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# create simple network containing 4 nodes and 3 branches
network = HydroNetwork(Name = "test network")

n1 = Node(Name = "node1", Geometry = Point(10, 10))
n2 = Node(Name = "node2", Geometry = Point(20, 20))
n3 = Node(Name = "node3", Geometry = Point(30, 30))
n4 = Node(Name = "node4", Geometry = Point(40, 40))

c1 = Branch(Name = "branch1", Source = n1, Target = n2)
c2 = Branch(Name = "branch2", Source = n2, Target = n3)
c3 = Branch(Name = "branch2", Source = n4, Target = n3)

# add nodes and branches to the network
network.Nodes.AddRange((n1, n2, n3, n4))
network.Branches.AddRange((c1, c2, c3))

# create and fill values of the network coverage
networkCoverage = NetworkCoverage()
networkCoverage.Network = network

networkCoverage[NetworkLocation(c1, 0.0)] = 100.0
networkCoverage[NetworkLocation(c1, 10.0)] = 200.0
networkCoverage[NetworkLocation(c1, 20.0)] = 300.0
networkCoverage[NetworkLocation(c2, 8.0)] = 400.0
networkCoverage[NetworkLocation(c2, 15.0)] = 500.0
networkCoverage[NetworkLocation(c2, 20.0)] = 600.0
networkCoverage[NetworkLocation(c2, 25.0)] = 700.0
networkCoverage[NetworkLocation(c3, 15.0)] = 800.0
```