CALCONNECTTHE CALENDARING & SCHEDULING CONSORTIUM

CALCONNECT DOCUMENT CD 0806

Type:	**Presentation**
Title:	**CalConnect Technical Preview - Roundtable XIII**
Version:	**1.0**
Date:	**2008-10-08**
Status:	**Published**
Source:	**N/A**

This document incorporates by reference the CalConnect Intellectual Property Rights, Appropriate Usage, Trademarks and Disclaimer of Warranty for External (Public) Documents as located at

http://www.calconnect.org/documents/disclaimerpublic.pdf.

CALCONNECT

The Calendaring and Scheduling Consortium

Technical Previews

October 2008 Roundtable

Note Well

- This presentation reflects in-progress work and activities of CalConnect

- CalConnect rules governing disclosure of such work applies

- As always you can discuss this work freely within the CalConnect community

More...

Note Well (cont.)

- Outside of CalConnect:

    - You may discuss the preview and the work being done in general

    - Please do not identify the organizations and individuals that are participating

    - Please do not discuss specific details and be cautious about inferences

Introduction

CalConnect members have produced a Technical Demonstration of key calendaring and scheduling technologies being developed by CalConnect

This serves as a technology "preview" only and does not in any way represent final protocols or products

More...

Introduction (cont.)

- Our goal is to solicit feedback from members and invited guests on the presentation itself as well as the technologies being demonstrated

- We also hope to show how CalConnect is successfully achieving its goal of improving calendaring and scheduling standards

Agenda

- Introduction to CalConnect
- Technical Previews
  - CalDAV Scheduling
  - iSchedule
  - Internet Freebusy
- Conclusion
- Q&A

Don't forget the reception afterwards!

Introduction to CalConnect

CalConnect

- What is CalConnect?

- Why do we need it?

- Who are the members?

- What is it doing?

  - What has been done so far?

  - What is going on now?

- Where is it going?

What is CalConnect

- An information technology consortium focused on calendaring and scheduling that is a partnership between vendors and customers

"Our vision of the future is not only interoperable calendaring, but ubiquitous interoperable calendaring. Calendaring should—and can—be as ubiquitous as electronic mail."

More...

Why do we need it?

- Our goals:
  - improve general understanding
  - promote the technologies
  - improve the technologies, in particular interoperability

"The driving premise behind the Consortium is that interoperability between calendaring programs and systems is essential to achieving the promise and future growth of calendaring."

Current Membership

Done so far?

- Substantial input to the IETF on new versions of calendaring RFCs (e.g., recurrences, timezones, and minimum interoperability subsets)

- Work on CalDAV, CalDAV Scheduling, and extensions to CalDAV

- Recommendations and guidance on Extended Daylight Savings Time

- Timezone Registry and Service Recommendations

More...

Done so far?

- Mobile Calendaring white paper and Interoperability Test Suite

- Mobile Calendaring Recurrence support

- Surveys and use cases for calendaring events, tasks (VTODOs)

- Calendaring Glossary

- Calendar Administrator's mailing list

More...

Done so far?

- Thirteen successful IOP test events between C&S implementations

- First Mobile Calendaring IOP test event

- Demo of Federated Freebusy data consolidation in 2006

Ongoing work?

TC-CALDAV	TC-EVENTPUB	TC-FREEBUSY
TC-IOPTEST	TC-ISCHEDULE	TC-MOBILE
TC-TIMEZONE	TC-USECASE	TC-XML

Where is it going?

- Continue with core goals

- Calendaring libraries/apis to assist implementations

- Calendaring as a platform (e.g. project management)

- Types of calendaring infrastructures (e.g. enterprise, federation, services, ad hoc)

More...

Where is it going?

- Expand participation in new areas
  - Vertical industry focus (e.g., mobile operators)
  - Government and private industry customer perspective
 - Overseas (Europe in short term, Asia after)

Technical Previews

Technical Preview

- Today we will demonstrate:
  - CalDAV Scheduling
  - iSchedule
  - Internet freebusy lookups using freebusy URLs
- Each presentation will consist of:
  - Introductory slides
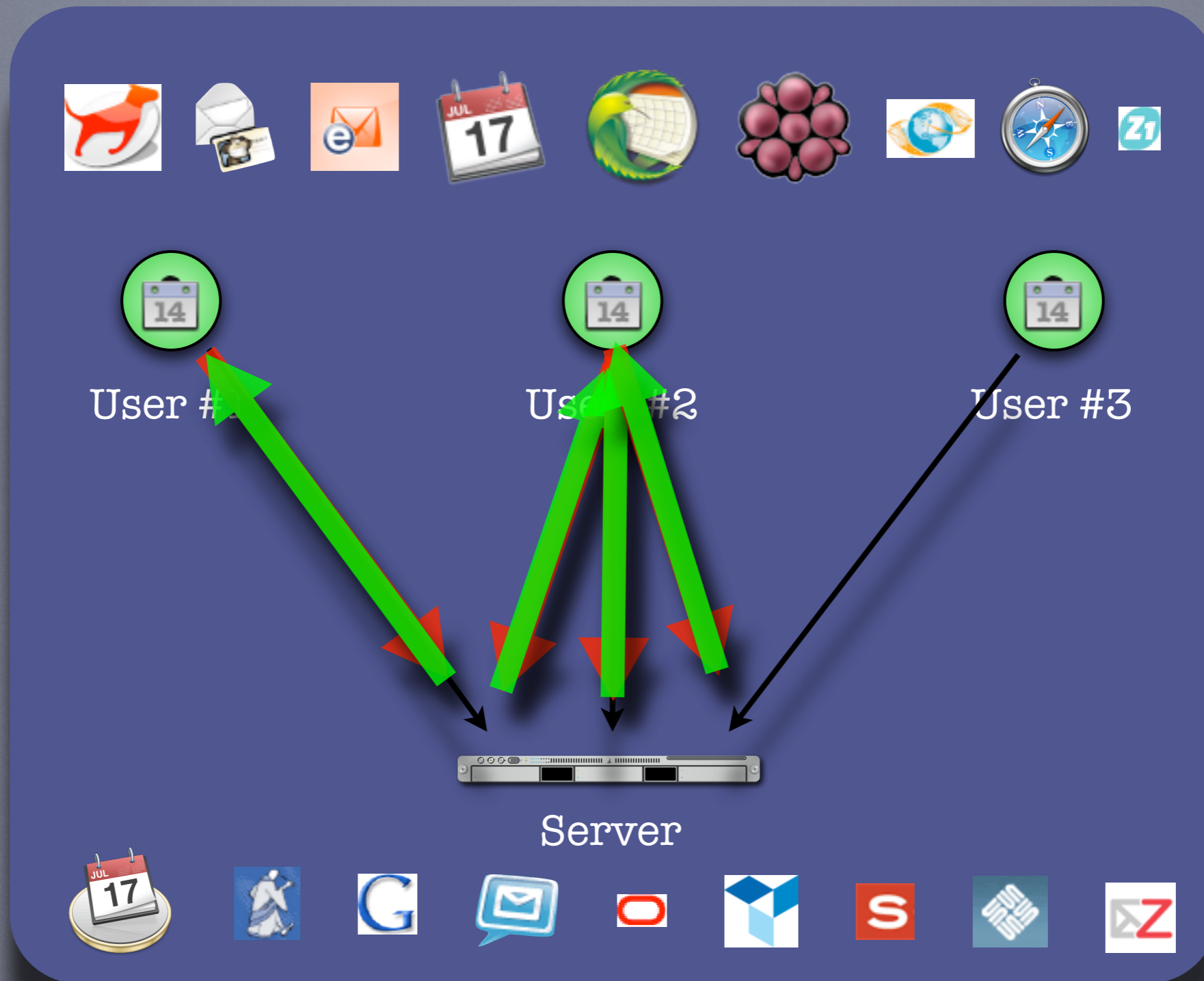 - Live demonstration

