

# CEGAR Demó

Hajdu Ákos

```

specification Test {
  property s : {
    // Variables
    local var x : integer
    local var y : integer
    local var z : integer

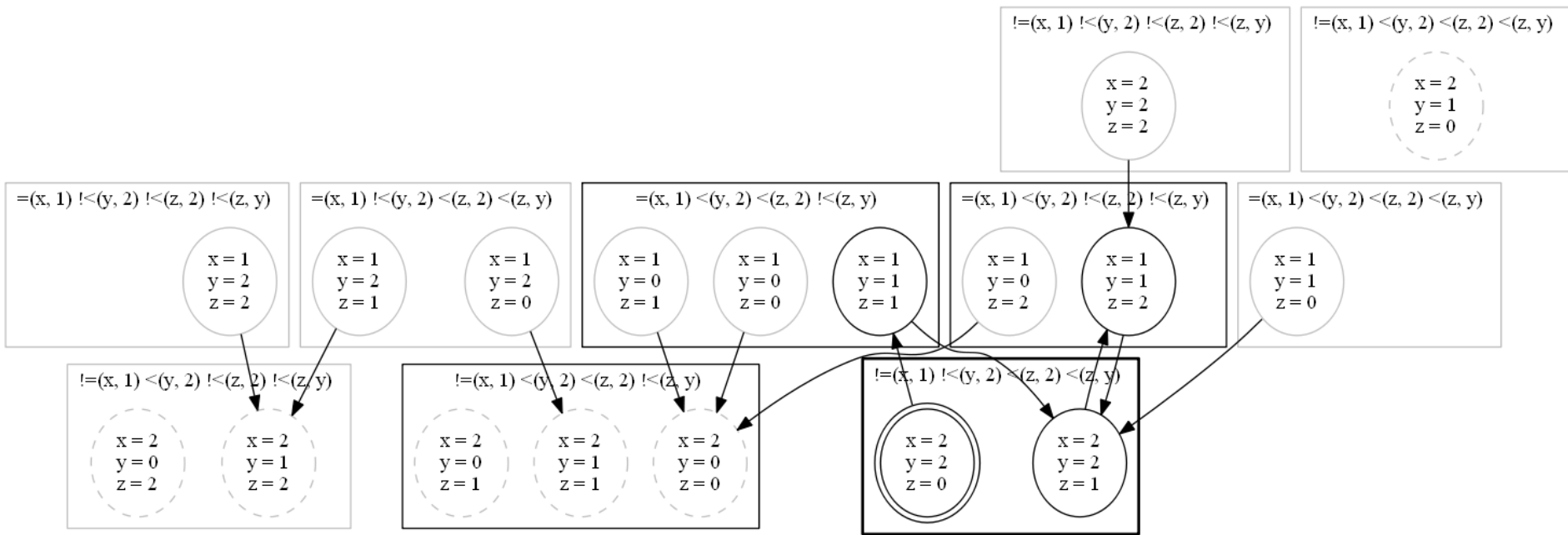
    // Invariants
    invariant x >= 1
    invariant x <= 2
    invariant y >= 0
    invariant y <= 2
    invariant z >= 0
    invariant z <= 2

    // Initial values
    initial x = 2
    initial y = 2
    initial z = 0

    // Transitions
    transition x' = (
      if (not (y < 2)) and (not (x = 1)) then x - 1
      else x + 1
    )
    transition y' = (
      if (y < 2) and (x = 1) then y * 2
      else y - 1
    )
    transition z' = (
      if z < y and z < 2 then z + 1
      else y
    )
  } models
  // Expression
  G((not (y < 2)) or (x = 1))
}

