



## MontaVista Professional Services



**MontaVista Professional Services bridges the gap between general purpose technology and your specific use case and architecture**

From initial definition to long-term support, we make sure you succeed!



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## Introduction

MontaVista Technology is deployed globally and in over 100 million devices in the marketplace ranging from cell phones to automobiles to medical devices. Our domain expertise spans the gamut from consumer devices (high change, fast development, short life devices) to the automotive industry (large projects involving 100s of people over many years) to network infrastructure (high performance and high availability of long device life and support capabilities).

MontaVista has been the innovator in the Embedded Linux market and now offers that knowledge and experience via our Professional Services organization. We can help in several different aspects of Linux development; kernel and design engineering, development of high availability systems, porting and migration services, creating build systems that integrate standardized packages, development of unique test and validation services for your project and a host of customized services. MontaVista understands the challenges you are facing and the pressures to deliver on time, on budget and with the highest level of reliability and quality. MontaVista can assist at every level of development, deployment, and on-going maintenance and support of your final product.

MontaVista's Professional Services can work embedded within your team as an integrated group member, manage a specific task, or take responsibility for the delivery of a finished component or total solution to make sure you succeed!

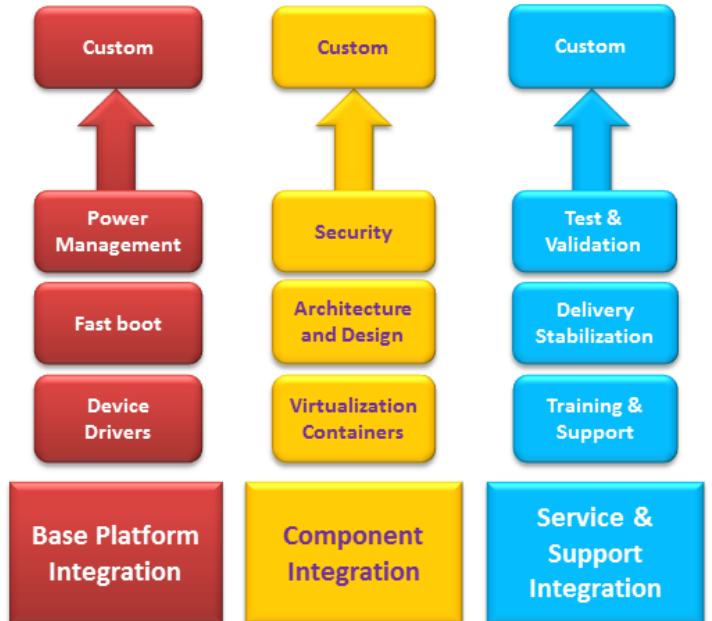
## Highlights

- Deep Linux Technical Expertise - in-depth knowledge of Linux kernel
- Architecture and design services

- Vertical Market Expertise - implementing solutions across the application development life cycle utilizing agile methodologies

- Start of Production, SOP / Commercial QA Processes

- Large Scale Project Management - requirements analysis, design workshops, project planning, development, and rollout



- Experience on all major embedded hardware platforms (x86, ARM, MIPS, & PowerPC) and Platform Development capabilities
- Component Integration - hardware and software
- Expertise with Legal, Intellectual Property, & Software Licensing
- Long Term Production Level Support - able to develop and sustain core platforms and applications for 10+ years
- Custom Board Support Packages (BSPs)

# Lifecycle Stages of a MontaVista Professional Services

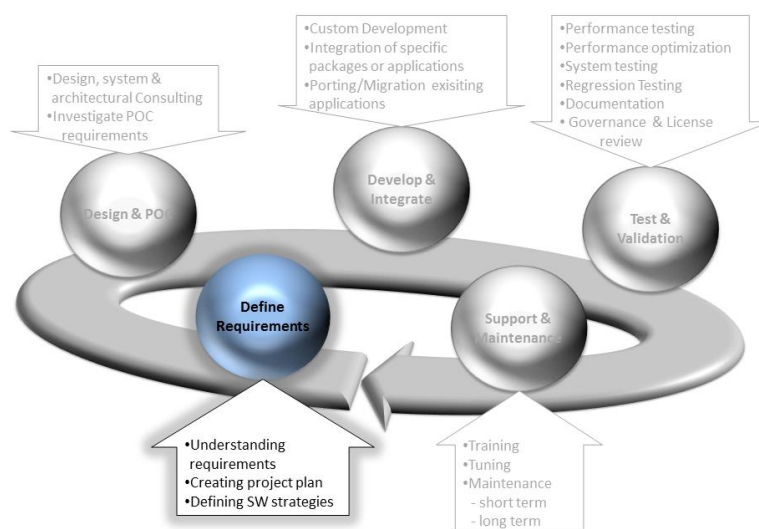
## Stage #1 – Defining Requirements

Regardless of which part of the embedded market you are addressing, MontaVista has most likely been involved with a project similar to yours. Having experience with thousands of companies and projects and 100+ million devices, we have the core knowledge that can help get you started.

