



ribbon™

**Ribbon Academy
Partners Course Catalog
Apollo**



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About us

In today's competitive market, businesses and individuals must acquire knowledge of leading-edge tools to stay ahead. By learning the latest technologies, all companies and their personnel gain the expertise needed to attain this goal.

Ribbon's Packet and Optical Training Services is responsible for training company personnel as well as a broad spectrum of Ribbon's Packet and Optical customers.

We offer excellent training for people like you, covering the complete range of the company's hardware products and dedicated software.

We offer tailor-made training courses and workshops, which provide in-depth instruction in the operation, maintenance, and troubleshooting of our network systems and components.

The courses and workshops are held either at our training centers, or at the customer premises, depending on the session requirements.

Our resources extend to online training sessions, as well as self-learning movies on our Intranet site, regarding global subjects such as the technologies themselves.

Our instructors are all certified with many years of industry and teaching experience. Recognized as industry experts, they lecture worldwide and are able to deliver courses in many languages such as English, Spanish, Russian, German, as well as a bevy of other languages.

Course Delivery Methods

Courses can be given in one of the three delivery methods listed below. The courses are offered both as dedicated courses and as part of the ongoing yearly partner program. Take a look at any course page to find out if it can be given as a webinar or only as frontal.

Frontal in a Ribbon facility: This type of course is given in a classroom at one of our training centers world wide by a certified Ribbon instructor. The course will usually involve a mixture of theoretical sessions and practical exercises. Most courses are limited to 8 students.

Frontal in a customer facility: This type of course is given by a Ribbon certified instructor at the customer's facility. The customer is responsible to make the necessary arrangements as detailed below. Please contact us in order to arrange such a course. Most courses are limited to 8 students.

Webinar course: Some courses can be given in webinar form. Remote connection for the theoretical sessions is done via MS Teams while practical exercises are done via a remote connection to the lab. It is necessary to make sure you have a working headset (earphones and a microphone) before the session and a good internet connection. Number of students per class is determined per course.

Note that some courses offer a part that can be done via a webinar and a part that can only be frontal.

Accreditation criteria and certificate

Eligibility for the Ribbon official accreditation certificate will be based on meeting all the following criteria: participation to all the lectures and hands on practice exercises as well as successful completion of the course exam.

The official certificate is granted to the participant only and it will include: the participant name, company name, course name and accreditation level.

Per seat or dedicated course

Our yearly partner training program offers courses from this catalog several times a year. These courses offer you the option to register only one or two people – per seat.

An alternative option is to purchase a complete dedicated course for your company.



Prerequisites When Performing Courses at the Customer's Site:

For Theoretical Sessions or the Theoretical Parts of Management Sessions:

- Projectors supporting HD resolution
- Whiteboard or flipchart, with markers

For Management Sessions:

Using a local lab for network management courses:

- Management software
- At least 4 PCs connected to the management station to be used as clients
- At least 2 to 3 elements connected to the management station
- No live traffic

Using a remote lab for network management courses:

- At least 4 PCs connected to an unfirewalled high speed internet connection, to be used as clients

For installation courses at the customer's site:

- At least 2 elements not carrying live traffic



Apollo Programs

The partner catalog includes two programs for the Apollo product line. Each program covers the expertise required to deliver professional services successfully. These services include (A) installation, (B) configuration and (C) handle potential support scenarios. The programs differ by the expected complexity of the implemented WDM network.

