Softwareintegration im Wandel

Jannick Khobo

- Was ist Softwareintegration?
- Aktuelle Themen von Khorn
  - Entstehung?
  - Wo stehen wir?
  - Welche Ziele verfolgen wir?
  - Aktuelle Herausforderungen
- Inhalte:
  - Softwareintegration vor meiner Zeit
  - Evolution der Softwarepaketierung

Softwareintegration vor meiner Zeit

Phase	Zeitrahmen	Icon	Haupttechnologien
1. Skript-Installationen	1980–1985	Terminal	Batch-Dateien, INF-Skripte
2. Setup-Wizards	1985–1990	Wizard	InstallShield, Wise Installer
3. CD-ROM & SFX-Archive	1990–1995	CD	Self-Extracting Archives, Medienproduktion
4. MSI-Beta & SMS	1995–2000	Netzwerk	Windows Installer (Beta), SMS 3.0

Evolution of Software Packaging

2000s

Manual Packaging & MSI Dominance

- Tools & Formate: MSI, EXE InstailShield
- Process: Manual creation of packages
- Focus: Basic installation, silent Installs
- Challenges: Limited automation, dependency on scripting

2010s

Virtualization & Automation Begin

- Technologies: App-V. ThinApp, Admmstudia
- Trends: Rise of application virtualization
- Improvements: Conflict management, rollback

2020s

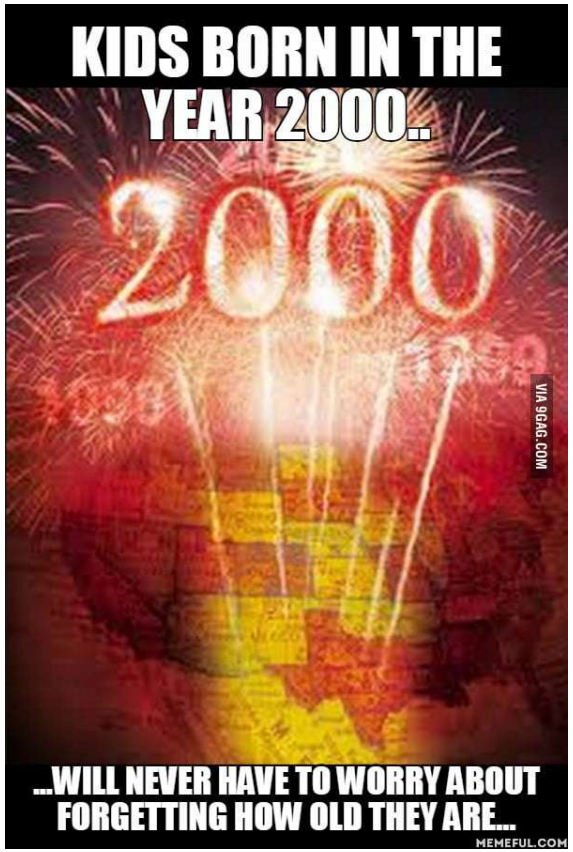
Cloud Integration & MSIX Emergence

- Modern Formats: MSIX, IntuneWin, App Attach
- Key Features: Containerization, clean uninstall
- Automation Tools: appCURE, PACE Trends: Hybrid environments Evergreen IT

Future

AI, Edge & Smart Packaging

- Ai-Driven Packaging: Compatibility checks, remediation
- Edge & loT Packaging AR/VR, smart devices
- Blockchain & Compliance: Tamper-proof delivery
- Unified Workflows: Centralized platforms



2000s

Manual Packaging & MSI Dominance

2000s: Manual Packaging & MSI Dominance

- **Tools & Formats:** MSI (Microsoft Installer), EXE, InstallShield
- **Process:** Manual creation of packages, often time-consuming and error-prone
- **Focus:** Basic installation, silent installs, and compatibility with Windows XP/7
- **Challenges:** Lack of standardization, high dependency on scripting, limited automation