This practical experience also feeds our knowledge in creating accurate and comprehensive project plans. We have handled short, very specific plans to execute simple projects, as well as large, complex projects that last several years.

Overlaying these skills is our Open-Source Software (OSS) experience that informs our ability to help you define a software strategy, setting up options around licensing and governance of the content of your solution.

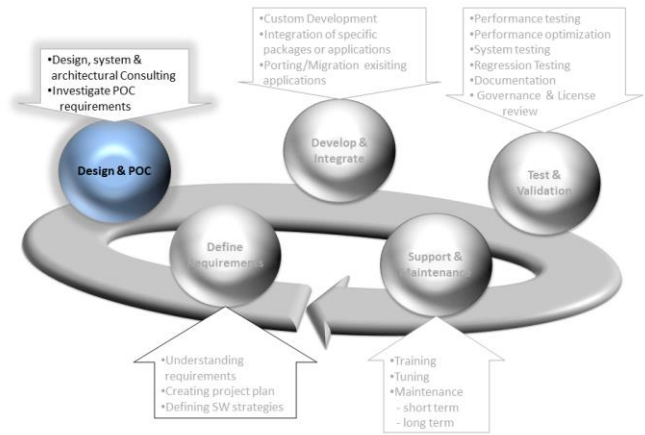
These skills (understanding, project planning, and setting strategies) are applicable to any of the stages that follow. Before we start any aspect of an engagement, MontaVista’s best business practices starts with creating a professional set of requirements.



## Stage #2 – Design & Proof of Concept

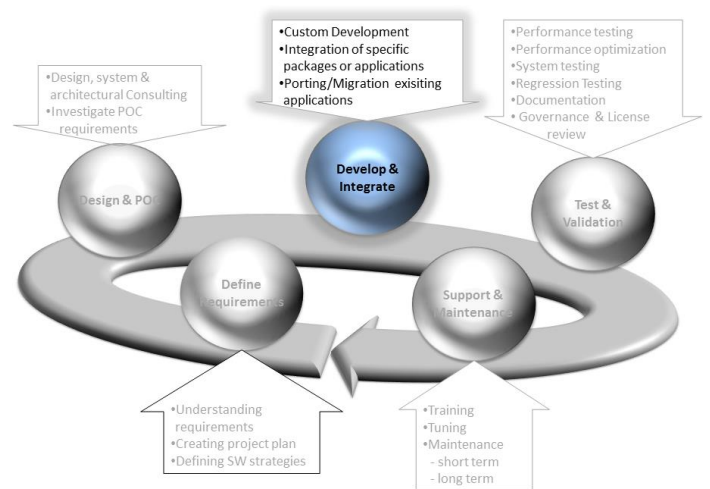
With the requirements set, the real design work starts. To help you get the design right, system and architectural consulting is available. For instance, we have helped create specific services around Virtualization in the Network Infrastructure market or integration of components with our Carrier Grade Linux offerings, MV CGE7 & CGX. These and many other areas are all available to compliment the general design services.

Many projects require the building of a Proof-of-Concept (POC), to ensure that the application performs as expected, or to show management the concept deserves funding, or to enable your company to win a project from one of your customers. MontaVista has written many successful Statement of Works (SOWs) to help build such systems.



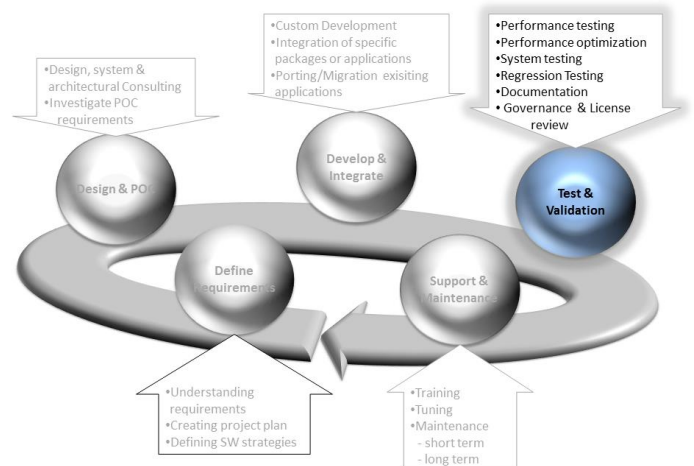
### Stage #3 – Develop & Integrate

The delivery of binaries have rapidly become a thing of the past in the OSS market and, as almost every embedded project is unique, much of MontaVista’s involvement at this stage of a project is helping customers build their recipes and integrate the components they need for their solution. MontaVista literally has millions of build recipes for different products and Board Support Packages (BSPs) and helps customers manage and maintain their custom builds.



