

NexCaster

Orchestration Platform for Broadcast Operation



Product Overview



NexCaster is a comprehensive DevOps orchestration platform purpose-built for next-generation broadcast operations. Designed specifically for ATSC 3.0 and TV 3.0 deployments, NexCaster provides broadcasters with a unified, cloud-native solution that orchestrates the entire broadcast workflow—from content playout through encoding, transport, and monitoring. Built on the Basejump low-code application platform, NexCaster combines enterprise-grade infrastructure automation with broadcast-specific capabilities, enabling rapid deployment, seamless integration, and operational agility for modern broadcasters.

Key Value Proposition

For TV 3.0 / ATSC 3.0 Broadcasters

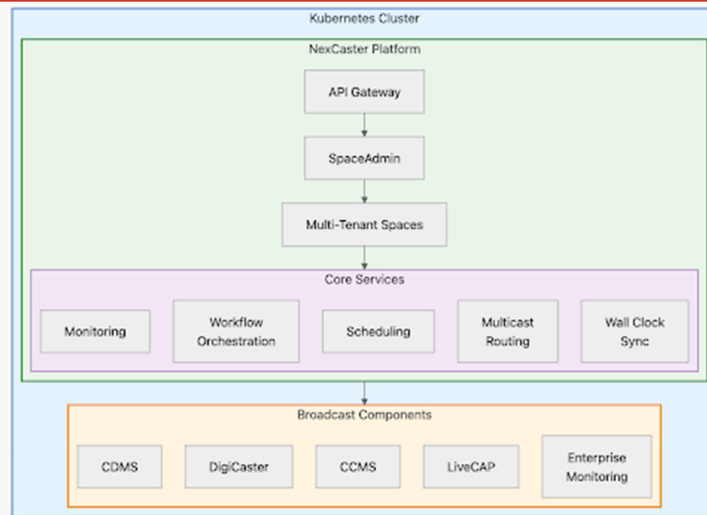
NexCaster solves the complexity of managing next-generation broadcast infrastructure by providing:

- **Unified Orchestration:** Single control plane managing playout, encoding, transport, certificate management, DigiCaster management, captioning, and monitoring.
- **Cloud-Native Architecture:** Kubernetes-based deployment supporting multi-cloud, hybrid, & on-premises environments.
- **Rapid Customization:** Low-code platform enabling broadcaster-specific workflow automation without extensive development.
- **Pre-Integrated Components:** DigiCaster, CCMS, CDMS, LiveCAP, and Enterprise Monitoring included.
- **DevOps Best Practices:** GitOps, Infrastructure as Code, Blue-Green deployment, and automated DR.
- **Future-Proof Design:** Extensible API-first architecture for third-party integration.

Core Platform Capabilities

- ✓ **SQL-REST API Framework:** Automatic REST API generation from database schemas.
- ✓ **Lambda Functions:** Serverless workflow automation with Deno runtime.
- ✓ **API Gateway:** Unified ingress for all microservices.
- ✓ **Authentication & RBAC:** Keycloak-based SSO with role-based access control.
- ✓ **UI Builder:** Visual interface designer for custom operator dashboards.
- ✓ **Database Management:** PostgreSQL, Clickhouse, Ceph SharedFS integration.
- ✓ **Multi-Tenancy:** Isolated spaces for different broadcast channels or regions.

Deployment Architecture



Integrated Broadcast Components

1. DigiCaster — Unified ATSC 3.0 Transport Platform

Coverage: Transport Layer (Multiplexer + Scheduler) Eliminates downtime

2. CCMS — Centralized Certificate Lifecycle Management System

Coverage: Service Certificate Management & Security

3. CDMS — Centralized DigiCaster Management System

Coverage: DigiCaster Version and Sub-Module Management

4. LiveCAP — Real-Time Multilingual AI Captioning

Coverage: Accessibility and Compliance

5. Enterprise Monitoring — Centralized Oversight

Coverage: Observability and Operations

6. Broadcast Stream Analyzer — QA and Testing

Coverage: Quality Assurance and Validation

Use Cases

1. TV 3.0 National Rollout

Scenario: Broadcaster deploying TV 3.0 across multiple markets

2. Multi-Channel Broadcaster

Scenario: Operating multiple broadcast channels with different content

3. Hybrid Broadcast-Broadband

Scenario: Simultaneous OTA (broadcast) and OTT (internet) delivery

4. Disaster Recovery

Scenario: Ensuring broadcast continuity during outages

Support



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