```

# Kezdő absztrakt modell



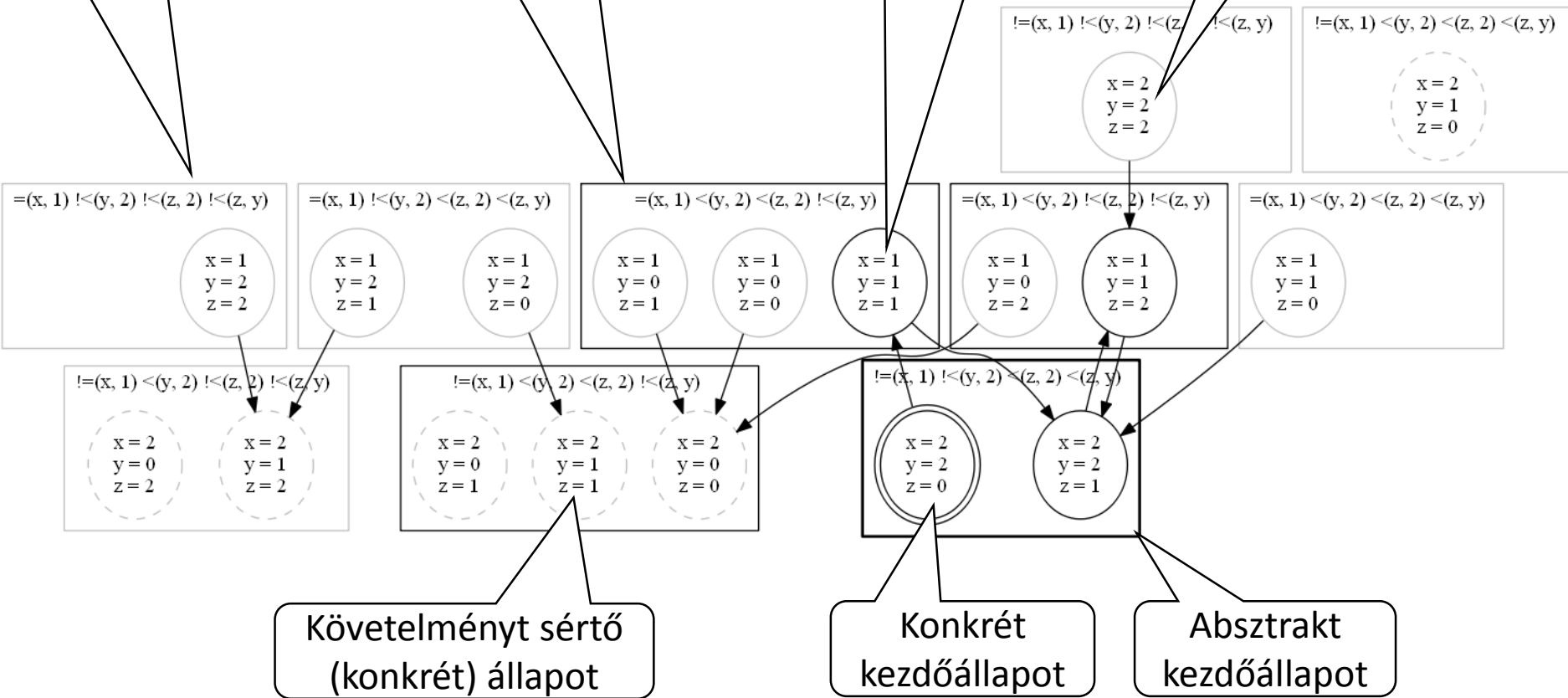
# Kezdő absztrakt modell

Nem elérhető absztrakt állapot

