

#### Delivering Broadband Assurance Across the Service Journey

# How Can You Validate, Optimize, and Improve the Subscriber Experience?

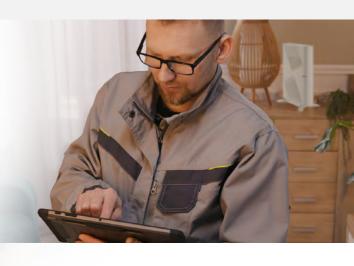
Measuring the quality of your subscribers' broadband service experience is a critical component of transforming into a **broadband experience provider** (BXP). Capabilities like speed and latency testing allow BXPs to quickly access performance insights to accurately address the broadband experience, giving them one of the best indicators of how happy subscribers are. When done right, broadband service assurance begins at installation and lasts the subscriber's entire lifecycle—ensuring you always deliver an optimized subscriber experience.

**Let's Get Started** 

#### Field Technician



Use Case: Speed Testing To Validate On-Site Installations & Troubleshooting



#### Subscriber



Use Case: Self-Speed Testing To Ensure Service Quality

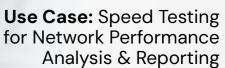


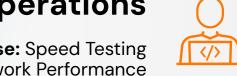
# **Customer Service Representative**

**Use Case:** Speed Testing for Subscriber Broadband Analysis & Reporting



#### Broadband Operations







# 3 Steps to Assure Subscriber Experiences Throughout the Service Journey

**Choose Your Role** 



Delight subscribers by ensuring the installation is done right the first time with speed testing and validation.

Field technicians can optimize and validate the service experience during installation, or the subscriber can utilize speed testing during self-install. By assuring the broadband experience from the beginning of service activation, you can avoid future truck rolls.



Support and optimize the broadband experience over time with data-driven speed testing insights.

As you grow—through funding and expansion, or by adding new services and segments—you add more value to your subscribers and broadband assurance is a key element. Assuring the broadband experience provides you (and your subscribers) with confidence as you continue to add more value.



Transform speed testing data into intelligence that proactively improves the subscriber experience.

Gain more insights from testing data with centralized reporting capabilities that show network health and identify what to optimize, plan for, and improve over time. Uplevel your support teams and evolve to proactive support to address silent sufferers.



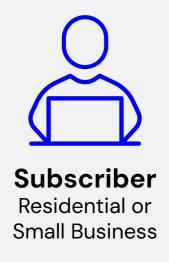
#### **CHOOSE YOUR ROLE**

# Speed and Latency Testing for Every Stakeholder

Introduction

Choose a role to explore how to perform speed and latency testing and reporting using the Calix Broadband Platform.







**Customer Service Representative** 



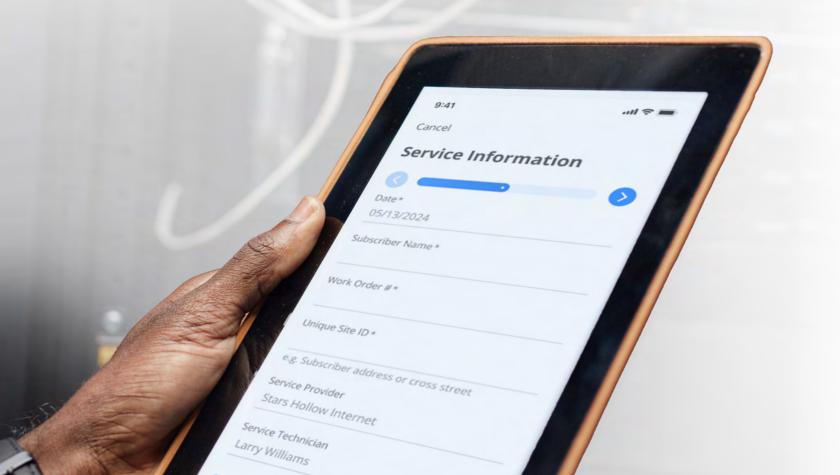
**Broadband Operations** 





# Speed Testing To Validate On-Site Installations & Troubleshooting

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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**On-Demand Speed Testing for Calix ONT Systems** 

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On-Demand Speed Testing for Indoor/Outdoor Calix Systems