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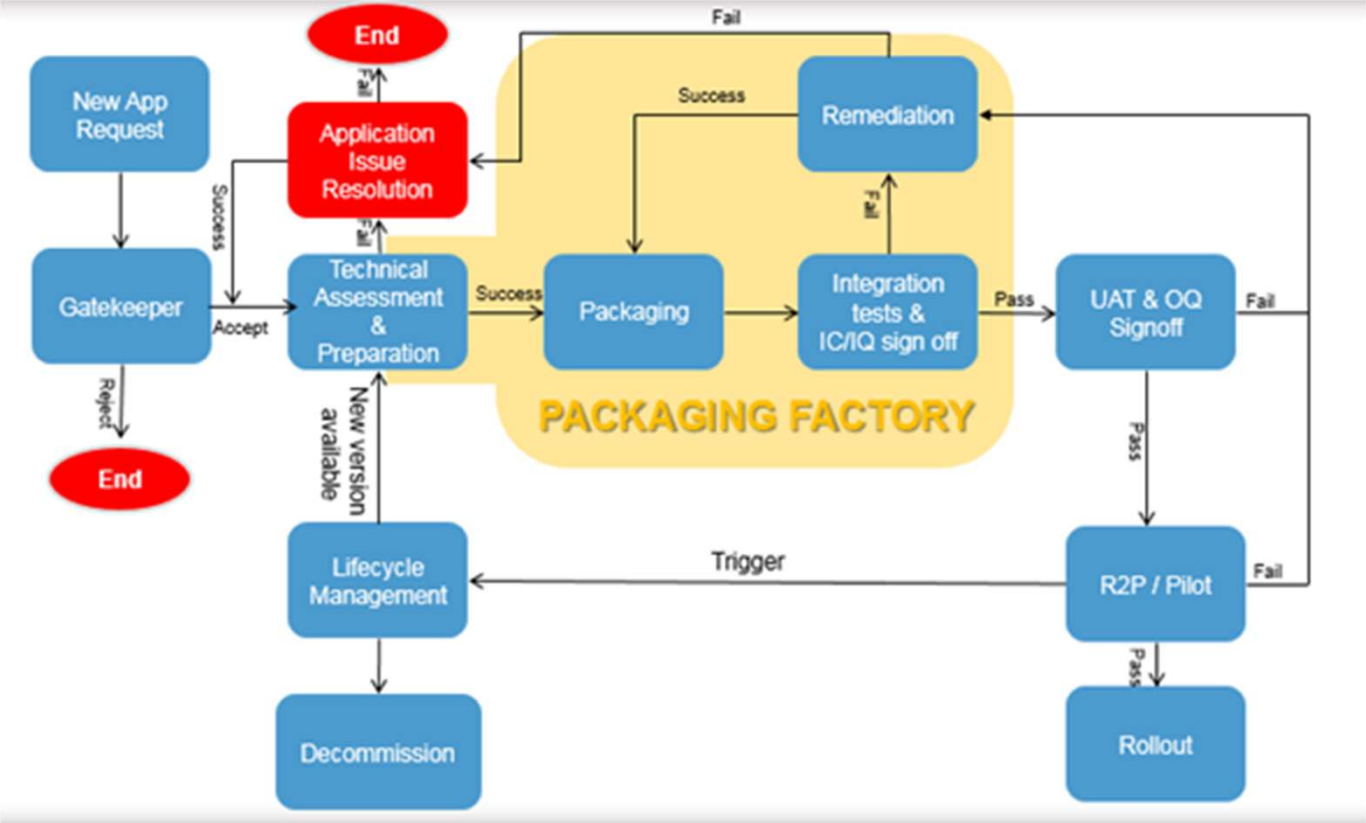
2010s: Virtualization & Automation Begin

- **Technologies:** App-V, ThinApp, AdminStudio, SCCM
- **Trends:** Rise of application virtualization and centralized deployment
- **Improvements:** Better conflict management, rollback options, and version control
- **Automation:** Introduction of PowerShell scripting and basic workflow automation
- **Packaging Lifecycle:** More structured QA and testing processes (next slide)

Strukturierte Softwareintegration



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Cloud Integration & MSIX Emergence

2020s: Cloud Integration & MSIX Emergence

- **Modern Formats:** MSIX, IntuneWin, App Attach
- **Platforms:** Microsoft Intune, Flexera AdminStudio, Citrix App Packages
- **Key Features:**
  - Differential updates
  - Clean uninstall
  - Containerization for security and isolation
- **Automation Tools:** appCURE, PACE Suite, AdminStudio Enterprise
- **Trends:**
  - End-of-life for App-V
  - Shift to hybrid and remote environments
  - Evergreen IT and continuous packaging readiness

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Comparison of Key Formats today

Comparison of Key Formats

Format	Isolation	Dependencies Bundled	Update Mechanism	Primary Platform
MSI	Low	No	Full-package deployments	Windows
EXE	Low	Varies	Custom/updater scripts	Windows
App-V/ThinApp	High	Bundled	Virtual container update	Windows
Snap	High	Bundled	Automatic delta updates	Linux
Flatpak	High	Shared runtime + bundled	Manual/CLI updates	Linux
AppImage	Low/Optional sandbox	Bundled	Manual or AppImageUpdate	Linux
MSIX	Medium	Bundled	Differential delta updates	Windows
IntuneWin/App Attach	Medium	Bundled	Sync via Intune/MECM	Windows

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AI, Edge & Smart Packaging

Future (2025 and Beyond): AI, Edge & Smart Packaging

- **AI-Driven Packaging:**
  - Automated compatibility checks
  - Predictive remediation
  - Intelligent packaging suggestions
- **Edge & IoT Packaging:**
  - Lightweight, secure packages for AR/VR, smart devices
  - Real-time deployment at the edge
- **Blockchain & Compliance:**
  - Tamper-proof package delivery
  - Transparent audit trails
- **Unified Workflows:**
  - Centralized platforms managing MSI, MSIX, IntuneWin, and legacy formats
  - Seamless integration with CI/CD pipelines

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Key Projections in packaging formats

Trend	Impact
MSIX adoption	Standard for secure, modern Windows apps
AI-powered automation	Reduces manual effort, improves QA
Cloud-native packaging	Enables scalable, remote deployments
Edge computing integration	Supports real-time, location-based delivery
Compliance & security focus	Drives blockchain and audit-ready formats

Vielen Dank für Ihre Aufmerksamkeit

- What‘s next with Khorn Solutions?
  - Streamlined Service Portfolio
  - New & updated training courses
  - Integrated solutions
  - Shop – Selected & prequalified Solutions
  - Integration of certified professionals
  - Serviceportfolio