CalDAV Scheduling

How it works

Introduction to CalDAV

- RFC4791 defines the CalDAV Access protocol.
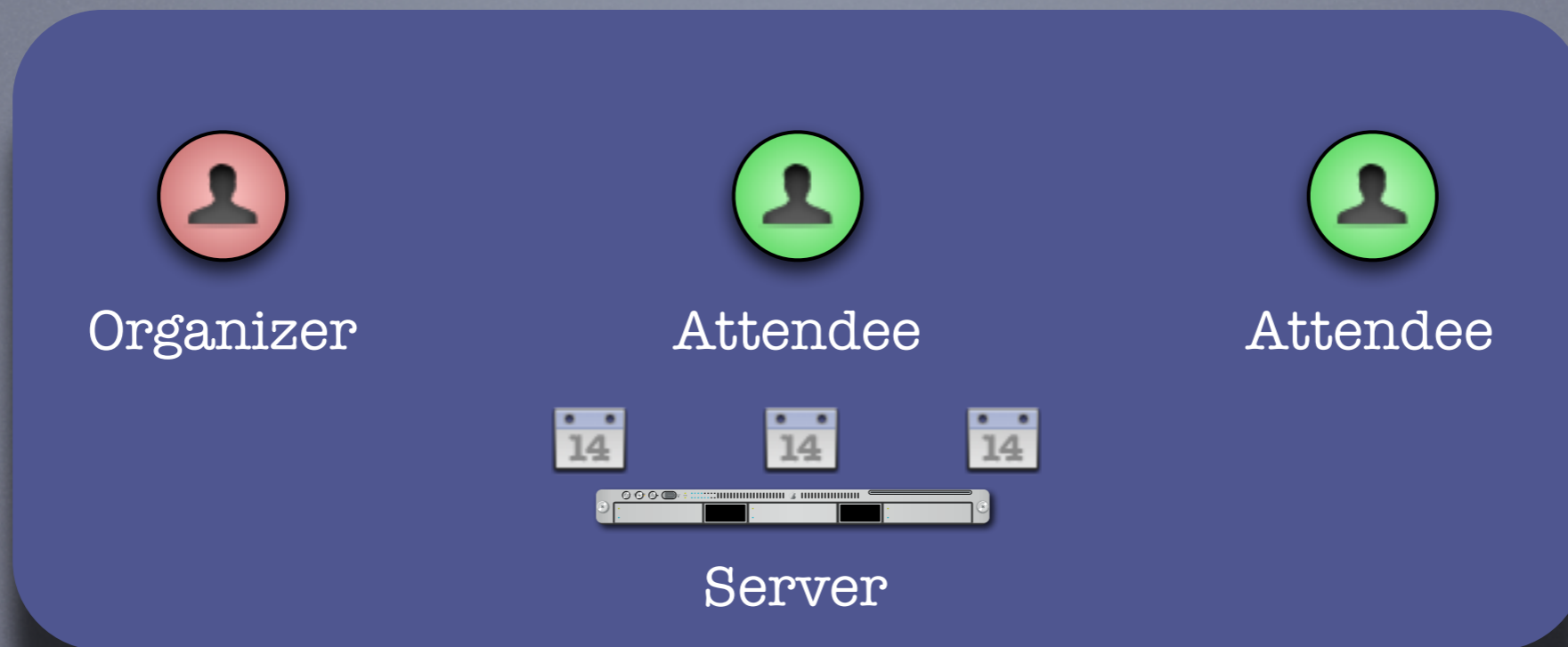
- Built on core internet technologies
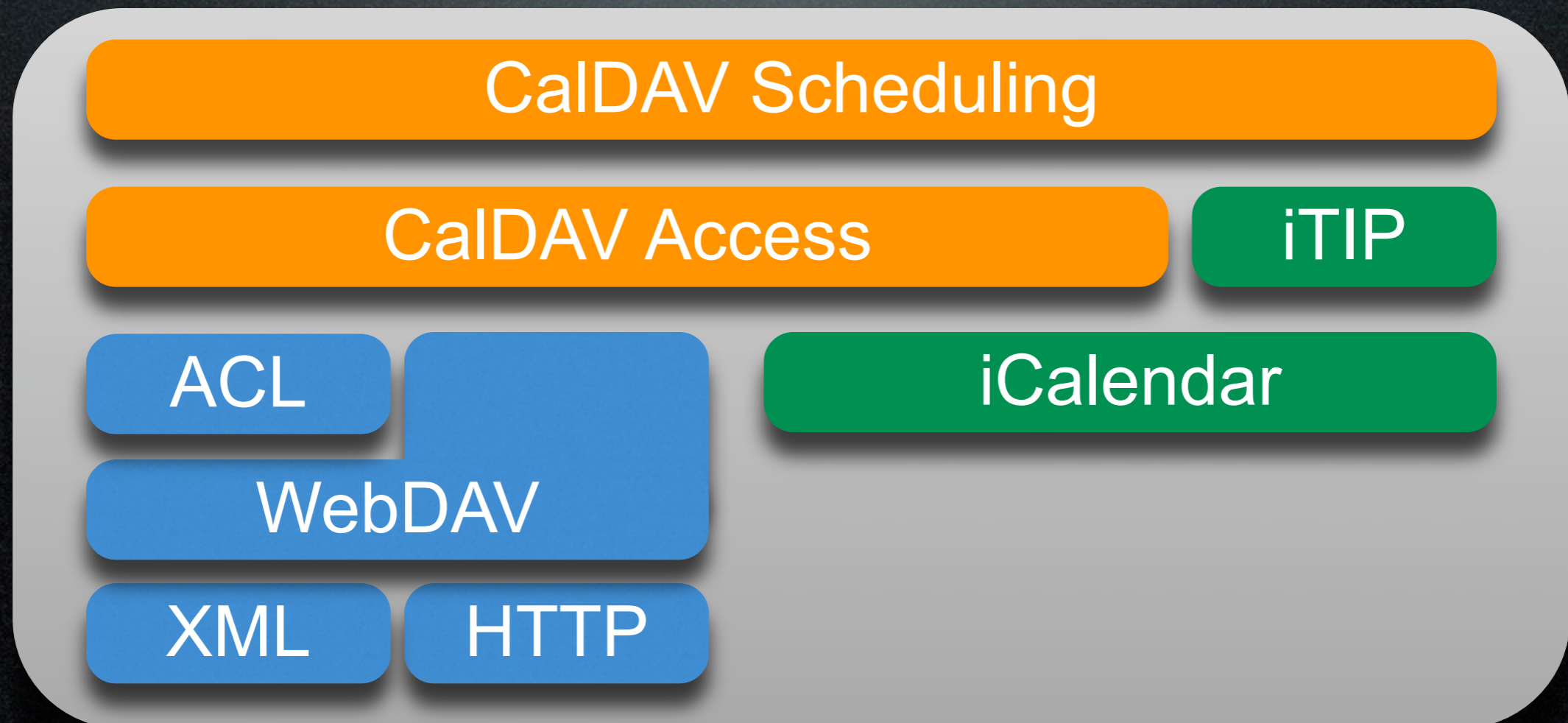
Multiple Users can Access and Share Calendars

User #1

User #2

User #3

Server

CalDAV Scheduling

- How it works:

  - Several users on one CalDAV server (any client) schedule with each other

  - One user is the "Organizer", others are "Attendees"

One is the Organizer, others are Attendees

Organizer

Attendee

Attendee

Server

CalDAV Scheduling

- There are two parts to scheduling:

  - Freebusy lookup

  - Sending invitations and receiving replies

- Freebusy results are returned immediately

- Invitation replies are sent only after users inspect and accept or decline
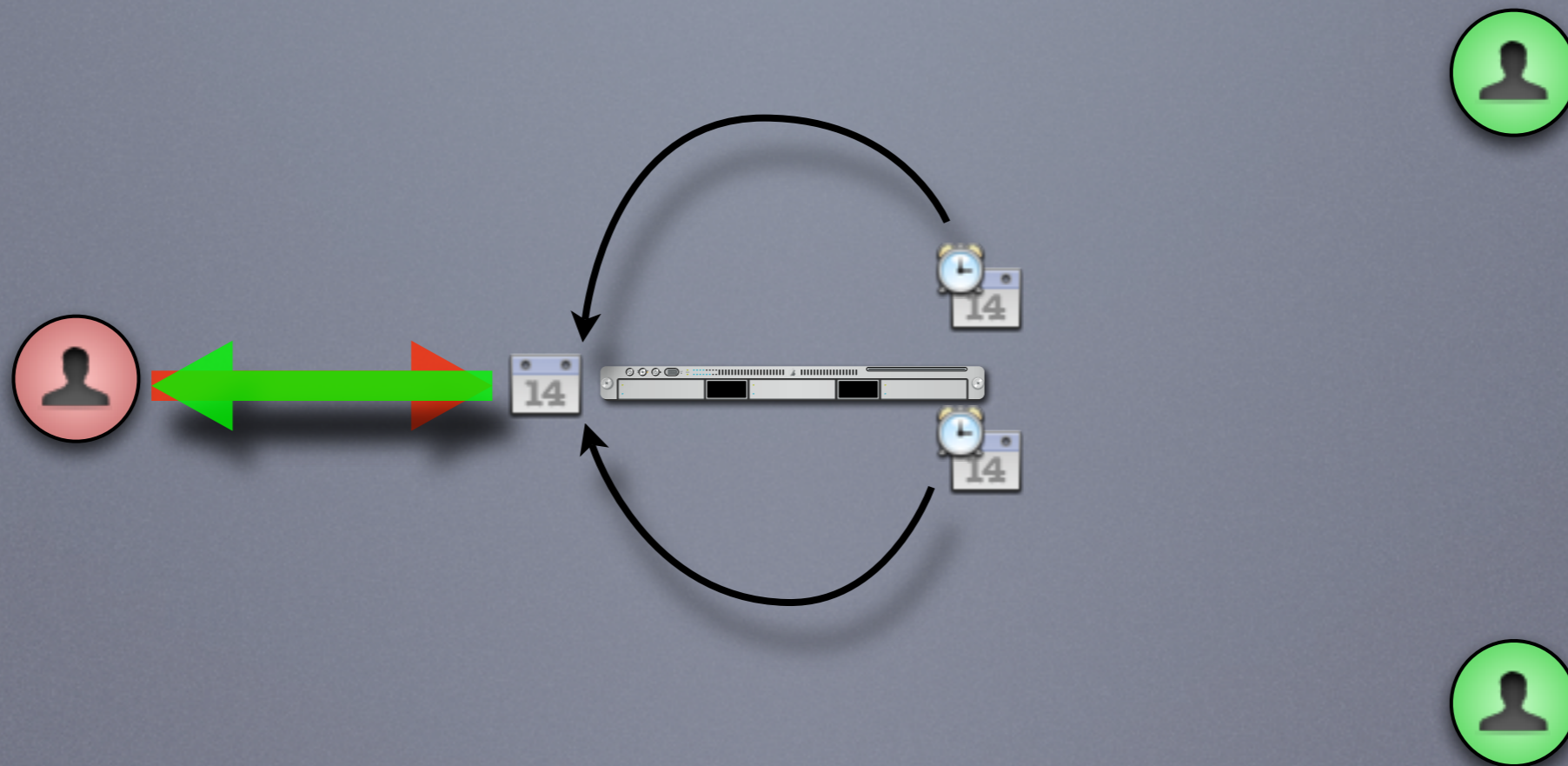
CalDAV Scheduling

