EMC ACADEMIC ALLIANCE

Educating Future IT Professionals

http://education.EMC.com/AcademicAlliance

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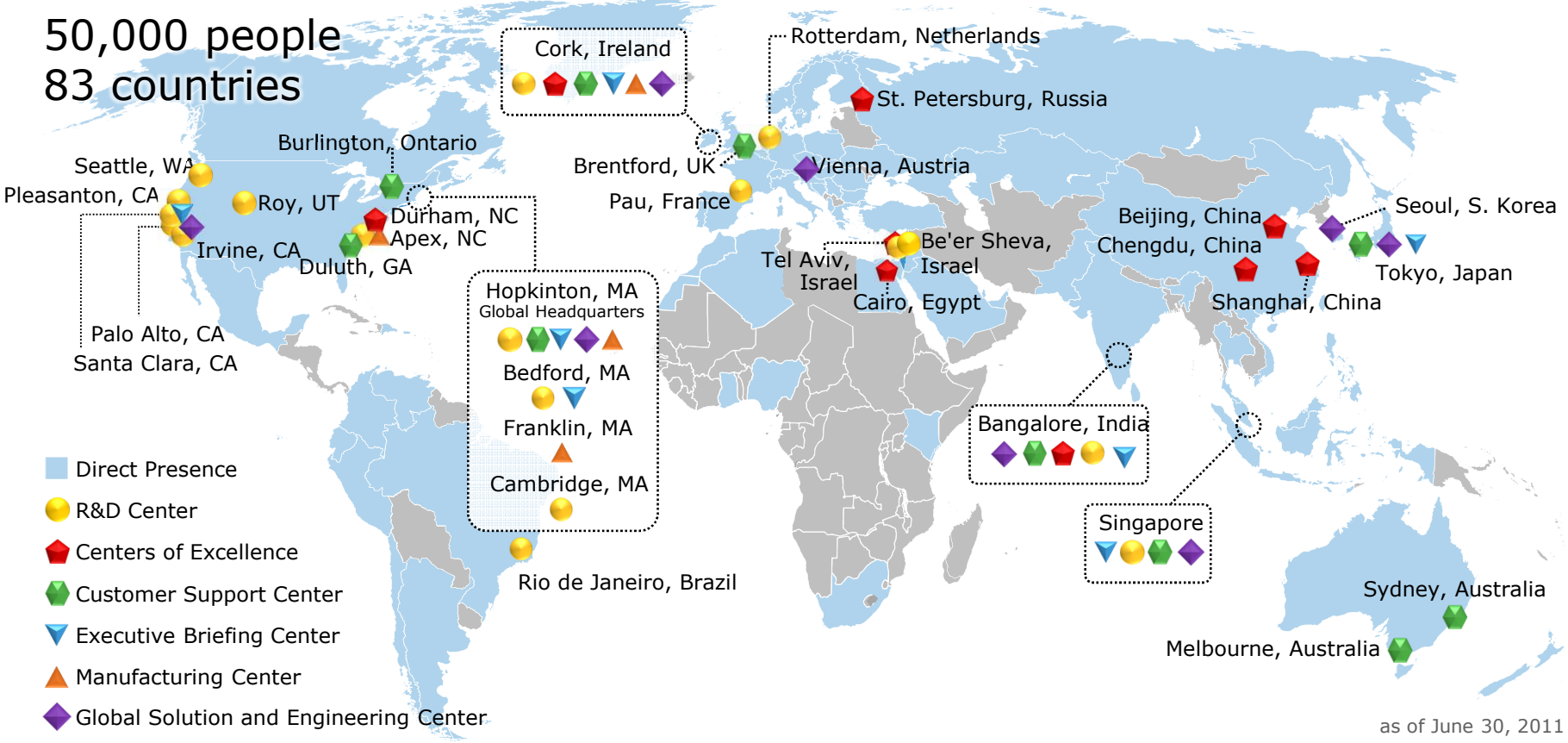
Our Global Presence

50,000 people
83 countries



as of June 30, 2011

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The Financial Strength To Invest Heavily

2011 Fortune 500 Rank	152
2011 Revenues	$20B
2011 R&D Investment	$2.3B
2011 R&D As A Percentage Of Revenues	~11.5%
2011 Free Cash Flow	$4.4B
2011 Total Cash And Investments	$10.8B
Market Value	$54B

