• PTC Market & Economic Strength
• Commitment to MKS Toolkit & X/Server
• New & Dedicated MKS Toolkit & X/Server Resources
• Product Roadmap
• Q&A
ABOUT PTC

Next-generation technology platforms and enterprise applications

Transforming how customers...

CREATE
CONNECT
ANALYZE
OPERATE
SERVICE

...smart and connected products, operations and systems
$1.26B
FY 2015 TOTAL REVENUE

REVENUE BY VERTICAL
- Industrial Products: 31%
- Electronics & High Tech: 18%
- Federal, Aerospace & Defense: 16%
- Automotive: 14%
- Retail & Consumer: 7%
- Life Sciences: 5%
- Other: 9%

REVENUE BY REGION
- Americas: 42%
- Europe: 37%
- Asia Pacific: 21%

FAST FACTS
- 26,000 active customers
- 750 partners
- 6,000 employees
- 1,800 academic program universities
PTC GLOBAL SERVICES

Delivering on the Promise of PTC Solutions

Services Portfolio
- Consulting
- Learning & Adoption
- Cloud Services

Global Team
- 1,240+ Experts
- 6 Centers of Excellence
- 35 Countries
- 200 Learning Centers
- 25 Years Delivering Customer Success
- Process Expertise Across the Product and Service Lifecycle

Industry Expertise
- Aerospace & Defense
- Automotive
- Electronics & High-Tech
- Industrial
- Medical Device
- Retail & Consumer
- Telecom

FIVE KEYS TO SOLUTION SUCCESS

Business Alignment
Process Transformation
Accelerated Deployment
Enterprise Adoption
Continuous Optimization
How PTC Support drives VALUE.....

- Core support – product releases, phone and web support
- Smart, Connected Products & Support Converge
- Support that is pro-active, personalized, and social

Assisted Support
- 650+ Certified Support Engineers
- Worldwide, multi-language
- Integrated R&D
- Remote Desktop Diagnostics

eSupport
- Personalized and self-guided
- Smart search experience
- Intelligent case management
- Proactive Support alerts
- Software management tools

Smart, Connected Support
- Optimized system performance
- Improved uptime
- Issue avoidance & faster resolution
- Improved adoption and innovation
- Automated, proactive resolutions
DEDICATED RESOURCES

- Product Development
- Quality Assurance
- Application Engineers
- Technical Support
- Global Consulting Services

- Cloud Services
- Product Management
- Customer Nurturing
- Value Messaging
- Sales & Operations
Submit Questions For Q&A
- Organizational Update
- Releases & New Features
- eSupport Portal
- Product Roadmap Plan
- Upcoming Events
• 22 years of Unix/Windows Interoperability

1993-1999
- **Datafocus**
  - NuTCRACKER 1.0 Development Team
  - Architect
  - Consulting Services Manager

1999-2012
- **MKS**
  - Director R&D
  - MKS Toolkit product unification
  - Integrity “diversion”

2012 - Present
- **Integrity Toolkit**
- **Classic Products Group (CPG)**
  - MKS Toolkit, X/Server and Implementer focus only.
A BIT ABOUT OUR PHILOSOPHY

- Keep the product alive, current and stable.
- “First do no harm”
  - We understand the importance of product stability
  - Forever improving regression, manual and automation testing
- Keep pace with modern Windows and Visual Studio
  - When you are ready we will be too
- Do Unix things the Windows way
  - More than a port
- Regular releases
  - Major release once per year
    - Several new features
  - Patch release once per year
    - Bug fixes
- Hot fixes
  - Where possible for mission critical problems
New CPG Structure

Classic Products Group

- Developer Tools
  - Perc
  - ADA
  - X32 Plus
- WCS
- MOVE
- Implementer
  - MKS Toolkit
  - X/Server
- Alan Brown
  - MKS Toolkit, X/Server
  - & Implementer
- Product Development
- Dawn Blohm
  - Technical Support
PTC® Developer Tools
MKS TOOLKIT & X/SERVER PRODUCT UPDATE

- Organizational Update
- Releases & New Features
- eSupport Portal
- Product Roadmap Plan
- Upcoming Events
**RELEASERS & NEW FEATURES**

**10.0p1**  
On schedule for May, 2016  
- OpenSSL Security fixes  
- X/Server OpenGL and Performance  
- 40+ Bug fixes in progress or completed

**10.0**  
- PTC e-support Portal  
- Windows 10  
- Visual Studio 2015  
- X11 R7.5  
- OpenSSL updated  
- Bug Fixes  
- November 2015