### Stage #4 – Test & Validation

Test and Validation spans a series of potential requirements from performance testing and optimization to Governance and License reviews. Validation of the performance and optimization are critical to achieving Service Level Agreements (SLAs). The depth



and breadth of MontaVista’s knowledge, from Kernel to complete solutions, ensures we exploit all the capabilities of the system. MontaVista has invested hundreds of man years to develop thorough and high quality automated and manual tests.

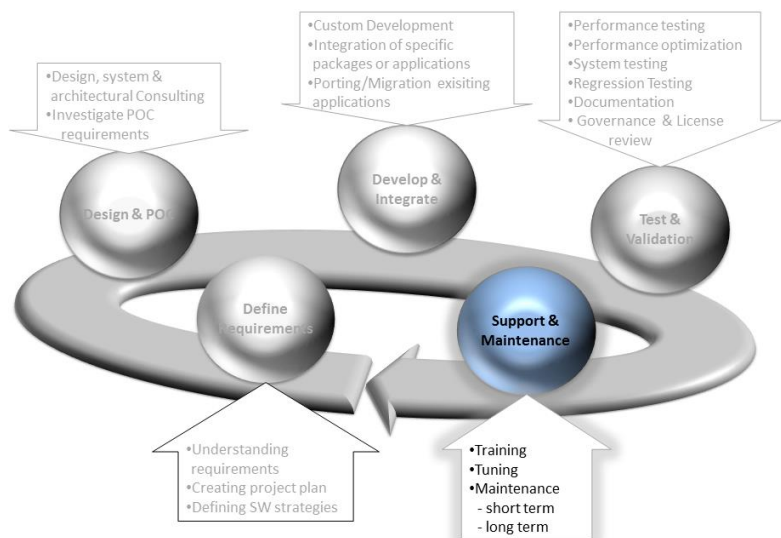
The harder part is the ongoing systems and regression testing to ensure that we help keep the performance and system integrity at the target level, regardless of the changes you make. Our OSS expertize allow us to continuously pull in new test procedures and build commercial strength test plans and procedures for you.

## Stage #5 – Support & Maintenance

MontaVista supports and maintains our customers solutions via three groups; training, PS for ongoing tuning, and support. Each group can be engaged for either short or long term contracts and you can opt for standard, enhanced, or in-house services.

Training can be taken live or on-line, with available options of standard modules or custom classes.

Within any project, short or long term support can be applied. The level of support and SLAs can also be customized, for instance, having short SLAs at the start of a project when developers are very active, and adjusting to meet your ongoing requirements once your solution has reached a relatively stable state



## Markets

With over 15+ years of commercial Linux experience in helping our customer develop embedded device, MontaVista offers an unmatched mixture of skill and experience to ensure success. Among the markets served we are helping transformation to the next generation use cases across military and aerospace, Telecom and networking, Internet of Things (IoT) and General Embedded markets.







## Sample Engagements

MontaVista offers professional Linux services around –

1. MontaVista certified Board Support Package (BSP) creation –

Under this, MontaVista undertakes enabling new platforms with appropriate BSPs to MontaVista products namely, Carrier Grade Edition and Carrier Grade Express through partner or direct customer engagements. These new BSPs (also called as Async BSPs) are then integrated to core MontaVista product for future maintenance.

Find more on BSP supported, <http://mvista.com/product-board-support.html>

2. Custom Board Bring-up and MontaVista BSP enablement

Enabling customized hardware platform with standard MontaVista BSPs (including custom Kernel, Driver, User-land changes) and the ability to receive on-going/long-term support.

3. Reference/Custom Board Maintenance Program

Our proven Linux Maintenance process that involves continuous build, QA regression/validation of our products with fixes/updates/upgrades across all supported hardware including critical security fixes (including those that require expensive back-ports).

4. Linux Kernel, Drivers and User-land expertize through Shared/Dedicated engineering services

These are flexible Linux services engagement with both time shared (SES) and dedicated engineering services for customer (both on-site and off-shore options possible).

