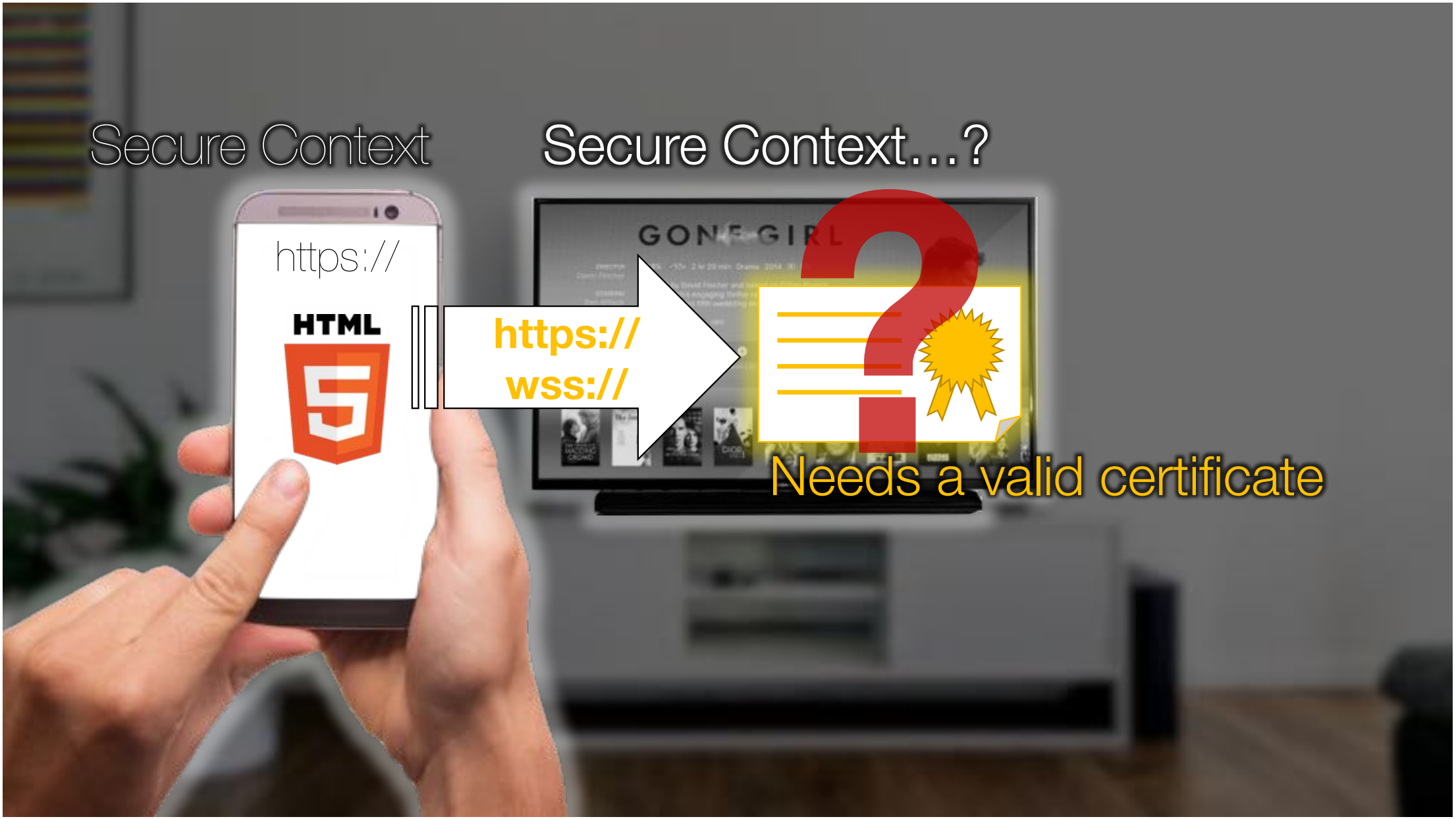
#httpslocal

HTTPS in Local Network

GONE GIRL

https://
HTML
http://
ws://
GONE GIRL

Secure Context
Non-Secure Context
https://
HTML
http://
ws://
GONE GIRL


Secure Context
Secure Context…?
https://
HTML
https://
wss://
Needs a valid certificate

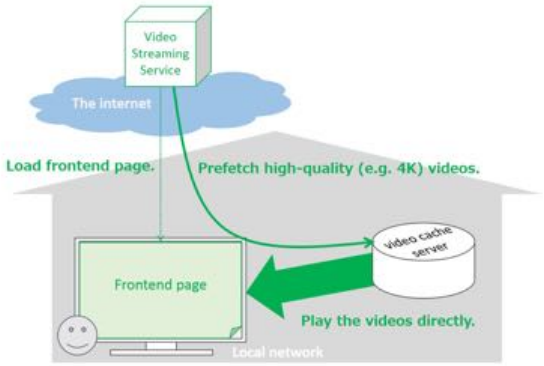
requires Domain Validation

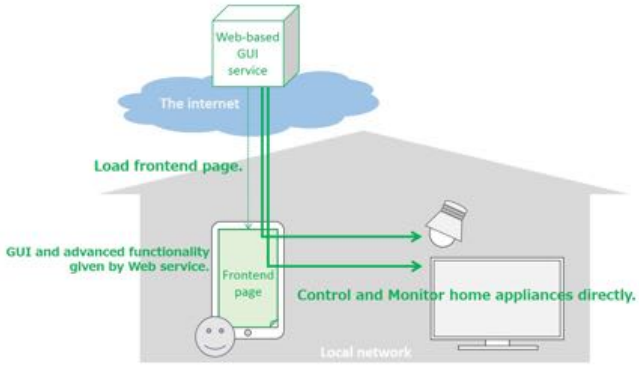
How can we do for local network devices?