All data f

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Catalysts For Change

Budget Dilemma

Information Deluge

Cyber Security

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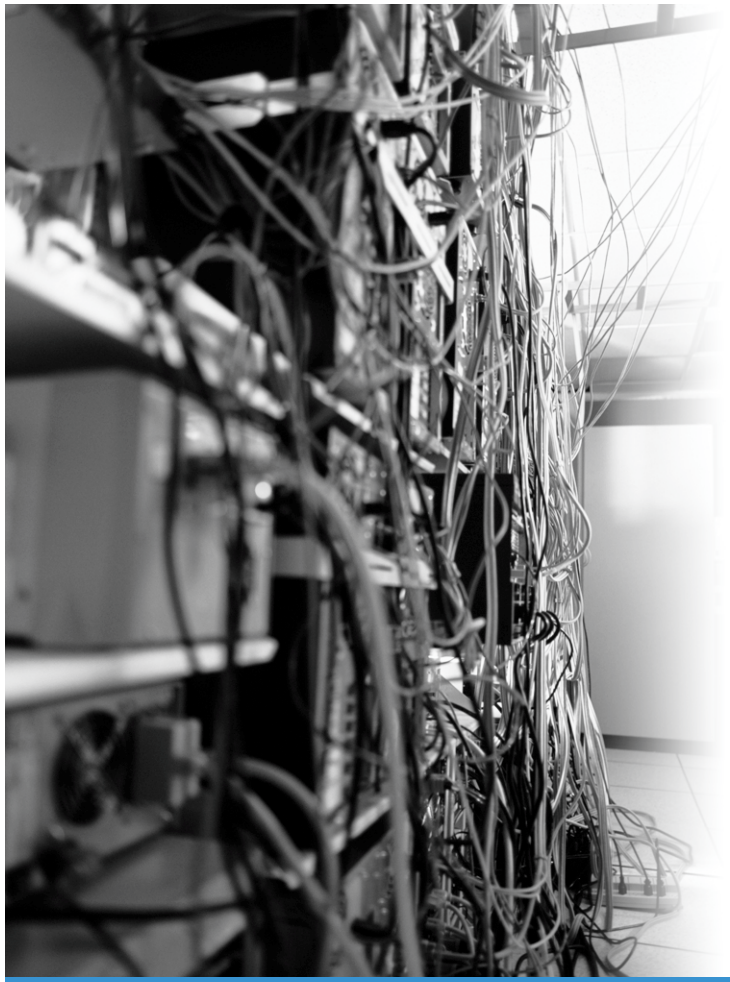
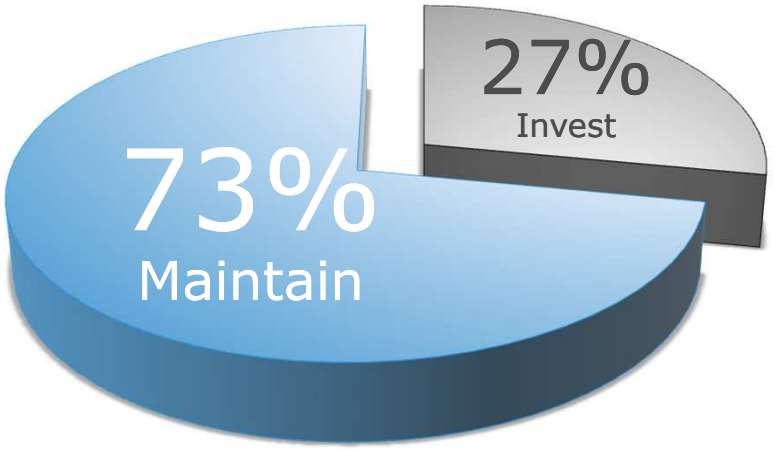


I.T. BUDGET DILEMMA



Source: Forrester Research, Inc., IT Budget Allocations: Planning For 2011, December 3, 2010

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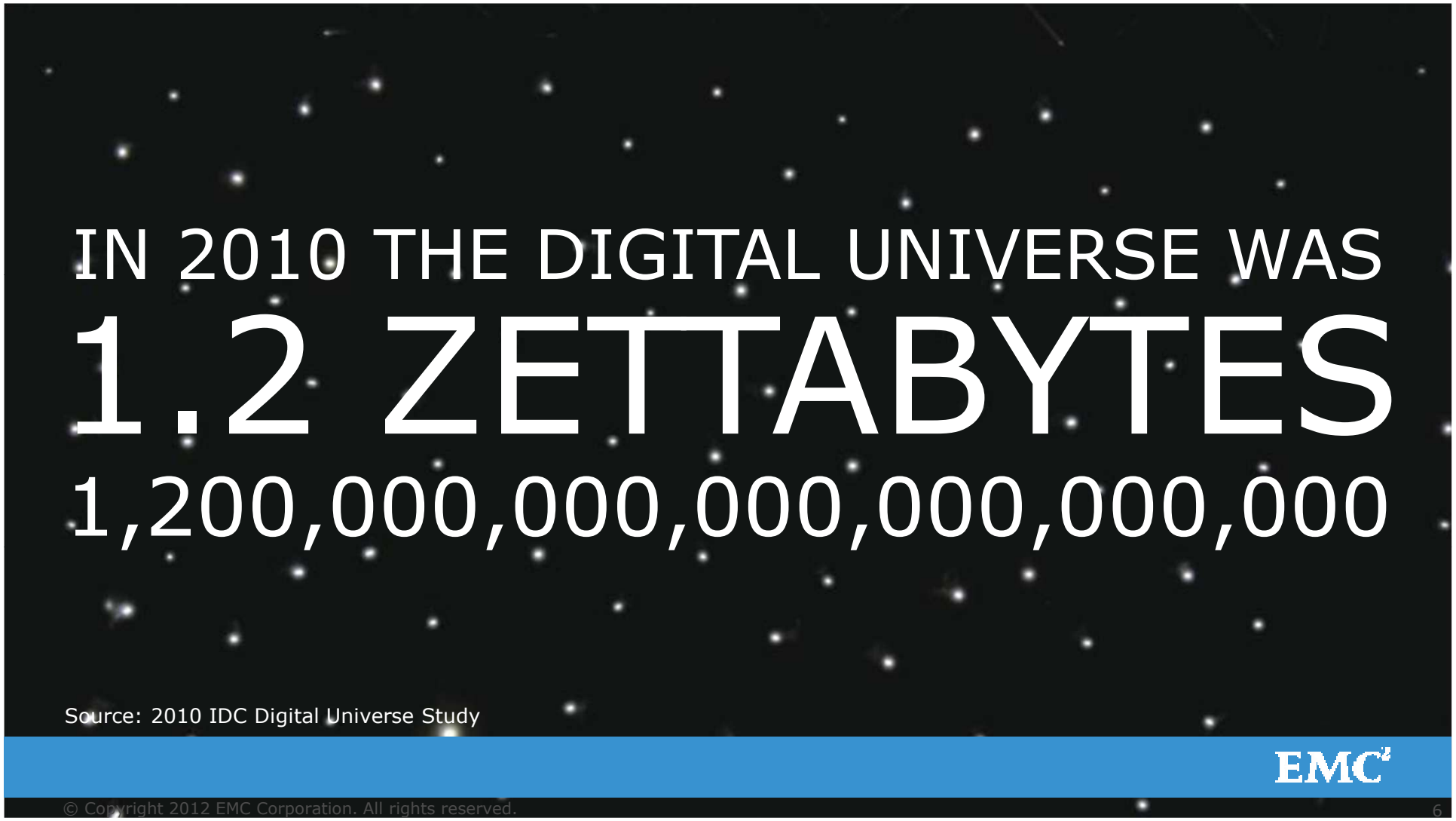

