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# ADP - Customer Experience with Oracle on System z

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**HR. Payroll. Benefits.**

## Thanks

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  - **Steve Conger** :VP - Mainframe Systems Dev.
  - **Joe Comitini** :Principal Architect - Infrastructure

## ADP – Company Background

- \$11 Billion in annual revenue
- 52,000 Employees worldwide
- ADP pays 1 in 6 U.S. workers
- ADP pays 1 in 4 Canadian workers
- Processed nearly 53 million W-2's in 2014
- We moved \$1.5 trillion dollars electronically for our U.S. clients last year
- Approximately 5 million people access ADP systems every day
- Over 300,000 SaaS clients (18 million users) leveraging ADP's solutions for recruiting, talent management, time and attendance, HR, benefits, retirement services, and payroll
- Provide one or more services to 80% of the Fortune 500 and 90% of the Fortune 100 companies
- ADP serves over 600,000 clients across 100 countries
- Largest provider of HR services in North America, Europe, Latin America and the Pacific Rim

## Mainframe Environments

- Four data centers in North America
- 22 CEC's
  - Mix of z13's, z/EC-12's, z/196's and z/BC-12
- 42 z/OS LPAR's
  - Consolidated into three data centers
  - Payroll processing, retirement services, tax services & more
  - 52,000+ Programs – almost 60 million lines of code (mostly COBOL)
  - 4 million batch jobs processed each month
  - Over 400 CICS regions supporting around 20 million transactions/day
- Over 1,500 TB of CKD DASD for z/OS and z/VM

## Mainframe Environments – z/VM / LINUX Details (June 2013)

### Where we are today...**June 2013**

- Over 400 IFL's
- > 300,000 MIPS installed and growing...
- 28 z/VM LPAR's and growing...
- More than 25 TB of Memory across 10 CEC's (Active and Pre-planned)
- 2,800 Guests and growing each week
- WAS, CSL, Oracle, Portal, Cognos, DB2 Connect, QMF, TEPS
- More than 6,800 JVM's
- Over 1,600 Oracle Databases
- 900+ TB of SAN attached disk
- Another 800+ TB of CKD disk
- Over 5,300 virtual CPU's and 17 TB of virtual RAM

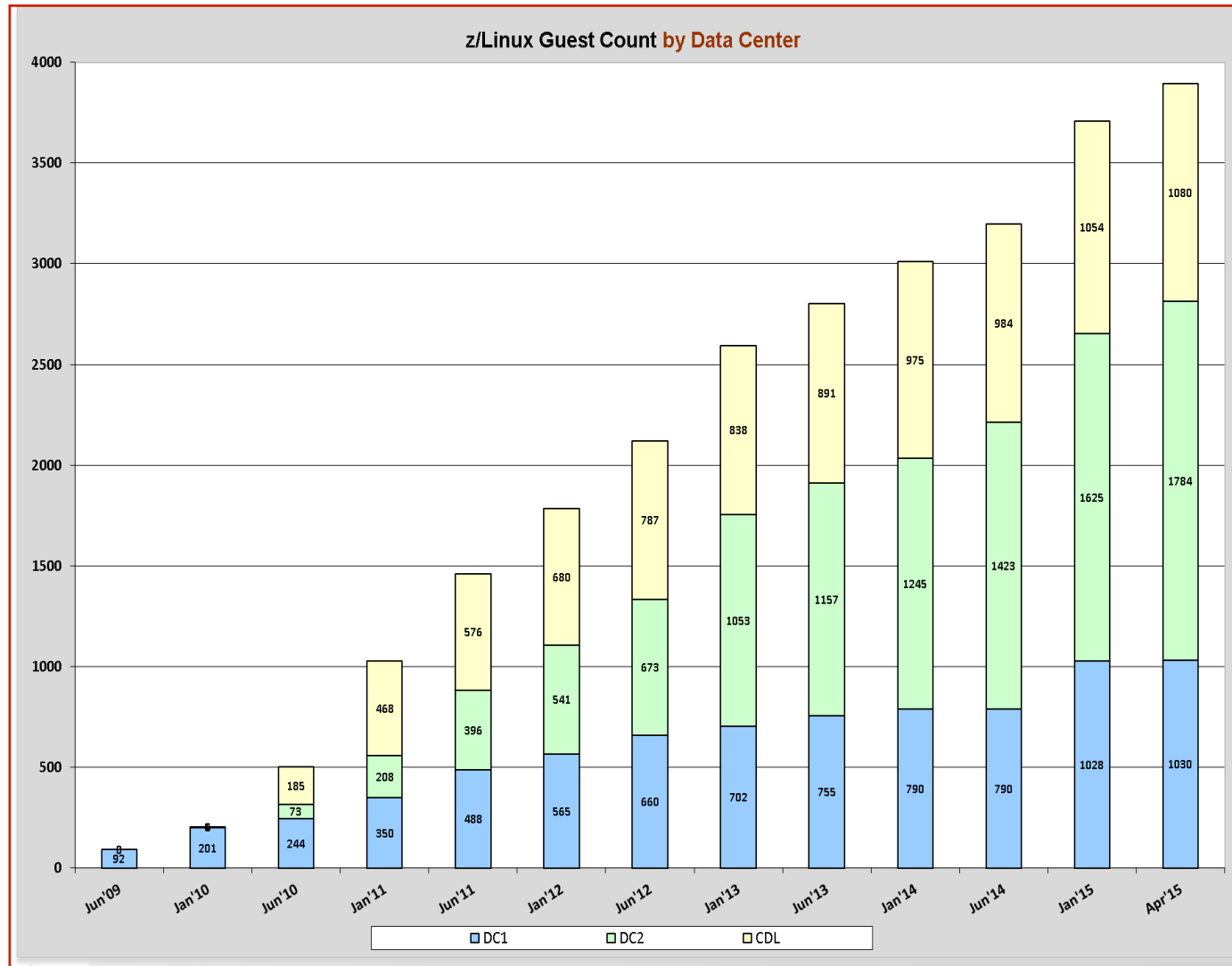
## Mainframe Environments – z/VM / LINUX Details (Today)

### Where we are today...April 2015

- Over 750 IFL's (By mid-July - Over 800)
- > 640,000 MIPS installed and growing...
- 56 z/VM LPAR's and growing...
- More than 40TB of Memory across 14 CEC's (Active and Pre-planned)
- 3,900 Active Guests and growing each week (6000+ including DR)
- WAS, Tomcat, CSL, Oracle, Portal, Cognos, DB2 Connect, QMF, TEPS
- More than 11,000 JVM's
- Over 3,500 Oracle Databases
- 1,500+ TB of SAN attached disk
- Another 1,200+ TB of CKD disk
- Over 8,500 virtual CPU's and 22 TB of virtual RAM

# Virtualization Project

## ■ This is true virtualization and not just consolidation



- ❑ Average Virtual to Real Memory over-commit is 1.5:1 (**Max – 3.0:1**)
- ❑ Average Virtual to Real CPU over-commit is 14:1 (**Max – 44:1**)
- ❑ Mixed applications sharing same resources – WAS, Oracle, CSL, Cognos, Portal, etc.
- ❑ Prod and Non-Prod LPAR's sharing resources

