



IBM System z Europe

# System z University Program for Europe

- A summary

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# System z University Program for Europe

## ■ Goals

- **assist** revitalisation of System z (“IBM mainframes”)
- **by** engaging with universities across Europe, the Middle East and Africa
- **to** raise System z knowledge and awareness
- **and** enhance System z skills
- **for** those about to join the IT industry
  - Previous names for this program have been “zSeries University Program for Europe” and “EMEA zSeries University Program”

## ■ Interlocked with IBM Academic Initiative for System z

- the System z branch of IBM's Academic Initiative
- formerly known as “IBM zScholar's Program”

## Offerings

- System z course module
  - including excellent course textbook and material
- Zeus, our System z university hub for Europe
  - The “System z Europe University System” went live 8/2005
  - **Free** online access to z/OS, z/VM and Linux for System z to support universities running the System z course
- Participation in event days for faculty and/or for students
- Master Theses studentship offered
- Integration with other programs

## System z Course

- Teaches System z, z/OS, z/VM and Linux for System z
- Suitable as module in post-grad or last-year course
- Aimed at students with good IT grounding
  - e.g. students already holding an IT-related degree
- Usually runs over 15 weeks with one full-day workshop per week (4-5 hours): ~65 hours teaching
- Often taught by IBMers
- Available at a low, not-for-profit price
  - the lower the charge, the more constraints on availability of IBM teachers

## System z Course Material

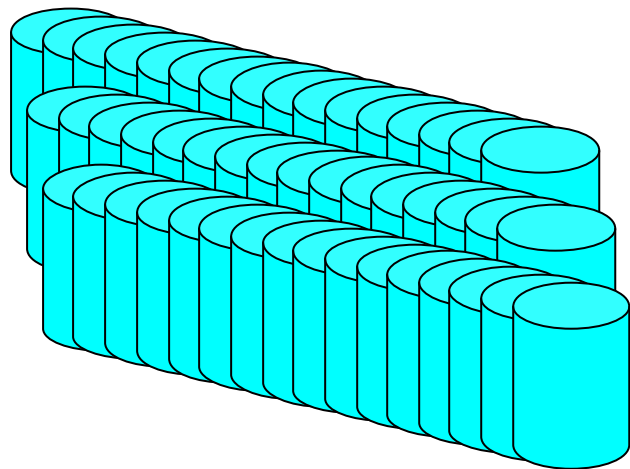
- The course material usually used consists of
  - the acclaimed textbook *Introduction to the New Mainframe: z/OS Basics* and associated presentation foils. This textbook is now available for free download at <http://www.redbooks.ibm.com/abstracts/sg246366.html>
  - a range of up-to-date, practical presentations, tutorials and associated text for the z/VM and Linux for System z parts of the course
- The format of the material is modular
  - can choose which sections to focus on or omit
  - allows flexibility of overall course time: ~40-80 hours
- Course material is being extended and enhanced constantly

## System z Course Online Content

- The course contains much online practical content
- Students use remote online access to our Zeus hub
- Zeus, the “System z Europe University System”, is available for free for universities running our course
- Zeus provides
  - access to z/OS userids
  - access to z/VM and Linux for System z
  - includes systems programming with online access as privileged user to z/VM system running “second level”

# The Zeus LPAR

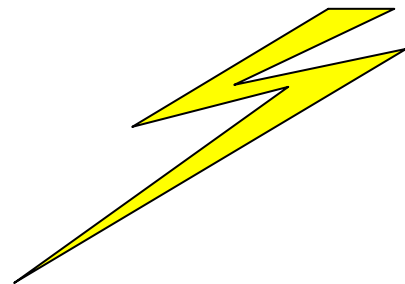
- Physically resides on a z990 at IBM Montpellier in the south of France