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90% OF THE DIGITAL UNIVERSE IS UNSTRUCTURED

Source: 2011 IDC Digital Universe Study

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What's Driving The Data Deluge?

Mobile Sensors

FACEBOOK GROWS BY 250 MILLION PHOTOS / DAY

Social Media

Video Surveillance

INFORMATION IN THE ENTERPRISE WILL

GROW 50X

IN THE NEXT 10 YEARS

READING METERS EVERY 15 MINS. IS 3,000X MORE DATA INTENSIVE

Smart Grids

Geophysical Exploration

Medical Imaging

Gene Sequencing

COST TO SEQUENCE ONE GENOME HAS FALLEN FROM $100M IN 2001 TO $10K IN 2011

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In 2010…

88% OF FORTUNE 500 HAD BOTNET ACTIVITY ASSOCIATED WITH THEIR DOMAINS

Source: Panda Labs Research

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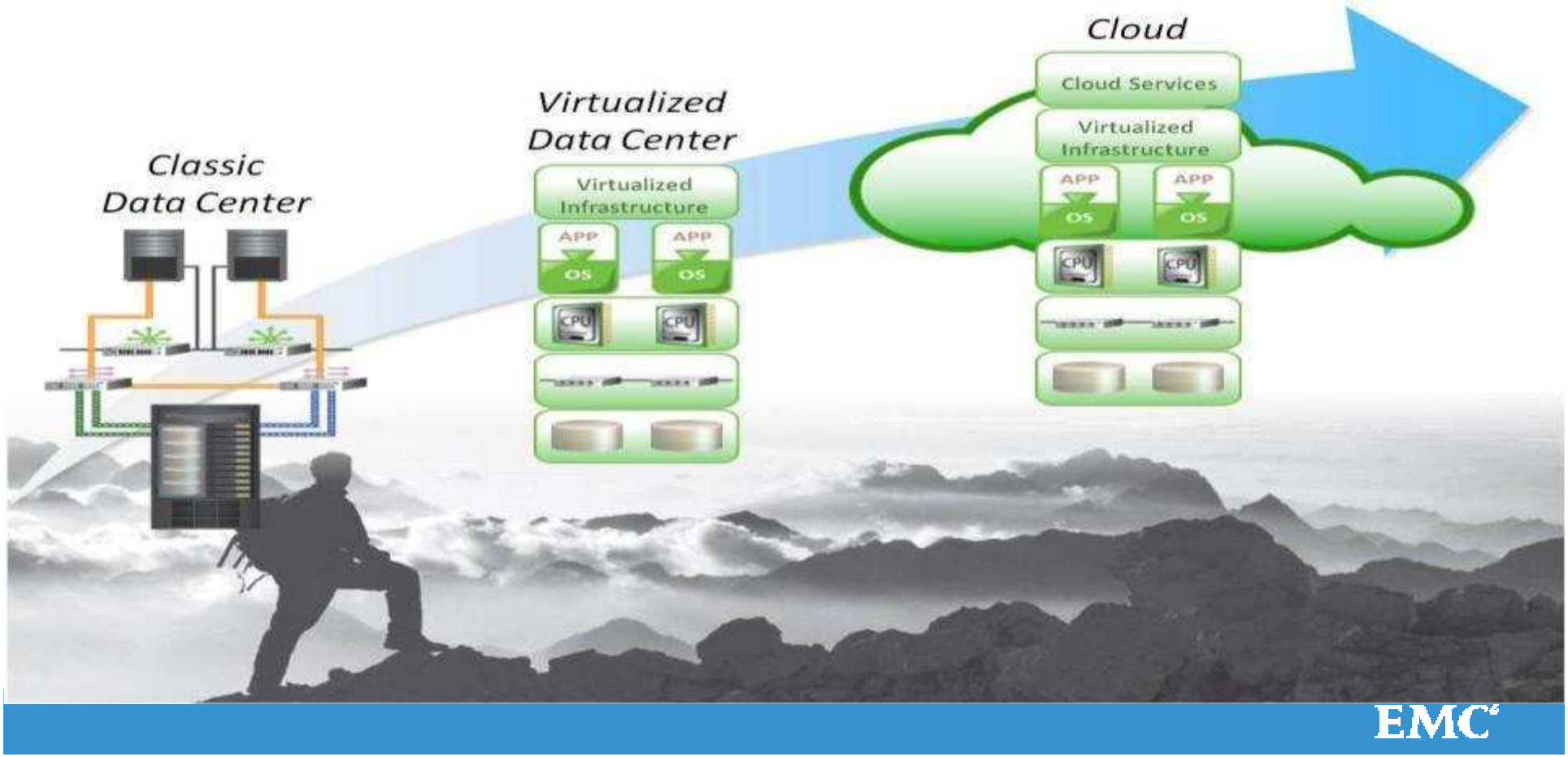
Enter The Cloud.