- Each user has an "Outbox" and an "Inbox"

- The "Outbox" is used to trigger freebusy lookup

- The "Inbox" is where invites or replies are delivered

- Changes to events trigger scheduling

- Clients monitor the "Inbox" for incoming scheduling messages

CalDAV Scheduling

Sequence of diagrams showing free-busy lookup.

Organizer sends freebusy request to the server

Server calculates and returns freebusy data for attendees

Organizer sees freebusy for everyone

Adjusts for free time for everyone

Free

Busy

Availability for "New Event"

All Day | Work Hours

◄ | Monday, October 15, 2007 | ► | Next Available Time

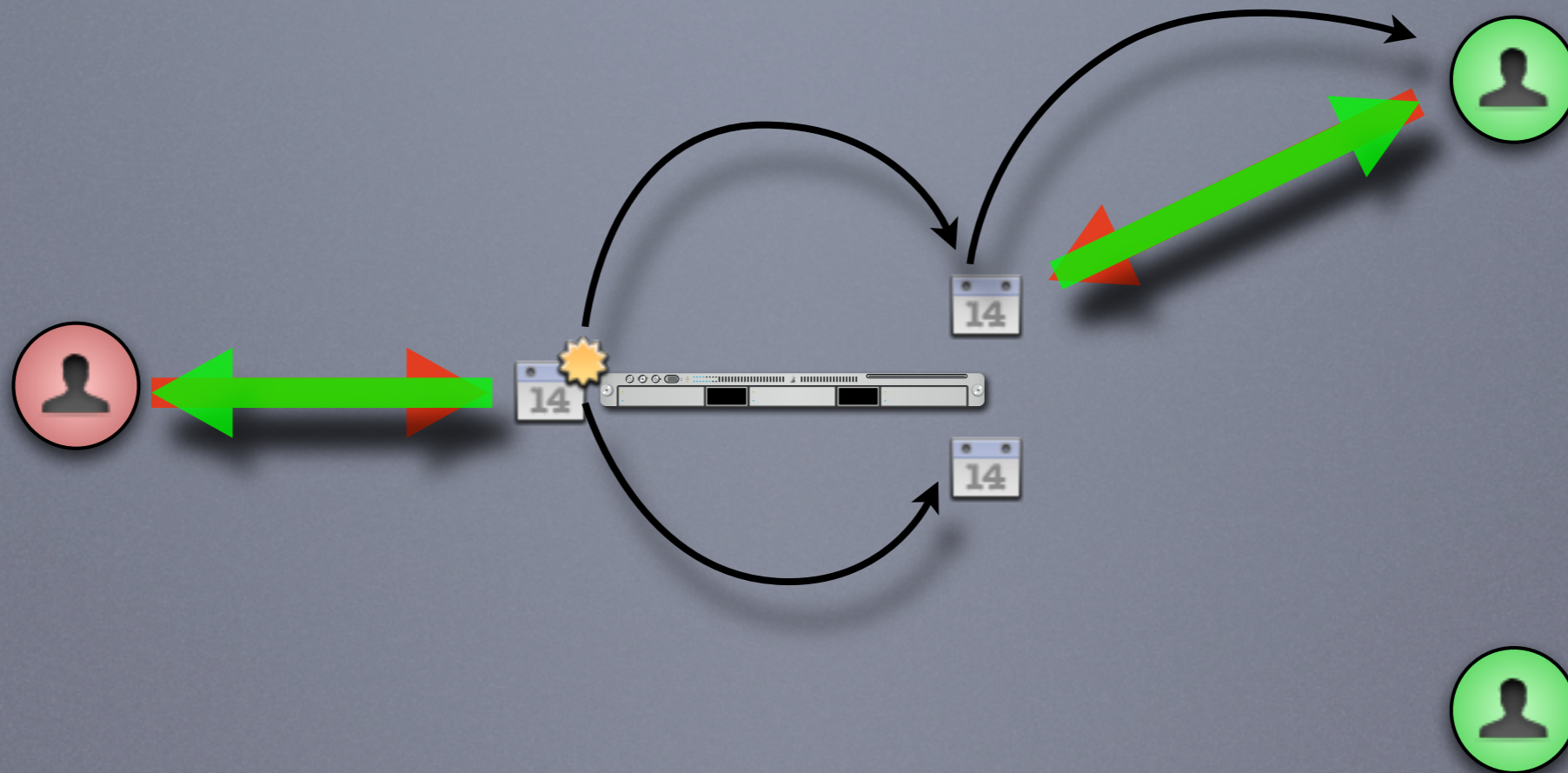| Name	1 AM	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	9	10	11 PM
Cyrus Daboo (organizer)																							
Chris LeCroy																							
Wilfredo Sanchez																							

Done

CalDAV Scheduling

Sequence of diagrams showing invitations being sent out, replies returned.

Organizer sends invite request to the server

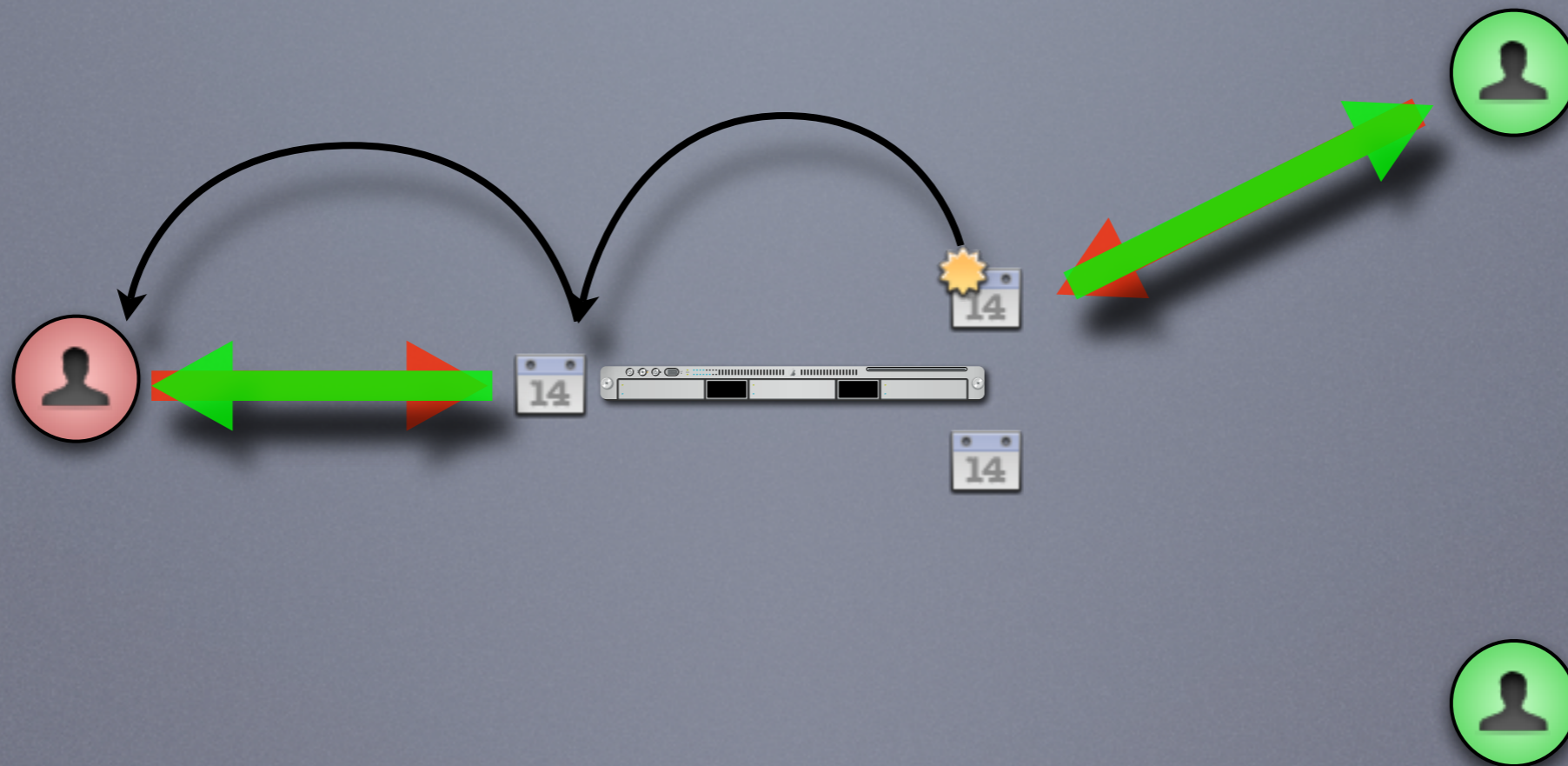Server copies the request into each attendees' Inbox

