

# Microservices patterns classified for the Paper Titled: Application of Microservices Patterns to Big Data Systems

Category	Pattern
Data Management	<ol style="list-style-type: none"> <li>1) Database per Service</li> <li>2) Shared Database</li> <li>3) Event Sourcing</li> <li>4) Command and Query Responsibility Segregation</li> </ol>
Platform and Infrastructure	<ol style="list-style-type: none"> <li>1) Multiple Service Instances per Host</li> <li>2) External Configuration Store</li> <li>3) Sidecar</li> <li>4) Static Content Hosting</li> <li>5) Computer Resource Consolidation</li> </ol>
Communicational, Transactional, Logical	<ol style="list-style-type: none"> <li>1) API Gateway</li> <li>2) Anti-corruption Layer</li> <li>3) Self Registration</li> <li>4) Service Discovery</li> <li>5) Competing Consumers</li> <li>6) Pipes and Filters</li> <li>7) Priority Queue</li> <li>8) Ambassador</li> <li>9) Gateway Aggregate</li> <li>10) Gateway Offloading</li> <li>11) Aggregator</li> <li>12) Backend for Frontend</li> <li>13) API Composition</li> <li>14) Saga Transaction Management</li> <li>15) Gateway Routing</li> <li>16) Leader Election</li> </ol>
Fault Tolerance	<ol style="list-style-type: none"> <li>1) Circuit Breaker</li> <li>2) Bulkhead Pattern</li> </ol>
Observability	<ol style="list-style-type: none"> <li>1) Log Aggregation Pattern</li> </ol>

TABLE I: Microservices categorization