR task force was formed in the last winter GLIF working group meeting in Hawaii.**
- **The member for the task force consists of:**
  - CANARIE, KRLight, Internet2, Netherlight/SARA, NorduNet, UNINETT, and CSTNET(Latest addition)
- **Our first task was to organize a perfSONAR demonstration in the 8th Annual Global Lambda workshop in October last year. It was performed successfully and well received.**
- **GLIF community recommendation was to continue the efforts on the perfSONAR deployment.**

The task force's objectives

- **The objectives are to:**
  - continue our efforts to deploy perfSONAR on trial basis to collect feedbacks and recommendations from members.
  - provide recommendations to the developers to enhance the functionality and usability of the tool.
  - help defining meaningful operation and administration states to enhance our NOC operation collaboration.
  - document our experiences that can be used for others as references.
  - Involve other domains for perfSONAR development
- **The ultimate objective is to adapt and use perfSONAR as one of the end-to-end network monitoring tools.**

Current activities

- Enhance the configuration documentation.
- Identify additional performance metrics that can be made available through web service.
- Enhance the usability of the end-to-end Monitoring (E2EMon) GUI.
- Invite other domains to participate.
- provide comments and feedbacks to developers to extend the functionality of the tool.

Enhance configuration documentation

- **A document repository:**
  - Internet2 has offered to host a document repository.
  - The repository would contain descriptions, configuration files, diagrams and scripts of various perfSONAR deployments.
  - http://anonsvn.internet2.edu/svn/glif-perfsonar/
- **perfSONAR glif wiki page**
  - It was used for the perfSONAR demo.
  - It is in my plan to revamp the wiki site with examples and task force activities.
  - http://wiki.glif.is/index.php/PerfSONAR_Working_Group
- **Others**
  - http://code.google.com/p/perfsonar-ps/wiki/Home
  - http://www.perfsonar.net/