Attendees see the invites when they next check the server

Attendee replies to the server
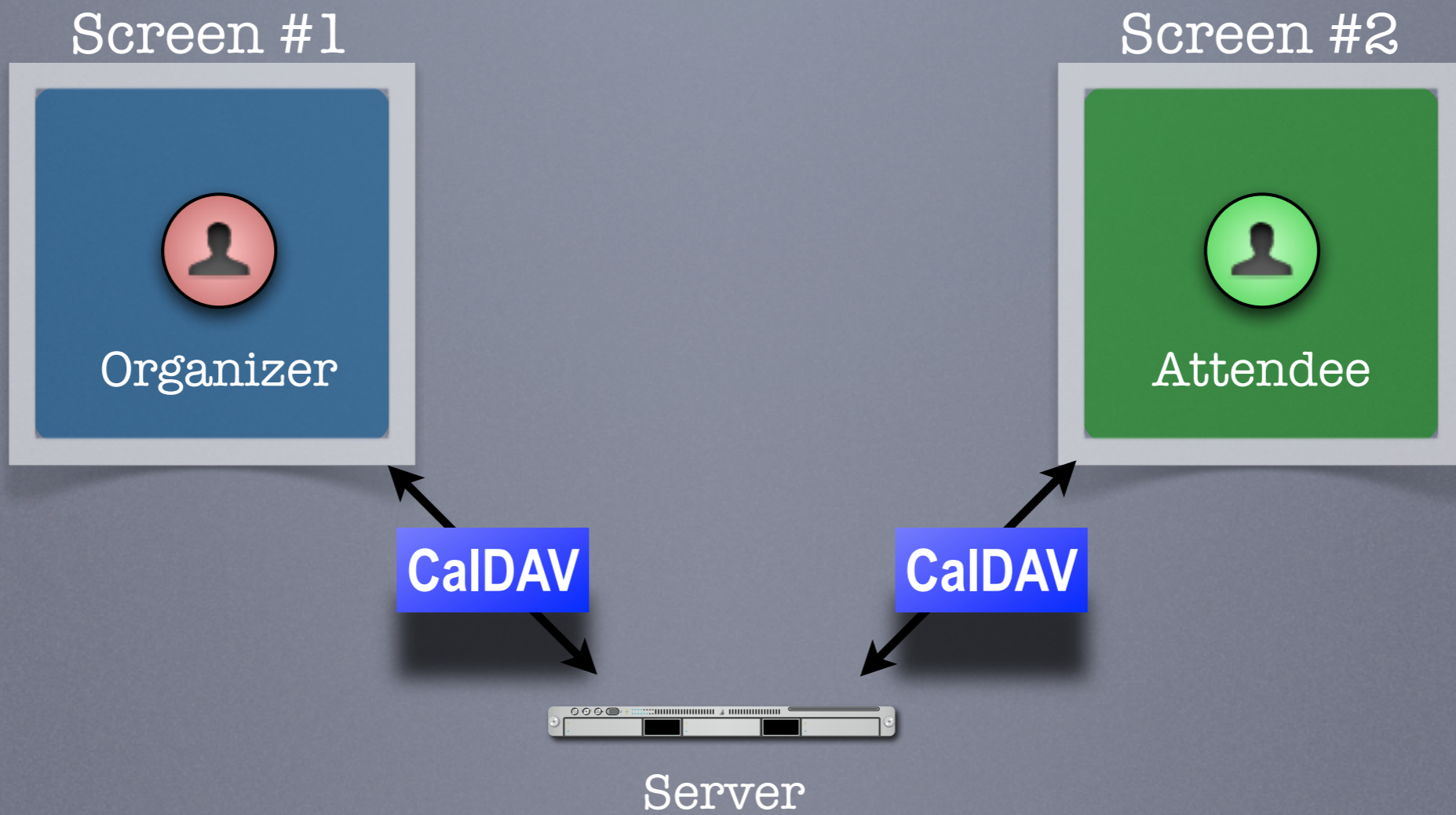
Server copies the reply into the organizer's Inbox

Organizer sees the reply when they next check the server

CalDAV Scheduling Demonstration #1
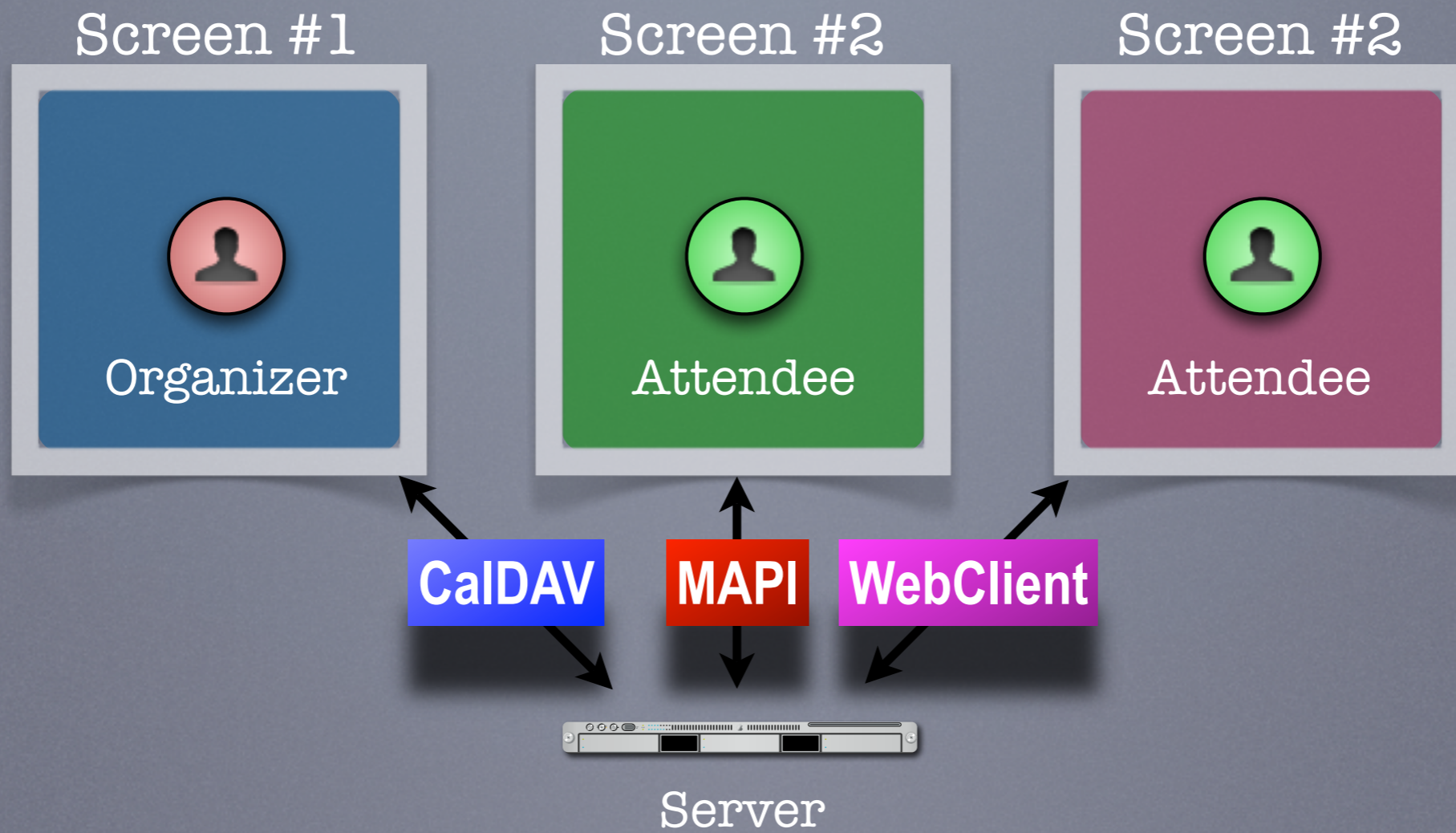
Simple meeting between two people

Demo Participants

Screen #1

Organizer

Screen #2

Attendee

CalDAV

CalDAV

Server

iSchedule

How it works

Basic Concept

- Provides the ability for users on different calendaring systems to schedule meetings with each other

- Instantaneous freebusy lookups

- Invites, replies sent as "messages" with delivery status immediately returned

Can't this be done today?

