REQUIREMENTS:

• Low latency for coordination and cooperation
• Harvest edge computational resources to minimize or avoid the use of clouds and cloudlets
• Provide support for task/behavior parallelization among the edge nodes (robot, drone, sensors, etc)

ASSUMPTIONS:

• Absence or low-connectivity to a back-end, i.e., cloudlets and clouds
• Cloudlets and clouds, if present, are mainly for off-loading batch processing (e.g., image search in large databases)
• Highly heterogeneous environment
• Highly transient nature

EXAMPLE SCENARIO

User generates Query through Application

Hyrax decomposes and distributes the job according to available resources

The results are gathered and combined to synthesize the final result

The computation is pushed onto the next Stage (Reduce)