

REDCap betreiben

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Charité / BIH

Erster Schritt Mitglied im Konsortium werden

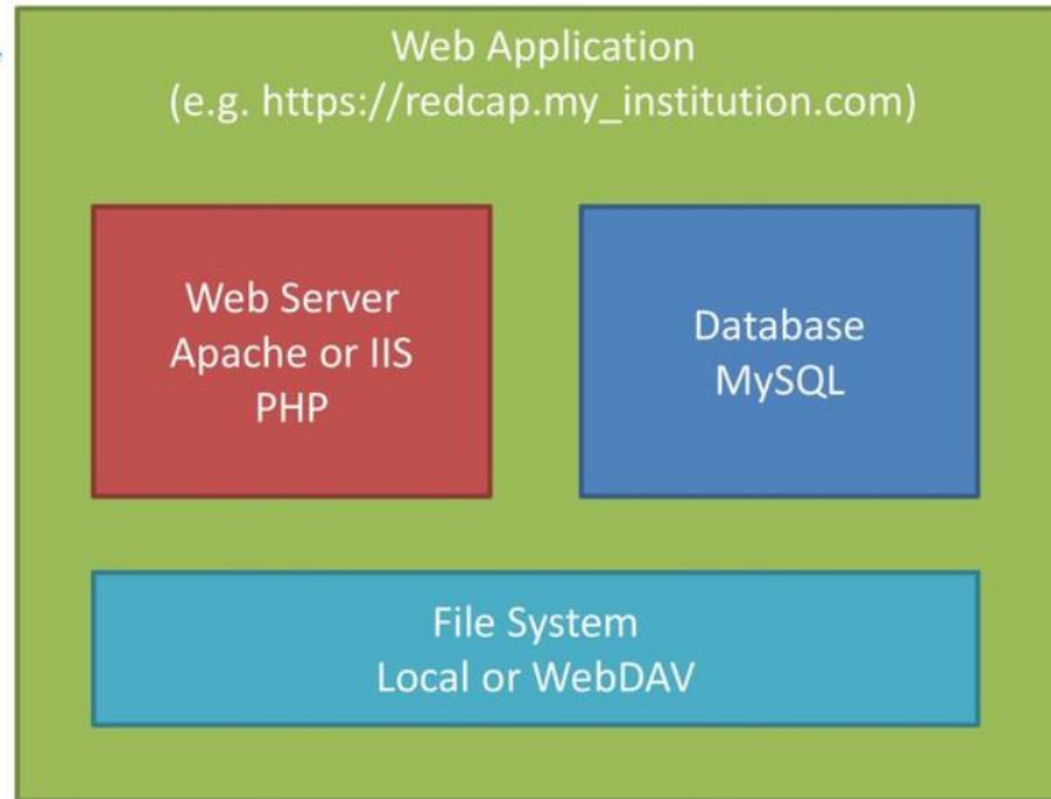


<https://projectredcap.org/partners/join/>

REDCap is a Web Application



- Web Server
 - connectivity
- Database Server
- File system
- Configuration



Simple – Single Machine Installation

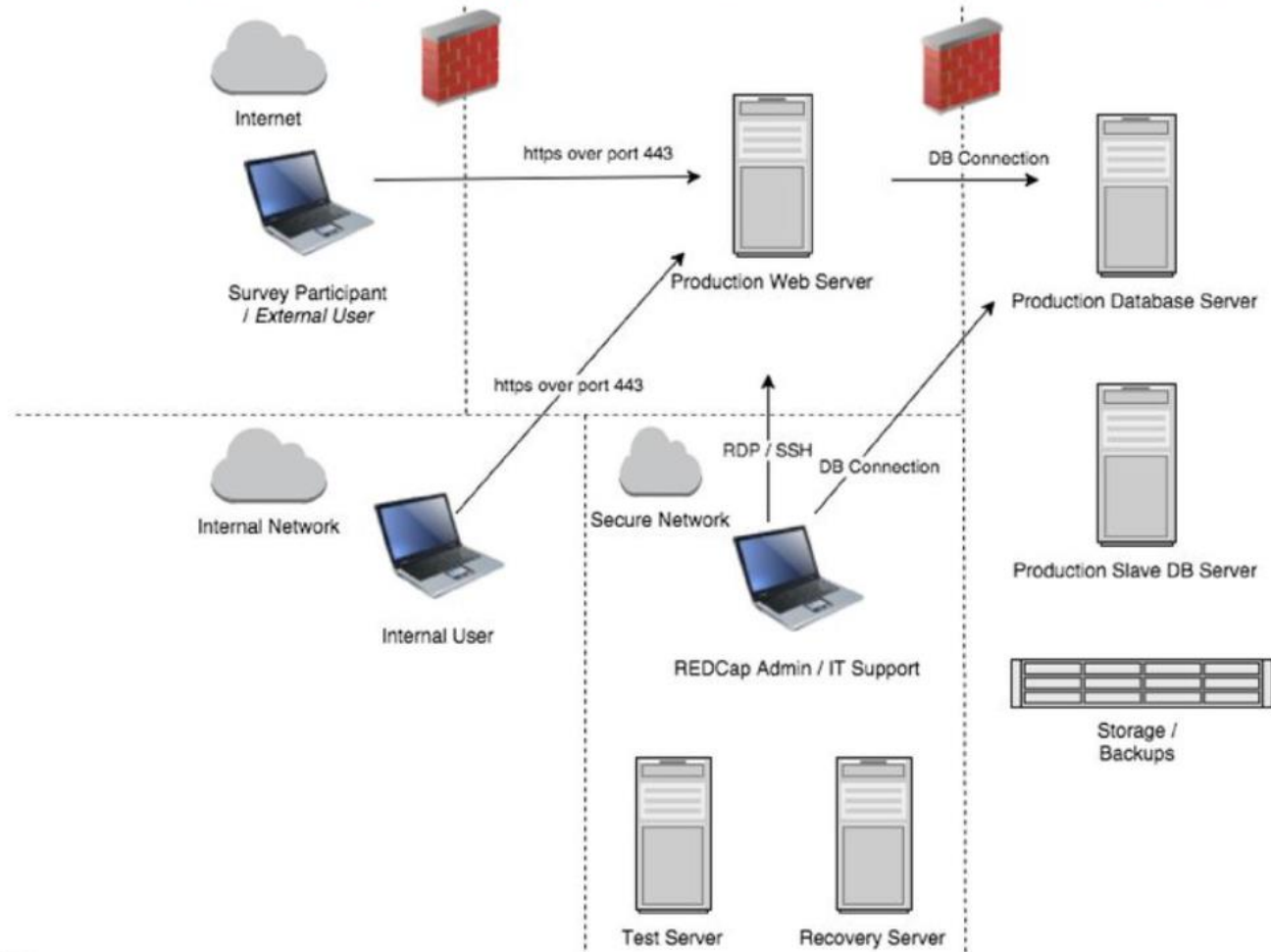
- Run everything on your computer!
 - Web server with PHP
 - Database server
- Downside is only you or others on your local network can connect
 - No public surveys, sketchy email support
- **This should only be used for testing & development**
 - Join one of the developer talks to learn more about how to set this up
 - Virtual Machines
 - MAMP / WAMP / XAMPP

A Professional Installation

- Separate servers for web and database
 - More secure, scales better, performs better
- Robust backups
 - A slave DB server allows for 24-7 runtime with backups
 - No backup is complete without both eDocs AND database components
 - Don't forget DET / API / HOOK scripts
- Additional installations are useful
 - Testing can be used to practice the upgrade process
 - Recovery can be used to validate backups and help quickly recover from common user mistakes
- Robust firewall and security precautions
 - Proper MySQL and Apache/IIS configurations for production environment

Zugriff aus dem Internet benötigt ein Firewall-Konzept (z.B. Betrieb in DMZ)