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Source: National Institute of Standards and Technologies (NIST)

IT Transformation: Journey to the Cloud



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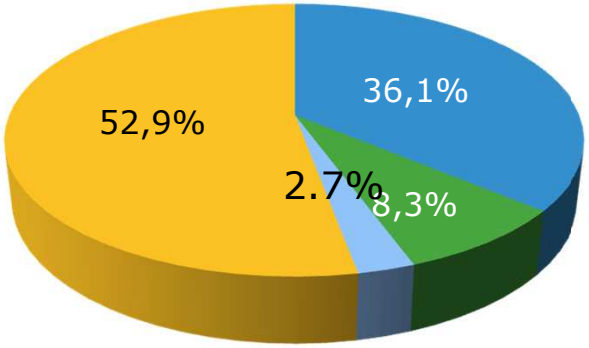
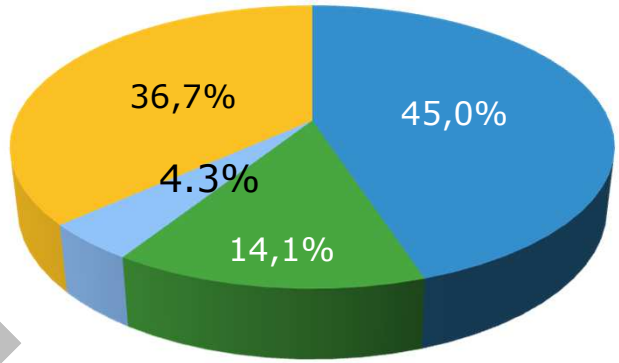
Evolving Information Infrastructure

- Current Capacity Allocations



- Virtualized Server Environment
- Private Cloud Environment
- External Cloud Environment
- Traditional/classic Environment

- In 24 months…



- Virtualized Server Environment +24.6%
- Private Cloud Environment +68.9%
- External Cloud Environment +57.8%
- Traditional/classic Environment -30.6%

Source: Managing Information Storage: Trends, Challenges and Options 2011-2012

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Virtualization & Cloud - Top Priorities

Biggest Trends Driving Spending Decisions In 2011

BARCLAYS CAPITAL

Source: Barclays Capital, CIO Survey, October 2010.

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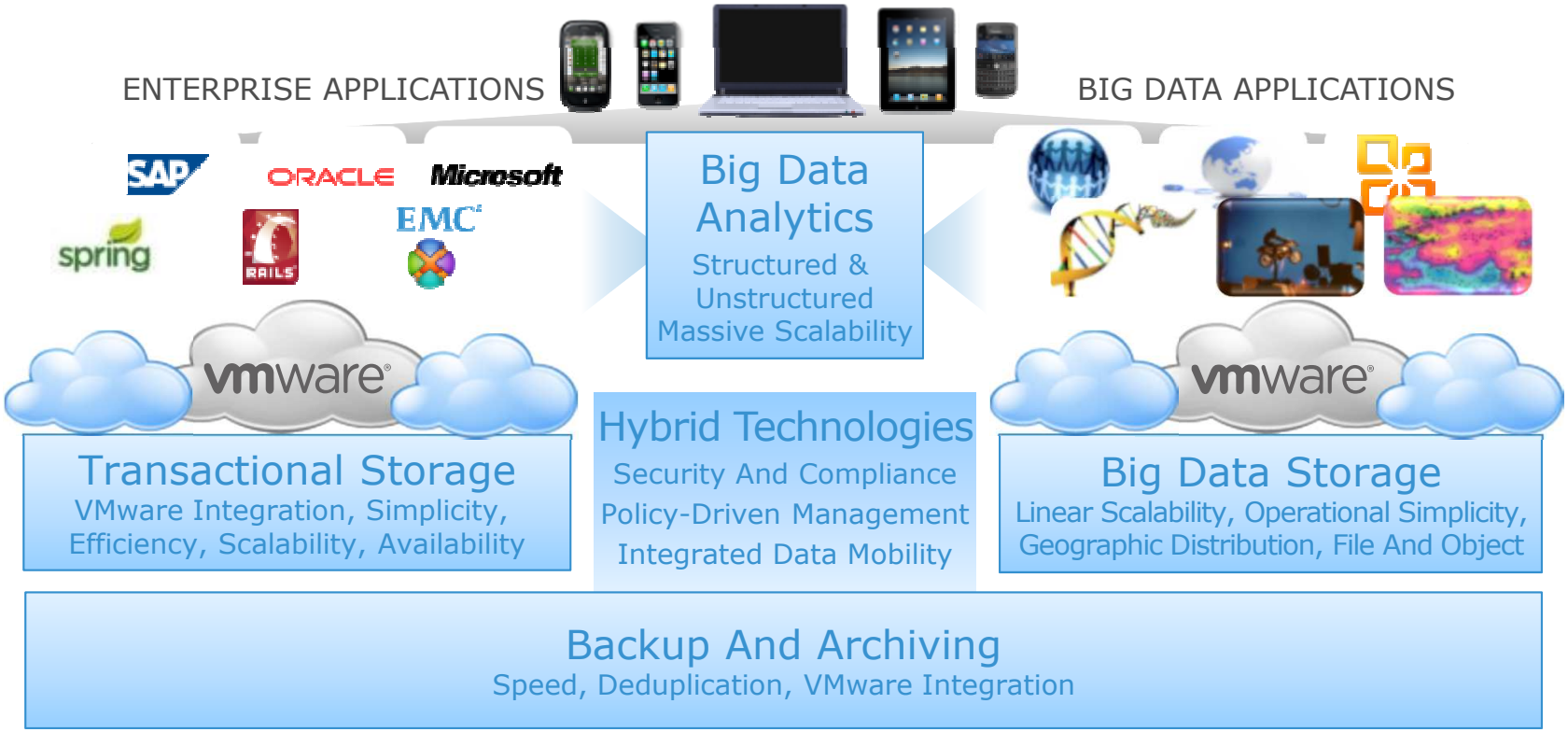
Requirements For The New IT Portfolio

