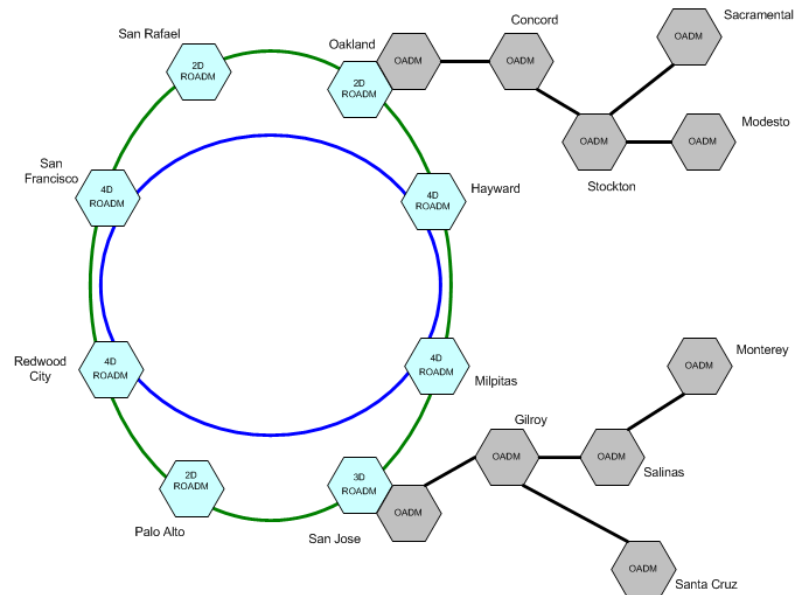


JDSU Optical Network Qualification



Features

- Design evaluation and in-field qualification
- Troubleshooting, baselining, commissioning, and acceptance testing
- Independent, third-party assessments from a trusted expert



Benefits

- Eliminates the risks of poor designs and over/under engineering
- Ensures reliable, optimized network performance with lower CapEx/OpEx
- Increases interoperability and integration with equipment and carriers

Applications

- Qualification/evaluation of agile and/or mesh-connected optical network design
- Commissioning/acceptance testing of DWDM, 10/40/100 G systems and networks
- Characterization of submarine cable systems for system upgrades

To meet growing bandwidth demand, network operators turn to increasingly complex optical transport solutions. Technologies such as Raman amplification, wavelength selection switch (WSS)-based reconfigurable add-drop multiplexers (ROADMs) in mesh topologies, and 50 GHz channels at 10/40/100 G offer huge performance improvements. However, their complexity makes design and implementation errors painfully expensive. And, operators cannot rely on vendor promises and published standards to guarantee the performance, scalability, reliability, and resiliency of their networks.

The Optical Network Qualification (ONQ) service combines deep JDSU expertise in optical networking components and test and measurement instruments with a global, professional services infrastructure. With an objective, third-party perspective, the ONQ service helps network operators optimize designs and identify hard-to-find problems before services are turned up. And, it establishes a thorough baseline record for future diagnostics and upgrades. As a result, network operators will be able to maintain reliable services to their customers while minimizing capital and operating expenditures.

JDSU Optical Network Qualification

From planning and R&D through building and maintaining to design verification, the JDSU ONQ service is a vital resource for network operators, system integrators, and network equipment manufacturers worldwide.

Specifications—Tests and Deliverables

ONQ service deliverables, fully documented in a Statement of Work created for each project, include:

- capturing and documenting the existing fiber link layout and optical network design
- developing high-level, step-by-step test plans and scripts and conducting tests that cover all aspects of performance including:
 - optical power: link and channel
 - channel wavelengths: accuracy and stability
 - optical signal-to-noise ratio (OSNR): in-band or out-of-band
 - channel balancing and placement of amplifiers
 - cascading effects of OADMs: OSNR and dispersion
 - 40/100G transmission: advanced modulations, spectrum compatibility, nonlinear effects
 - optical protection switching or optical path protection
- executing test plans with JDSU test and measurement equipment in collaboration with an operator's field personnel
- providing detailed test results; data analyses, including end-of-life (EOL) margins; and expert recommendations such as chromatic and polarization mode dispersion mitigation strategies.

Whenever possible, ONQ service tests and upgrade/replacement plans will not impact existing customer services.

Related Services

ONQ is just part of our professional and consulting services portfolio that includes:

Fiber Characterization

Independently verifies the quality and integrity of new or existing optical fibers to determine their suitability for today's high-speed applications. With comprehensive reports that detail results and give clear analyses and recommendations, fiber characterization will eliminate uncertainty and identify infrastructure and cross-carrier issues before deployment, avoiding the costs of troubleshooting and rework.

Operational Process Re-Engineering

Collaborates with service providers to develop operational requirements, models, and architectures for optimizing and extending services. Applying a comprehensive understanding of operations systems and hands-on experience with the deployment of systems and services, the practice delivers detailed requirements and implementation plans that are tailored to the challenges of the engineering and operations teams who will deploy them.



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