Periscope

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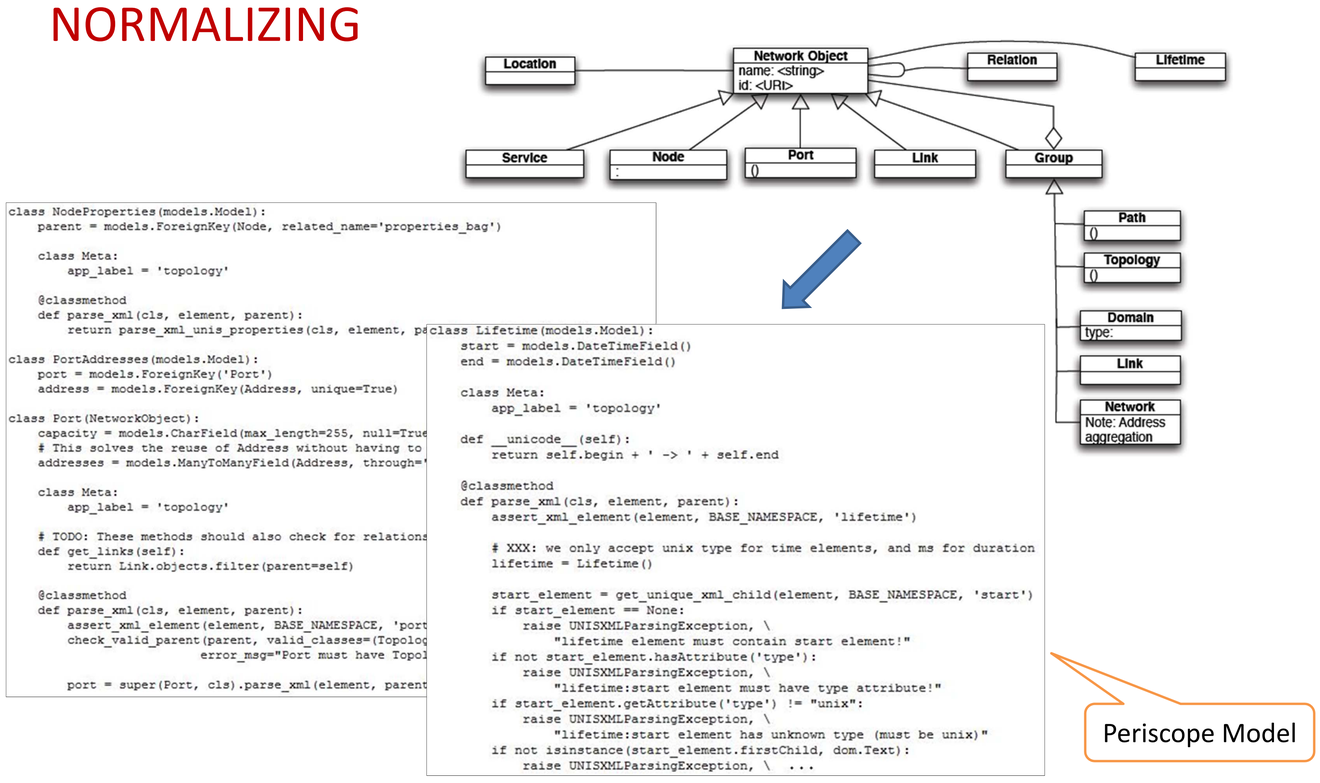
Periscope is an initiatiave that provides performance data to the user in a friendly and fast manner. Topology data is stored and processed based on UNIS (Unified Network Information Services) Topology Schema - used by perfSONAR, IDC, OSCARS, AutoBAHN and Phoebus. Domain-specific network topologies are represented in UNIS and visualized in an interactive web-interface. Collected measurement data is standardized and cached for analysis and display. The initial Periscope backend has been developed in Python and makes use of the Django MVC framework.

