

# Cloud Federation

sync, share & collaborate

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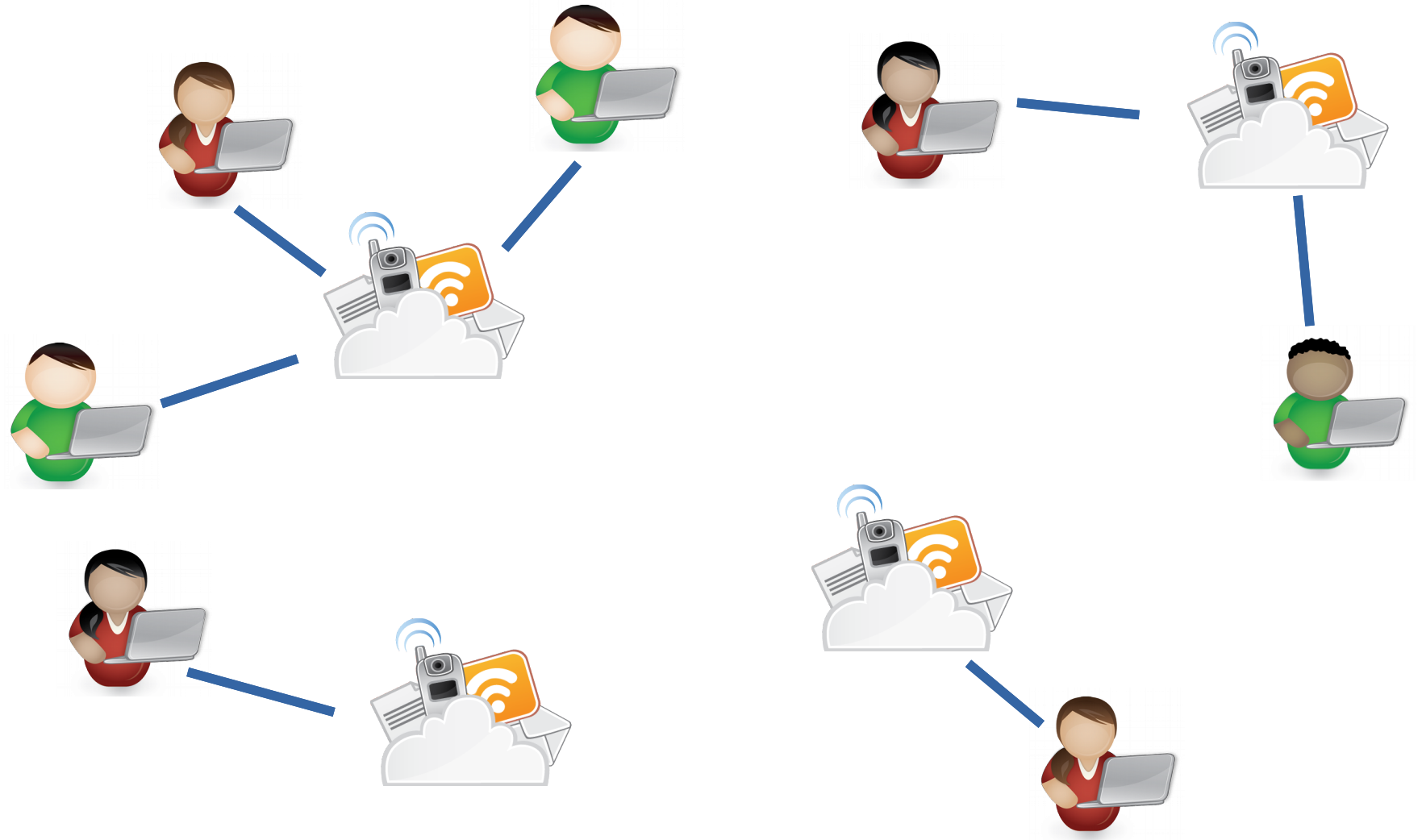
🐦 [@schiesse](https://twitter.com/schiesse)



