CISCO SYSTEMS

Transit Path Design and

Inter-Operability

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Agenda

- **Introduction**

- **Requirements**

- **Simulation Results**

- **Conclusion**

Introduction

- **Some architectures have 1 transit buffer**

- **Some architectures have 2 transit buffers**

- **Buffers operating in store-and-forward or cut-through mode**

- **Each architecture has a unique congestion control and fairness algorithm with:**

  - Unique messaging infrastructure

  - Unique control parameters

- **Transit path design is critical for performance**

Introduction

- **Questions:**
  - Can different architectures live in the same ring?
  - If yes, can we get the same or similar performance in a heterogeneous ring compared to a homogenous ring?

- **Answers:**
  - Yes!
  - And yes!

Requirements

- **The mass of the problem revolves around congestion control**

- **Need to make sure no one is favored based on a particular architecture or location on the ring**

- **How?**
  - Need to investigate on a case-by-case basis
  - Who wants to talk to whom?

- **A single control message format needs to be defined**

Simulation Results

Conclusion

- **Inter-operability is possible!**

- **Need cooperation of all nodes involved in a heterogeneous ring**

- **Need to agree on common control messaging format and parameters**