**Task #70: Authentication/CDN Services Comparison Matrix**

**Authentication & CDN Services Combined Comparison Matrix**

| **Service** | **Cost (Monthly)** | **Pros** | **Cons** | **Features** | **Integration Difficulty** | **CDN Performance** | **Security Capabilities** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Auth0 + Cloudflare** | $25-65+ (Auth0 Free-Enterprise) + $0-200 (CF) | Auth0: Legacy support, complex use cases, 2nd largest provider[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: 300+ edge locations, <30s global propagation, unlimited bandwidth on all plans[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Auth0: Expensive, reduced free tier, dated UI[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: Less dense than Akamai in emerging markets[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Auth0: Hosted SSO, Lock widget, custom UI, LDAP/SAML support[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: DDoS protection, WAF, Workers (edge compute <5ms), R2 storage[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | **Moderate** - Auth0 hosted login reduces complexity; Cloudflare API-first with Wrangler CLI, <30s deployments[userfront+1](https://userfront.com/blog/auth-landscape)​ | **Excellent** - <20-50ms median latency, 11,000+ peering relationships, flat Anycast architecture[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Auth0: MFA, SSO, SAML/OAuth[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: L3-L7 DDoS auto-mitigation, ML-based WAF, Zero Trust Access, <3s attack mitigation[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ |
| **Firebase + Google Cloud CDN** | $0-25+ (Firebase Spark-Blaze) + Pay-as-you-go GCP | Firebase: All-in-one BaaS, Google security team, free tier, mobile-first[userfront](https://userfront.com/blog/auth-landscape)​ / GCP CDN: Strong media tools (Transcoder/Live Stream API), global infrastructure[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Firebase: Backend lock-in, dated UI, limited to Firebase ecosystem[userfront](https://userfront.com/blog/auth-landscape)​ / GCP: Highest egress costs ($0.045-$0.085/GB), complex tier pricing[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Firebase: FirebaseUI, phone auth, social login, real-time database[userfront](https://userfront.com/blog/auth-landscape)​ / GCP: Media CDN, signed URLs, Cloud IAM integration[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | **Easy-Moderate** - Firebase handles full backend; GCP native integration with Firebase projects[userfront+1](https://userfront.com/blog/auth-landscape)​ | **Excellent** - Low latency, 99.95% availability, optimized for media delivery[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Firebase: Built by Google security team, encryption at rest/transit[userfront](https://userfront.com/blog/auth-landscape)​ / GCP: Cloud IAM, DDoS protection, GDPR/SOC 2/ISO 27001 compliant[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ |
| **AWS Cognito + CloudFront** | $0-50+ (Cognito pay-per-MAU) + $0.085/GB (CloudFront) | Cognito: Deep AWS integration, user pools, federated identities[userfront](https://userfront.com/blog/auth-landscape)​ / CloudFront: 400+ edge locations, Lambda@Edge, 99.99% SLA[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Cognito: Limited features, poor documentation, basic UI[userfront](https://userfront.com/blog/auth-landscape)​ / CloudFront: Regional pricing variation ($0.085-$0.170/GB), requires AWS familiarity[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Cognito: User pools, MFA, social federation, SAML 2.0[userfront](https://userfront.com/blog/auth-landscape)​ / CloudFront: Lambda@Edge (<10ms), Shield DDoS, field-level encryption[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | **Moderate-High** - Requires AWS ecosystem knowledge; IAM complexity; 90-120s global propagation[userfront+1](https://userfront.com/blog/auth-landscape)​ | **Excellent** - Ultra-low latency, tiered caching model, 11-nines durability[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Cognito: MFA, Amplify UI library[userfront](https://userfront.com/blog/auth-landscape)​ / CloudFront: AWS Shield Standard (free), WAF integration, HIPAA/FedRAMP/GDPR compliant[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ |
| **Okta + Akamai** | $2-15 per user/month (Okta) + $0.035-$0.049/GB (Akamai, enterprise contract) | Okta: 6,500+ integrations, enterprise focus, stable platform[userfront](https://userfront.com/blog/auth-landscape)​ / Akamai: 4,100+ edge nodes, ISP-embedded, <15-30ms latency, 300+ Tbps capacity[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Okta: Expensive, confusing admin, occasional MS integration bugs[userfront](https://userfront.com/blog/auth-landscape)​ / Akamai: 12-month contract required, complex setup, slower deployment (10-15 min)[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Okta: SSO, LDAP, MFA, identity mgmt for workforce[userfront](https://userfront.com/blog/auth-landscape)​ / Akamai: Prolexic DDoS (900+ Gbps), App & API Protector, Bot Manager, Ion optimization[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | **High** - Okta requires extensive configuration; Akamai Property Manager has 300+ rules, version staging, approval gates[userfront+1](https://userfront.com/blog/auth-landscape)​ | **Excellent** - Deepest last-mile presence, embedded in ISPs/carriers, best for Tier 3 markets and live streaming[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Okta: Enterprise SSO, MFA, 6,500+ app integrations[userfront](https://userfront.com/blog/auth-landscape)​ / Akamai: FIPS 140-2, SOC 2 Type II, HIPAA, 365-day log retention, Zero Trust EAA[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ |
| **Userfront + Cloudflare** ⭐ | $0-80+ (Userfront Starter-Growth) + $0-200 (Cloudflare) | Userfront: Modern, easy install, auto-updating forms, JWT-native, best UX[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: Zero egress fees (R2), 120 Tbps DDoS protection, Workers <5ms cold start[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Userfront: Newest entrant, no legacy protocol support (LDAP/SAML)[userfront](https://userfront.com/blog/auth-landscape" \t "_blank)​ / Cloudflare: Fewer enterprise-specific compliance features vs Akamai[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Userfront: Self-hosted forms, SSO (Google/Facebook/Azure), JWT, multi-tenancy, access control[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: Workers, Durable Objects, R2 storage, real-time analytics[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | **Easy** - Userfront toolkit with HTML/React/Vue/Angular snippets; Cloudflare API-first, <30s propagation, Wrangler CLI[userfront+1](https://userfront.com/blog/auth-landscape)​ | **Excellent** - <20-50ms latency globally, 300+ edge locations in 100+ countries, Auto-scaling to millions req/sec[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ | Userfront: Modern auth protocols, MFA, SSO[userfront](https://userfront.com/blog/auth-landscape)​ / Cloudflare: Built-in L3-L7 DDoS, WAF with ML anomaly detection, Zero Trust Access, TLS 1.3, mutual TLS[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​ |