Virtual Desktop Infrastructure: End-User Choice With IT Control



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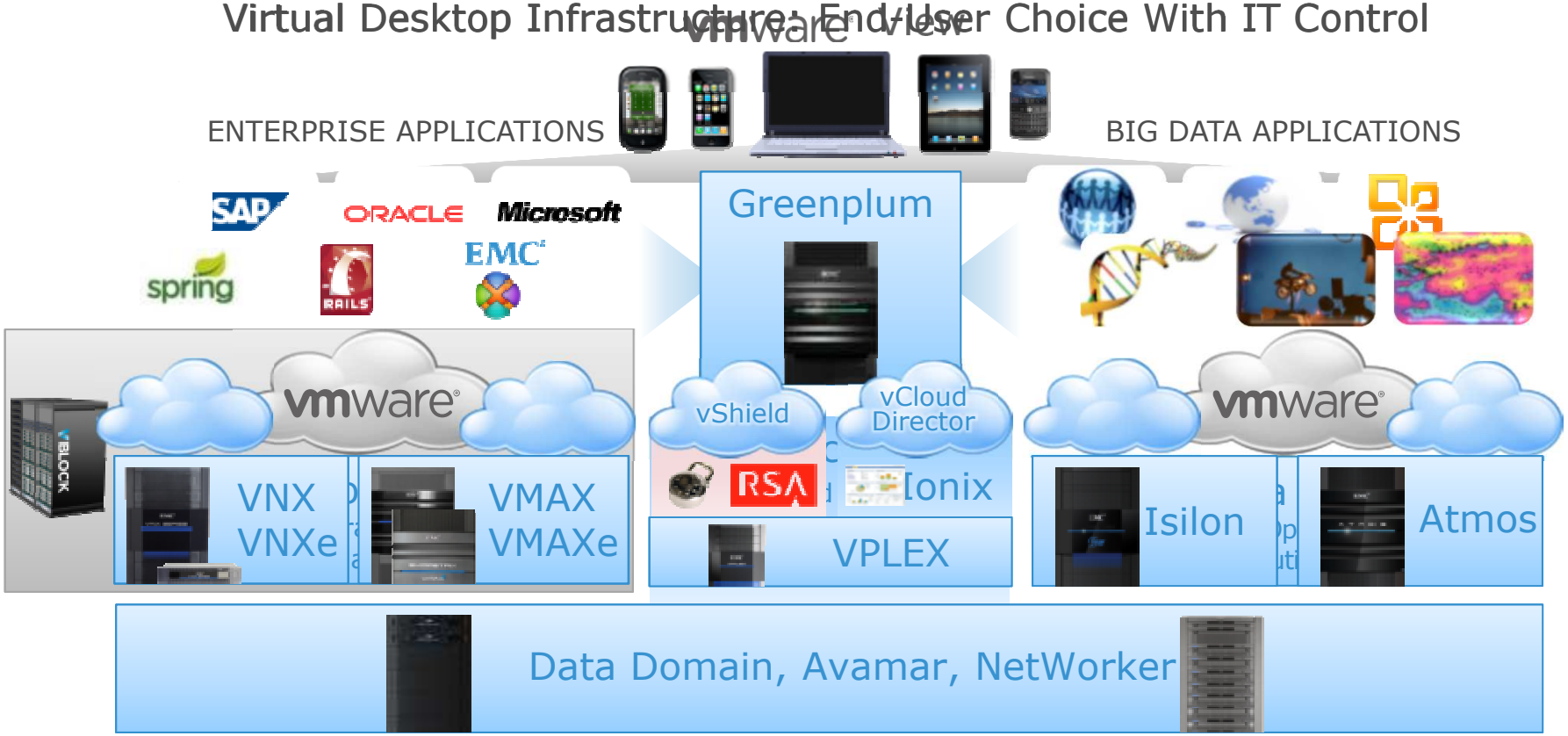
The EMC Product Portfolio

Virtual Desktop Infrastructure: End-User Choice With IT Control



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Digital Information Storage Challenges

Managing growth and defining strategic directions

1. Managing Storage Growth
2. Designing, deploying, and managing storage in a virtualized server environment
3. Designing, deploying, and managing backup, recovery, and archiving solutions
4. Storage consolidation
5. Making informed strategic / big-picture decisions
6. Designing, deploying, and managing disaster recovery solutions
7. Lack of skilled storage professionals
8. Designing, deploying and managing storage in a cloud computing environment
9. Convincing higher management to adopt cloud
10. Managing external cloud service providers