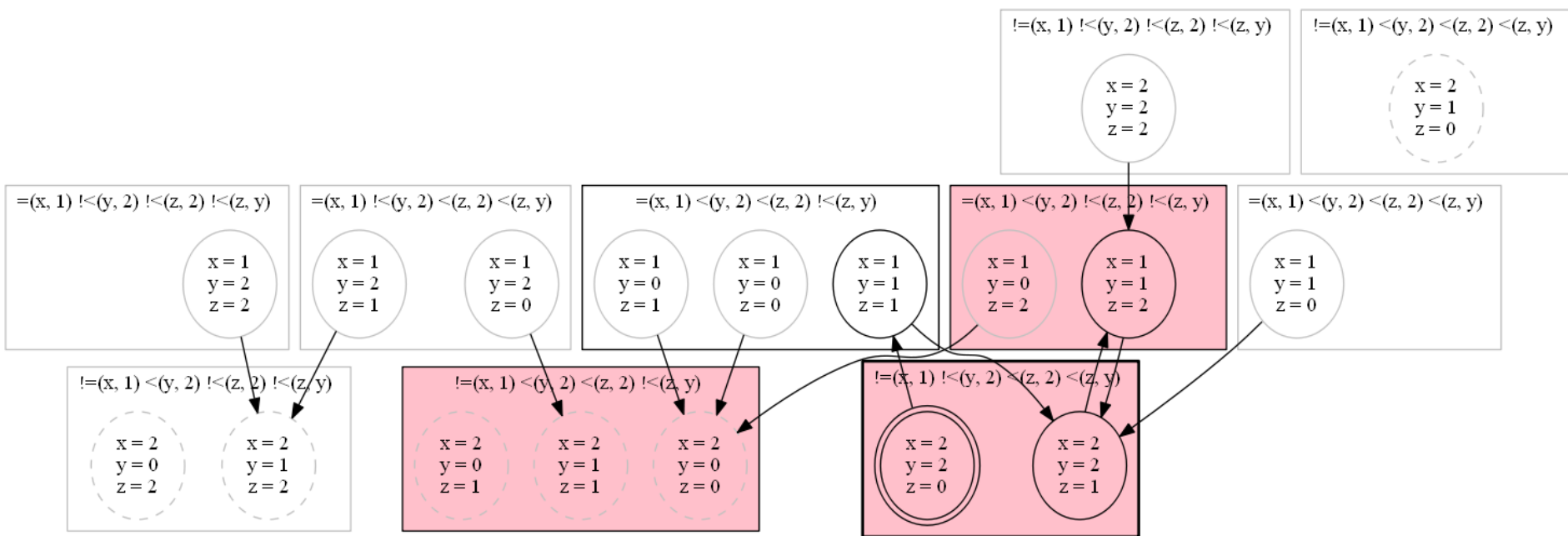
Elérhető absztrakt állapot

Elérhető konkrét állapot

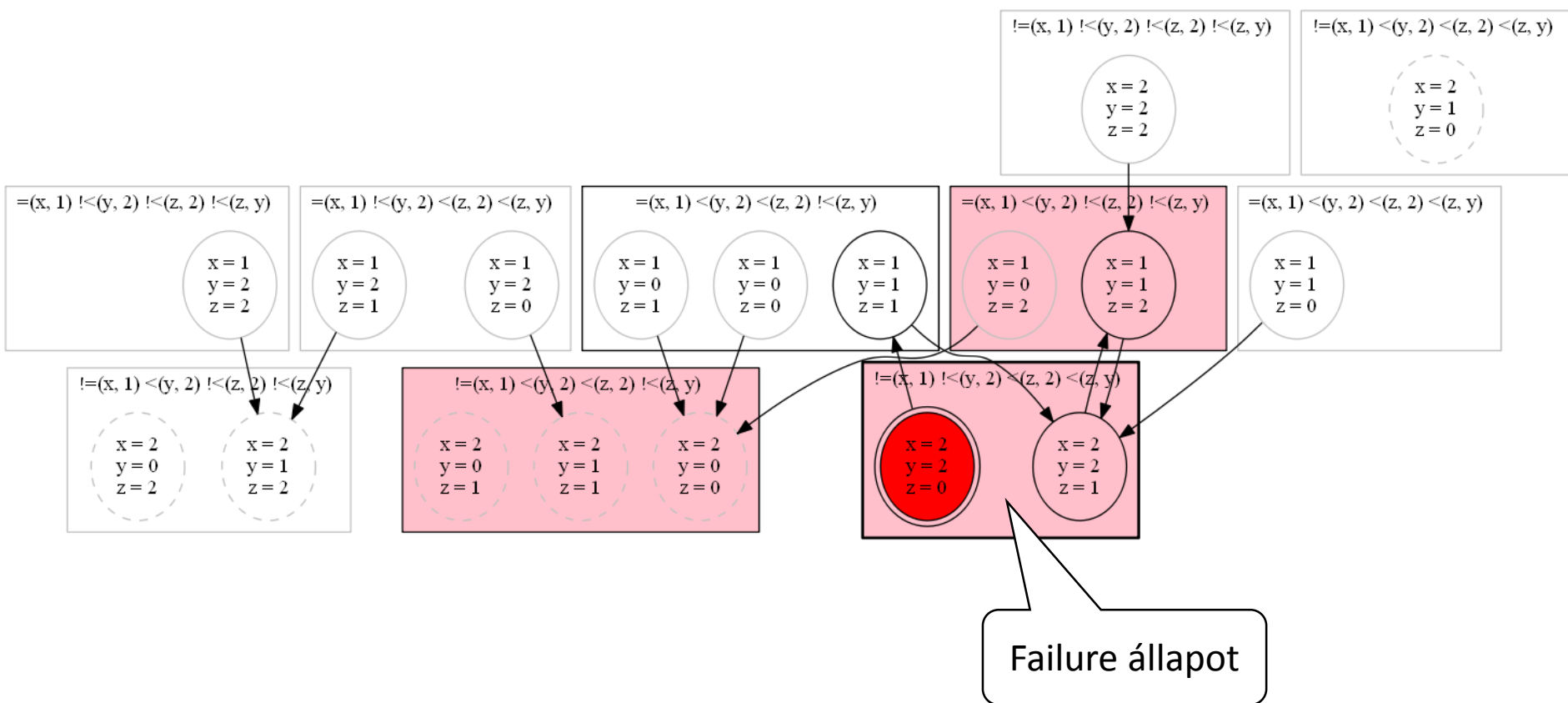
