

# Thyme: An Ad-hoc Group Collaboration Environment

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# Do we need ad-hoc collaboration tools?



Meetings



Conferences



“Conferences”

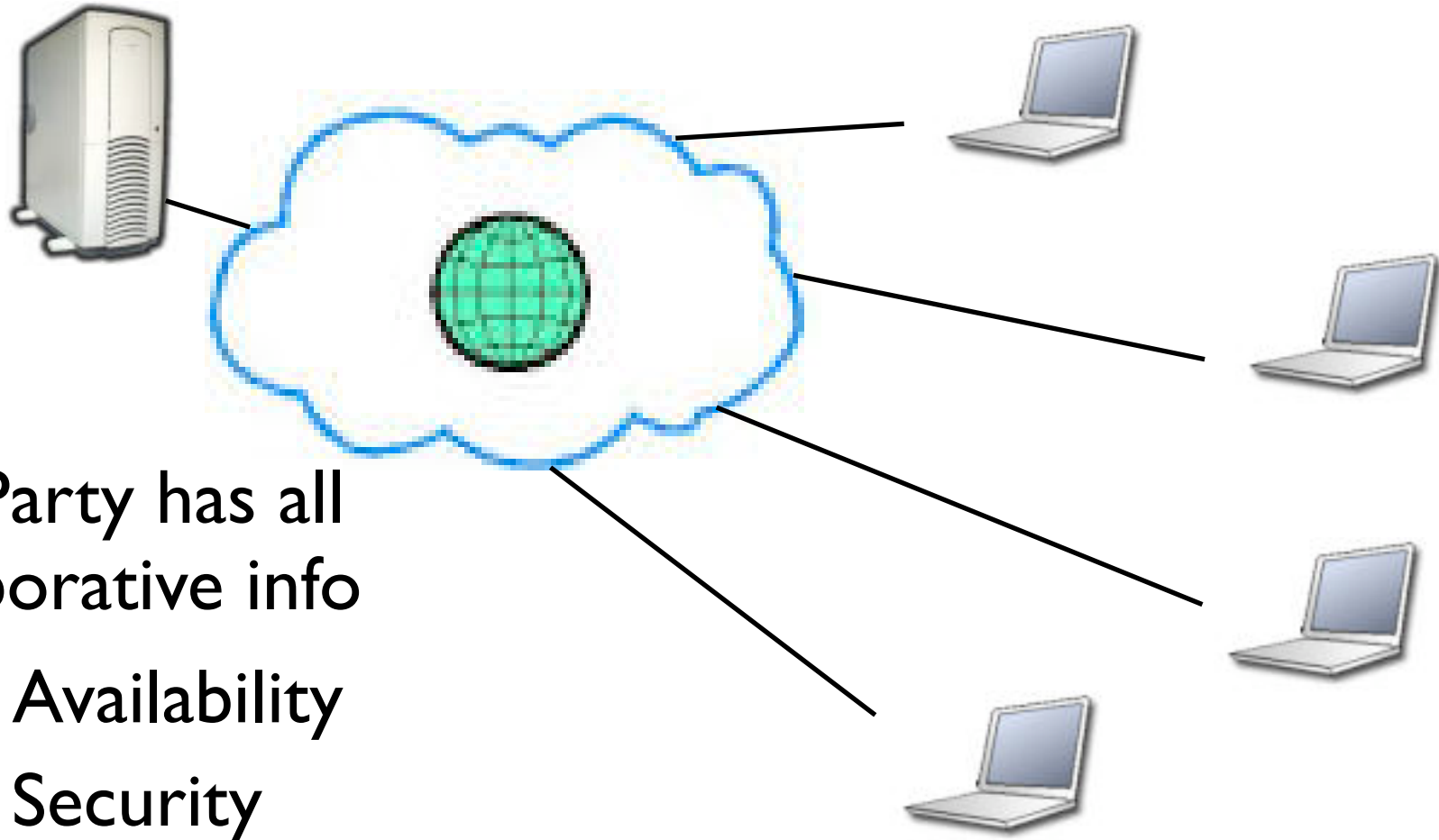