- But I can do scheduling with my colleagues today!

- True, but only people on the same server as you, or via some other communication process such as email or telephone.

Design of iSchedule

- Built on core internet technologies

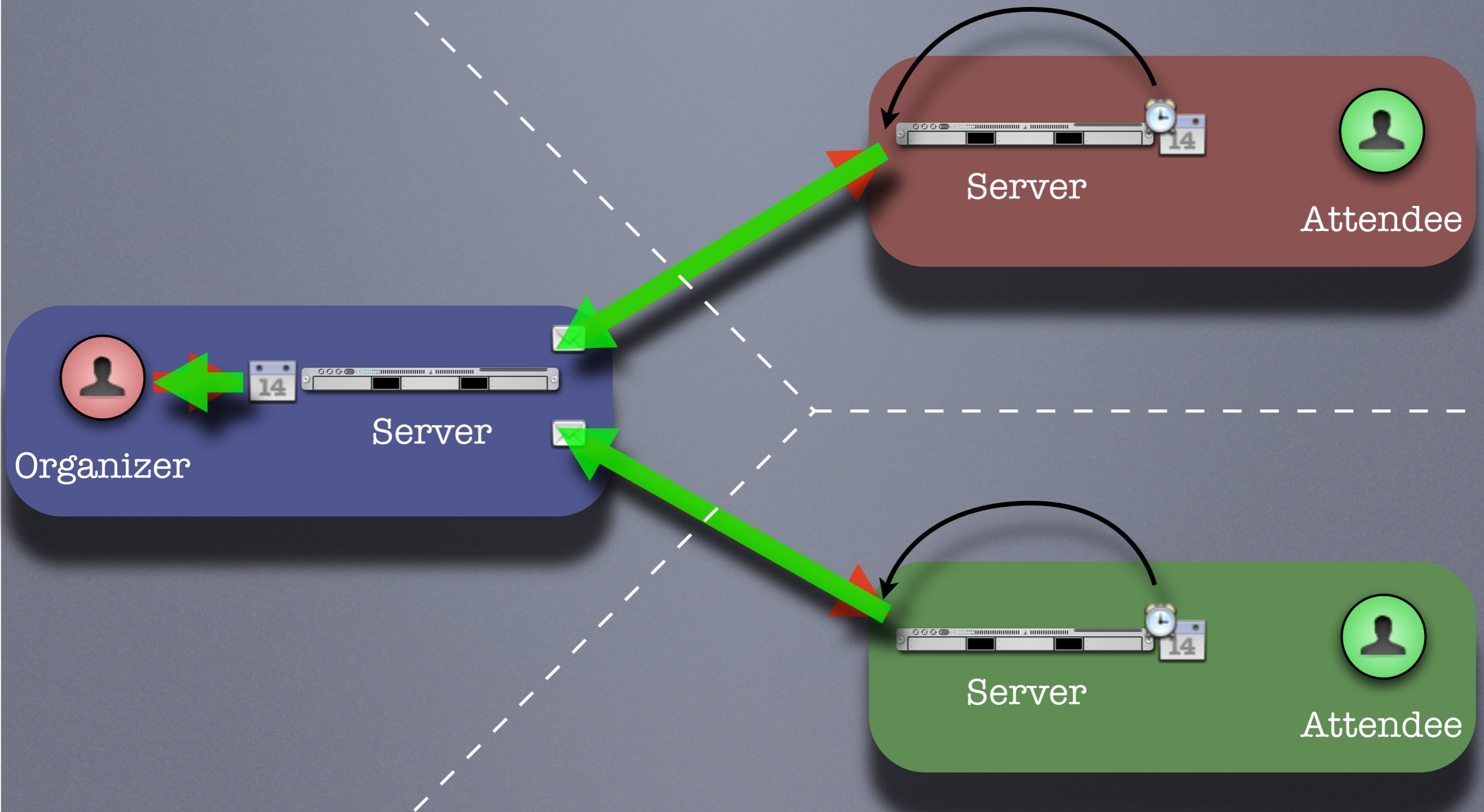- Can be used with any type of calendar store (does not depend on CalDAV)

iSchedule

Security

Discovery

HTTP

iTIP

iCalendar
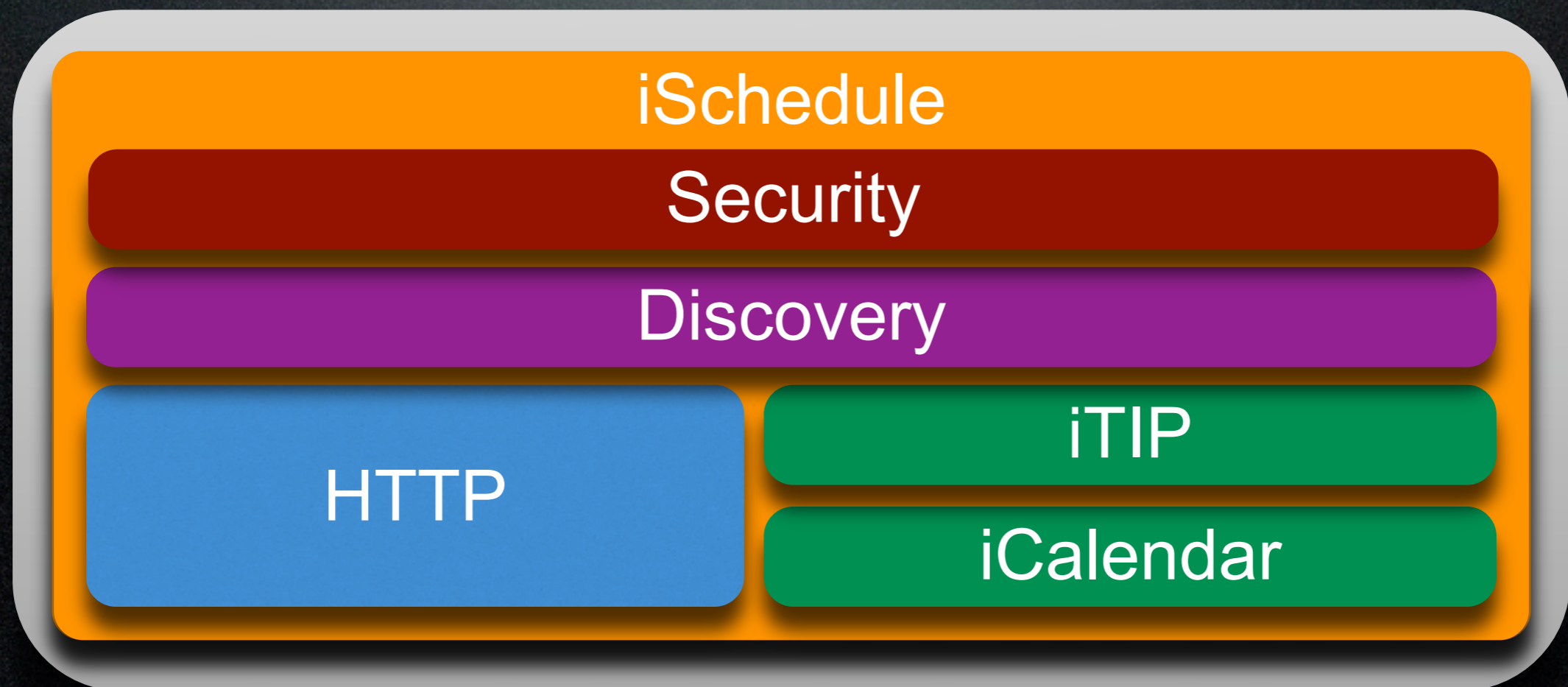
Organizer and Attendees on different systems
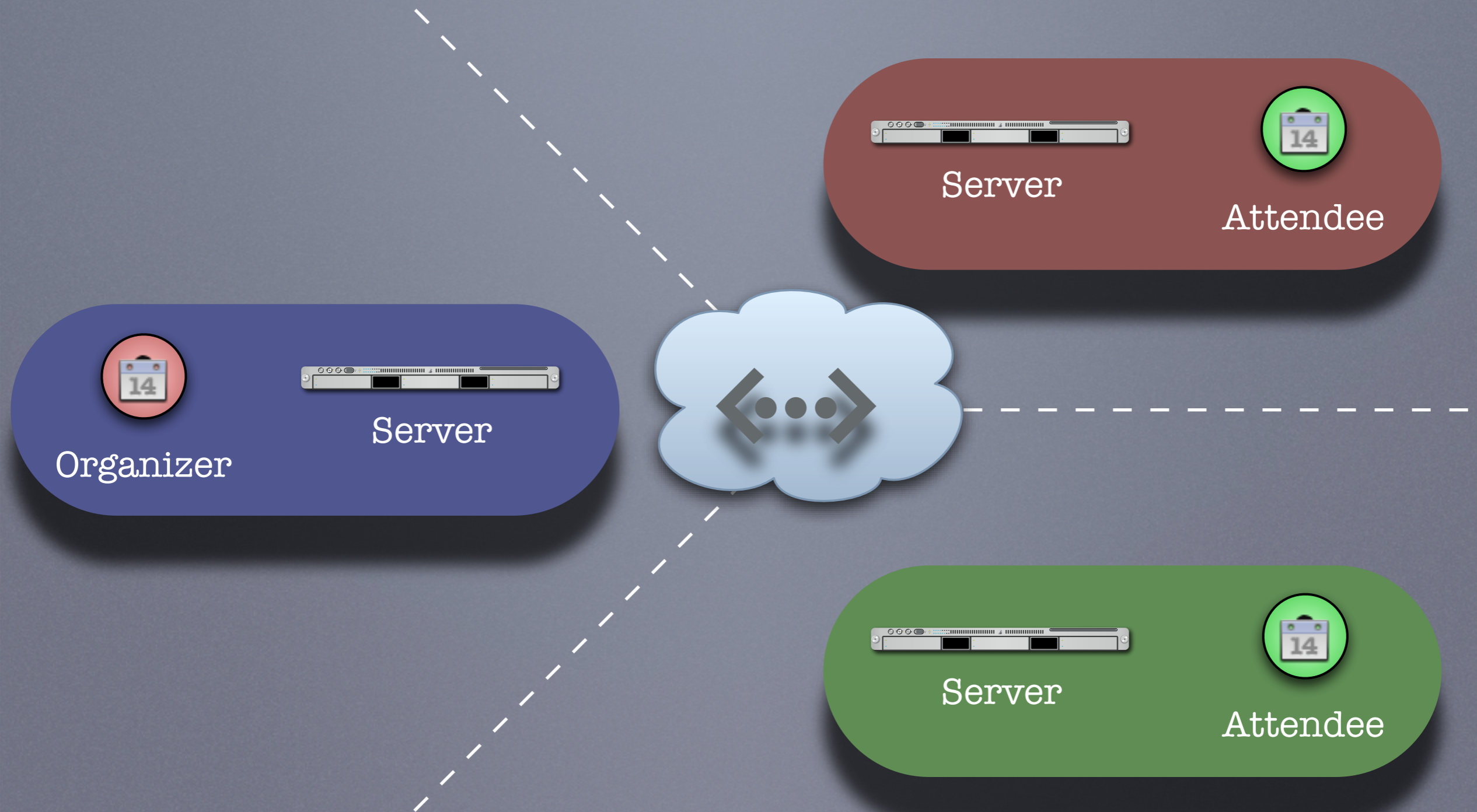
iSchedule

