NTT DATA Application Modernization Services
Mainframe Application Re-hosting on Azure
We get it right the first time!

July, 2018
NTT DATA Services
More than your traditional IT services provider

• NTT Group operates 240+ data centers worldwide
• Process 100 million healthcare claims annually
• Serve 25 of the leading financial institutions in North America
• Apply 45+ years of applications experience
• Serve the top 10 automotive companies worldwide
• Support 3.9+ million end users and 11+ million service desk contacts annually
• Manage 300+ million security identities
• Serve more than 50 federal agencies and military branches

1Source: “Brand Finance Global 500 (2017)"
2Source: “The 2017 Best Firms to Work For,” Consulting Magazine, Sep 12, 2017
Application Portfolios Need to Evolve

Great CX is mandatory

“...by 2020, customer experience will overtake everything, including price and product quality as the top brand differentiator.”

CIO.com, Nov. 2017

Enabling innovation through technology

1. Lower IT/business costs
2. Improve IT sustainability
3. Improve customer service
4. Introduce new IT-led products and services
5. Make business processes more efficient

What are the primary ways your org. plans to innovate in 2017? InteropITX Research Report, Mar. 2017

80% of IT and business leaders say outdated technologies are an existing or emerging barrier to achieving expected results from digital technology initiatives.

2017 Global Digital IQ® Survey, PWC

CIOs are under constant pressure to maintain an application portfolio that enables digital initiatives, drives analytics and insights, and operates at an optimized level.
NTT DATA: An experienced successful modernization practice

We have more than 900 mainframe re-hosting sites and more than 27 years of production experience worldwide.

We have re-architected millions lines of code across a range of industries.

We have analyzed and documented millions of lines of code in hundreds of applications.
Application Re-hosting
NTT DATA Application Re-Hosting Services

Migrate legacy mainframe applications onto cost-effective, standard platforms while protecting valuable business logic and data investments

**Principles**

- Preserve existing business logic and application investments while reducing costs
- Minimize disruption; reuse existing application development skills & end-user interfaces
- Use products and services intended to minimize changes in the application on the new Linux / UNIX platform
- Address the complete environment, including third-party tools, to reduce risk and enable success
- Leverage and integrate with new applications

**Results**

- Significant cost savings potential
  - Many customers cut costs 30-70% (HW, SW, mainframe specific support)
  - Fund future innovation by lowering operating costs
- Re-hosted applications run natively on updated target platform
  - Cloud, physical or virtualized servers
- Evolutionary step forward
  - Destination or part of larger journey
NTT DATA Re-hosting Product Suite: UniKix

**Development Tools**
- **IDE**
- **File Editor**
- **Map Editor**

**Runtime Components**
- **TPE**
- **BPE**
- **TSF**
- **COBOL**

**Management Tools**
- **TPE Manager**
- **BPE Manager**
- **TSF Admin**

**Key Features**
- **NTT TPE Manager** allows for the administration and monitoring of multiple TPE regions through a centralized graphical console.
- **NTT BPE Manager** allows for the administration and monitoring of multiple batch subsystems in on-premise servers or the Cloud.
- **NTT TSF Admin** provides administration of the security environment (password reset, account unlocks, user maintenance).
- **NTT TPE** provides an execution environment for CICS and IMS online applications using BMS, MFS, VSAM, IMS-DB, SQL, MQ, and other interfaces.
- **NTT BPE** provides an execution environment for JCL using steps that run programs, utilities (SORT, FTP, EMAIL, COPY), interfacing with job schedulers.
- **NTT TSF** implements the security provided by RACF for CICS, using LDAP or RDBMS as the repository.
- **NTT COBOL** provides a compiler and runtime environment for COBOL applications.

**Additional Tools**
- **NTT DATA Re-Hosting IDE for Visual Studio and Eclipse** allows development of COBOL/CICS/SQL/JCL applications, including those deployed on the Cloud.
- **NTT File Editor** is used to do direct maintenance of VSAM and sequential files.
- **NTT Map Editor** is used for maintenance of existing BMS or MFS screens and for development of new BMS maps for CICS or MFS maps for IMS.
NTT DATA Re-hosting Approach

Proven project methodology & risk mitigation process: NTT DATA follows a proven migration methodology consisting of many flexible service offerings that are tailored to meet the business objectives and technical needs of an organization. The image below shows many of the services that NTT DATA can offer, including many that will be proposed for the mainframe re-hosting project.
NTT DATA Application Modernization Services

Unique and patented NTT DATA IP
• Broad range of market-tested tools and software

End-to-end solutions
• Software and services
• Flexible engagement model
• Integrated with NTT DATA Services IT outsourcing, maintenance, testing and development teams

25+ years of experience
• Proven track record of success
• Established methodologies
• Trusted partner network
• Single point of accountability
• Domain and package expertise
• Global and local resources
NTT DATA Services Expertise

1,200 Cloud Architects, Practitioners & Engineers

400+ Combined years of Microsoft Azure experience

Microsoft Cloud Solution Provider (CSP) Partner

4300+ technical team members supporting the Microsoft stack

Microsoft Gold Partner

30+ NTT DATA Cloud Advisory engagements in the last 24 months

60+ Dedicated Product development experts building modernization and automation solutions.

Leader Cloud Infrastructure Migration Services

Leader Cloud Professional Services

Compliance & Certifications

Strong Performer Hosted Private Cloud Services

The Forrester Wave™ North America, 2017

2K+ Public Cloud instances supported

Leader

500+ Cloud Customers managed

60+

Microsoft

NelsonHall NEAT evaluation, 2017

IDC MarketScape: Worldwide Cloud Professional Services 2016 Vendor Assessment

SAS Type II

PCI DSS

HIPAA

TUV Sud

ITIL

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