

# Results

```
===== Node =====
{
  "in_both_tree": {
    "in_tree_c": 150,
    "not_in_tree_c": 15,
    "not_in_tree_c_with_conn": 11,
    "not_in_tree_c_without_conn": 4
  },
  "in_one_tree": {
    "not_in_tree_c": 57,
    "not_in_tree_c_with_conn": 40,
    "not_in_tree_c_without_conn": 17,
    "in_tree_c": 92
  },
  "in_no_tree": {
    "not_in_tree_c": 161,
    "not_in_tree_c_with_conn": 101,
    "not_in_tree_c_without_conn": 60,
    "in_tree_c": 1
  }
}
global total in c: 243
global mutated in c: 16 - 0.066
global upgraded in c: 5 - 0.021
global downgraded in c: 4 - 0.016
{
  "layer 2": {
    "in_both_tree": {
      "in_tree_c": 49,
      "not_in_tree_c": 5,
      "not_in_tree_c_with_conn": 5
    },
    "in_one_tree": {
      "in_tree_c": 8,
      "not_in_tree_c": 5,
      "not_in_tree_c_with_conn": 5
    },
    "in_no_tree": {
      "not_in_tree_c": 1,
      "not_in_tree_c_with_conn": 1
    }
  }
}
```

```
},
"layer 3": {
  "in_both_tree": {
    "in_tree_c": 63,
    "not_in_tree_c": 6,
    "not_in_tree_c_with_conn": 3,
    "not_in_tree_c_without_conn": 3
  },
  "in_one_tree": {
    "not_in_tree_c": 10,
    "not_in_tree_c_with_conn": 4,
    "in_tree_c": 17,
    "not_in_tree_c_without_conn": 6
  },
  "in_no_tree": {
    "not_in_tree_c": 5,
    "not_in_tree_c_with_conn": 3,
    "not_in_tree_c_without_conn": 2,
    "in_tree_c": 1
  }
},
"layer 4": {
  "in_both_tree": {
    "in_tree_c": 36,
    "not_in_tree_c": 4,
    "not_in_tree_c_with_conn": 3,
    "not_in_tree_c_without_conn": 1
  },
  "in_one_tree": {
    "not_in_tree_c": 25,
    "not_in_tree_c_with_conn": 20,
    "not_in_tree_c_without_conn": 5,
    "in_tree_c": 44
  },
  "in_no_tree": {
    "not_in_tree_c": 27,
    "not_in_tree_c_without_conn": 13,
    "not_in_tree_c_with_conn": 14
  }
},
"layer 5": {
  "in_no_tree": {
    "not_in_tree_c": 128,
    "not_in_tree_c_with_conn": 83,
```

```

    "not_in_tree_c_without_conn": 45
  },
  "in_one_tree": {
    "in_tree_c": 23,
    "not_in_tree_c": 17,
    "not_in_tree_c_without_conn": 6,
    "not_in_tree_c_with_conn": 11
  },
  "in_both_tree": {
    "in_tree_c": 2
  }
}
}
===== Conn =====
{
  "in_both_tree": {
    "in_tree_c": 135,
    "not_in_tree_c": 31,
    "not_in_tree_c_with_both_ends": 13,
    "not_in_tree_c_without_both_ends": 18
  },
  "in_one_tree": {
    "in_tree_c": 107,
    "not_in_tree_c": 100,
    "not_in_tree_c_without_both_ends": 79,
    "not_in_tree_c_with_both_ends": 21
  },
  "in_no_tree": {
    "not_in_tree_c": 283,
    "not_in_tree_c_without_both_ends": 273,
    "in_tree_c": 24,
    "not_in_tree_c_with_both_ends": 10
  }
}

```

When have two connectables:

Prob with one link: 0.662

Prob with two links: 0.338

## Analysis

- Global:

- In both trees:
  - In tree\_c:  $150/165 = 91\%$
  - In tree\_c with conn:  $150/161 = 93\%$
- In one tree:
  - In tree\_c:  $92/149 = 62\%$
  - In tree\_c with conn:  $92/132 = 70\%$
- In no tree:
  - In tree\_c: 0
- Mutated:  $16/243 = 6.6\%$
- Upgraded:  $5/243 = 2.1\%$
- Downgraded:  $4/243 = 1.6\%$
- Allocated in tree\_c:  $18/26 = 70\%$
- Layer 2:
  - In both trees:
    - In tree\_c:  $49/54 = 91\%$
    - In tree\_c with conn:  $49/54 = 91\%$
  - In one tree:
    - In tree\_c:  $8/13 = 62\%$
    - In tree\_c with conn:  $8/13 = 62\%$
- Layer 3:
  - In both trees:
    - In tree\_c:  $63/69 = 91\%$
    - In tree\_c with conn:  $63/66 = 95\%$
  - In one tree:
    - In tree\_c:  $17/27 = 63\%$
    - In tree\_c with conn:  $17/21 = 81\%$
- Layer 4:
  - In both trees:
    - In tree\_c:  $36/40 = 90\%$
    - In tree\_c with conn:  $36/39 = 92\%$
  - In one tree:
    - In tree\_c:  $44/69 = 64\%$
    - In tree\_c with conn:  $44/64 = 69\%$
- Layer 5:
  - In both trees:
    - No data
  - In one tree:
    - In tree\_c:  $23/40 = 58\%$
    - In tree\_c with conn:  $23/34 = 68\%$
- Conn:
  - When have two connectables:
    - Prob with one link: 0.662
    - Prob with two links: 0.338