Sequence of diagrams showing freebusy.

Freebusy response comes back immediately

Organizer sees freebusy for everyone

Adjusts for free time for everyone

Free

Busy

Availability for "New Event"

| All Day | Work Hours | | ◀ | Monday, October 15, 2007 | ▶ | | Next Available Time |

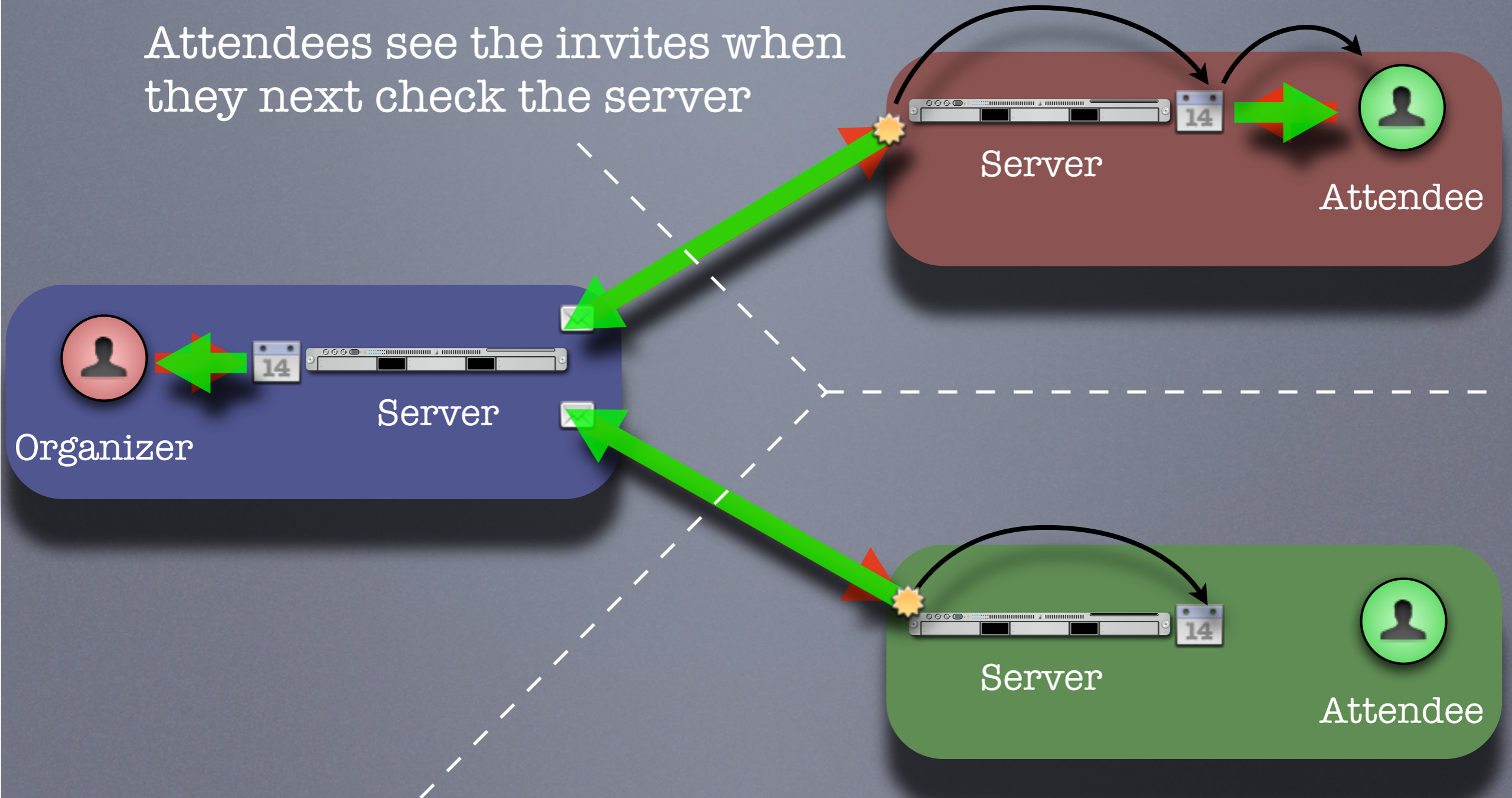| Name	1 AM	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	9	10	11 PM
Cyrus Daboo (organizer)																							
Chris LeCroy																							
Wilfredo Sanchez																							

Done

iSchedule

Sequence of diagrams showing invites and replies.