Source: Managing Information Storage: Trends, Challenges and Options 2011-2012

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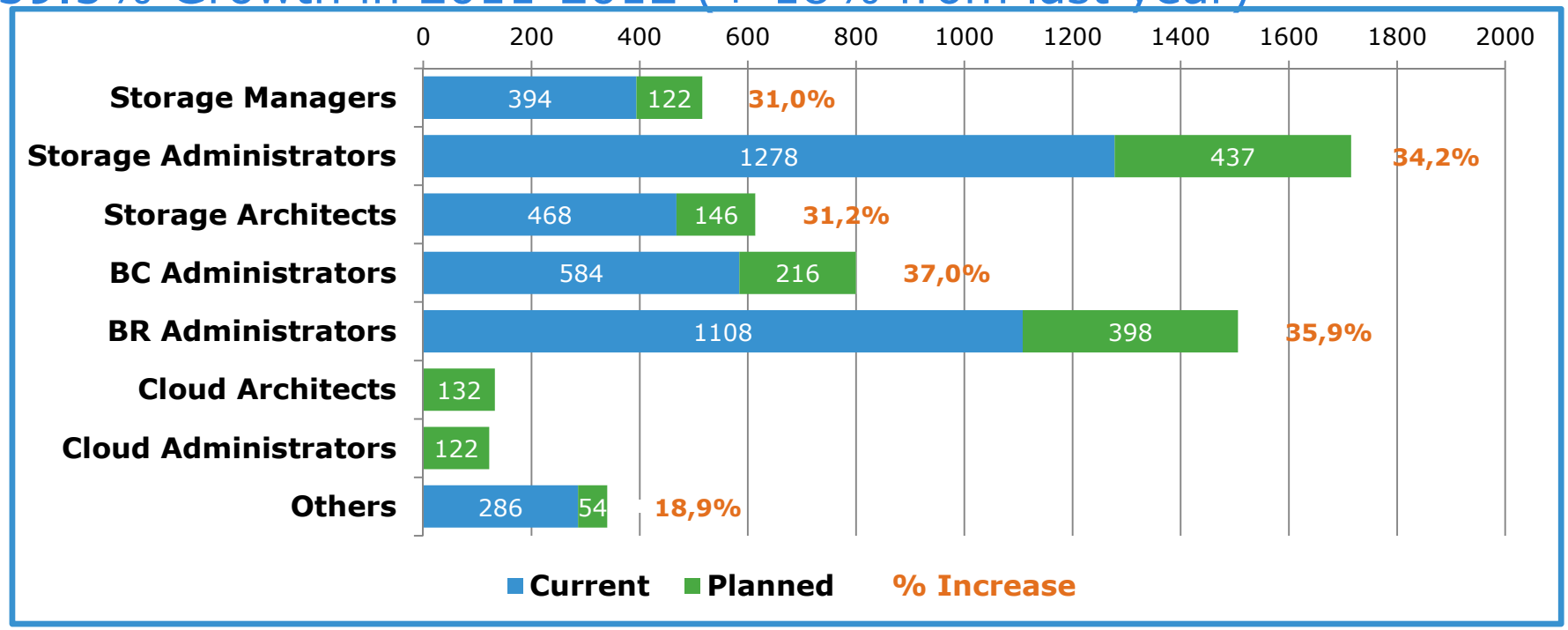
Building an Effective Storage Mgmt Organization

IT Managers Hiring Plans for the Next Year

39.5% Growth in 2011-2012 (+ 18% from last year)



Source: Managing Information Storage: Trends, Challenges and Options 2011-2012

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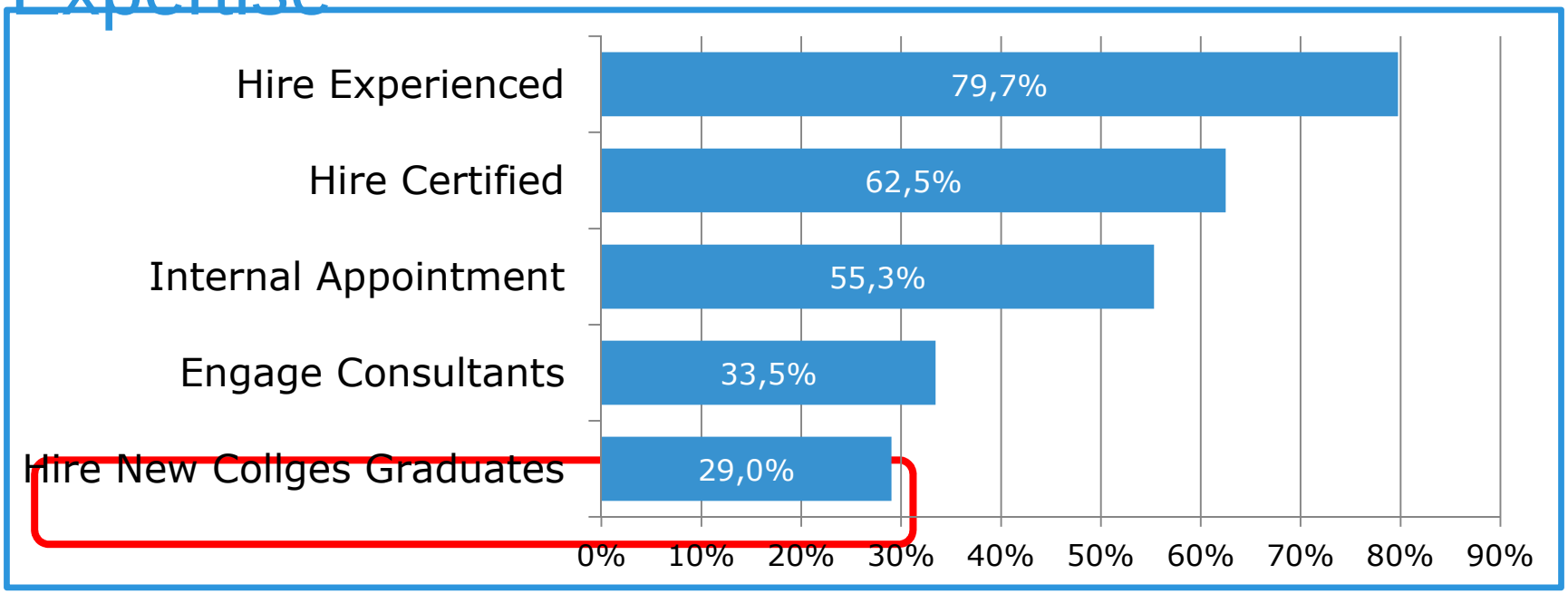
Where Managers Plan to Find Storage Expertise



Source: Managing Information Storage: Trends, Challenges and Options 2011-2012

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Storage Role Across IT Disciplines

Leverage the functionalities of storage technology products to…..