# Industry & Government Trends

Outsourcing → Increase need for inter-company employee interactions

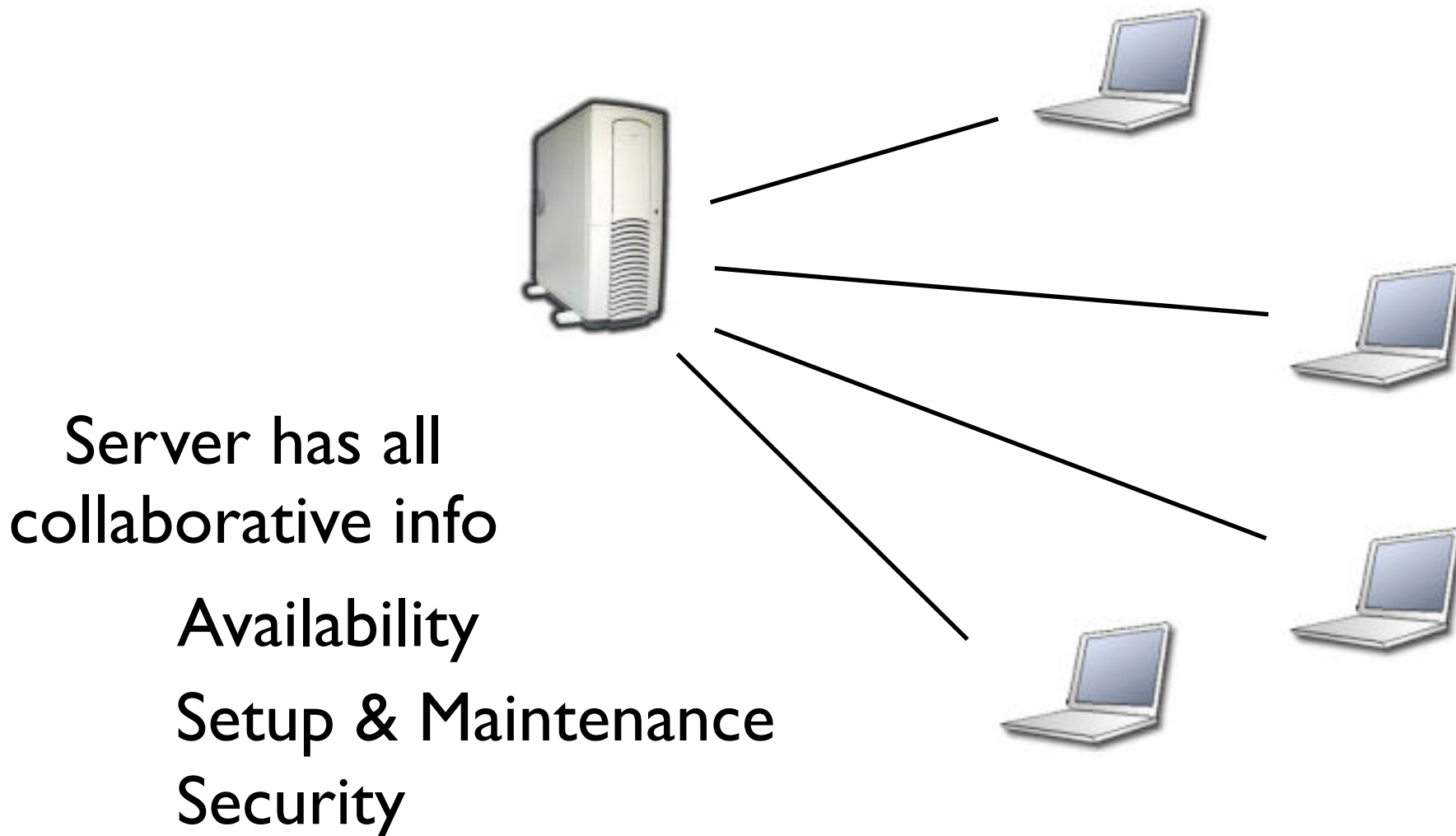
Consulting → Increase number of on-site visits by non-employees