Organizer sends invite request to their server
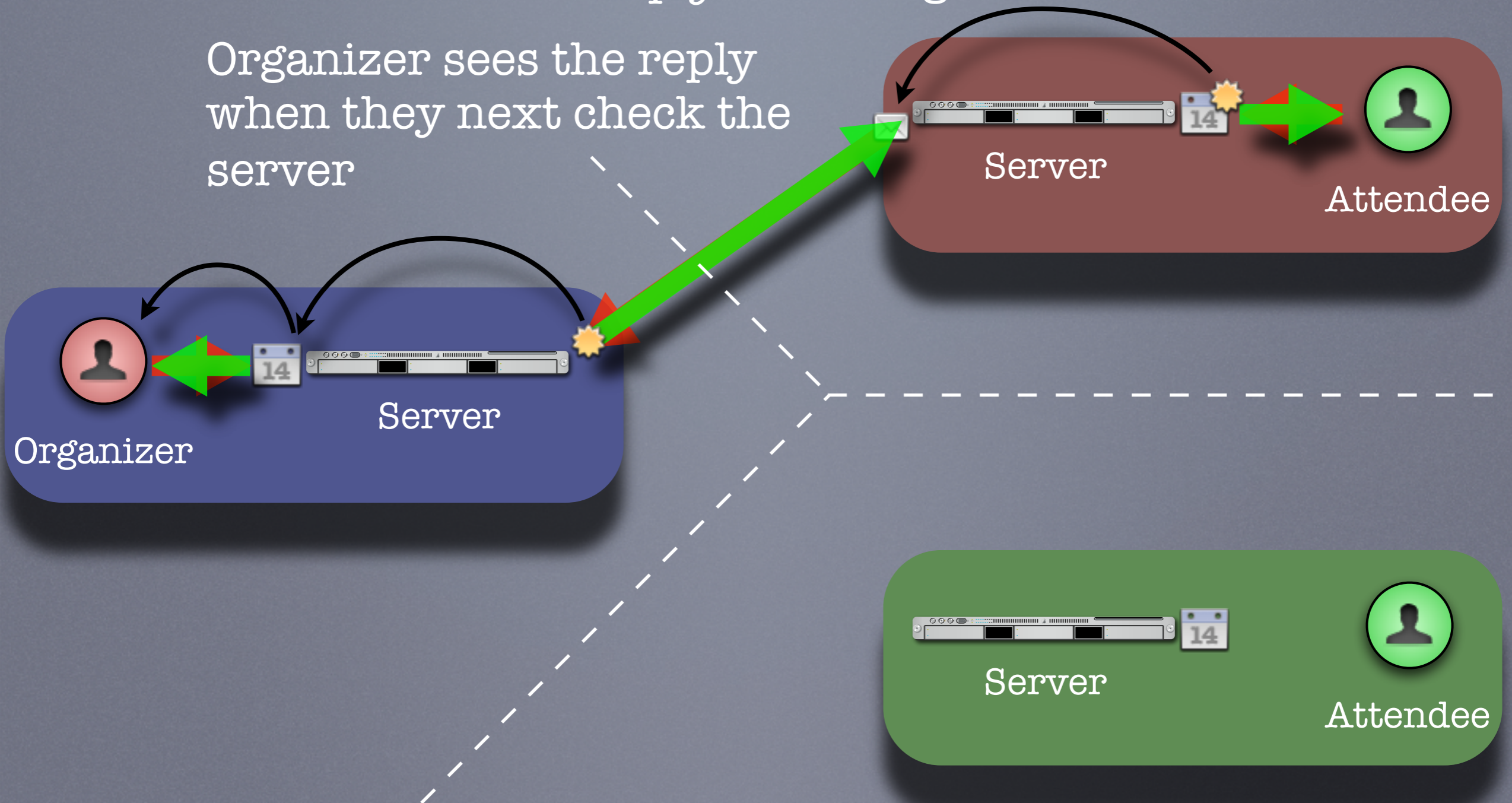
Server sends the invite to each attendee's server

Attendees see the invites when they next check the server

Server

Attendee

Organizer

Server

Server

Attendee

Attendees reply to their server

Server sends the reply to the organizer's server

Organizer sees the reply when they next check the server

Server

Attendee

Organizer

Server

Server

Attendee

iSchedule Demonstration

Two calendar users in different domains

iSchedule Demo Setup

Organizer

Screen #1

CalDAV

Server

iSchedule

Server

Web
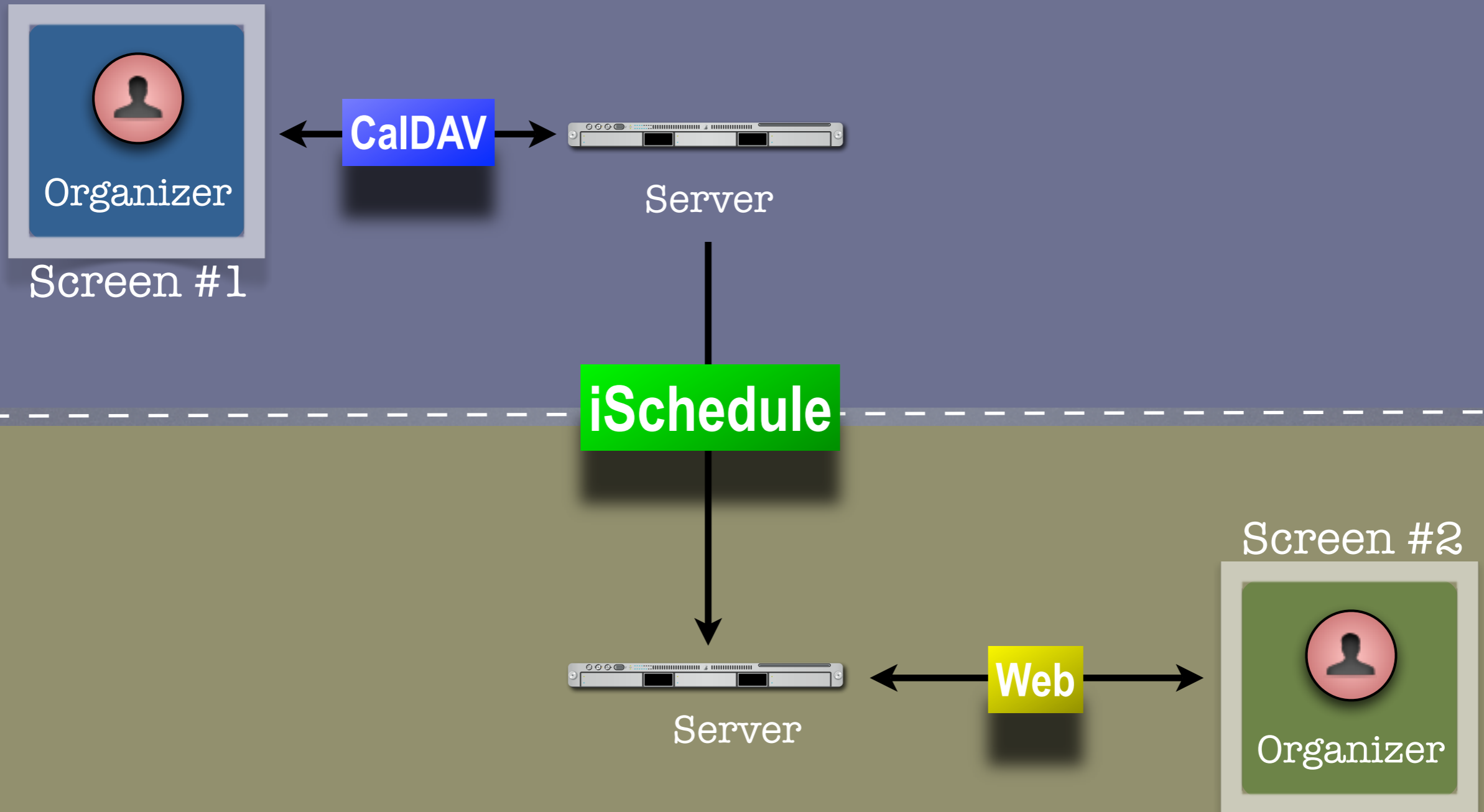
Screen #2

Organizer

iSchedule Demonstration

Four calendar users in different domains
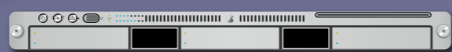
iSchedule Demo Setup

Organizer

Screen #1

CalDAV

Server

Attendee

Screen #2
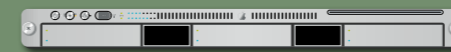
CalDAV

Server

iSchedule

Server

Web

Screen #1

Organizer

Server

ActiveSync

Off Screen

Attendee

Freebusy URL

What is Freebusy?

- A list of free and busy periods for a particular calendar user or resource

- Primarily used for scheduling resources or meetings with other people

- Time periods may be marked as
  - busy
  - free
  - busy unavailable ("out of office")
  - busy-tentative

Expressing Freebusy time

- Most commonly as a RFC 2445 VFREEBUSY object

  - a request for freebusy time,

  - a response to a request, or

  - a published set of busy time

Sharing Freebusy

- CalDAV Scheduling

- iTIP/iMIP (email)

- iCalendar .ics file

- Freebusy URL (FBURL)

Why FBURL?

- Freebusy is LCD scheduling

- FBURL is LCD Freebusy (or could be)

- Easy

- Outlook supports a form of FBURL

Why FBURL? (cont.)

- The market says FBURL is desirable and useful

  - tungle.com, timebridge.com, timetomeet.info, doodle.ch

- Potentially bridge the divide between enterprise calendaring and

  - calendar/scheduling augmenters

  - standalone calendaring clients (no server)

What we have done

- Standardize/Normalize

- Parameters -URI template

- Error reporting within the HTTP protocol

- Allow for non-authenticated or weakly authenticated service

- Keep it simple (in its simplest form)

What we have done...

- Outlook compatibility

- Extend?

  - Discovery
  - Authentication
  - Provisioning
  - VAVAILABILITY
    - provide a grouping of available time information over a specific range of time.