? 48 x 3390-3 DASD volumes

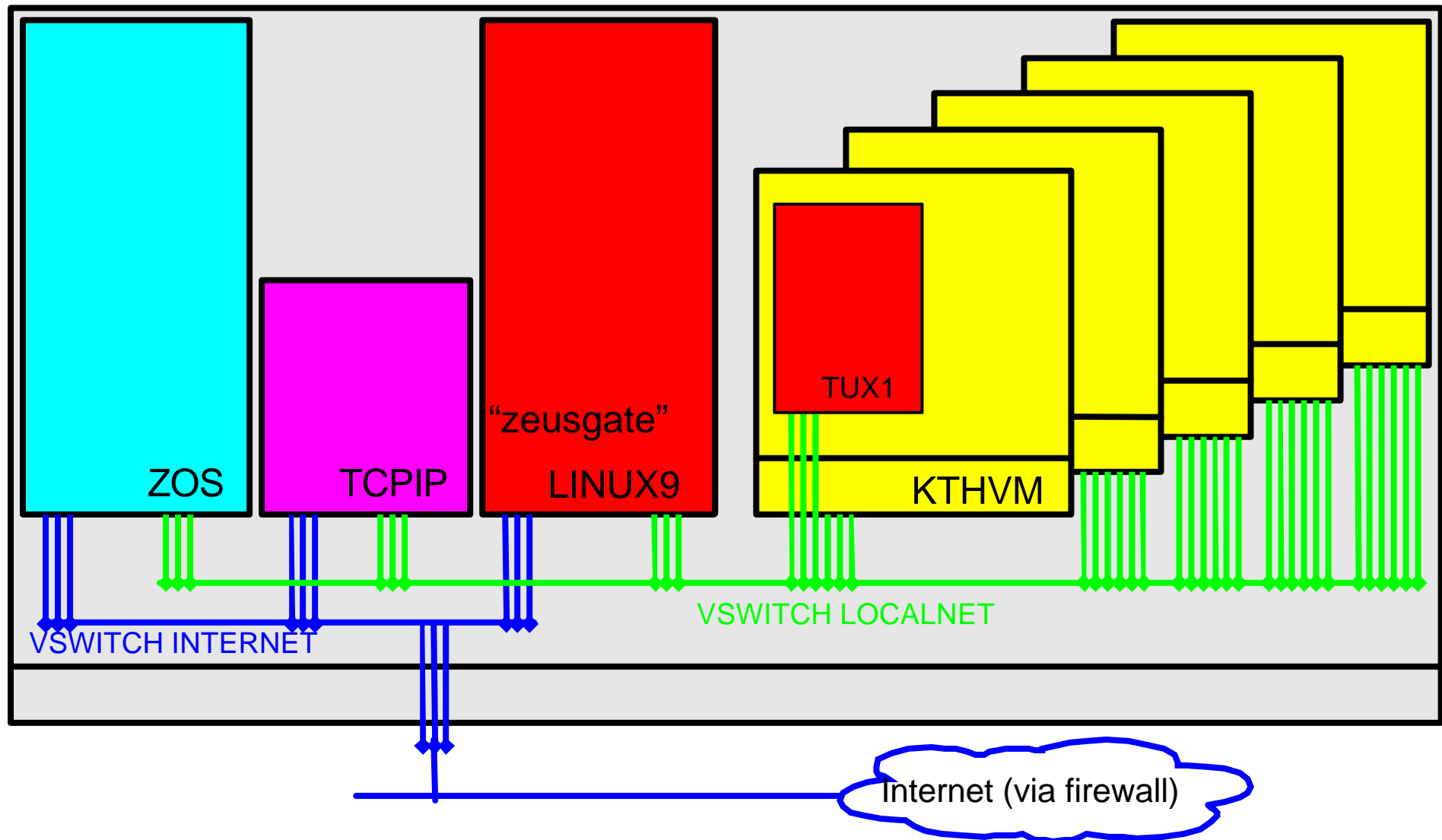
- ? 2 shared CPUs
- ? 6GB central storage
- ? 2GB expanded storage

**LPAR W64A**



- ? One triple of OSA-Express subchannels
- ? Three Internet-visible IP addresses
- ? Firewall protected access to/from Internet

# Zeus guests' network configuration





# Current System z course arrangements

- **Norway: Høgskolen i Oslo (HIO)**
  - course has finished its third year of running
- **Poland: Adam Mickiewicz University, Poznan**
  - course completed its first year in 1Q2005
  - this year, two courses: this one and one focussing on software
- **Sweden: Kungliga Tekniska Högskolan (KTH), Stockholm**
  - course started in September 2005
  - this year, there will be an additional course focussing on WebSphere
- **Denmark: Niels Brock Copenhagen Business School**
  - will run the course, dates to be arranged
- **Finland: Helia Business Polytechnic, Helsinki**
  - Using Zeus to support System z course
- **France: EPITA, Paris**
  - expanded course of 90 hours started in September 2005
  - Course at ESIAL, Nancy this year
- **Germany**
  - **Universität Leipzig**
    - integration with existing courses
  - **Fachhochschule Bochum**
    - integrated with summer school that ran through September 2005
- **Austria: HTL Spengergasse, Vienna**
  - existing course resuming using Zeus for online access