Interdepartmental Collaboration → Increase need for organizational meetings

# 3rd Party Collaboration Service Provider



# Member Hosts Collaboration Service



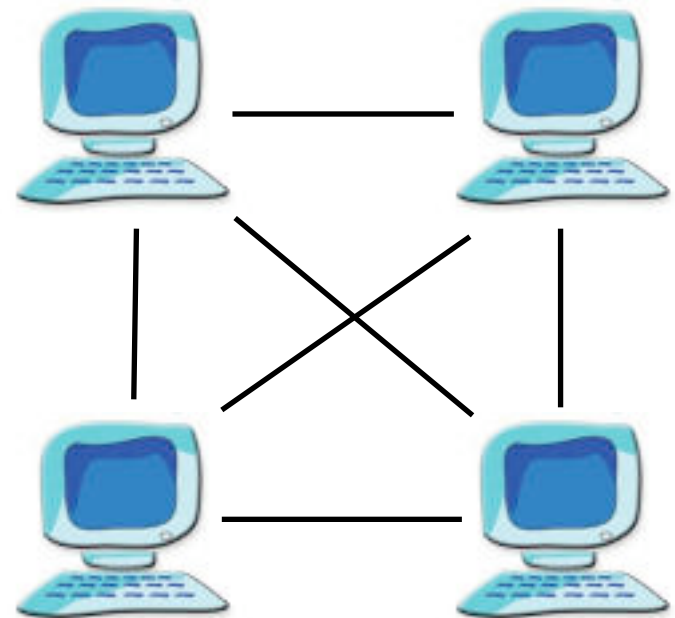
# Decentralized Collaboration Solution

## Advantages

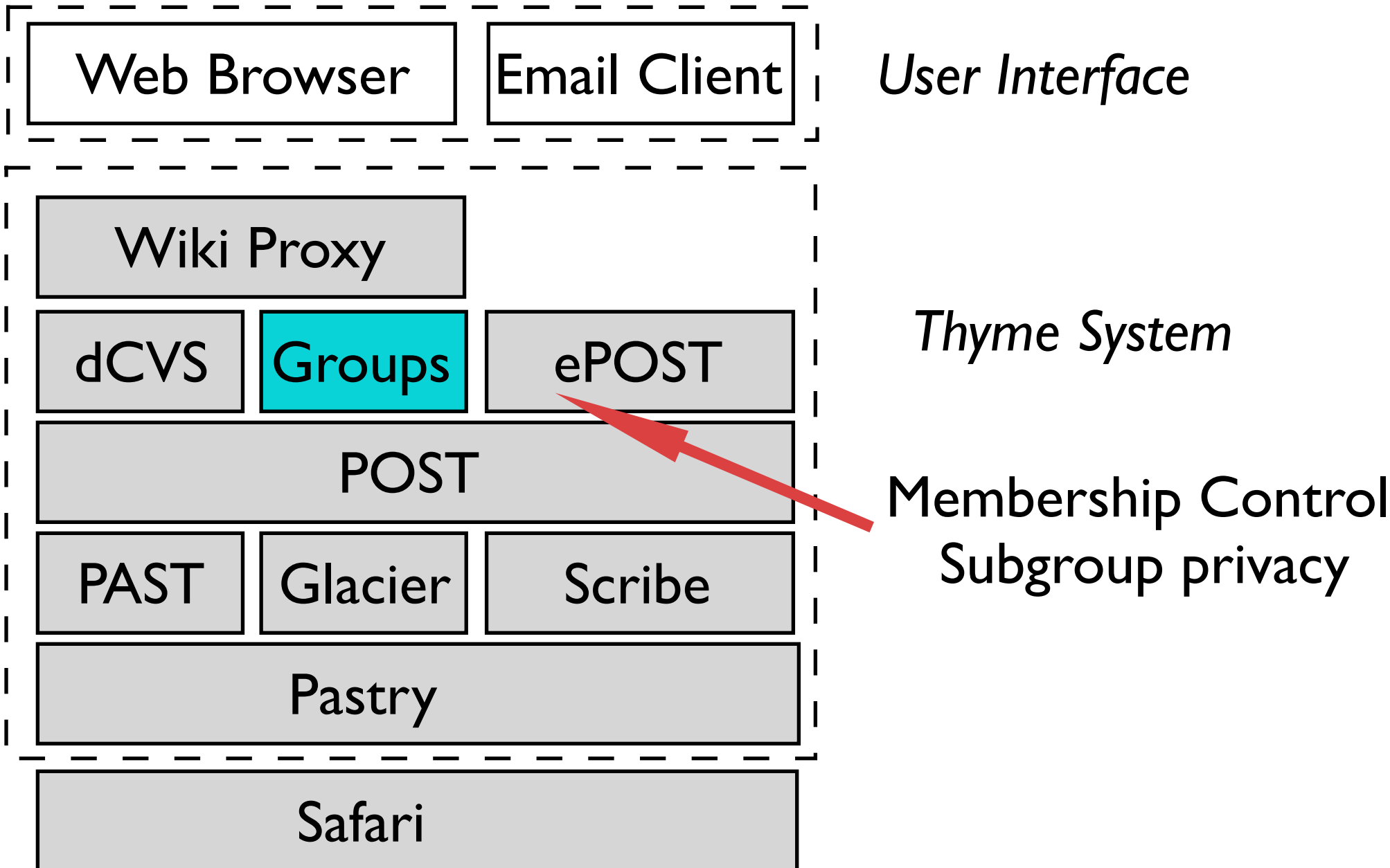
- Support for ad-hoc networks (802.11 networks)
- Low overhead