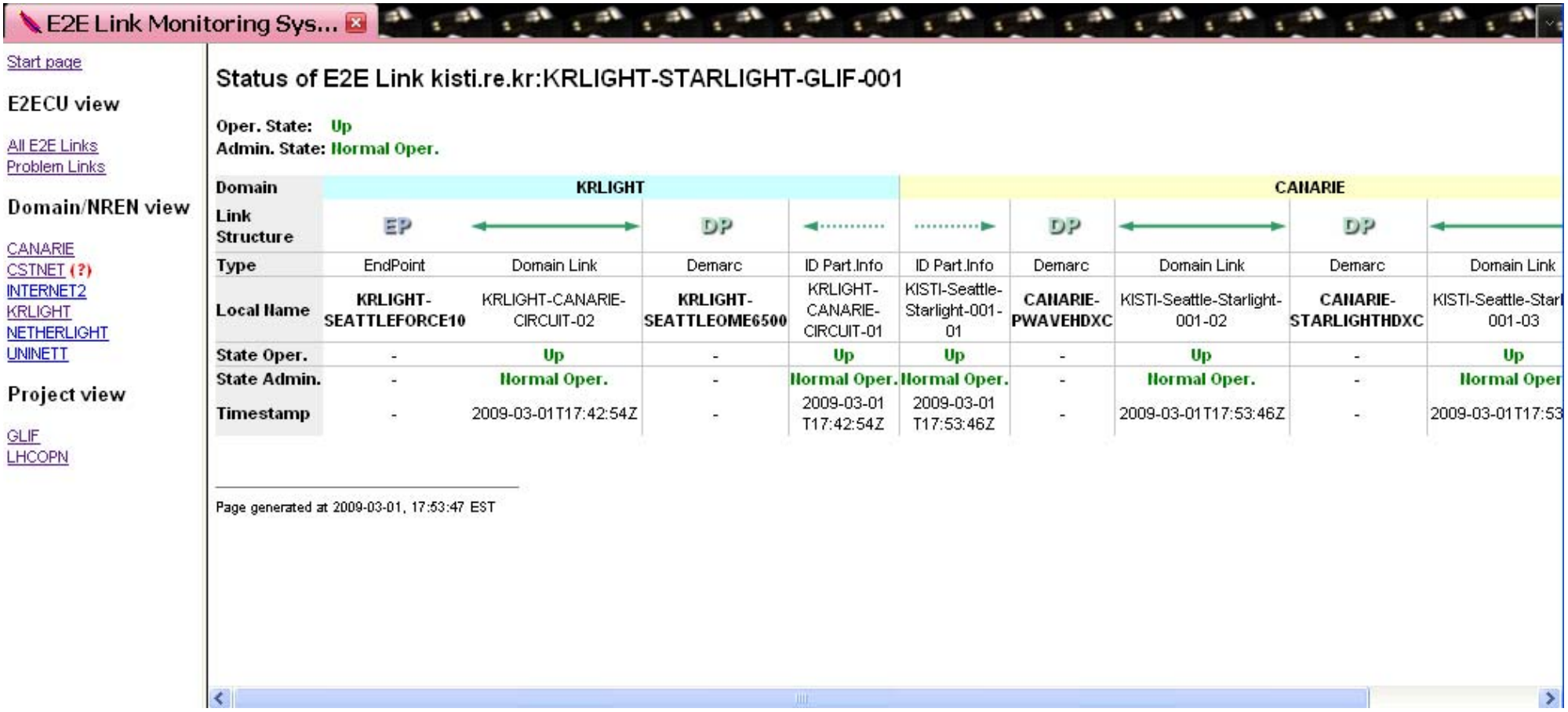
Helpful performance metrics

- **The current E2EMon only shows up/down link states.**
- **Optical lightpaths**
  - Performance Monitoring counters – SONET errors
  - Link alarms – link down
  - Port status – LOS
  - Light level
- **L2 type of lightpaths**
  - VLAN status
  - Port status and errors
- **URL Links to ticketing systems or other tracking systems**

Potential participants

- **CSTNET HK-Chicago and HK-Amsterdam**
  - Currently working with CSTNET to bring up their instance
- **GLORIAD NY-Chicago-Amsterdam**
- **NORDUnet - Korea**
- **AARNet-SURFNet JIVE-ATNF**
- **Prague-Chicago FNAL**
- **Prague-Chicago VINI**
- **TWAREN Chicago-New York-Amsterdam**
- **TWAREN Chicago-MANLAN**
- **Others**