**9.6p2**  
- Special release with 2 critical bug fixes  
- June 2015

**9.6p1**  
- Updated Zip version  
- Updated OpenSSL  
- Sqlite3 port  
- Mandoc  
- Clang 3.4 beta  
- Bug Fixes  
- February 2015

**8.7p1**  
- Visual Studio 2013  
- ABSOFT FORTRAN 13.0  
- Intel C++ 2013  
- Added OpenLDAP, realpath and dmidecode  
- Bug Fixes  
- March 2014

**9.6**  
- Visual Studio 2013  
- ABSOFT FORTRAN 13.0  
- Intel C++ 2013  
- Added OpenLDAP, realpath and dmidecode  
- Bug Fixes  
- March 2014

**8.7**  
- Visual Studio 2013  
- ABSOFT FORTRAN 13.0  
- Intel C++ 2013  
- Added OpenLDAP, realpath and dmidecode  
- Bug Fixes  
- March 2014
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• Heartbleed
  – suddenly in the news

• Hot fixes created

• Updates in the next patch

• Updates with almost every release since
  – OpenSSL code reviews
• Replaces older gcc port in the Resource Kit +
• Win32/Win64 exceptions & SEH
• “Codeview” & symbols – Visual Studio debugging
• Multi-target
  – i386, x86_64, PPC, ...
  – Cross platform compilation
• Added NuTCRACKER target to supplement Win32 targets
  – i386-pc-mks, x86_64-pc-mks – MKS Toolkit for Enterprise Developers
  – i386-pc-win32, x86_64-pc-win32 – MKS Toolkit for Developers
• NuTCRACKER and Native Win32 toolchains.
• Documentation
• TODO
  – Libc++ port – needs BSD libc update
INFRASTRUCTURE CHANGES

• Support moved to e-support portal
  – Customer impact.

• CFS retired in favour of Integrity

• Testlink retired in favour of Integrity.

• Build system and automated tests report results to Integrity

• Integrity integrated with Salesforce

• TS and sales use Salesforce

• Web site and Activation Manager being moved to Needham
  – Changes deployed securely with rsync (reskit) and tunneled ssh.
    • We still eat our own dog food.
Organizational Update

Releases & New Features

eSupport Portal

Product Roadmap Plan

Upcoming Events
E-SUPPORT PORTAL
PTC® Developer Tools
MKS TOOLKIT & X/SERVER PRODUCT UPDATE

- Organizational Update
- Releases & New Features
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Slowly Evolve Capabilities

- Update NuTCRACKER libc
  - Latest BSD sources
  - Latest POSIX additions
  - ANSI C/C++ additions
  - Work in progress in a branch

- POSIX ACLs
  - APIs
  - Utilities

- 64 bit Utilities
  - 32bit WOW can be removed

- Add useful GNU'isms
  - More Gmake'isms added to make
  - More BASH'isms added to ksh

- Line length relaxation

- Finish clang
  - Port libc++ over BSD libc

- Rebrand and update Resource Kit

- .7z
  - Added to zip/unzip?
  - Separate utilities?

- Customer Enhancement Requests
  - Keep them coming
• So far this is a Metro platform

• Have an ARM port
  – NuTCRACKER runtime
  – Utilities

• No proper console API
  – So no vi, or curses
  – Even ssh is rough

• Security APIs limited

• MKS Toolkit for Windows IoT?
  – Platform not ready
  – Not at the moment
MKS TOOLKIT & X/SERVER: PRODUCT RELEASES

- **10.0p1**
  - Updated OpenSSL
  - Pseudocolor and OpenGL fixes
  - Windows Server 2016
  - Bug fixes

- **10.1p1**
  - Bug fixes
  - Roadmap features as time permits

- **10.1**
  - New BSD C library
  - POSIX ACLs.
  - Clang formal release
  - Update Intel C++ to latest version
  - Bug fixes

- **10.2**
  - Customer input welcome
  - Roadmap features
  - ???

Timeframes:
- **May - 2016**
- **February - 2017**
- **November - 2017**
- **August - 2018**
Submit Questions For Q&A
PTC® Developer Tools
MKS TOOLKIT & X/SERVER
PRODUCT UPDATE

Maja Milutinovic
Marketing Manager

- Organizational Update
- Releases & New Features
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THEME “EVERYTHING IS CHANGING”

The world’s largest IoT event

Hosted by PTC
June 6th – 9th, 2016
Boston, MA
Q & A

Convert UNIX and Linux to Windows with PTC MKS Toolkit

http://www.ptc.com/developer-tools/mks-toolkit

1. Log a case online at: www.ptc.com/support

2. Telephone: 1-800-477-6435

3. dblohm@ptc.com