

Timesys On-Premises Board Farm Cloud

One Tool for All Members of a Project Team = Productivity Gain + Less Resources

Within the past few years, the explosive growth of mobile and Internet of Things (IoT) devices and adoption of open source operating systems such as Linux and Android has forced application and system developers to test against a number of devices running both current and legacy versions of operating systems. This trend has resulted in the need for what is now a well-known concept — a board farm cloud.

A company that produces embedded products or solutions typically faces many challenges, including:

- The need to share a limited number of boards among various teams during the New Product Introduction (NPI) phase.
- Making the large domain of target test devices available to various project groups to ensure catching anomalies early.
- The wish list for the number of boards needed by various groups (from Engineering to Customer Support and Manufacturing, and from Sales and Marketing to sales partners) adds up to be a number and expense that adds to the payback period.
- The need to have access to boards for demos and customer evaluation
- The urgent need by Support and Repair teams for short access to boards and devices specific to customers' hardware and software version.
- Often a problem is only reproducible on a specific revision of the board. Having different versions of boards at different location becomes an inventory management challenge.

These problems become worse for distributed teams. Whether spread geographically, within the same building, or among different companies, they face the additional challenges of managing hardware logistically (shipment and tracking), which usually means low utilization of hardware resources.



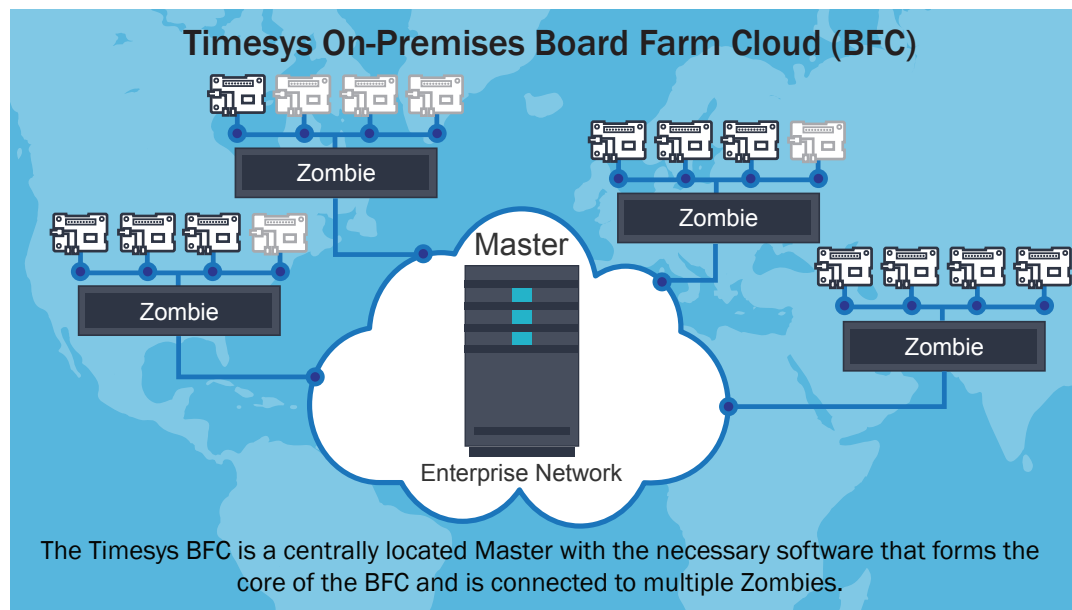
Remote Board Access with Live Streaming

Continuous Testing Infrastructure

Centralized Board Inventory Management

Easy to Set Up Demos

Efficient Use of Hardware Boards by Sustaining and Support Team



A Universal Tool

The Timesys On-Premises BFC enables all members of the project team (software developers, QA, sustaining engineering, support, and sales) to efficiently share boards — no matter where the team members are located globally. It provides value throughout the entire product life cycle by enabling embedded hardware and software engineering teams to reduce time-to-market (TTM), lower project budget, and improve product quality.

