### **Comparison Summary :**

| **Feature** | **Weaviate** | **Milvus** | **Pinecone** | **OpenSearch** |
| --- | --- | --- | --- | --- |
| **Security** | Strong: OAuth2, API keys, RBAC, encryption | Good: RBAC, TLS, basic authentication | Robust: Encryption in transit & at rest, API auth | Comprehensive: RBAC, LDAP, encryption, auditing |
| **Multitenancy** | Advanced: Namespaces & schema-based isolation | Good: Namespaces | Limited customization | Advanced: Index-level controls & logical separation |
| **Kubernetes Support** | Excellent: Dedicated operator, seamless scaling | Good: Kubernetes operator, dynamic scaling | Not required: Managed service | Good: Kubernetes operator, integrates well |
| **Performance** | High for vector searches, hybrid queries | High scalability, real-time processing | High scalability, low latency | Good for full-text and vector search, less specialized |
| **Ease of Use** | User-friendly APIs, extensive documentation | Comprehensive APIs, detailed docs | Very easy: Managed service, API-centric | Familiar for Elasticsearch users, rich ecosystem |
| **Scalability** | Scalable via Kubernetes, optimized for real-time | Highly scalable for large-scale deployments | Highly scalable via managed infrastructure | Scalable with Kubernetes and managed services |
| **Community & Support** | Active community, enterprise support available | Active community, enterprise support via Zilliz | Professional support from Pinecone | Active community, managed support via providers |
| **Use Cases** | Semantic search, AI applications, multitenant systems | AI, similarity search, large-scale vector operations | AI applications needing managed vector search | Full-text search, analytics, vector search add-on |