An Example Secure Installation



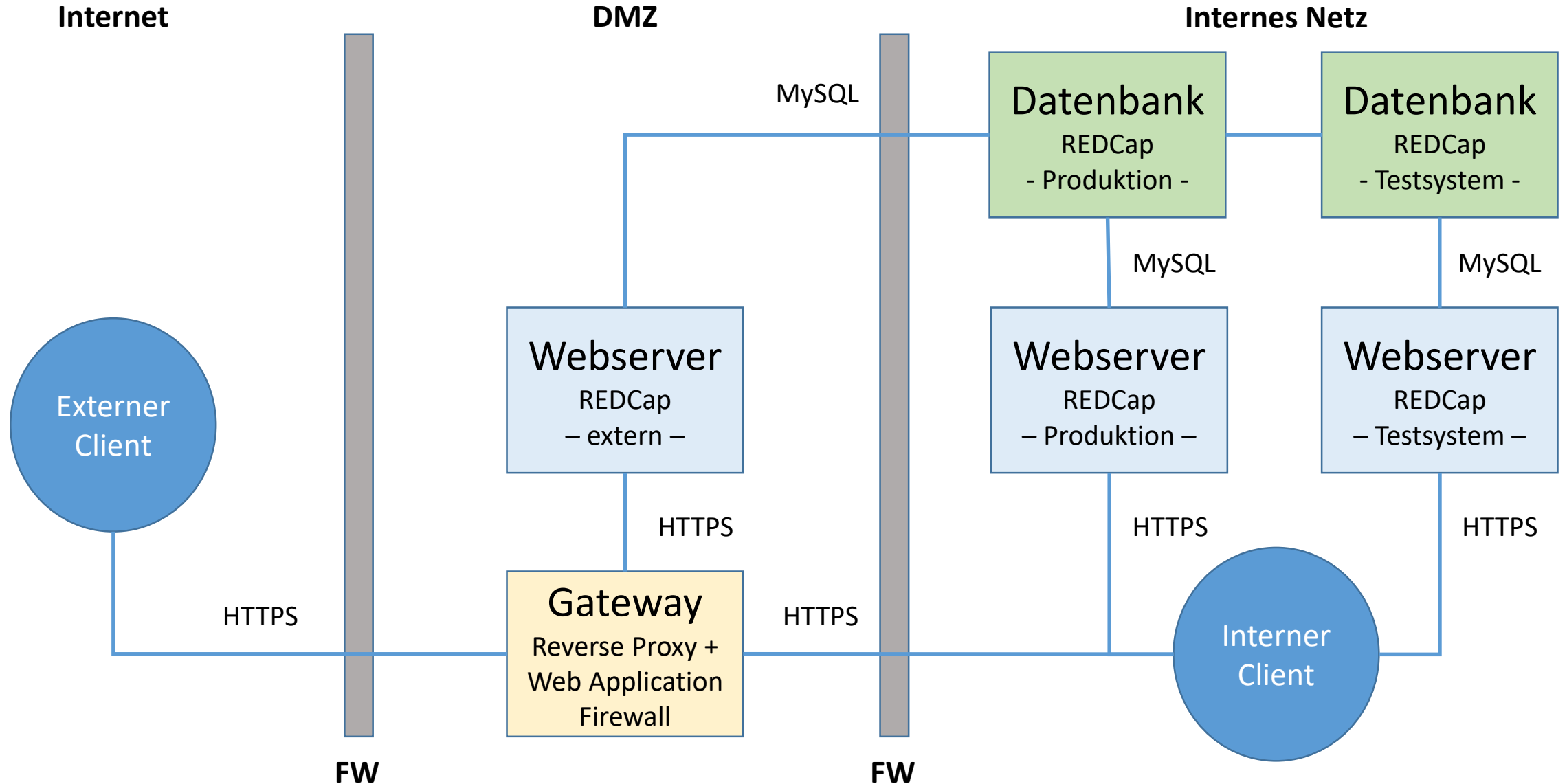
Practical Take-Homes

- REDCap requires IT personnel to properly maintain and secure in a healthcare / research environment
 - While one could run it under their desk, this should only be for testing/development and not for REAL use
- In order to use the robust patient-reported features (public surveys) you **MUST** expose your web server to the internet
 - Firewall / Proxy / Load Balancer / etc...
- A robust backup strategy is a life saver – test it, use it, one day it will be needed

Common Struggling Points

- Mail Configuration
 - Often you will have to work with central IT to configure a SMTP relay
- LDAP Integration
 - Identify an institutional LDAP guru who can make sure you have a user with proper credentials to use the directory
- Database Configuration
 - Make sure MySQL user-level security is tight and my.cnf is configured with appropriate settings
 - Is there a training page / lookup page for my.cnf
- Proxy Server
 - Use of external library and adaptive testing requires that your server can access the internet – this may require a proxy server in some settings
- File Permissions
 - Verify the redcap temp and edocs folders are writable by your webserver user

Beispiel: Konfiguration der Charité (vereinfachte Darstellung)



Authentifizierung: LDAP/AD-Konfiguration muss je Institution angepasst werden

`/var/www/redcap/webtools2/ldap/ldap_config.php`

```
// EXAMPLE #1: LDAP that does not require username/password during
binding
$GLOBALS['ldapsn'] = array(
    'url'           => 'ldap.med.cornell.edu',
    'port'         => '636',
    'version'      => '3',
    'basedn'       => 'ou=people,o=nypcornell.org',
    'binddn'       => 'ou=people,o=nypcornell.org',
    'bindpw'       => '',
    'attributes'  => array('uid'),
    'userattr'    => 'uid',
    'userfilter'  => ''
);
```

Sicherheitshinweis: Datenbankzugang außerhalb des Webspaces ablegen

`/var/www/redcap/database.php`

```
<?php

//*****
// MYSQL DATABASE CONNECTION:
// Replace the values inside the single quotes below with the values for your MySQL configuration.
// If not using the default port 3306, then append a colon and port number to the hostname (e.g.
$hostname = 'example.com:3307');

// For greater security, you may instead want to place the database connection values in a separate file
that is not
// accessible via the web. To do this, uncomment the line below and set it as the path to your database
connection file
// located elsewhere on your web server. The file included should contain all the variables from above.

include '/var/redcap/private/database.php';

?>
```

- Übernimmt Web-Team der Institution den Betrieb des Webservers?
- Temp-Verzeichnis schreibbar
- SSL-Zertifikat für Webserver
- MySQL/MariaDB-Server, optional Verschlüsselung
- Unterstützung Update-Button (dann weiterer DB-Nutzer notwendig)
- Proxy Server (u.a. für Shared Library oder BioPortal benötigt)
- Mail Server (SMTP gateway)
- Authentifizierungsdienste: LDAP/AD, Shibboleth, OpenID, ...
- Storage für Dateiupload (local, WebDAV, ...)
- Datenverzeichnis außerhalb vom Web-Pfad und schreibbar
- Alternative Pfade für Module, z.B. für Entwickler
- Backup-Strategie: Datenbank und File-Upload-Dateien und Webspace
- ...