Benefits of the Timesys On-Premises BFC include:

- **Shortened Product Development Schedule** — Reduce TTM by sharing early working prototypes with software and test teams.
- **Resource Leveraging** — The Timesys On-Premises BFC, when combined with Continuous Integration (CI), becomes a great continuous testing and smoke testing infrastructure for automated test lab, including stress and load tests.
- **Cost Efficiency** — Reduce the number of boards that must be built at every re-spin which directly saves money in the project budget.
- **Reduction in Wastage** — Allowing access to boards from any location via the network reduces the wastage of time and money spent in shipping boards to every team location.
- **Productivity Gains** — Sharing of boards remotely provides a large, readily available infrastructure of devices with various hardware and software combinations, minimizing the time required for reconfiguring equipment and enabling the testing of various hardware/software combinations at the same time, rather than serially.
- **Easier Inventory Management** — Manage multiple boards, OS versions, and generations from a centralized dashboard, simplifying inventory management and providing timely access of boards to sales, R&D, Sustaining and Support engineering.

The Timesys On-Premises BFC is architected with Rest APIs, so any Test Automation framework can be plugged in easily.

Zombie



Allows remote access to up to four boards, giving users full control of the boards as if it is physically located next to the engineer.

Specifications

- 3.25" x 17" x 9.25" (with a 19" wide faceplate for rack mounting)
- 5V 4A power supply
- 4 Device/board USB serial ports
- 4 IO-CX USB data ports
- 4 IO-CX I2C communications ports
- 8 APP USB ports
- 7port gigabit (max throughput 480) to Zombie/app
- 2x100mb Ethernet
- Compatible with USB webcams

IO-CX



Connects each board to a Zombie. The IO-CX extends the capability for a Zombie to control each board by adding SD card mux, USB mux, hot plug, I2C, and GPIO.

Specifications

- 5" x 7" x 3.75"
- 3.3V 2.5A power supply
- Full sized SD card slot
- Micro SD ribbon cable (both can be used with a micro-to-full SD adapter to accommodate the other size)
- 6 GPIO pins
- Up to 4 hotplugs for USB or Ethernet
- I2C pass-through line

Timesys On-Premises BFC features:

- Centralized Management
 - Board-specific dashboards
 - Admin dashboards
 - User management
- Access via a Browser
 - Chrome, IE11, Firefox, Safari
- Multi-user Support (login controlled)
 - Enables multiple users to connect into the BFC simultaneously, and allows each logged-in user to control different boards
- Rest API for Test Automation
 - Example code and documentation
- Easy Customization
 - Support for different power modules: network, GPIO, custom
- Expansion Capability
 - I2C, USB buses, GPIO pins
- Built-in App/Test server
- Remote Power Cycle
- Console Access
 - Serial, network, multiple
 - Support for different languages
- Hot Plugs
 - USB, Ethernet insertion and removal events
- Boot Medias
 - SD card (multiple partitions), USB, Network Boot (tftp/nfs)
- SD Mux
 - Use special SD card MUX to eliminate manual SD card programming and insertion
- USB Mux
 - Update flash from USB storage utilizing USB mux to eliminate manual copying files to USB and insertion and insertion
- Image/File Management
 - Upload and download, single or multiple files
- Remote Monitoring
 - View board screen
- Board access to/from a defined network resource (e.g. viewer/logger server)

To learn more about the Timesys On-Premises Board Farm Cloud, email us at sales@timesys.com or call us at **1.866.392.4897** (toll-free) or **+1.412.232.3250** to schedule a complimentary, no-obligation consultation.



Headquarters / North America Office:

1905 Boulevard of the Allies,
Pittsburgh, PA 15219 UNITED STATES
1.866.392.4897
sales@timesys.com

EMEA Office:

ul. Palmowa 1A,
62-081 Chyby POLAND
+48.53.733.8080
emea@timesys.com

APAC Office:

3rd Floor, Jaag Homes, Achyutha Square,
No. 3, MTH Road, Villivakkam,
Chennai, Tamil Nadu – 600 049 INDIA
+91.0124.4299897
apac@timesys.com

Copyright © 2019 Timesys Corporation. All Rights Reserved.

Timesys and the Timesys logo are registered trademarks of Timesys Corporation. Linux is a registered trademark of Linus Torvalds in the United States and other countries. All other company and product names mentioned and marks and logos used are trademarks and/or registered trademarks of their respective owners.