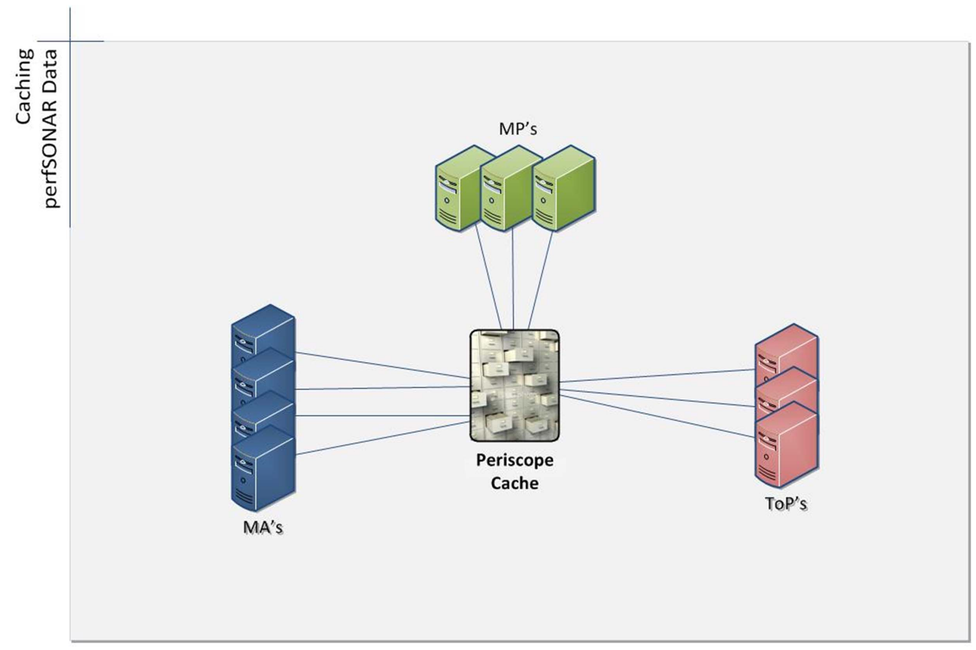
NORMALIZING



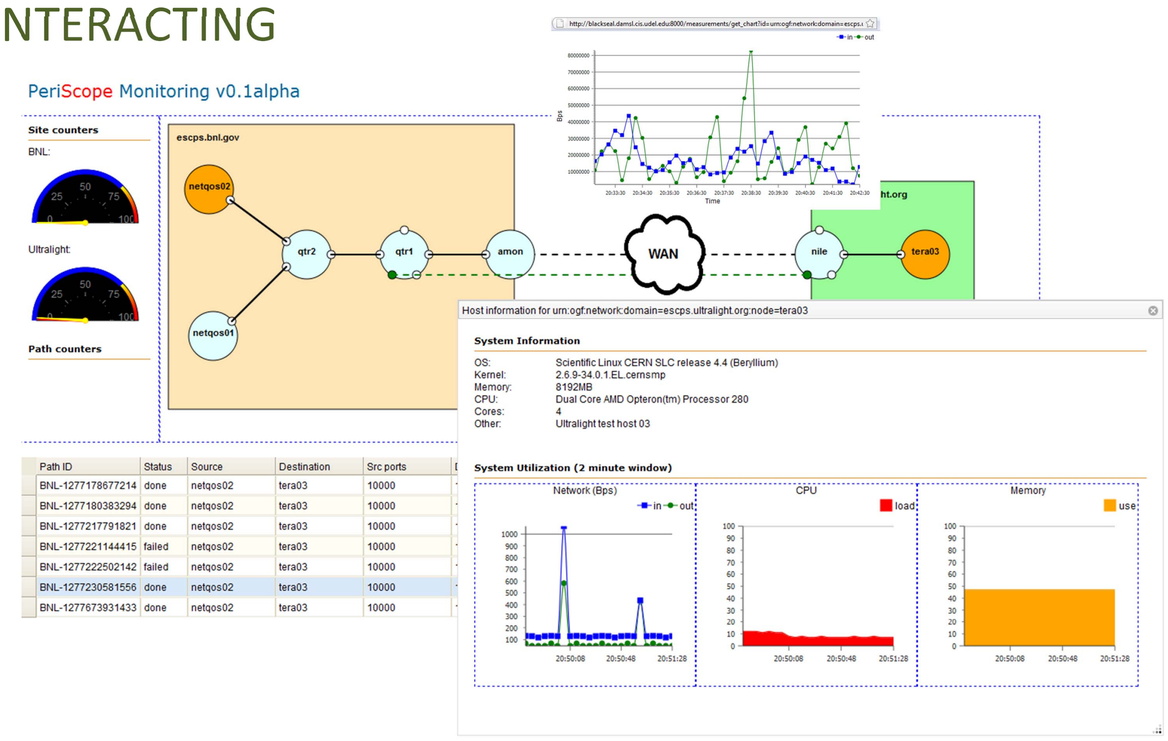
- Schemas based on NML-WG (Network Mark-up Language Working Group) definitions are used to specify XML messages format to interact with perfSONAR services.
- The Django MVC is used to represent UNIS and measurement data within Periscope.
- Periscope may also translate general network models to UNIS.
- Topological elements, from links and ports to domains and networks, are cleanly modeled and mapped to measurement data.

CACHING

- Measurement and Topology data is currently distributed throughout many repositories across perfSONAR domains
- Queries can take a considerable time to return results.
- Obtaining data faster is the main motivation to the caching functionality of Periscope.
- Measurement data from Measurement Archives (MA's) and Measurement Points (MP's), and network data from the Topology Service (ToP's) are cached within Periscope.
- All cached information is available and accessed through a web interface that provides individual link utilization information to the user in a friendly and fast way.



INTERACTING



- Front-end visualized the topology based on cached data acquired from the Topology Service.
- The user can click on a port or link to obtain tooltip information and access updating performance charts.
- Measurement data cached from MA's or MP's – related to the network entity – are shown within a dynamic monitoring pane.
- Information about possible anomalies occurring in the entity are accessed based on an anomaly detection module that will be available.

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