5. Specialized technology services including product enhancements, POCs/Dedicated EVALS, New Product Creation

As technology leader, we often engage with our leading customers for such evangelic exercise into the lesser known, especially around, Carrier Grade Linux, Virtualization, Security, Data-path optimization.



E.g. Carrier Grade Hypervisor (CGL & RT optimized KVM), Carrier Grade NFV (CGL & OpenNFV), Proxy Services and others.

6. Performance Optimization / Special purpose solution

Real-time, Boot-up times, Power Management and others

7. System Validation and QA services



## Advantage MontaVista Professional Services

MontaVista is the only proven Linux partner that offers our customers ensured success in their projects and an unmatched Long Term Maintenance (LTM) capability. Offering highest flexibility of both time and scope, customers can leverage MontaVista expertise through the development and deployment process.

Our services value proposition consists of –

1. In-depth Linux expertise,
2. Standard up-front pricing options,
3. Clear and predictable engagement process,
4. Flexibility and Scalability, with
5. Our global presence
6. Always On-Time, On Budget

### Embedded Linux Expertise

- Since 1999, MontaVista has been a leader in embedded Linux commercialization, helping our customer successfully deploy 100s of millions devices till date and counting. Our areas of Linux expertise include:
- Processors — ARM, MIPS, Power Architecture, x86, SH and more with leading platforms from Cavium, Marvell, AMD, Xilinx, Freescale/NXP, Altera/Intel, and others.
- Operating Systems — MontaVista Carrier Grade Linux (CGE & CGX), other GPP Linux, and others
- Languages — C, C++, Python and other scripting
- Technologies — Wired/Wireless, Networking/ Telecom, Virtualization, Security, IoT, Graphics, and more

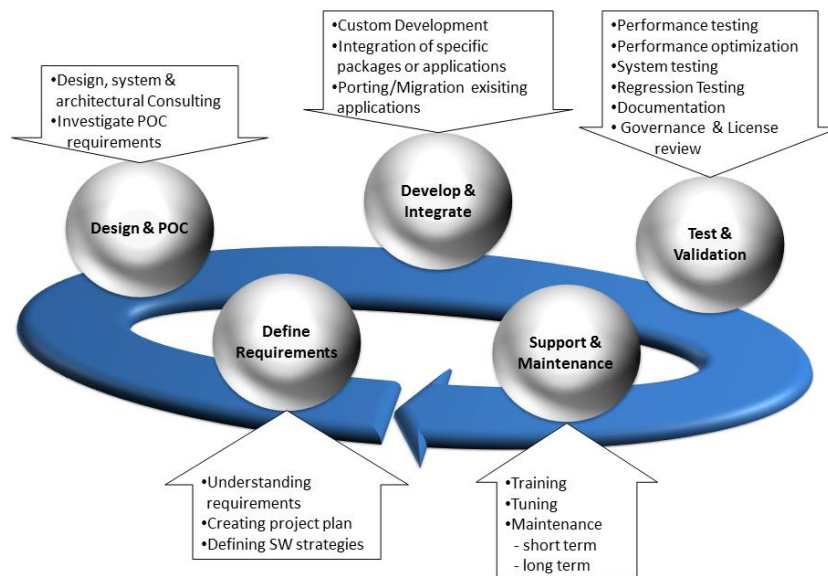


- Standard product professional service to full design services i.e. from platform services (i.e. Kernel, driver, board bring-up to best customize Linux on a selected hardware) to full application services (around virtualization, IoT, NFV/SDN, and others)
- Industries — Networking/Telecom (including Virtualization, NFV/SDN and other use cases), IoT Gateway solutions, Military and Aerospace (Highly available and secure systems), General Embedded (including consumer electronics, medical, automotive, industrial control/process automation) and many more

## Summary

Building over 100 Million devices in a global marketplace that covers everything from NFV/SDN Infrastructure to IoT/M2M to Automobiles to medical devices and office printers makes our Professional Services domain expertise second to none. MontaVista has the skills and processes required to build solutions for high change, fast development, short life devices to large projects involving 100s of people over many years that deliver high performance and high availability.

The innovation brought to the Embedded Linux market has developed and grown the knowledge and experience that is now delivered via our Professional Services organization; kernel and design engineering, development of high availability systems, porting and migration services, creating build systems that integrate standardized packages, development of unique test & validation services for your project and a host of customized services. MontaVista understands the challenges you are facing and the pressures to deliver on time, on budget and with the highest level of reliability and quality.



MontaVista can assist at every level of development, deployment and on-going maintenance and support of your final product



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