## Challenges

- Self-organization
- Service availability
- Collaboration security
- Privacy



# Thyme Architecture



# Group Hierarchy



Collaboration  
Group

*Data visible to all  
members*



Subgroup  
*Data visible only  
to members*

# Group Membership

Single Writer Log



Add X

Add Z

Add Y

Rm X



Collaboration  
Group

*Data visible to all  
members*

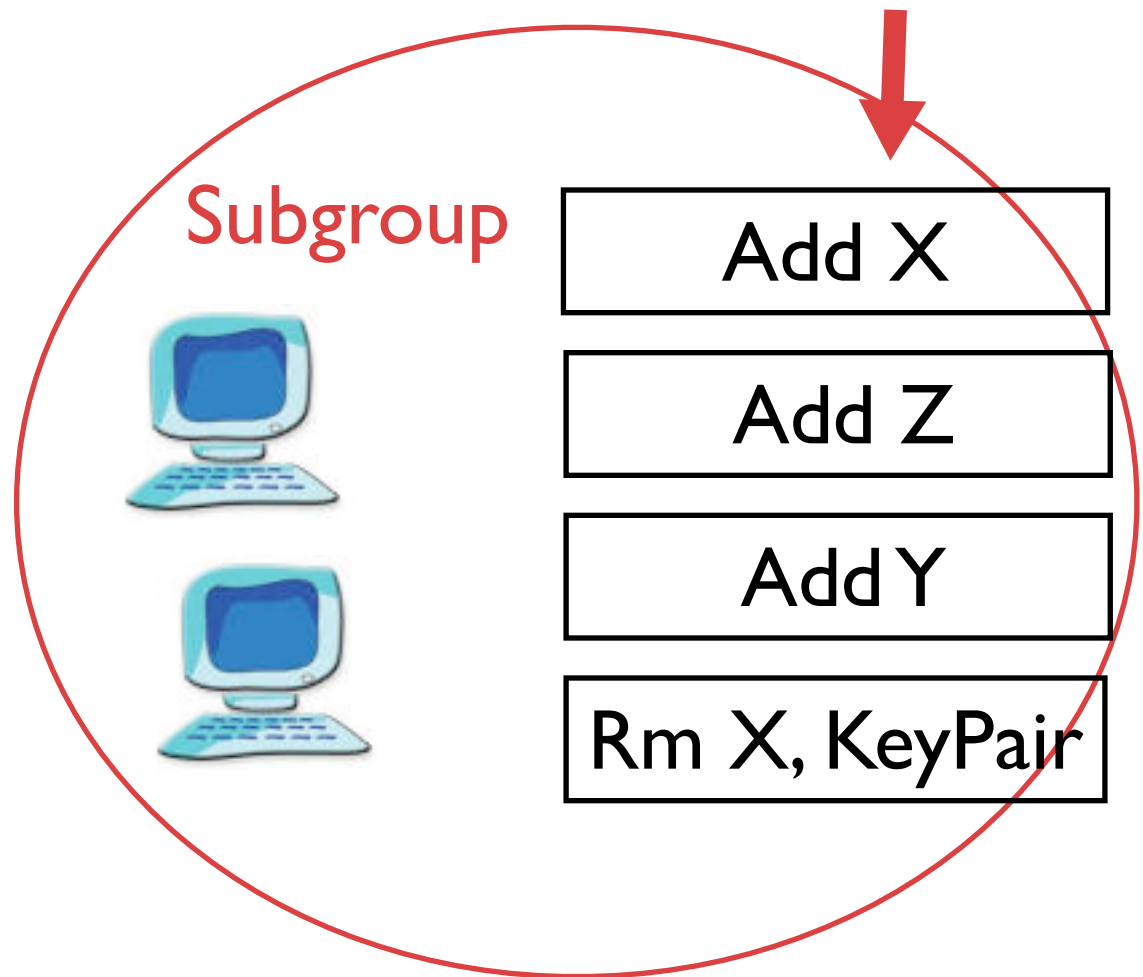
# Subgroup Privacy

*Data visible only  
to members*

One sub group  
key-pair at time

Key changes when  
member removed

Membership Log



# Summary

Need for ad-hoc collaboration is growing

Decentralized environments uniquely satisfy constraints

Compelling application for many existing P2P technologies

Thyme Architecture  Thyme Prototype

## Questions?