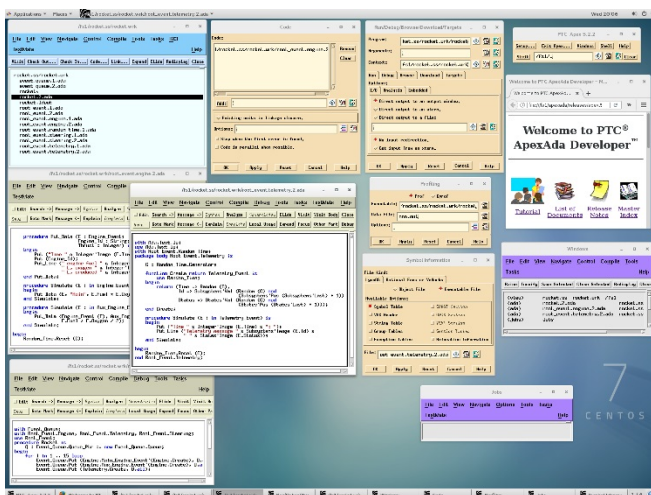ptc

PTC ApexAda®

PTC ApexAda provides a single, scalable host development environment that integrates design, implementation, testing, configuration management, and process management for native or cross development projects.

More than just a set of loosely integrated development tools, PTC ApexAda Developer products are designed specifically for large-scale team development of long lifecycle applications. Such applications can survive only when they are developed using sound software engineering best practices, and PTC ApexAda Developer is built on the fundamental principles that govern large-scale modern software engineering.

The software also provides architectural control features that are essential for developing and managing large-scale applications. These applications are already difficult to design, but when they are improperly architected they are even more difficult to maintain. PTC ApexAda Developer helps protect the architectural integrity of application design throughout the software development lifecycle.
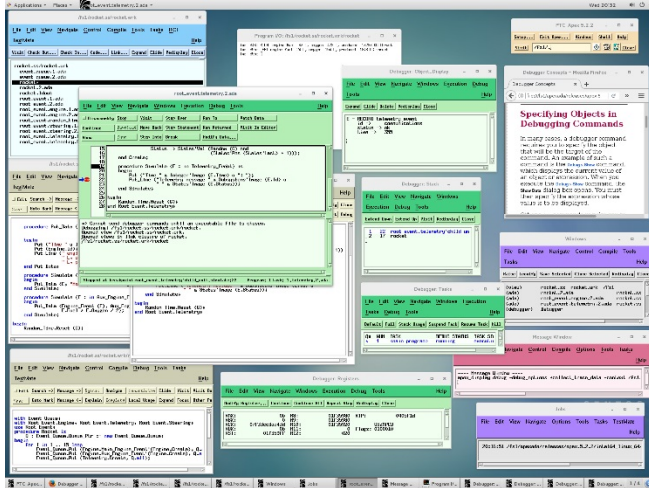

Large applications typically have special needs for configuration management. Managing change

becomes extremely complex with the addition of more development staff. PTC ApexAda Developer includes technology for controlling versions and configurations in such an environment, leveraging architectural subsystems that reside above the programming language constructs.

Key Benefits

- Leverages best practices for large-scale application development

- Supports a controlled iterative development so that smaller increments of change can be edited, built, tested and deployed
    - Reduces risk and improves time-to-market

- Delivers encapsulation restricting access and manipulation to only meaningful operations
    - Simplifies communication about real-world constructs and improves the reliability of accessing and changing data

- Includes facilities for creating software architectures (subsystems) larger than that provided by the programming language itself
    - Fosters large-scale software reuse and creates software that is adaptable in response to changing operational conditions.

- Provides testing tools directly within the development environment to facilitate frequent developer-led testing
    - Allows bugs to be found sooner and corrected more cost-efficiently

- Manages parallel development simply and without high overhead due to configuration management commands and facilities being built into the development environment
    - CM is more transparent to developers and less intrusive to work activities

- Supports embedded cross-compilation as well as native compilation
    - Seamlessly extends the host-based development tools to allow software to work directly on the target execution platform

- Results in less redundancy in development tools, higher productivity, and less rework from modification

Capabilities and specifications

- Architectural control for developing and managing large-scale applications

- Version control and configuration management

- Automated tooling that goes beyond compilers and debuggers and supports all lifecycle of development needs, from conception to testing

- PTC ApexAda Developer Enterprise Edition contains:
  - PTC ApexAda (IDE for host-based Ada05, Ada95 and mixed Ada/C/C++ development)
  - Integrated coding and debugging tools (language-based editor, program browser, incremental compiler, and comprehensive, integrated debugging facility)
  - Configuration Management and Version Control (CMVC)
  - Test Mate (test management system for native and cross development including unit, integration, system test, and coverage analysis, including modified condition/decision coverage)

- PTC ApexAda Developer Base Edition contains:
  - PTC ApexAda (IDE for host-based Ada05, Ada95 and mixed Ada/C/C++ development)
  - Configuration Management and Version Control (CMVC)

- PTC ApexAda Embedded Developer Enterprise Edition further extends the PTC ApexAda Developer Enterprise Edition tool chain with Instruction Set Simulation (ISSIM), Ethernet Support (ENet), and Patching Linker. *(Features vary depending on the target architecture and RTOS.)*

Platforms and system requirements

- PTC ApexAda Developer Enterprise Edition runs on the following host platforms:
  - Solaris®/SPARC
  - Solaris/x86
  - Linux®/x86, Linux/x86_64

- PTC ApexAda Embedded Developer Enterprise Edition runs on the following host platforms:
  - Solaris/SPARC
  - Linux/x86, Linux/x86_64

- PTC ApexAda Embedded Developer Enterprise Edition targets PowerPC processors with the following real-time operating systems:
  - PTC ApexAda Exec
  - Wind River® VxWorks®
  - Lynx Software Technologies LynxOS®

- PTC ApexAda Embedded Developer Enterprise Edition targets x86 and x86_64 with the following real-time operating systems:
  - PTC ApexAda Exec
  - Wind River® VxWorks®

- PTC ApexAda Embedded Developer Enterprise Edition targets MIPS processors with the following real-time operating systems:
  - PTC ApexAda Exec

- PTC ApexAda Embedded Developer Enterprise Edition targets Armv8 64-bit (aarch64) with the following operating systems:
  - Linux
  - Wind River® VxWorks®

For more information, visit: PTC.com/Developer-Tools/ApexAda