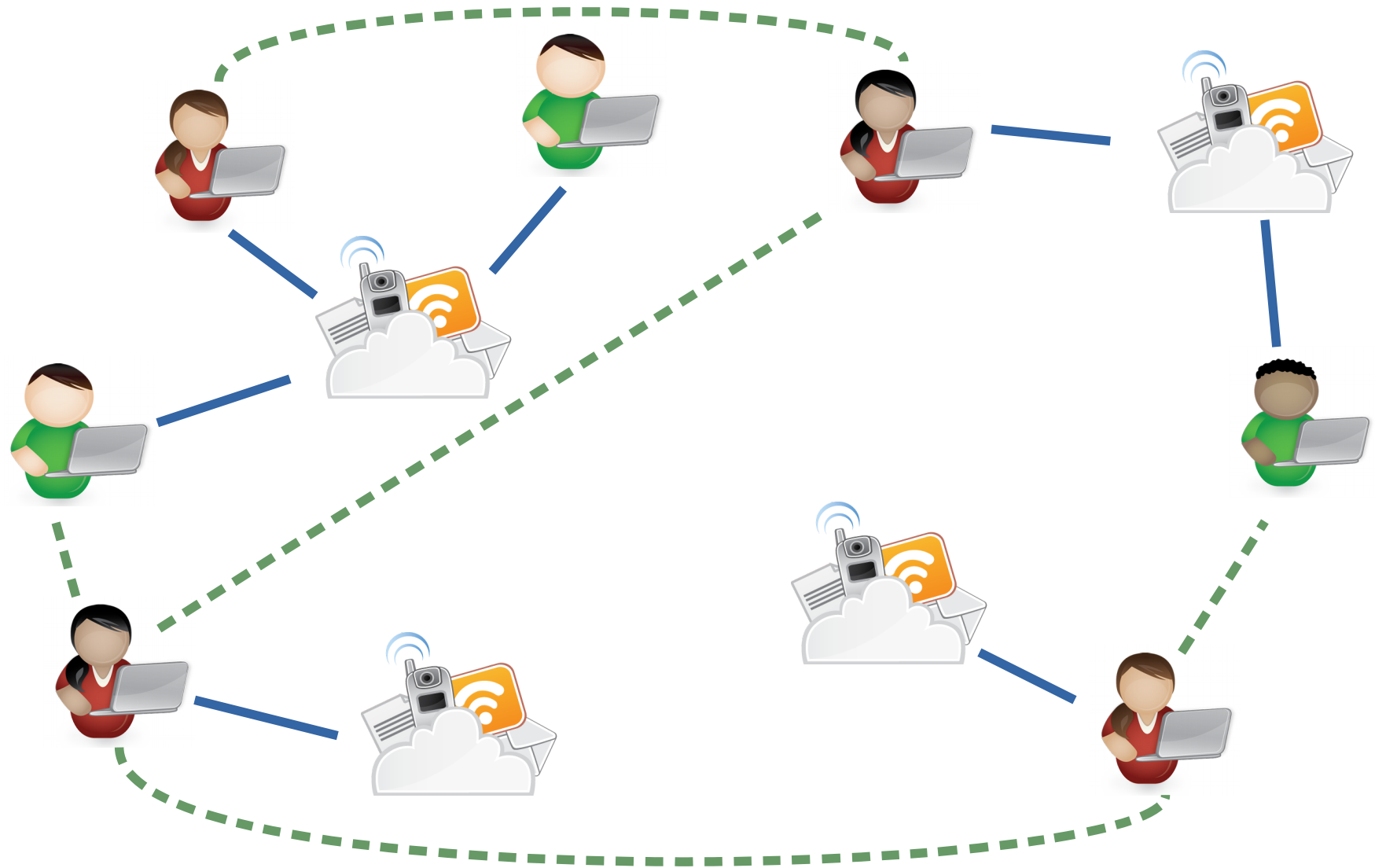
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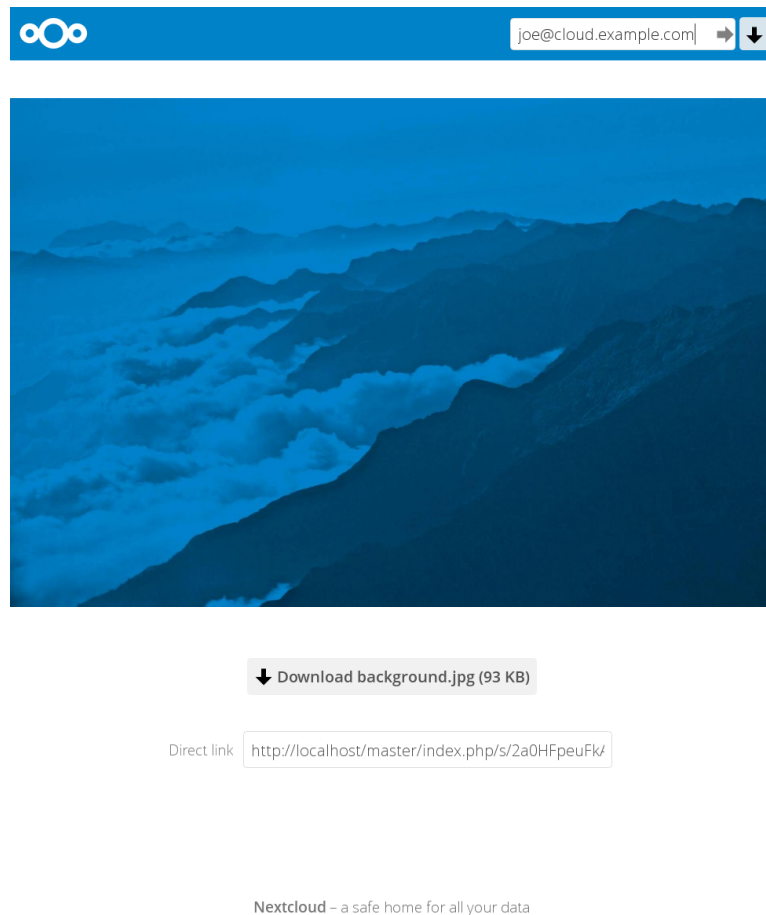