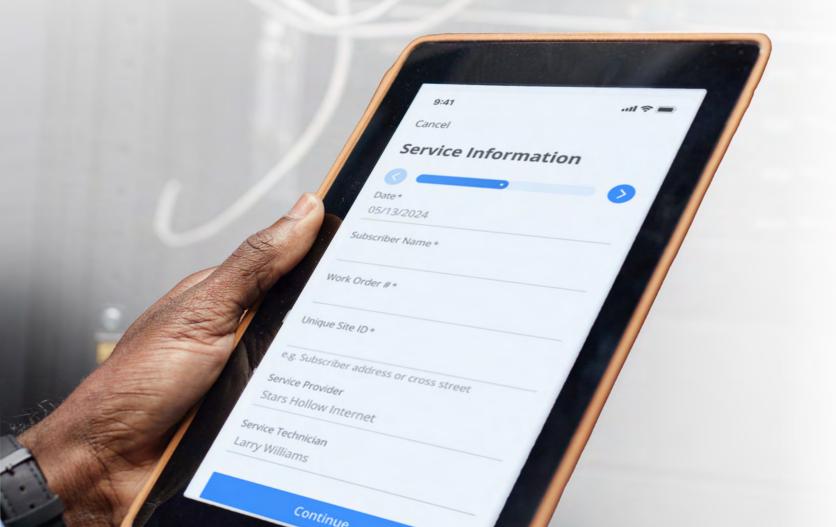
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# Speed Testing To Validate On-Site Installations & Troubleshooting

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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Validate the service experience for onsite installations, repairs, and upgrades.

- Test servers:
  - On-BSP premises multi-gig/TR-143 server
  - Cloud-based global performance network

On-Demand Speed Testing for Calix ONT Systems

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On-Demand Speed Testing for Indoor/Outdoor Calix Systems

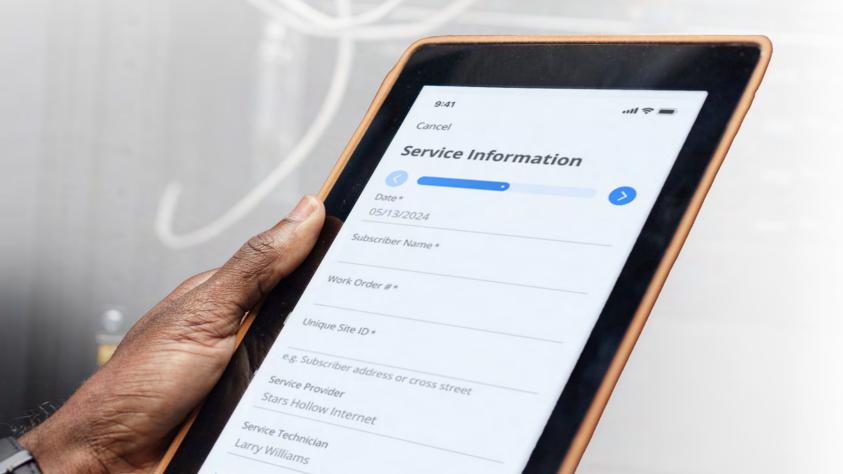
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# Speed Testing To Validate On-Site Installations & Troubleshooting

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems



**On-Demand Speed Testing for Calix ONT Systems** 



Enable analysis of network performance.

- Test server:
  - On-BSP premises multi-gig/TR-143 server

On-Demand Speed Testing for Indoor/Outdoor Calix Systems

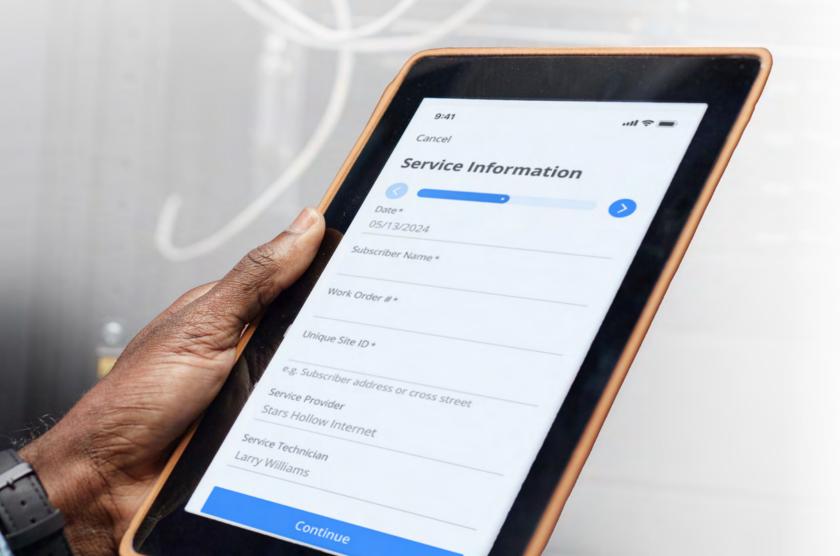






# Speed Testing To Validate On-Site Installations & Troubleshooting

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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**On-Demand Speed Testing for Calix ONT Systems** 

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On-Demand Speed Testing for Indoor/Outdoor Calix Systems



# Optimize placement and performance of systems/devices during install.

- On-demand speed and latency testing from the Field Service App to indoor and outdoor Calix systems/devices throughout the residence.
- Test server:
  - On-BSP premises multi-gig/TR-143 server





#### **SUBSCRIBER**

# Self-Speed Testing To Ensure Service Quality

Introduction



### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems



On-Demand Speed Testing for Certified Third-Party Systems





#### **SUBSCRIBER**

# Self-Speed Testing To Ensure Service Quality



### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems



Enable subscribers to validate their broadband service tier.