How it works (1)

- The "Read URL" is used to get freebusy data for a user

  http://www.example.com/freebusy/user1@example.com?
  start=20070901T000000-0800

  http://www.example.com/freebusy/user1@example.com

- returns VFREEBUSY object

How it works (2)

- The "Publish URL" is used by a client to upload freebusy data for a user

  http://www.example.com/freebusy/user1@example.com

  http://www.example.com/freebusy?user=user1@example.com&token=xcsfdgetdh
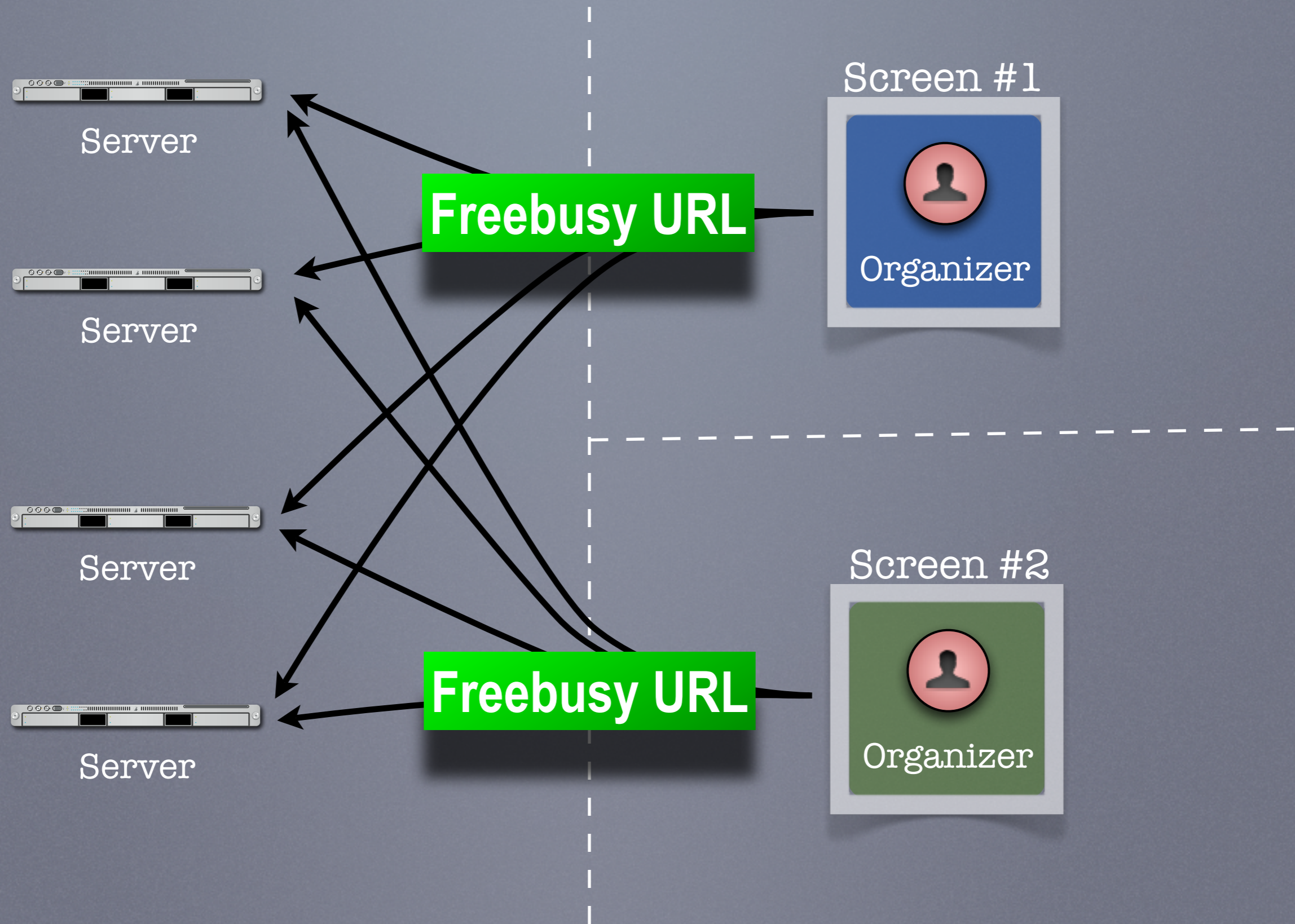
What we will show you

- Basic form FBURL

  - lookups - no publishing

  - Accessing multiple servers from the same clients

  - Comparison with server-server lookups

Freebusy URL Demonstration #1

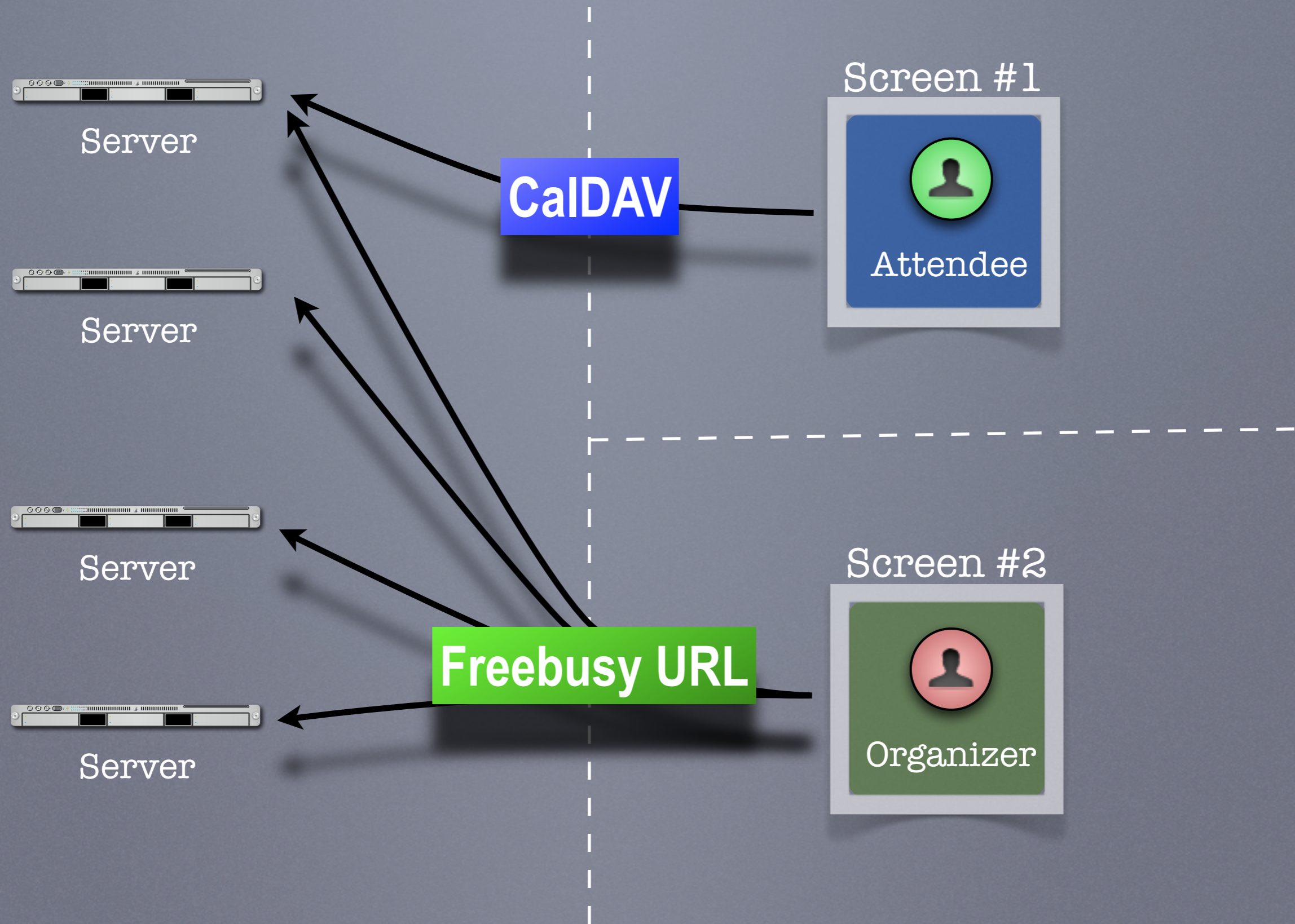Several clients retrieving freebusy information

Freebusy URL Demonstration #2

Freebusy aggregation information

Freebusy Demo #2 Setup

Conclusion

Wrap-up

- We have demonstrated how progress is being made with key scheduling technologies

- As with a lot of CalConnect work this is a very interactive process with specifications and implementations being worked on together

- This ultimately provides for a better specification and interoperability

CalDAV Scheduling

- A new CalDAV scheduling draft with implicit scheduling support was recently published and now we are heavily testing that

- Hope to complete this by end-2008

iSchedule

- Demonstrated basic scheduling message processing

- Key elements of iSchedule still need to be developed:

  - Discovery (use SRV records in DNS)

  - Security - need input from security experts as to what model(s) to use

- Hope to complete this by mid 2009

Freebusy URL

- Freebusy is LCD scheduling

- Freebusy is soft-core calendaring

- It is what we settle for, not what we want

- But...Free/Busy is very, very useful

- CalConnect will continue to develop FBURL

Q&A

Thanks