I collaborated with: TA

Solution
Let G be a node-capacitated network. Let G^* be an empty graph. For every node v in G add two vertices v_{in} and v_{out} to G^* and an edge connecting them with capacity equal to c_v. If two vertices in G are connected, then connect the corresponding pairs in G^* with an edge of capacity equal to the capacity of the node where the original edge comes out of. Now, run the FordFulkerson algorithm on G^* to find an $s - t$ maximum flow in G^* which corresponds to such flow in G.
Time Complexity: Building $G* = O(|V| + |E|)$ + FordFulkerson algorithm $O(||E||V|CC) = O(|E||V|CC)$
Space Complexity: $O(|V| + |E|)$

Proof. Claim: The analogue of the Max-Flow Min-Cut Theorem holds true.
We can find a minimum $s - t$ cut in an edge-capacitated network using the FordFulkerson algorithm. This cuts through edges of G^* and separates the network. These edges that are cut correspond to vertices in G. By removing these vertices, we have found a minimum $s - t$ cut for the node-capacitated network G. We can now see there is a one-to-one correspondece between G and G^*. The sum of the edges accross the minimum $s-t$ cut in G^* corresponds to the maximum flow of G^*, so the sum of the capacities of the vertices in G that correspond to these edges results in a maximum flow in G. □