Nem elérhető konkrét állapot



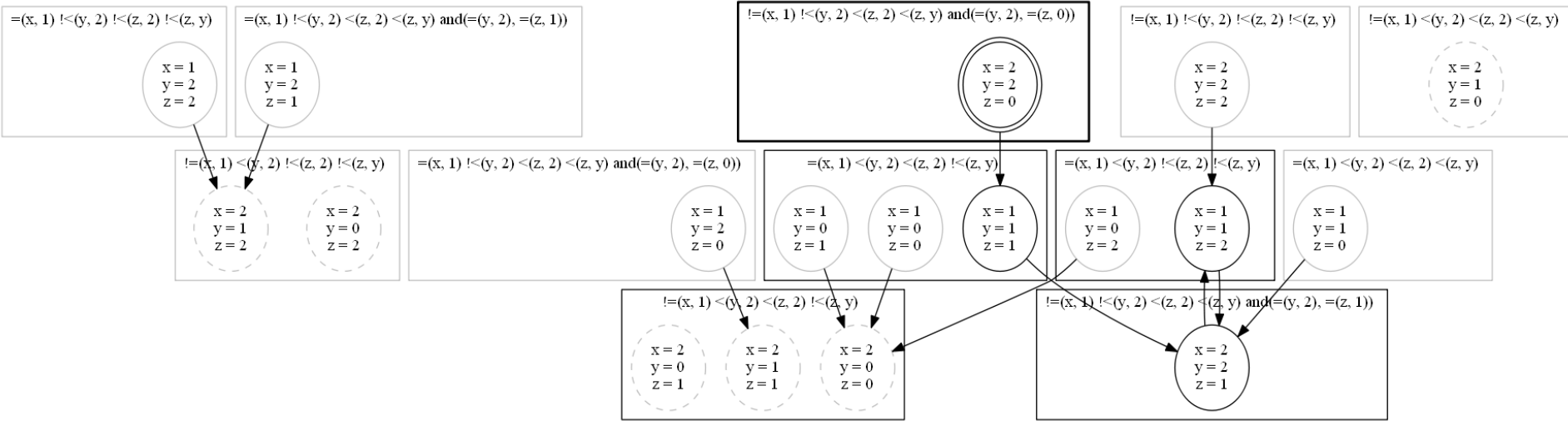
# Absztrakt ellenpélda



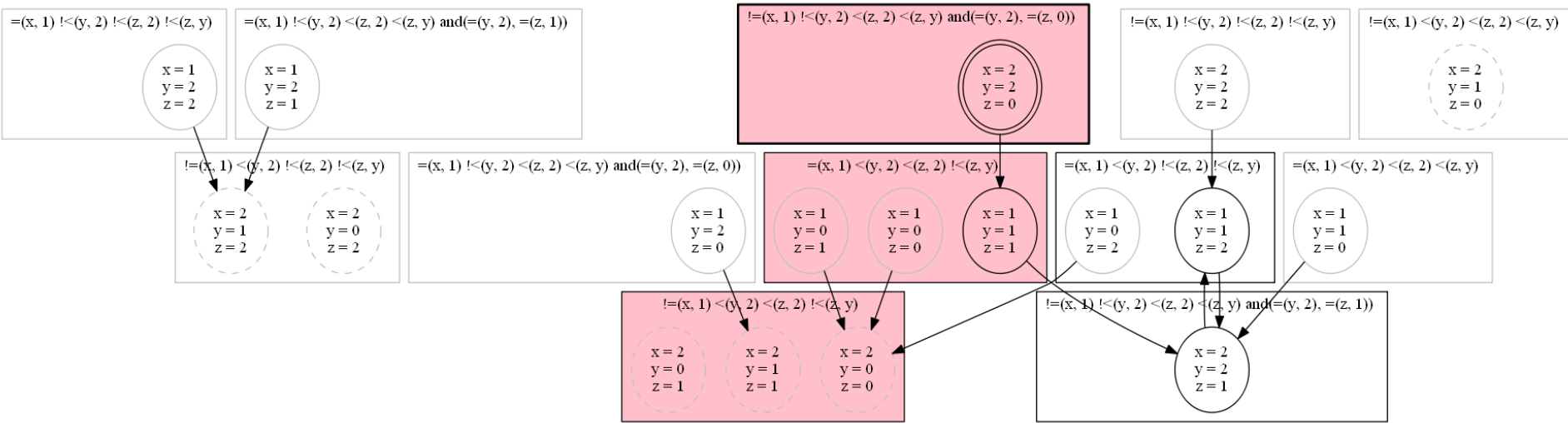
