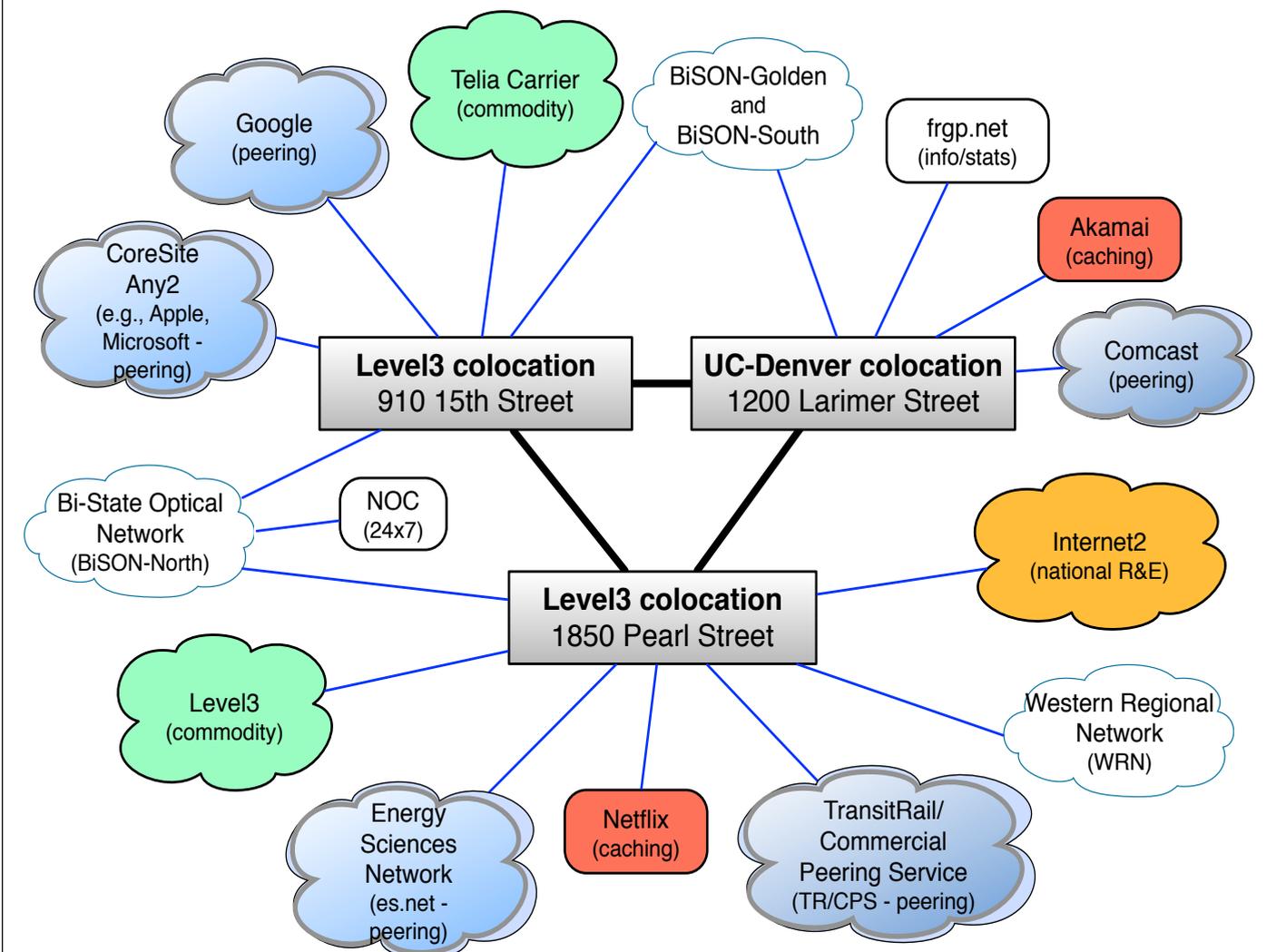




The FRGP enables advanced scientific research and education, supports experimental and production networks, fosters networking and application research, and facilitates interconnectivity among regional, national, and international high-performance research and education networks.

FRGP conceptual overview



2016-07-26 (PJS)

Since 1999, the FRGP has advanced the research and educational goals of Research and Education (R&E) participants in the region by establishing and maintaining a unique multi-state network infrastructure. The FRGP is owned and controlled by the FRGP participant research and education community. The University Corporation for Atmospheric Research (UCAR) provides the management, engineering, and network operations center support for the FRGP.

Front Range GigaPoP (FRGP)

The FRGP is a consortium of Universities, research organizations, non-profit corporations, government agencies, cities, counties, States, and K-12s that cooperate to share wide area networking services including Internet2, intra-FRGP, commodity Internet, caching, and peering connectivity.

FRGP participants benefit from economies of scale providing increased buying power, overall cost reduction, shared services and expertise. One of the main benefits the FRGP provides is aggregated and direct intra-member network access. This includes access to all participants, secondary connections behind primary FRGP participants, and direct peering connections including the Energy Sciences network (es.net), Google, CoreSite Any2 (e.g., Apple and Microsoft), and Comcast.

The FRGP has supported a doubling in traffic growth every 2-3 years since inception. It currently serves approximately one million users whose organizations participate in the FRGP research and education community in Colorado and Wyoming.

The FRGP provides connectivity to the Internet2 network - either directly for Internet2 members or via the US UCAN program for qualifying community anchor institutions. The FRGP also provides participants with access to Akamai and Netflix caching systems.

The FRGP is a member of the Western Regional Network (WRN), a multi-state partnership providing high-speed networking for research, education, and related uses through the sharing of network services among communities across the western United States.

WRN includes Pacific Wave participation, multiple Internet2 connections, backup connectivity options, and cost savings provided by intra-region peering, commodity Internet services, and multiple TransitRail (TR) / Commercial Peering Service (CPS) connections.

The FRGP provides access to multiple commodity Internet service providers for resiliency and diversity. Traffic aggregation and FRGP membership in The Quilt, Inc. provide cost savings for commodity Internet services. The FRGP also participates in the commercial network peering program known as TR/CPS that improves network performance through peering relationships with commercial networks to help members reduce the overall cost of, and reliance on, commodity Internet services.

Front Range GigaPoP (FRGP)
<http://www.frgp.net>

University Corporation for Atmospheric Research
(UCAR)
<http://www.ucar.edu>

Internet2
<http://www.internet2.edu>

US UCAN
<http://www.usucan.org/>

[http://www.internet2.edu/products-services/
advanced-networking/network-participants/](http://www.internet2.edu/products-services/advanced-networking/network-participants/)

The Quilt, Inc.
<http://www.thequilt.net>

Western Regional Network (WRN)
<http://nets.ucar.edu/nets/ongoing-activities/wrn/>

Pacific Wave
<http://www.pacificwave.net/>