- Systems Architects/Administrators
  - Maximize performance, increase availability, and avoid costly server upgrades.
- Network Administrators
  - Maximize performance of your network and to help you plan in advance.
- Database Administrators
  - Maximize performance, increase availability, and realize faster recoverability of your database.
- Application Architect
  - Increase the performance and availability of your application
- IT Project Managers

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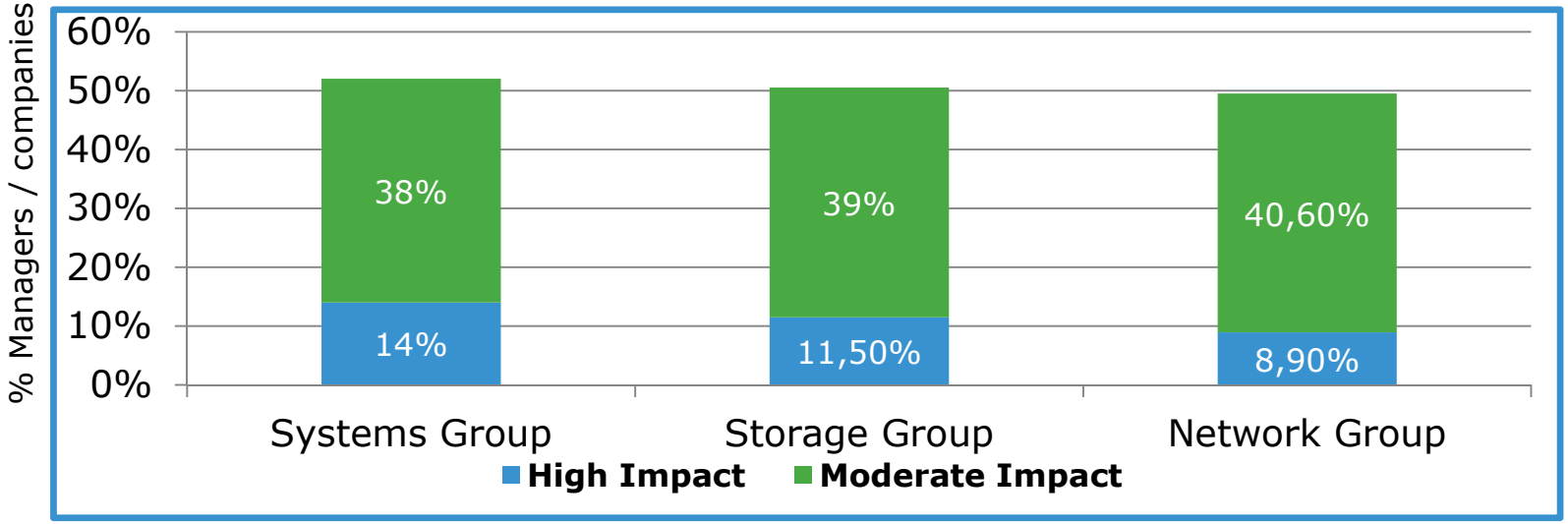
Impact of Cloud Technologies…

~50% managers estimate moderate to high impact



- High impact: Re-skill the team
- Moderate impact : Acquire additional skills

Source: Managing Information Storage: Trends, Challenges and Options 2011-2012

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EMC Academic Alliance Course Offerings

Information Storage & Management (ISM)

- Intro to ISM
- Storage System Environment
- Data Protection: RAID
- Intelligent Storage System
- Storage Networking Technologies
  - DAS, SAN, NAS, IP SAN, CAS
- Storage Virtualization
- Intro to Business Continuity
- Backup and Recovery
- Local and Remote Replication
- Securing & Managing the Storage Infrastructure

Cloud Infrastructure & Management (CIS)

- Journey to Cloud Computing
- Overview of Classic Data Center environment
  - Server, Storage and Network
- Virtualization
  - Compute, Storage, Network, Application & Desktop
- Backup Recovery & BC in a Virtualized Environment
- Cloud Security
- Cloud Infrastructure and Management
- Migrating to Cloud

Data Science & Big Data Analytics (DSBDA)

- Intro to Big Data Analytics
- Overview of Data Analytics Lifecycle
- Using R for Initial Analysis of the Data
- Adv Analytics & Statistical Modeling for Big Data
  - Theory and Methods
- Adv Analytics and Statistical Modeling for Big Data
  - Technology and Tools
- Concluding and Operationalizing & Analytics Project
- Big Data Analytics Lifecycle Lab

Backup Recovery Systems & Architecture(BRSA)

- Backup Theory
- Information Storage Concepts
- Backup Client
- Backup Storage Node
- Backup and Recovery, Planning

E20-001 Information Storage & Mgmt Exam

- *Exam Details*
  - 90 minutes and ~65 questions
- *Be prepared, take the FREE ISM practice exam.*
  - **Step 1:** Go to http://education.emc.com/guest/certification/exams.aspx .
  - **Step 2:** Find Information Storage and Management (E20-001) in the table.
  - **Step 3:** Click "Launch" under the Practice Exam heading in the ISM row of the table.
- *Request certification voucher.*
  - Ask your professor to provide you with certification voucher. You get a 50% discount *and* a free retake!
- *Pearson Vue testing centers.*
  - Visit http://www.pearsonvue.com to locate a testing center near you.
- *Once certified, get the EMC Proven Professional logo.*
  - Add it to your business cards and email signature.
  - Log in to CertTracker to access your logo.