# What is Cloud Federation?

- Every user has a “Cloud ID” similar to a E-Mail address, e.g. [user@cloudserver.org](#)
- REST API to invite people
- WebDAV to access the files
- Currently implemented by:
  - Nextcloud
  - Pydio
  - ownCloud

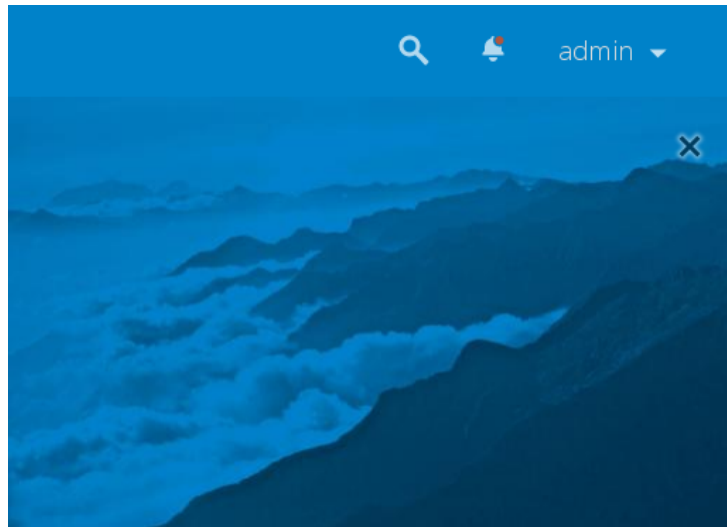


# Convert Public Links



- Share public link
- Recipient adds the public link to his Nextcloud
- Receive federated share from owner
- Owner see who added a public link and can control access to his data

# Integrated in normal Sharing



- Use the share dropdown to create federated shares
- Recipient has to accept it
- Same behavior as local shares
- Same permissions
- No group shares at the moment

# How to find People

## Federation

Federation allows you to connect with other trusted servers to exchange the user directory. For example this will be used to auto-complete external users for federated sharing.

☒ Add server automatically once a federated share was created successfully

## Trusted Servers

+ Add Nextcloud server

 <https://example1.org>



 <https://example2.org>



 <https://example3.org>



- **Trusted Servers** exchange user directory
- Add servers automatically or manually
- Auto complete from trusted servers





# A global Address Book

Profile picture 



png or jpg, max. 20 MB

Full name 

Björn Schießle

Email 

bjoern@nextcloud.com

For password recovery and notifications

Website 

www.schiessle.org

Phone name 

+49 7438 8437 8 4837

Twitter 

@schiessle

Address 

 Private

 Contacts

 Public

# Federated global Address Book

- Everybody can set up his own (internal) address book server
- Or use an existing address book server
- You can limit access to one address book, e.g within your company/organization
- Or you can federate with other servers → keep address book entries in sync across multiple servers



# Federated global Address Book

- Every user has a private/public key
- Data send to the server are signed with the users private key
- The same key is used to sign/verify Twitter, Webpage,... Accounts from the user
- Trust on first contact: The first time I share with a new user I get their public key
- From now on my server uses the public key to verify updated data records



# Benefits of the Address Book

- Make it easier to find people to share with
- It could allow users to migrate from one provider/server to another
  - They only needs to move the key to the new server and update their data with the new federated cloud ID
  - Contacts can detect the change and automatically update existing shares



# User defined Cloud ID

- Problem: user@email.com@cloud.com

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## Possible Solutions:

- Administrator could define the first part of the Cloud ID
- Users could set their individual cloud id.

# User defined Cloud ID - Solutions

- The Administrator defines a pattern for the first part
  - The cloud server could resolve it internally
  - Administrator would need to take care that there is no name collision



# User defined Cloud ID - Solutions

- Users define complete custom cloud ID
  - The user could for example decide to use their email Address as federated cloud ID
  - Therefore they could add a well-known/federated-cloud file to the root of their server pointing to the real cloud server
  - ... or store the information in the DNS Record
  - The cloud server will provide a API to resolve the custom cloud ID





# Federated sharing beyond files

- Share calendars and event across servers
- Share address books and contacts across servers
- Call and chat with people across servers (upcoming Spreed.me integration)



# Thank You!

Question?

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