# Current System z course arrangements

- Czech Republic
  - Czech Technical University (CVUT), Prague
    - Two faculties are running the course, started September 2005
      - Electrotechnical Faculty
      - Mathematics/Physics Faculty
  - University of Economics (VSE), Prague
    - course started September 2005
- Belgium
  - Karel de Grote Hogeschool, Antwerp
    - course started 23 Jan 2006
  - Hogeschool Gent
- Russia
  - Moscow State University of Economics, Statistics and Informatics
  - Oil-Gas University
  - Russian Railways Universities (6 universities)
    - all courses start January 2006
    - “Teach The Teachers” course started September 2005
- Spain: Universidade Politecnica de Madrid (UPM)
  - ran an expanded course of 100 hours teaching
- Egypt: Cairo University signed an agreement with high-level government and media coverage
  - 14 other universities working towards making the same agreement

# Current System z course arrangements

## ■ Italy

- Translated and modified course material available
- Full/formal classes (examined) at
  - Palermo University
  - Catania University
- Also shorter seminars at
  - Palermo University
  - Catania University
  - Politecnico di Bari Federico II University, Naples
  - Universita la Sapienza, Rome

## ■ Eire: Letterkenny Institute, Co. Donegal

- Using Zeus to support COBOL course
- Course will expand to include CICS, DB2

## ■ UK

- Surrey University at Guildford
  - course will start Spring Semester 2007 (January)
- Southampton University
  - including involvement with JPMorganChase
  - course planning for academic year 2007
- Loughborough University
  - course planning for academic year 2007
- Manchester University
  - Looking at working System z into curriculum
  - Barclays Bank involved
- Belfast Institute
  - Using Zeus to support z course
  - Investigating further expansion

## System z course arrangements in discussion

- Other universities are interested in discussing or planning System z courses
- UK
  - Bournemouth University
  - Birkbeck College, London
  - Edinburgh University
  - Glasgow University
  - Plymouth University
  - most already have involvement of System z customers: more is always welcomed
- Denmark: Danmarks Tekniske Universitet (DTU), Copenhagen
- and other universities in UK, Italy, France, Portugal, Germany, Belgium, Poland, Saudi Arabia, Oman, ...

## Student Mainframe Contest 2006

- Last year, the Student Mainframe Contest (“Master the Mainframe”) ran across the US and Canada
  - 695 contest registrations from 77 universities
  - winners won Thinkpads and a trip to New York
- This year, the contest will be running in Europe as well as North America
- In Europe, the contests will run separately by country due to competition laws
- The contest will run in the UK from October to December 2006
- Zeus will be hosting the European instances of the contest



## Relationship with the IBM Academic Initiative

- IBM Academic Initiative for System z
  - was formerly known as “IBM Scholars zSeries Program”
  - the System z branch of IBM's world-wide Academic Initiative
  - The Academic Initiative is an umbrella program covering hardware (all IBM brands), software (all IBM brands), hiring, ...
  
- The System z University Program for Europe
  - works across IBM Software Group, IBM Storage and Technology Group, the IBM Academic Initiative and IBM Development
  - focusses on System z activity across higher education institutions in Europe, the Middle East and Africa

## IBM Academic Initiative for System z: Summary

- The System z branch of IBM's world-wide Academic Initiative
- We strongly encourage universities to register (free)
- Universities use `ibm.com/university` as
  - primary online contact point
  - access point for software, course material, online userids on US hubs
- Universities use System z University Program for Europe
  - as contact point for local arrangements, visits, meetings
  - for events, course arrangements, teachers, other engagements
  - online userids on Zeus, the zSeries Europe University System hub

## Contact details

- **IBM Academic Initiative**
  - <http://ibm.com/university>
- **System z University Program for Europe**
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