Pilot-Manager

Compute-Data Manager

| Pilot-Compute Manager | Pilot-Data Manager |

Distributed Coordination Service

Pilot-Agent

Compute Manager

| SSH | MPI | YARN | Spark |

Distributed Memory Manager

| File | Redis | Spark |

Data Manager

| SSH | iRODS | HDFS | Cloud |

Resource Slot

Compute-Unit

In-Memory Data-Unit Chunk

Data-Unit Chunk