# Absztrakt ellenpélda konkretizálása



# Vágás után

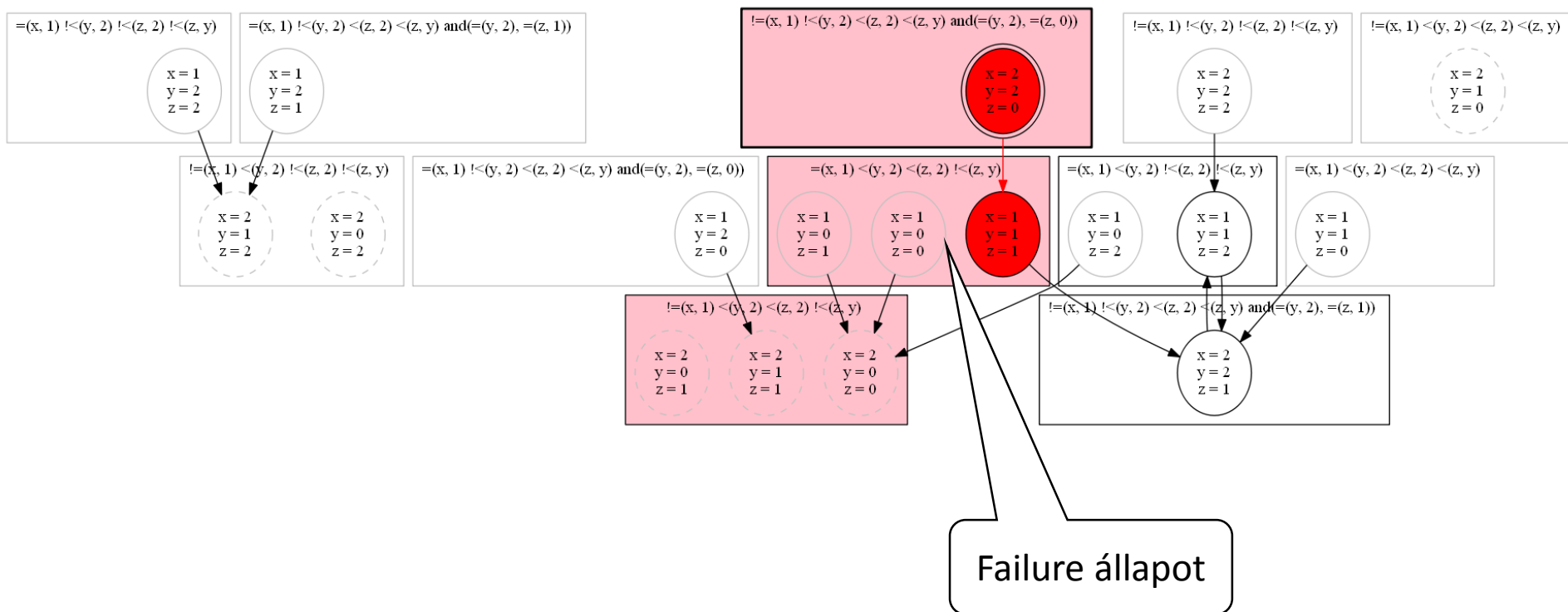


# Absztrakt ellenpélda

