

# Course Outline

## Cisco ThousandEyes Deployment and Implementation Course TEDI: 5 days Instructor Led

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### About this course

TEDI, Cisco ThousandEyes Deployment and Implementation, is a 5-day course designed to help you understand, deploy, and manage the ThousandEyes platform. This course provides the details and hands-on activities necessary to successfully deploy ThousandEyes and perform outage and performance analysis by leveraging data patterns and correlating test output.

### Audience profile

- Systems Engineers
- Technical Solutions Architects
- Application Developers and Engineers

### At course completion

After completing this course, students will be able to:

- Describe the ThousandEyes solution and its benefits
- Describe ThousandEyes agents, their purpose and how to determine optimal agent placement
- Explain the different ThousandEyes test types and their purposes
- Configure and run tests to correlate test output with the source of an application or network performance issue

### Course Outline

#### Module 1: Evolution of Application Delivery and Network Monitoring Requirements

- The SaaS Cloud Disruption
- The Importance of Enterprise App-to-User Visibility

#### Module 2: Thousand Eyes Platform Overview

- ThousandEyes Platform and Architecture
- Working with Agents
- Understanding Consumption Models and Pricing
- External Integrations

#### Module 3: Solution Use Cases

- ThousandEyes Cloud Adoption Use Cases
- Use Cases for Digital Experience
- L3 And WAN Use Cases
- Qualifying ThousandEyes Strategic Value

#### Module 4: Enterprise Agent Installation and Placement

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- Enterprise Agent Overview and Data Collected
- About BrowserBot
- OVA and Hyper-V Hypervisor Installation
- UX Installation and Docker Deployment
- Installation for Cisco IOS XE Containers
- Installation for Cisco Catalyst 9000 Series Switches
- Other Installation Options
- Enterprise Agent Clusters
- Interface Selection, Creation and Configuration
- Placement Considerations

### Module 5: Endpoint Agent Installation and Configuration

- Endpoint Agent Overview and Data Collected
- Endpoint Agent Installation options
- Configuration and Deployment
- Creating Scheduled Tests
- User Experience

### Module 6: Thousand Eyes Test Types and Functionality

- Cloud and Enterprise Agent Based Tests
- Nesting of Tests
- Data Collection
- Adding Tests
- Relating Foundation Technologies to Test Methods and Output

### Module 7: Network Layer Tests

- Test Inputs
- Agent-to-Server Test Configuration
- Agent-to-Agent Test Configuration
- End-to-End Metrics and Visualization

### Module 8: BGP Testing

- BGP Protocol Review
- Test Inputs
- Alert Rules
- Interpreting BGP Route Visualization

### Module 9: DNS Testing

- DNS Review
- DNS Test Inputs
- Analyzing DNS Test Output

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- DNS+ Layer Tests Settings
- DNS+ Layer Tests Output

### Module 10: Testing Web Servers

- HTTP Inputs
- FTP Server Test Inputs
- Analyzing Web Test Output

### Module 11: VoIP Tests

- VoIP Technology Review
- RTP Settings
- SIP Server Settings
- Interpreting RTP Stream and SIP Server Output

### Module 12: Transaction Testing

- Modeling User Workflows
- Basic Test Configuration
- Transaction Scripting Examples
- Using the ThousandEyes Recorder
- Selenium and Web Dev Tools
- The Document Object Model and Interpreting Waterfall Charts

### Module 13: SD-WAN Visibility and App Performance

- SD-WAN Review
- Leveraging Visibility to Baseline App and Network Performance
- SD-WAN Branch, SaaS, and ISP Metrics
- Using Underlay/Overlay Visualizations to Validate Performance and Isolate Issues

### Module 14: Outage and Performance Analysis with ThousandEyes

- Determining the Correct Test Type and Config
- Correlating and Validating Test Results

### Module 15: Monitoring, Alerting and Remediation

- Using ThousandEyes Monitoring to Improve Digital Experience
- Determining Actions to Take Based on Test Output
- Using Snapshots
- Managing Alerts
- Capturing Historical Data

### Module 16: Troubleshooting

- Missing or Incorrect Path Visualization Information

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- HTTP server test errors
- Endpoint Agent Issues
- Firewall Considerations
- CLI Network Troubleshooting Utilities

### Hands-On Labs:

Labs are designed to assure learners a whole practical experience, through the following practical activities:

#### Lab 1: Getting Started with ThousandEyes Platform Administration

- Task 1: Create Organizations and Account Groups
- Task 2: Create Users
- Task 3: Managing Shared Assets

#### Lab 2: ThousandEyes Agent Installation and Configuration

- Task 1: Install and Configure the Enterprise Agent
- Task 2: Install and Configure Endpoint Agents

#### Lab 3: Configuring Network Tests and Analyzing Test Output

- Task 1: Configure Agent-to-Server Network Test Inputs
- Task 2: Running Agent-to-Server Network Tests
- Task 3: Agent-to-Server Output Visualization and Analysis
- Task 4: Configure Agent-to-Agent Network Test Inputs
- Task 5: Running Agent-to-Agent Network Tests
- Task 6: Agent-to-Agent Output Visualization and Analysis

#### Lab 4: Configuring and Running DNS Tests

- Task 1: Configure DNS Test Inputs
- Task 2: Run DNS Tests and Review Outputs
- Task 3: Create DNS+ Server and Domain Tests
- Task 4: Review DNS+ Test Outputs

#### Lab 5: HTTP Test Configuration and Output

- Task 1: Configure HTTP Test Inputs
- Task 2: Run Web Layer Tests
- Task 3: HTTP Test Output Visualization and Analysis

#### Lab 6: Testing with Transactions

- Task 1: Configure Transaction Test Inputs
- Task 2: Model User Workflows Using the ThousandEyes Recorder

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- Task 3: Using Example Scripts to Modify Transaction Tests
- Task 3: Running Transactions Tests
- Task 4: Review Waterfall Charts for Page Load and Transactions

### Lab 7: Configuring Monitoring and Alerting

- Task 1: Configure Customer Digital Experience Monitoring
- Task 2: Inter & Intra Cloud Monitoring
- Task 3: Scheduling Tests
- Task 4: Configuring Alert Criteria, Actions, And Suppression
- Task 5: Monitoring Endpoint or Employee Digital Experience

### Case Study 1: Digital Experience

- Part 1: Background
- Part 2: Objectives
- Task 1: Solution (Includes Agent Placement and Recommended Testing Strategy; Test Type, Configuration and Monitoring and Alerting Considerations)

### Case Study 2: SD-WAN and Cloud Security

- Part 1: Background
- Part 2: Objectives
- Task 1: Solution (Includes how to Baseline based on current SaaS/ISP/Branch considerations and how to determine and communicate success criteria for SD-WAN implementation)