AN INTRODUCTION TO PRPL MANAGED SERVICES

OPEN-SOURCE SOFTWARE AND SUPPORT FOR CONTAINERIZED APPLICATIONS ENRICH THE HOME NETWORK

The evolution of the home gateway is enhancing the connected home experience with a raft of new applications and services, enabling service providers to deliver added value to end users.

There are two fundamental factors that are driving this evolution:

- The availability of carrier-grade, open-source device software, such as prplOS and RDK-B, gives service providers cost-effective and feature-rich solutions that benefit from community-driven innovation.

- Software modularization based on industry standards enables platform-agnostic applications to be developed and deployed as containers without the need to update the device firmware. This dramatically reduces the time, effort, and cost associated with delivering new features and managing common software across multiple device platforms. Software application containers are supported by several open-source stacks such as prplOS and RDK-B.

The availability of carrier-grade, open-source software has given service providers the freedom to choose to manage the device software stack themselves, providing more control over the software lifecycle and the consumer experience, and making multi-sourcing hardware easier.

But what does this "freedom" really mean in practice?

WHAT DOES THIS MEAN FOR SERVICE PROVIDERS?

There is little doubt that open-source software has its advantages over proprietary solutions. However, while open-source projects may claim to be "carrier-grade," there is a significant difference between "carrier-grade" and being ready for a service provider to deploy. A standardized, low-level API has simplified porting of open-source stacks to a service provider's target device. A standardized, high-level API facilitates platform-agnostic application development. Life Cycle Management (LCM) accelerates the deployment of application updates. With these significant steps forward, service providers may find the option to manage device software in-house an attractive one but must carefully consider whether they have the capability to do so.

Questions to consider include:

- Does our in-house development team have the appropriate skills and expertise?

- Are we able to scale our in-house development team to satisfy a fluctuating workload?

- Do we want to invest in our own development and test infrastructure?

- Do we want to manage the integration of frequent software updates from multiple sources, which often requires significant development expertise to resolve conflicts?

- Do we want to manage hardware vendors, open-source software providers, and third-party System on a Chip (SoC) providers, as opposed to working with a single company delivering an integrated solution?

The answers to the above questions are likely to vary from service provider to service provider. Some will be content to leave it all to the device vendor to deliver working integrated solutions. Some may have the resources to manage the software fully in-house. Many service providers may relish the opportunity to take control of the device software by moving to an open-source solution but may not have the capability or desire to manage the software fully in-house. These service providers may look for a software partner to provide support while the service provider maintains full control of the device software.

PRPL MANAGED SOFTWARE SERVICES FROM VANTIVA

Whichever route the service provider chooses, Vantiva can help. Vantiva has created three service models to satisfy the diverse needs of service providers that have decided to use prpl device software:

Core

The Core service adds the service provider's prplOS device (which may be a Vantiva device or a device from another vendor) to Vantiva's prpl Managed Service Continuous Integration System. This system will automatically integrate updates from prplOS and other open-source and third-party repositories and execute automated testing including prpl Certification test cases to validate that there are no regressions. Vantiva's expert development team will be available to address any issues as they arise. A major benefit of this service is that Vantiva will serve all artifacts, such as source code repositories, firmware images, documentation, and issue tracking systems in a secure, shared cloud workspace, providing customers with real-time visibility and effortless collaboration while maintaining the freedom to choose how to manage device software.
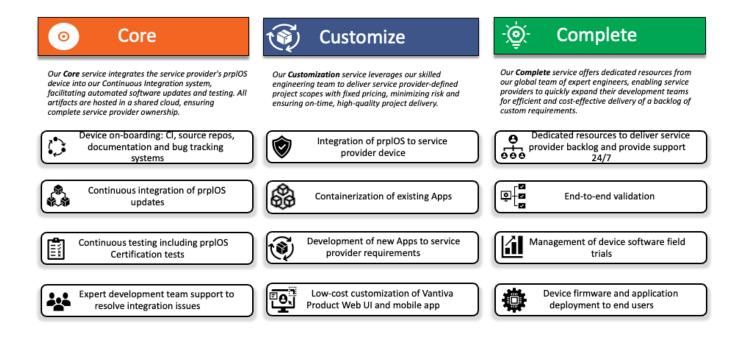
Customize

The Customize service utilizes Vantiva's expert engineering team to deliver service provider-defined projects at a fixed price, while minimizing risk, and ensuring project delivery is on time and on quality. Service providers can use this service to supplement an in-house development team to cover skill gaps or resource shortages due to short-term project workloads. Projects will vary depending on service provider needs but may relate to the integration of prplOS to a target device, containerization of existing applications, or the development of new applications.

Complete

The Complete managed service partners the service provider with Vantiva's global expert engineering team, offering dedicated resources that enable service providers to quickly scale their in-house development team or completely outsource the development work, ensuring efficient and cost-effective delivery of customized solutions to meet service provider requirements.

Core

Our **Core** service integrates the service provider's prplOS device into our Continuous Integration system, facilitating automated software updates and testing. All artifacts are hosted in a shared cloud, ensuring complete service provider ownership.

- Device on-boarding: CI, source repos, documentation and bug tracking systems
- Continuous integration of prplOS updates
- Continuous testing including prplOS Certification tests
- Expert development team support to resolve integration issues

Customize

Our **Customization** service leverages our skilled engineering team to deliver service provider-defined project scopes with fixed pricing, minimizing risk and ensuring on-time, high-quality project delivery.

- Integration of prplOS to service provider device
- Containerization of existing Apps
- Development of new Apps to service provider requirements
- Low-cost customization of Vantiva Product Web UI and mobile app

Complete

Our **Complete** service offers dedicated resources from our global team of expert engineers, enabling service providers to quickly expand their development teams for efficient and cost-effective delivery of a backlog of custom requirements.

- Dedicated resources to deliver service provider backlog and provide support 24/7
- End-to-end validation
- Management of device software field trials
- Device firmware and application deployment to end users

The above services offer flexibility and can be tailored to unique service provider needs. Some service providers may wish to have Vantiva manage the device software end to end, while others may wish to use Vantiva services to complement their own in-house development team or that of another software vendor.

WHY VANTIVA ?

Vantiva has vast experience in successfully delivering integrated solutions to service provider customers using various proprietary and open-source software stacks such as OpenWrt, prpl, and RDK-B.

Vantiva is a major contributor to the development of prpl. Vantiva currently has two seats on the prpl Foundation board of directors, is engaged in working groups, and has contributed to the code base, most recently contributing the User Services Platform (USP) Services Architecture feature that, together with prplLCM, are the cornerstones of software modularization.

Vantiva's prpl Managed Software Services enables service providers to have control over their gateway software stacks and the consumer experience, while managing resource demands, ensuring time to market, and reducing risk, in a cost-effective package.

Whatever challenges service providers encounter with their home gateway software, Vantiva is ready to help!

To learn more, please contact your Vantiva account manager.

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