StagePatch

Installation Guide

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Terminology:

StagePatch is a collection of scripts and databases that run on a host computer on a local network which presents to the network as a web server (This computer will be referred to as the *StagePatch* **server** in documentation).
The parameters of a show are edited via a browser- this browser instance will be referred to as the **Master**. A separate device on the same network as the **Server** can act as **Master** if required (eg if the head patch takes a tablet device whilst greeting a band and wants to make changes away from patch-world), but it is envisioned that in the majority of uses the **Master** and **Server** will be the same computer/laptop.
Those who do not require the ability to make changes to the show (such as Front of House and monitor engineers and junior members of the patch team) are referred to as **Users**. They also access *StagePatch* via a browser, with pages showing information tailored to their role.
As **Users** find the **Server** via IP address 2 or more *StagePatch* servers could share common network infrastructure if required but function as independent systems.
A system can be edited by more than one **Master** (no need to log out the patch world laptop when picking up the ipad in the previous example) but it is recommended that one person be designated to make edits and if they are using multiple devices to refresh the **Master** browser when returning to one device if any changes have been made on another.
There is no hard limit on the number of user devices nor do they have to refresh manually as information is resent from the database periodically.

Requirements:

Users- any device which is

1) capable of connecting to the same network as the **Server**
   And
2) with a browser that supports html and javascript should work (tested with a variety of browsers across windows and linux laptops (mac is expected to work, I just dont have one), android phones and iPad - I'm interested to hear if anyone has success on anything more esoteric). Nothing requires installing or setting up on the device.

Master (as a separate device)- as **User**, recommended not to use on smaller devices due to screen size.

Server- 1) A computer running as a php capable webserver and MySqli database (installation instructions for the recommended platform below)
2) *StagePatch* files downloaded and unzipped within the webserver directory.
3) A Network connection for **Users** to connect via (this is not required for writing a show which can be done offline)

Setting up a StagePatch Server

1) Install the recommended server platform (if the computer to be used already has web server and database capabilities this step can be skipped, but using a different web server is an unsupported set up and should be attempted by advanced users only)
   a) The recommended server platform is XAMMP- this can be downloaded from https://www.apachefriends.org/index.html - follow the installation instructions (Apache, MariaDB and PHP are required components).

2) Download and unzip *StagePatch-* for the beta the *StagePatch* software will be distributed as a .zip via email (later this will be downloaded from a website). The installation of XAMMP will have created a folder called 'htdocs' (default location C/xammp/htdocs) - unzip StagePatch into this (to give xammp/htdocs/Stagepatch/).

3) First time set up- Run the XAMMP control panel and start the apache and MariaDB components. Open a browser and open 'localhost/stagepatch/resources/setup.php'. Running this in the browser will set up the needed databases for StagePatch.

4) Check local connection- Setup.php should redirect to 'localhost/stagepatch/master.php' - this will be the page from which shows are created and edited (and can be accessed from other devices with '<host device lan IP address>/stagepatch/master.php'

5) Check user connection- it is recommended to check the connection from another device- open '<host device lan IP address>/stagepatch' in a browser, this is how users on the network (ie front of house and monitor engineers) will access the system.

Notes on networking best practices

- Whilst not required it is recommended where possible to keep the **server** on a static IP address (either by setting it to static in its network settings via DHCP reservation) once on the network it will be used on during the show- this is so on a multiday show the **Users** can find the **Server** in the same place each day.

- Simple set up: The most basic implementation of *StagePatch* in a laptop on stage acting as the **master** and **server**, a domestic router (handling DHCP and potential WIFI) and a device (laptop/tablet) for each engineer (**User**). The set up can be increased with more devices and network infrastructure as needed.

- Mixed use (other data):
  StagePatch uses very little network bandwidth and dose not use multicast/broadcast as such should play nicely sharing a network with other show control data (eg LA-network manager, Wireless Workbench, desk control apps) providing there are no IP address clashes. This enables front of house and monitor engineers in particular to make use of devices they already have on the show.

- Mixed use (AOIP):
  As *StagePatch* network data is low volume and should be readily identified by network QoS as low priority it is theoretically possible to run it on spare capacity in an Audio Over IP (eg Dante) network, where for example all the network lines of the multicore to FoH are already in use. This has not been tested by me and is as such an unsupported set up. It should only be considered by those with a high degree of understanding of AOIP, the implications of mixed use networks for things like QoS and understanding of how to configure any networking equipment to suit this.