CEREBRUM BASIC FOR SUPPORT ENGINEERS

This course is aimed at broadcast service engineers that are new to Cerebrum. It provides a complete overview of Cerebrum Control & Monitoring Software capabilities and a detailed description of its operation. This course focuses on what **Cerebrum** can do, using practical exercises to illustrate its approach to controlling and monitoring connected studio equipment. Participants will develop a clear mental model of Cerebrum—understanding what each major component does, why it exists, how the components work together, and how to begin building stable, logical workflows—preparing engineers to confidently perform **Tier 1 support tasks**.

Target audience: Support engineers

Format: E-learning

Duration: 2 hours

Pre-requisites

- Basic broadcast workflow understanding and signal routing
- IP basic knowledge: Layer 2, Layer 3, Subnetting, Upper Layers, Multicasting
- Solid Live IP knowledge: SMPTE ST2022, ST2110, SDP, PTP, NMOS, JT-NM
- Successfully completed the Cerebrum GO online training
- Local installation of Cerebrum app with enabled demo-mode license

Considerations

1. All exercises included in this training will be completed locally on your own system, using virtual devices where required. No physical hardware is needed to complete this course apart from the student laptop.
2. Once this training is completed, it is suggested that engineers are exposed to field tickets to exercise their acquired knowledge

Agenda

The Cerebrum Basic for Support engineers training course contains the following sections:

1. Platform Foundations

- Cerebrum architecture overview
- Core applications & system components
- Redundant server model (Primary, Secondary, Witness)
- SQL database role & availability
- System startup & failover principles

2. System Configuration Fundamentals

- Device configuration & communication setup
- Router & multi-level routing (Video + Audio)
- Virtual device deployment

- Configuration management & version control

3. Routing & Workflow Design

- Building virtual routers
- Multi-level routing logic
- RouteMaster abstraction layer
- Category-based workflow structuring
- Operator-friendly system design

4. Control & Panel Design

- Cerebrum Designer fundamentals
- Panel variables & dynamic configuration
- Single-category & XY routing panels
- Navigation vs Control views
- Scalable panel architecture

5. Advanced Control Logic

- Salvos (routing presets & snapshots)
- Joystick configuration (GPI-driven routing)
- Macros & automated control actions
- Multi-router tielines

6. Signal Monitoring & Tally

- Virtual switcher integration
- Multiviewer (UMD) configuration
- GPIO-driven tally workflows
- End-to-end signal flow verification

7. User Management & System Governance

- User & group permissions
- CLF overrides & control layouts
- Alternate mnemonics (Engineering / Production / Button labels)
- Operational safety & role separation

8. Troubleshooting & Support Best Practices

- Log export & diagnostics
- Configuration backups
- CLF/CPF export
- Support engagement process