Hughes Technical Training

Course Catalog

2024

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PRODUCT TRAINING FOR EXTERNAL AND INTERNAL CUSTOMERS

COURSE OFFERINGS AND FACILITY OVERVIEW

The Hughes Technical Training Group's objective is to provide customers and employees with world-class training that supports our products and services. We have a state-of-the-art training facility located in our Hughes EXM building, with fully functioning laboratory and professionally qualified staff. The training reservations go through the program managers.

Technical training consists of a staff of professional trainers that instruct customers on Hughes' major products, utilizing over several independent courses. We can provide three types of trainings.

- **Local Training:**
  Our training facility includes a modern training room equipped with glassed-in laboratories dedicated to our program. The customers and employees will learn the technical and operational aspects of Hughes' products and systems in our facility. Students obtain direct exposure to the hardware and receive hands-on training that is not limited to the restrictions of a live network operations center.

- **Online Training:**
  Our trainers can provide online training courses via Microsoft Team Meeting. The customers and employees will learn the Hughes product online. The trainer will present the course via training presentations and alive network demos.

- **Onsite Training:**
  Global customer site delivery of training remains an option available to our customers.

The Jupiter System is the latest Hughes VSAT network providing high speed broadband TCP/IP connections for consumer and enterprise customers. The system is comprised of one or more Gateways and multiple terminals.

An alive JUPITER 2 System is currently at the training facility in Germantown, Maryland, USA. We can provide JUPITER 2 System training, local, online, or onsite. For JUPITER 3 System training, it can be provided online or onsite at present.

The JUPITER training courses cover system overview, terminal installation, network operations and maintenance and system sizing.

PRODUCT LINE COURSES

JUPITER 2 Training Courses:

Course Number	Course Title	Duration Days
TC-JS0300	Jupiter System Introduction	2
TC-JS0310	Jupiter System Terminal Installation and Operations	1
TC-JS0320	Jupiter System Network Operations and Maintenance	5
TC-JS0330	Jupiter System Sizing	2

JUPITER 3 Training Courses:

Course Number	Course Title	Duration Days
TC-JS0400	Jupiter System Introduction	2
TC-JS0410	Jupiter System Terminal Installation and Operations	1
TC-JS0420	Jupiter System Network Operations and Maintenance	5
TC-JS0430	Jupiter System Sizing	2

Notes:
1. For local training, maximum class size is 12 students, and the minimum is 4 students.
2. For online training, the students from one customer are up to 12.
3. The online training or onsite training are based on requests from the program managers.
4. For local/online training, the price is $900 per day per person; for onsite training, the price is $4,200 per day per class plus travel cost.

JUPITER SYSTEM COURSES

Recommended Sequence for Jupiter System training courses:

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┌─────────────────────────────────────┐
│     Jupiter System Introduction      │
│                                      │
│      TC-JS0300 or TC-JS0400          │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│     Jupiter System Terminal          │
│    Installation and Operations       │
│                                      │
│      TC-JS0310 or TC-JS0410          │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│     Jupiter System Network           │
│    Operations and Maintenance        │
│                                      │
│      TC-JS0320 or TC-JS0420          │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│        Jupiter System Sizing         │
│                                      │
│      TC-JS0330 or TC-JS0430          │
└─────────────────────────────────────┘
```
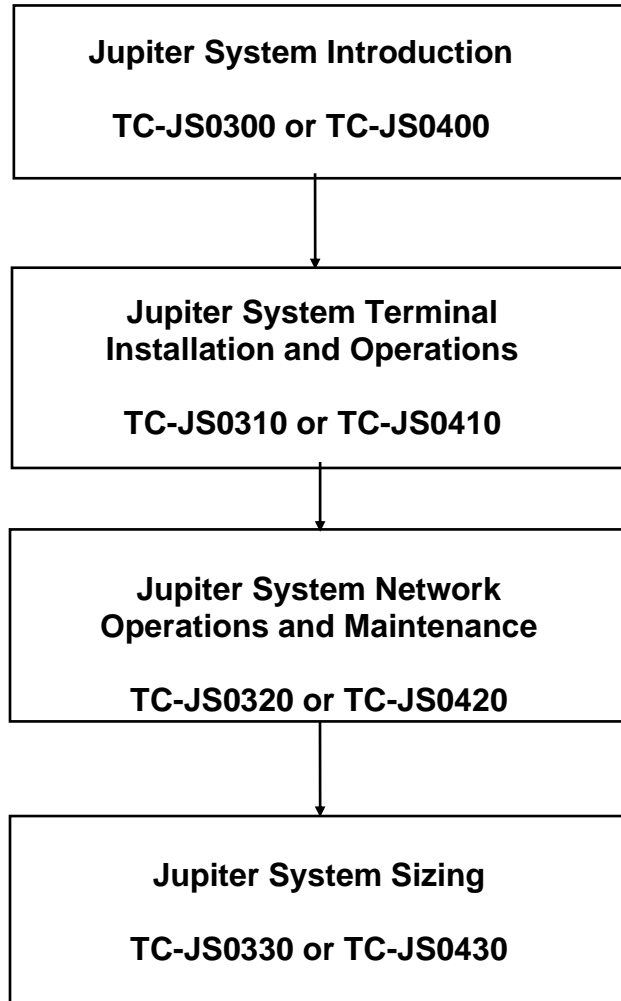
Jupiter System Introduction Course

Course Number: TC-JS0300 for JUPITER 2; TC-JS0400 for JUPITER 3

Course Duration: 2 Days

Class Size:
- Local training: 4 to 12
- Online training: up to 12 per customer
- Onsite training: up to 15

Prerequisites: None

Course Purpose:
This course is designed to provide a detailed introduction to the Jupiter System, which includes the high-level system architecture and major key features. The course provides fundamental knowledge for engineers, managers, technicians, operators, and other individuals who require a working knowledge of the product. Connectivity, traffic flow, and component functionality are discussed. This course is a prerequisite to Jupiter Network Operations and Maintenance training courses

Objectives:

This course introduces the major components of the Jupiter System. It is intended to provide the student with a functional knowledge of the following subjects and equipment:

1. Overview of satellite communications and TCP/IP
2. Jupiter System Architecture
3. Jupiter System Key Features
4. Jupiter Gateway Description

Topical Outline:
- Satellite Communications and TCP/IP Overview
- Jupiter System Architecture
    - Outroutes /Inroutes
    - Gateway and terminals
    - Network Managements
- Jupiter System Features
    - TCP/IP Features
    - Advanced Bandwidth Management Features
    - Satellite Link Features
- Jupiter Gateway description

Jupiter System Terminal Installation and Operations Course

Course Number: TC-JS0310 for JUPITER 2; TC-JS0410 for JUPITER 3

Course Duration: 1 Day

Class Size:
- Local training: 4 to 12
- Online training: up to 12 per customer
- Onsite training: up to 15

Prerequisites: None

Course Purpose:
This course covers the installation, commissioning and maintenance of the Jupiter terminals.

Objectives:
Upon completion of the program the student should be able to:
1. Install Hughes indoor unit
2. Commission a terminal
3. Familiar with the terminal Web UI

Topical Outline:
- Terminal Equipment
- Site Survey
- Terminal Commissioning
- Terminal Web UI

Jupiter System Network Operations and Maintenance Course

Course Number: TC-JS0320 for JUPITER 2; TC-JS0420 for JUPITER 3

Course Duration: 5 Days

Class Size:
- Local training: 4 to 12
- Online training: up to 12 per customer
- Onsite training: up to 15

Prerequisites: JUPITER System Introduction course (TC-JS0300 or TC-JS0400)

Course Purpose:
Introduce basic day-to-day operations and maintenance of the NOC Gateway.

Objectives:
This course introduces the day-to-day operations and maintenance of Jupiter Gateway. It is intended to give the Gateway Operator prerequisite knowledge to be able to perform the following tasks:

1. Introduction to Jupiter Gateway components
2. Monitor Jupiter network via Jovian NMS
3. Manage Jupiter terminal services
4. Configure, monitor and control Jupiter terminals via Jovian
5. Manage Gateway components
6. Perform routine system maintenance
7. Demonstrate basic troubleshooting skills via Jovian and Device Web UI

Topical Outline:
- Introduction to Network Management System
- Introduction to Gateway Components
- Jupiter Network Monitoring
- Terminal Management
- Gateway Management
- System Maintenance

Jupiter System Sizing TC-JS0430

Course Number: TC-JS0330 for JUPITER 2; TC-JS0430 for JUPITER 3

Course Duration: 2 Days

Class Size:
- Local training: 4 to 12
- Online training: up to 12 per customer
- Onsite training: up to 15

Prerequisites: JUPITER System Introduction course (TC-JS0300 or TC-JS0400)

Course Purpose:
This advanced course is designed to introduce the concepts and procedures used in Jupiter system sizing. During the course, space link and virtual network sizing are discussed.

Objectives:
Upon successful completion of this program, the student should be able to:

1. Estimate Jupiter space link capacity

2. Understand VN subscription and terminal QoS parameters

3. Size VN capacity based on the terminal QoS requirements

Topical Outline:
- Jupiter space link capacity and spectrum planning
- Virtual network subscription
- Virtual network capacity sizing based on terminal QoS
- New service considerations