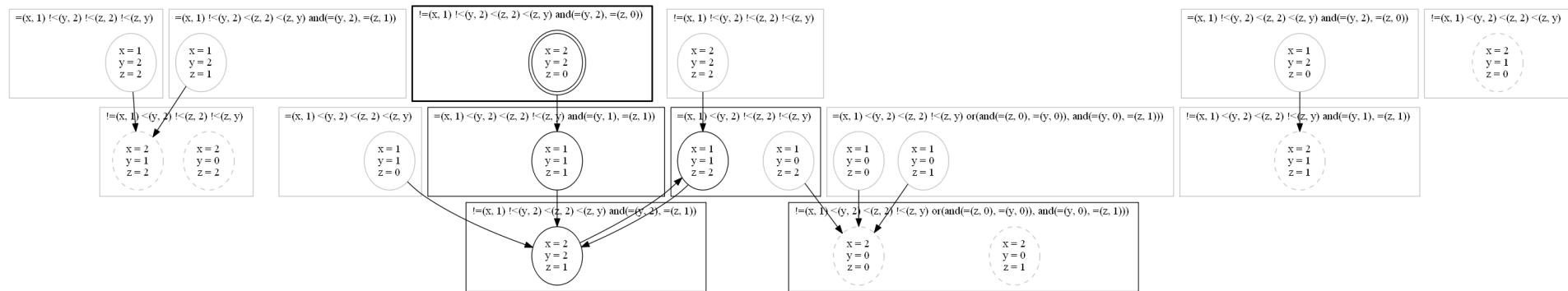




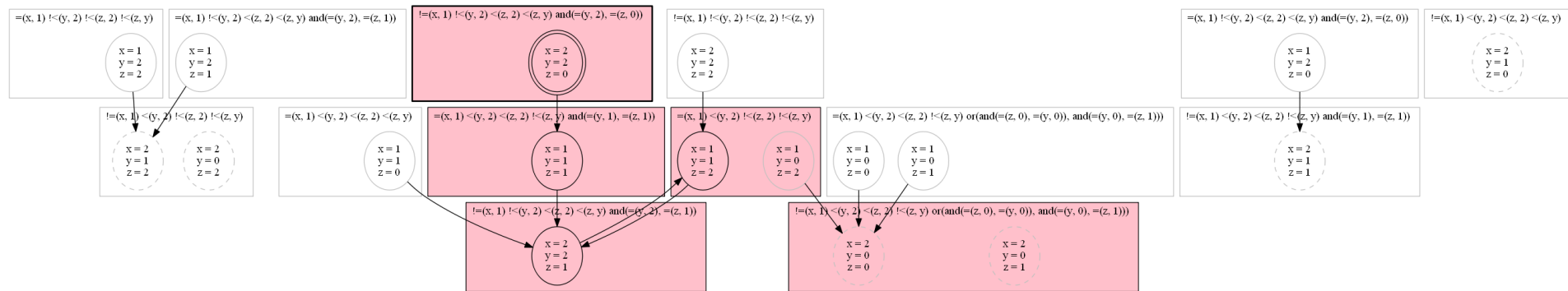
# Absztrakt ellenpélda konkretizálása



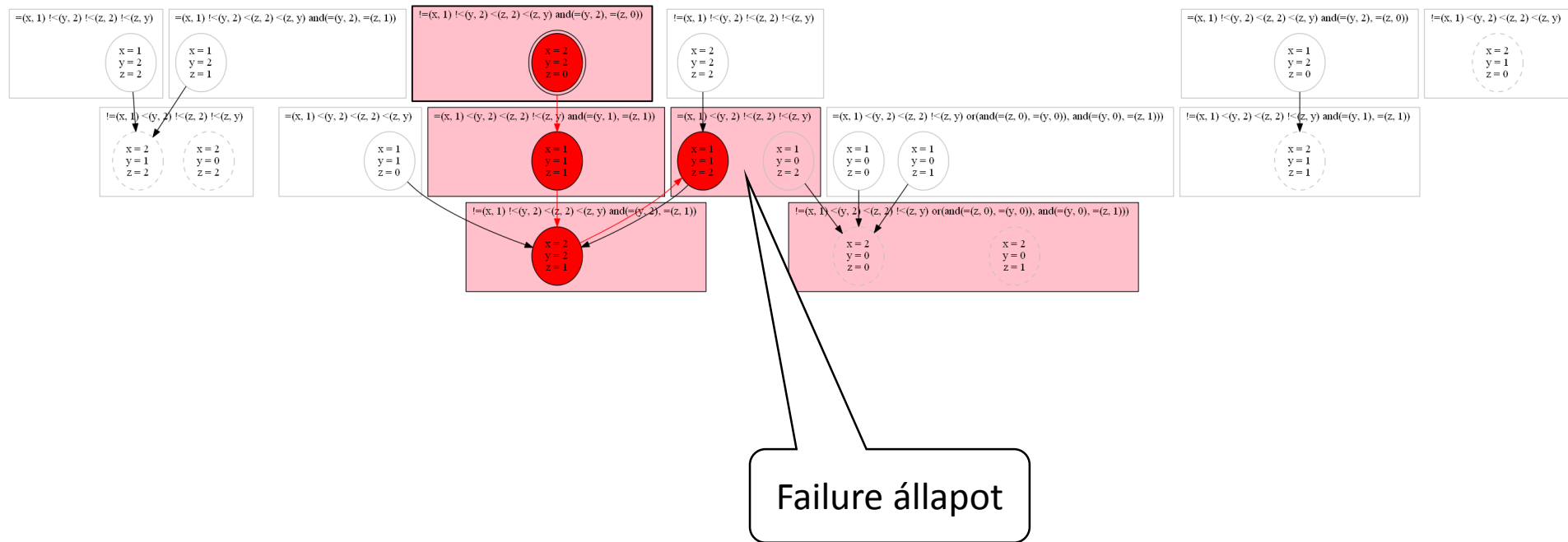
# Vágás után



# Absztrakt ellenpélda



# Absztrakt ellenpélda konkretizálása



# Vágás után (követelmény teljesül)

