Transshipment Problem
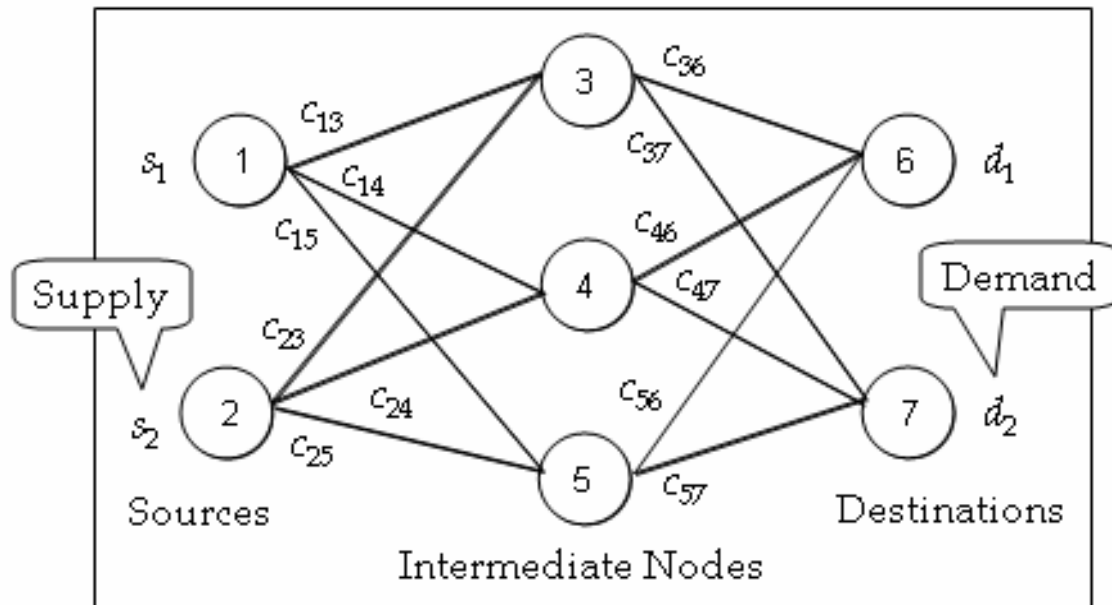
- Network Representation

Transshipment Problem

- Linear Programming Formulation
  x_{ij} represents the shipment from node i to node j

$$\text{Min } \sum_i \sum_j c_{ij} x_{ij}$$

$$\text{s.t. } \sum_j x_{ij} \leq s_i \qquad \text{for each origin } i$$

$$\sum_i x_{ik} - \sum_j x_{kj} = 0 \qquad \text{for each intermediate node } k$$

$$\sum_i x_{ij} = d_j \qquad \text{for each destination } j$$

$$x_{ij} \geq 0 \qquad \text{for all } i \text{ and } j$$