**Recommendation for Varsity Sports Platform**

**Primary: Userfront + Cloudflare**[userfront+2](https://userfront.com/blog/auth-landscape)​

**Rationale:**

* **Best modern web experience:** Userfront offers simplest integration with auto-updating security, JWT-native design, and excellent UX without legacy overhead[userfront](https://userfront.com/blog/auth-landscape)​
* **Zero egress costs:** Cloudflare R2 eliminates bandwidth fees critical for video streaming; included in all pricing tiers[cloudflare](https://www.cloudflare.com/cloudflare-vs-akamai/)​
* **Fastest deployment:** <30 second global CDN propagation; Userfront toolkit provides copy-paste integration for React/Vue/Angular[cloudoptimo+1](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​
* **Cost-effective scaling:** Cloudflare's unlimited bandwidth and Userfront's predictable pricing ($0-80/month) vs. Okta's per-user costs[cloudflare+1](https://www.cloudflare.com/cloudflare-vs-akamai/)​
* **Developer-friendly:** API-first design, Wrangler CLI for CI/CD, Workers for edge compute without vendor lock-in[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​

**Implementation Strategy:**

1. Use **Userfront** for authentication with self-hosted forms on platform pages[userfront](https://userfront.com/blog/auth-landscape)​
2. Deploy **Cloudflare Workers** for edge authentication logic (<5ms latency)[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/" \t "_blank)​
3. Store video content in **Cloudflare R2** with zero egress fees[cloudflare](https://www.cloudflare.com/cloudflare-vs-akamai/)​
4. Enable **Cloudflare Zero Trust Access** for admin/privileged accounts[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​

**Secondary: Firebase + Google Cloud CDN** (if mobile-first)[userfront+1](https://userfront.com/blog/auth-landscape)​

* Best for mobile app development with all-in-one BaaS approach[userfront](https://userfront.com/blog/auth-landscape)​
* Strong media optimization tools (Transcoder API, Live Stream API)[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/" \t "_blank)​
* Higher egress costs ($0.045-$0.085/GB) require budget consideration[cloudoptimo](https://www.cloudoptimo.com/blog/cloudfront-vs-cloudflare-vs-akamai-choosing-the-right-cdn-in-2025/)​