- Self-speed testing via the CommandIQ® app for residential users and the CommandWorx® app for small businesses to Calix GigaSpire systems.
- Test servers:

**3 Steps to Assure Subscriber Experiences** 

- On-BSP premises multi-gig/TR-143 server
- Cloud-based global performance network

On-Demand Speed Testing for Certified Third-Party Systems





#### **SUBSCRIBER**

# Self-Speed Testing To Ensure Service Quality



### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems



On-Demand Speed Testing for Certified Third-Party Systems



# Enable subscribers to validate their broadband service tier.

- Self-speed testing via the CommandIQ® app for residential users and the CommandWorx® app for small businesses to Calix GigaSpire systems.
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**3 Steps to Assure Subscriber Experiences** 

- On-BSP premises multi-gig/TR-143 server
- Cloud-based global performance network





Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

**3 Steps to Assure Subscriber Experiences** 

On-Demand Speed Testing for Calix GigaSpire Systems

On-Demand Speed Testing for Calix ONT Systems

On-Demand Testing for Certified Third-Party
Systems

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CC Performance Testing

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Automated Background Testing





Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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Enable remote troubleshooting and validation of the service experience.

- Test servers:
  - On-BSP premises multi-gig/TR-143 server
  - Cloud-based global performance network

On-Demand Speed Testing for Calix ONT Systems

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On-Demand Testing for Certified Third-Party Systems

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**FCC Performance Testing** 

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**Automated Background Testing** 

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Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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**On-Demand Speed Testing for Calix ONT Systems** 



Enable remote subscriber troubleshooting and analysis.

- Speed and latency testing to select Calix ONT systems (requires Calix Operations Cloud).
- Test server:
  - On-BSP premises multi-gig/TR-143 server

On-Demand Testing for Certified Third-Party Systems

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**FCC Performance Testing** 

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**Automated Background Testing** 

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Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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On-Demand Speed Testing for Calix ONT Systems

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**On-Demand Testing for Certified Third-Party Systems** 

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Enable remote troubleshooting and validation of the service experience.

- · Speed and latency testing to certified third-party systems.
- **Test servers:** Third-party certification is based on interoperability testing to the TR-069, TR-098, TR-181, and TR-143 standards.

**FCC Performance Testing** 

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**Automated Background Testing** 

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Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

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On-Demand Speed Testing for Calix ONT Systems



On-Demand Testing for Certified Third-Party Systems

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**FCC Performance Testing** 



Enable FCC performance testing for funding reporting and compliance.

- Set up by broadband operations in Calix Service Cloud and supported by customer support.
- Test server:
  - Cloud-based global performance network

**Automated Background Testing** 







Introduction

# Speed Testing for Subscriber Broadband Analysis & Reporting



#### **Testing Capabilities**

On-Demand Speed Testing for Calix GigaSpire Systems

On-Demand Speed Testing for Calix ONT Systems

On-Demand Testing for Certified Third-Party Systems

FCC Performance Testing

Automated Background Testing

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Establish a baseline of measuring broadband service quality.

- Daily background speed tests. One speed test per day.
- Test server:
  - On-BSP premises multi-gig/TR-143 server





# Speed Testing for Network Performance Analysis & Reporting

Introduction



#### **Testing Capabilities**

**On-Demand Speed Testing for Calix ONT Systems** 

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**FCC Performance Testing** 

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**Automated Background Testing** 

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# **Speed Testing for Network Performance Analysis & Reporting**

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix ONT Systems

Enable remote troubleshooting and analysis of network performance.

- Test server:
  - On-BSP premises multi-gig/TR-143 server

**FCC Performance Testing** 

**Automated Background Testing** 





# Speed Testing for Network Performance Analysis & Reporting

Introduction



#### **Testing Capabilities**

**On-Demand Speed Testing for Calix ONT Systems** 

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**FCC Performance Testing** 



# Enable FCC performance testing for funding reporting and compliance

- Set up by broadband operations in Calix Operations Cloud, supported by customer support.
- Test server:
  - Cloud-based global performance network

**Automated Background Testing** 







# Speed Testing for Network Performance Analysis & Reporting

Introduction



#### **Testing Capabilities**

On-Demand Speed Testing for Calix ONT Systems

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**FCC Performance Testing** 

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**Automated Background Testing** 



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- Test server:
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