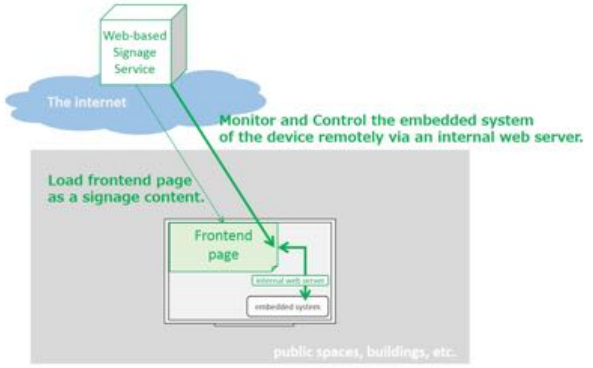
HTTPS in Local Network
Community Group

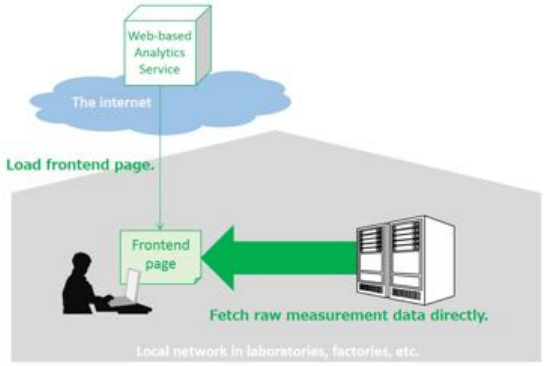
https://www.w3.org/community/httpslocal

https://github.com/httpslocal


Video Streaming Service
The internet
Load frontend page.
Prefetch high-quality (e.g. 4K) videos.
video cache server
Frontend page
Play the videos directly.
Local network


Web-based GUI service
The internet
Load frontend page.
GUI and advanced functionality given by Web service.
Frontend page
Control and Monitor home appliances directly.
Local network


Web-based Signage Service
The internet
Monitor and Control the embedded system of the device remotely via an internal web server.
Load frontend page as a signage content.
Frontend page
internal web server
embedded system
public spaces, buildings, etc.


Web-based Analytics Service
The internet
Load frontend page.
Frontend page
Fetch raw measurement data directly.
Local network in laboratories, factories, etc.

Use Cases

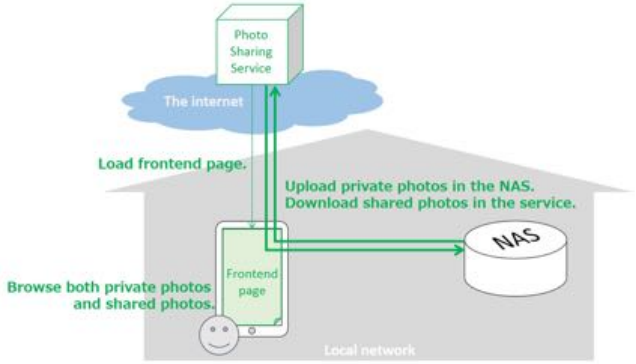
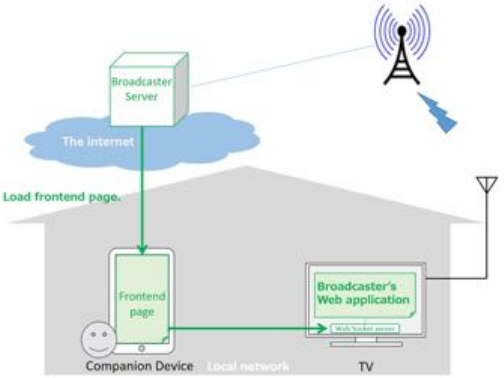
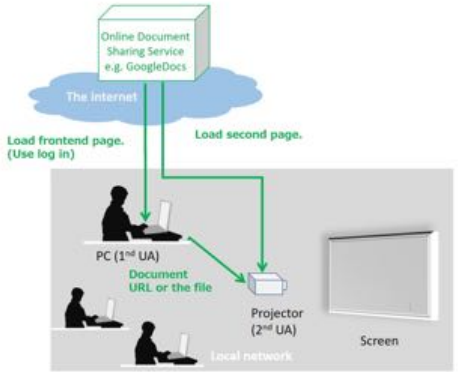


Photo Sharing Service
The internet
Load frontend page.
Upload private photos in the NAS.
Download shared photos in the service.
NAS
Frontend page
Browse both private photos and shared photos.
Local network


Broadcaster Server
The internet
Load frontend page.
Frontend page
Broadcaster's Web application
Companion Device
Local network
TV


Online Document Sharing Service e.g. GoogleDocs
The internet
Load frontend page. (Use log in)
Load second page.
PC (1st UA)
Document URL or the file
Projector (2nd UA)
Screen
Local network

HTML
GONE GIRL

HTML
5

HTML
Quby
London
14.5°
19.0°
Schedule
On
Gas today
2.5 m³
12.0°
Away
19.0°
15.0°
Asleep
20.0°
Comfort

Requirements

Functional Requirements

- Device Discovery
- Device Identification
- Certificate Grant and Issuance
- Certificate Management

Non-Functional Requirements

- Privacy and Security
- User Experience

Web
Application

Certificate Issuance
/ Management

Device Discovery
/ Identification

Certificate Grant

How can we provide the devices with valid certificates?