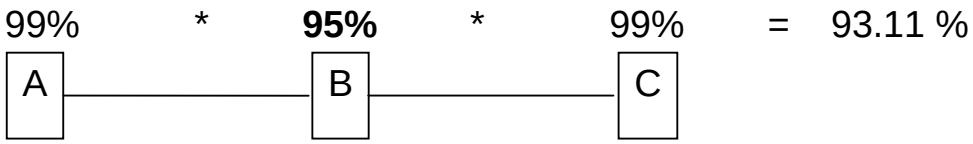
Question 2 [10 Marks]

a. Current configuration:

Availability calculation:

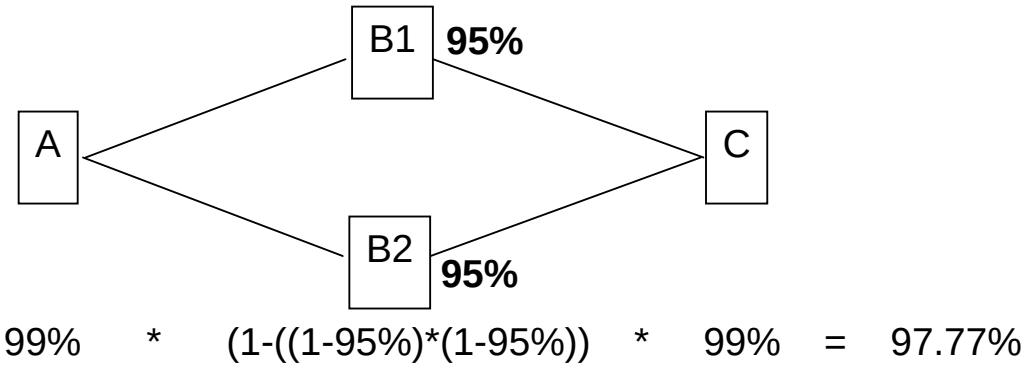


Unscheduled downtime in a year = 365 days * 24 hours * (1 – 0.931) = 604 hours

Cost of Unavailability = ($500 + $200) * 604 = $422,800

Proposed configuration:

Availability calculation:



Unscheduled downtime in a year = 365 days * 24 hours * (1 – 0.9777) = 195 hours

Cost of Unavailability = ($500 + $200) * 195 = $136,500

Recommendation to CIO:

Benefit from Reduction in Cost of Unavailability = $422,800 - $136,500 = $286,300

Additional cost for new configuration = $900,000 - $700,000 = $200,000

Additional Benefit > Additional Cost => Recommend to CIO to accept vendor's proposal.

b. The lifecycle stages in Design for Recovery are:

i. Detection

ii. Diagnosis

iii. Component Repair

iv. Component Recovery

v. Service Restoration

A better solution is to have a replacement card on site.

This comes under the Component Repair lifecycle stage.