Current perfSONAR-PS - E2EMon

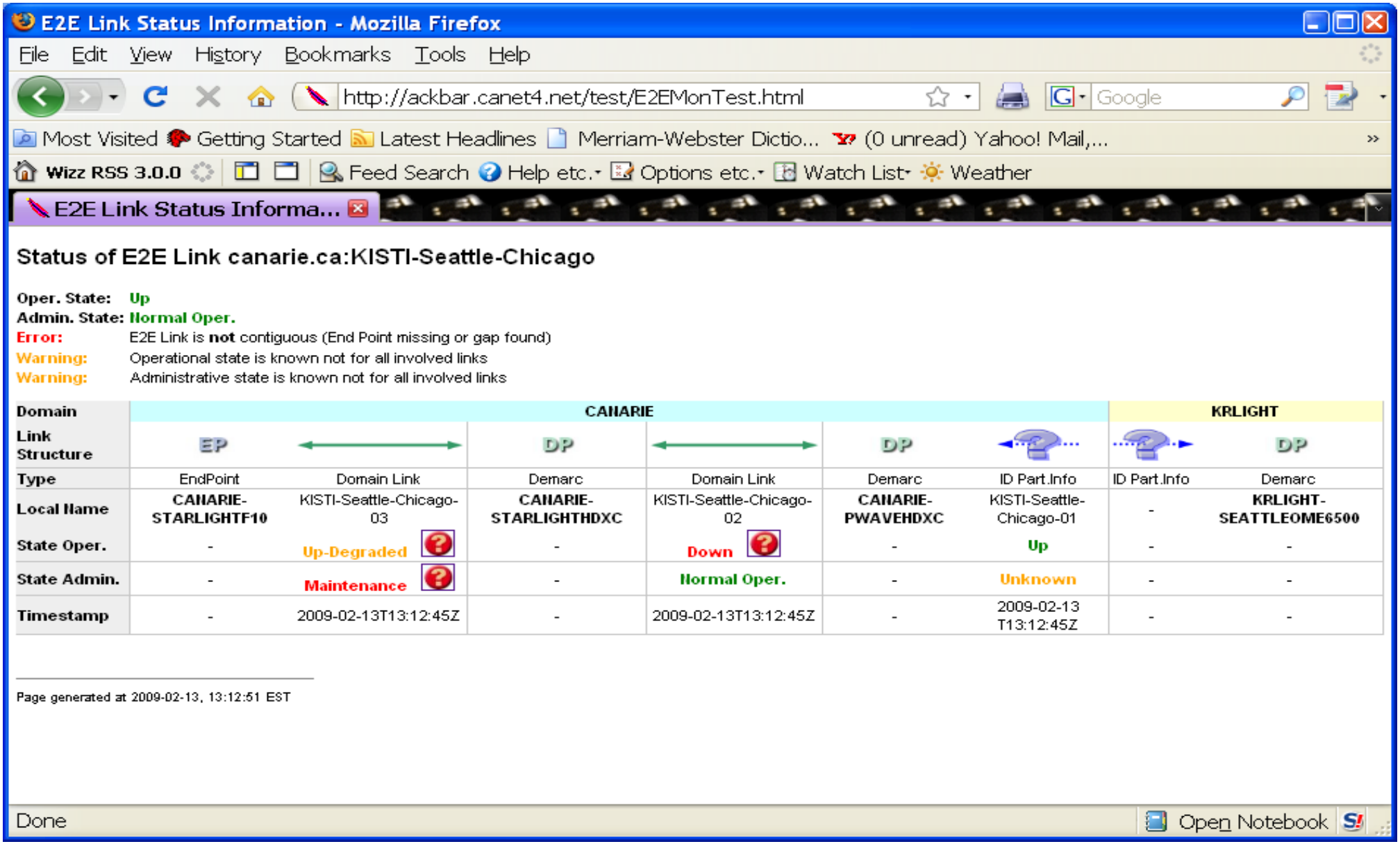


Domain	KRLIGHT				CANARIE				
Link Structure	EP	◄——►	DP	◄·····	·····►	DP	◄——►	DP	◄——
Type	EndPoint	Domain Link	Demarc	ID Part.Info	ID Part.Info	Demarc	Domain Link	Demarc	Domain Link
Local Name	KRLIGHT-SEATTLEFORCE10	KRLIGHT-CANARIE-CIRCUIT-02	KRLIGHT-SEATTLEOME6500	KRLIGHT-CANARIE-CIRCUIT-01	KISTI-Seattle-Starlight-001-01	CANARIE-PWAVEHDXC	KISTI-Seattle-Starlight-001-02	CANARIE-STARLIGHTHDXC	KISTI-Seattle-Starl 001-03
State Oper.	-	Up	-	Up	Up	-	Up	-	Up
State Admin.	-	Normal Oper.	-	Normal Oper.	Normal Oper.	-	Normal Oper.	-	Normal Oper
Timestamp	-	2009-03-01T17:42:54Z	-	2009-03-01 T17:42:54Z	2009-03-01 T17:53:46Z	-	2009-03-01T17:53:46Z	-	2009-03-01T17:53

Current perfSONAR-PS - E2EMon

- **perfSONAR-PS and E2EMon GUI were deployed.**
- **The configuration is quite a manual process.**
- **The E2EMon only shows simple up or down link state.**
  - The link states are updated in regular interval.
  - The system might not be able to detect degrading circuit, intermittent and short-lasted problems.
- **The end-to-end link naming of E2EMon is somewhat semi-structured, the global id might not fit in well.**
  - [src]-[dst]-project-[#], e.g. CERN-TRIUMF-LHCOPN-001
  - netherlight.net:5018LE, the global id for “5018LE_AUSYD-NLDGL(NBD-ATNF-JIVE)”
- **perfSONAR-PS developers are currently looking at developing dynamic-circuit monitoring capabilities, the intend is to use the same infrastructure to monitor static circuits.**
  - The development will take some time, is there any interim solution?

perfSONAR-PS - E2EMon enhancements



perfSONAR-PS - E2EMon enhancements

- **The additional information/performance metrics really enhance the usability of the system.**
- **Challenges**
  - Developers has expressed the possibility of extending the schema for incorporating the additional information but it is still a a question of how is being done.
  - These should be done in minimum effort and shouldn't be affecting the on-going development of perfSONAR-PS, and also should minimize the change of the E2EMon.
  - How can the system integrate with the existing tools? Such as, ticketing systems, network monitoring, etc.. Each domain would need to come up with its own implementation to support the new features.
  - Would each domain able to provide appropriate information to make the tool useful?

On-going and future work

- Populate the information into the document repository and the glif wiki site.
- Continue the collaboration with Internet2 and developers to incorporate the enhancement as our short term objective.
- Keep a close eye on the perfSONAR development - including the dynamic-circuit monitoring capabilities.
- Invite other networks to participate.
- Look into an issue with the Global id.
- Deploy perfSONAR as a NOC monitoring tool.
- Prepare a demo in the next lambda workshop to show the new functionality.