

Topic 5: Programming frameworks, models, and techniques

1 Guidelines

In this topic, you should present several P2P-based programming models that are parallel programming environments designed for programmers to develop applications to be executed concurrently on peers with idle cycles and other available resources. Different from traditional parallel programming models that support programming over a set of static and controllable computing nodes, P2P-based programming models is designed for run-time systems that should be able to utilize computing resources of heterogeneous and dynamic peers on the edge of Internet. Therefore, portability, availability, fault tolerance, and security are all important factors for evaluating a P2P-based programming model. In addition, you also need to consider its network performance because the searching and transportation cost could be very high. You should introduce three available P2P programming models in literature, which are P³, Teaq, and P2P-RPC.