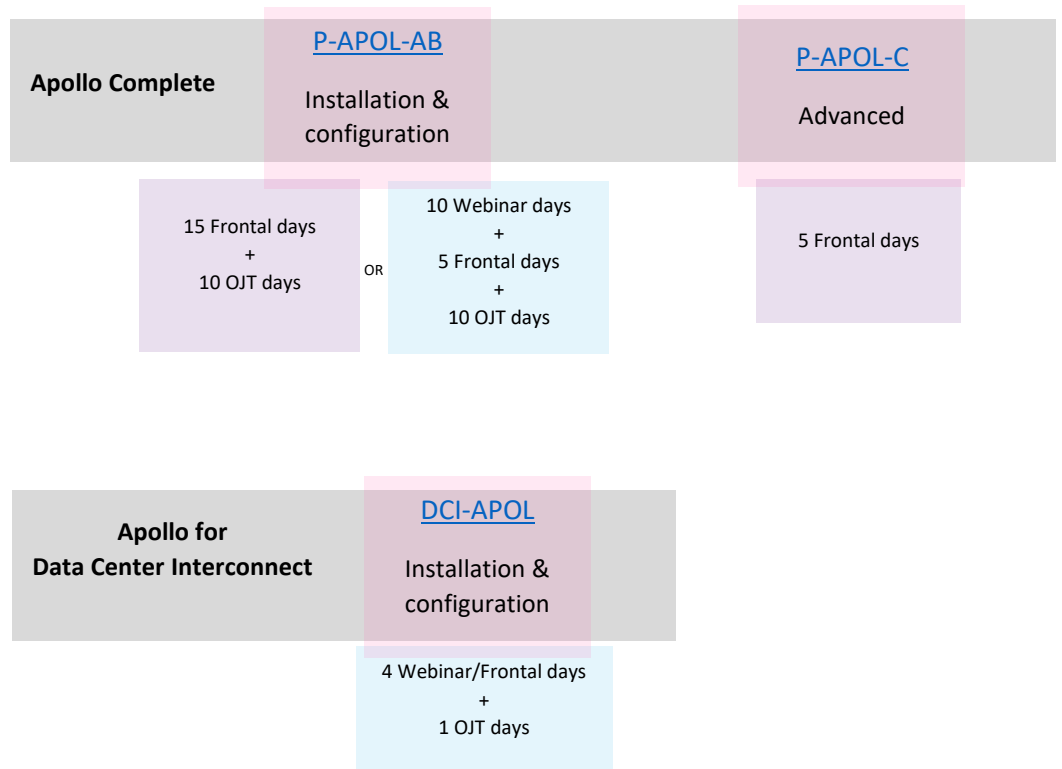
Apollo Complete

This program covers the expertise and professional services required by technical staff to deliver, install, configure and calibrate Apollo based optical networks. A comprehensive program for partners targeting optical networks requiring solutions with ROADM and switched optical networks techniques.

Apollo for Data Center Interconnect

This program covers the expertise and professional services required by technical staff to deliver, install, configure and calibrate Apollo based optical networks implementing point-to-point optical networks for applications like Data Center Interconnect.

Recommended Course Path



Color Code:
Course Program
Course Code
Frontal Option
Hybrid (Web & Frontal) Option



Apollo Level A+B

Course Duration:

Frontal: 15 days + 10 OJT days

Hybrid: 10 webinar days + 5 frontal days + 10 OJT days

Course Code: P-APOL-AB

Course Content:

- WDM, OTN, Coherent technology
- OTN management principles
 - GCC
 - FEC/EFEC/SD_FEC
 - ODU-XC concept
- Flex Grid technology
- Encryption & Security Approach
- Netconf & Yang Approach
- Common cards and modules
- Apollo WDM & OTN cards and modules
- Initial configuration
- LCT & CLI Access to an NE
 - Configuration via the CLI
 - On site WDM & OTN cards configuration
- OSC Overview & Configuration
- Network management - Main window, groups, layers
- WDM & OTN Cards configuration
- ONCP concept
- ONCP implementation
- Path signal health tracking
- Optical links & trails
- OTDR card overview & Configuration
- Power Budget & Project book
- Physical construction of a WDM optical link
- Optical link calibration
- Optical Link & Traffic testing and measurement by OSA
- On site monitoring and troubleshooting using WDM/OTN test equipment
- NE DB backup & Restoration

**Goals:**

Upon completion of this course, you will be able to:

- Describe the different Apollo chassis and their cards
- Perform basic configuration of an Apollo shelf
- Understand how to work with remote support
- Understand the importance of the monitor points
- Configure the Apollo cards using the network management software
- Configure optical trails
- Physically build and calibrate an Apollo WDM/OTN optical link

Target Audience:

- Partners wishing to get acquainted with Apollo WDM, OTN, Flex Grid, Coherent Technologies, and perform local troubleshooting
- Partners wishing to be certified regarding Apollo Installation, Optical network calibration and network management

Prerequisites:

- Basic knowledge in telecommunications



Apollo Level C

Course Duration:

Frontal: 5 days

Course Code: P-APOL-C

Course Content:

- OSNR, PMD, attenuation, chromatic dispersion and nonlinearity; and how they affect optical links
- Analyzing optical links with OTDR
- Flex Grid implementation
- Coherent Technology implementation
- Encryption & Security configuration
- NTP configuration steps
- Netconf Yang implementation
- Protection types: Equipment, port, traffic
- Protection maintenance
- Advanced optical layer operation in LightSOFT - Light Pulse
- NE event logs
- Advanced optical link case studies, maintenance & troubleshooting

Goals:

Upon completion of this course, you will be able to:

- Master advanced WDM/OTN network setup techniques and on-field decision making
- Improve your optical & data packet troubleshooting skills
- Gain understanding of the various optical phenomena's and their effect on WDM/OTN network performance

Target Audience:

- NOC personal
- Network engineers

Prerequisites:

- Apollo level A+B [[P-APOL-AB](#)]
- Hands on field experience with Apollo

Notes:

This course consists of 5 days of a frontal course using a lab

This course does not include ASON & WSON Overview & Configuration



Apollo for DCI –Level A+B

Course Duration:

Frontal/Hybrid: 4 webinar days + 1 OJT days

Course Code: DCI-APOL

Course Content:

- Apollo shelf overview
- WDM, Coherent technology Overview
- IO Interface cards overview & Configuration: TR200_2, TM200EN, TM200ENB, TM800, TM1200
- Encryption & Security Approach
- ROADMs cards overview and basic configuration
- Amplification - OA_LF, OA_HF, OA_DLF & OA_DLHF overview & Configuration
- Initial configuration via LCT
- NE DB backup & Restoration

Goals:

Upon completion of this course, you will be able to:

- Describe the different Apollo chassis and their cards
- Perform configuration of an Apollo shelves
- Understand how to configure IO Cards, Amplifiers & ROADMs using LCT
- Understand how to configure encryption between Peer NEs
- Understand the importance of security

Target Audience:

- Partners wishing to learn how to configure Apollo shelves for DCI applications

Prerequisites:

- Basic knowledge in telecommunications
- Knowledge of DWDM, OTN

Notes:

This course consists of 4 days of frontal course using a lab; and an additional 1 day on-site OJT