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Secure Student Web Portal

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EMC Global Services Associate Program (GSAP)

Be a force in the IT infrastructure!

- GSAP is an intensive 10-week, role-based training program.
- Receive technical expertise needed to obtain EMC certification(s)
- At end of program, participants are assigned an EMC mentor for on-the-job coaching and ongoing-skills development.

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GSAP Associate Program Hiring Profiles

Title	Description	Minimum Requirements	IT Experience Required	Training Boot Camp Duration
Associate Customer Engineer (ACE)	Supports and provides maintenance of EMC products	Associate Degree, Technical Discipline (Networking, MIS, Computer Engineering)	0-2 years	7 weeks
Associate Implementation Delivery Engineer (AIDE)	Implements business continuance software and moderately complex solutions	Associate Degree, Technical Discipline (Networking, MIS, Computer Engineering)	0-2 years	9 weeks
Associate Practice Consultant (APC)	Provides technical and consultative support on EMC technical solution opportunities on a range of IT consulting engagements (Microsoft, Infrastructure)	BS Computer Science	1-3 years	6-8 weeks
Associate Project Manager (APM)	Manages customer service delivery contracts and activities	BS Information Technology Management, MIS	2-5 years	5 weeks
Associate Storage Operations Specialist (ASOS)	Manages the customer's storage infrastructure	BS Computer Science	0-3 years	7 weeks
Associate Technical Education Specialist (ATES)	Develops technical training for EMC employees, partners, and customers	BS Computer Science	0-2 years	9 weeks
Associate Technical Support Engineer (TSE)	Provides remote support to internal and external EMC customers both centrally located EMC support centers	Associate Degree, Technical Discipline (Networking, MIS, Computer Engineering)	0-2 years	7 weeks
Associate Technology Consultant (ATC)	Supports presales activities (architecture, configuration, qualification, and supporting documentation) leading to the sale of EMC solutions	BS Information Technology Management, MIS	2-5 years	8 weeks

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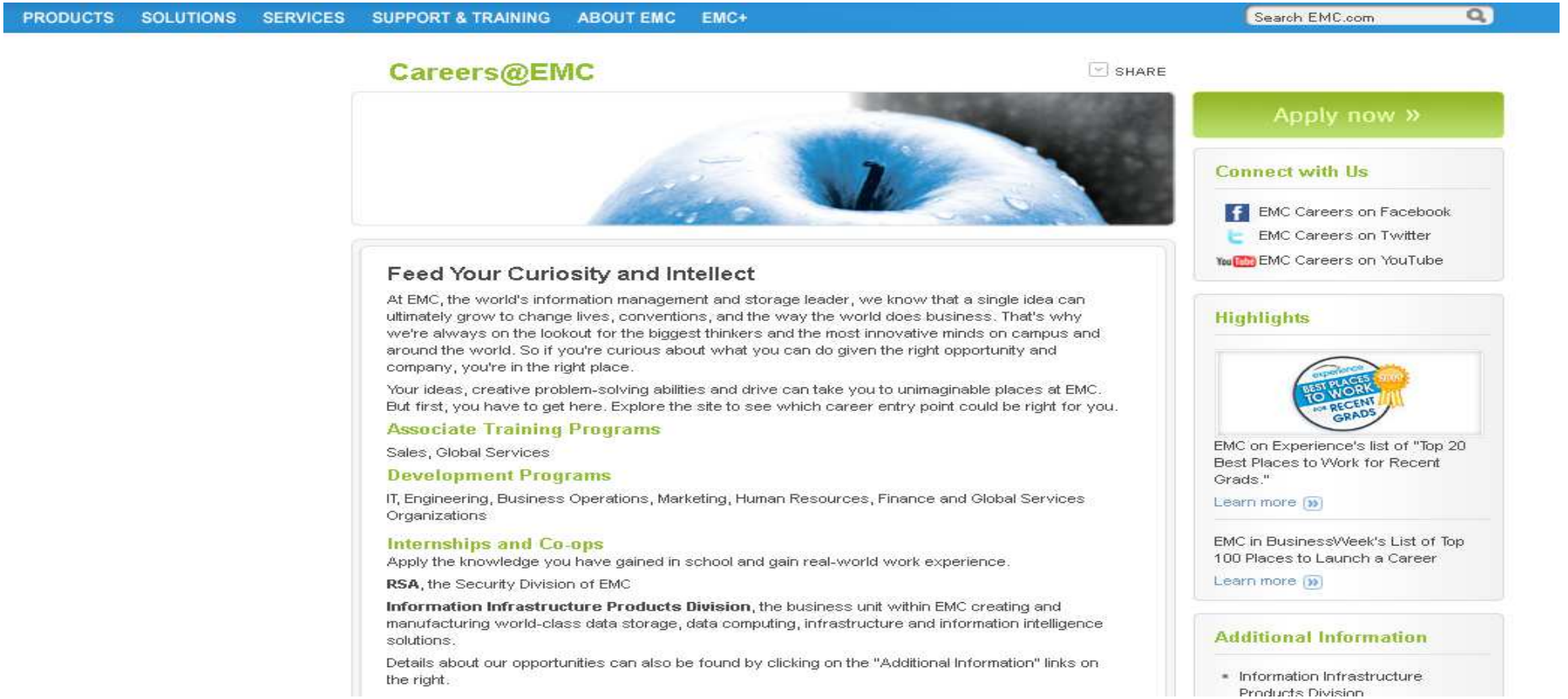
http://www.emc.com/college



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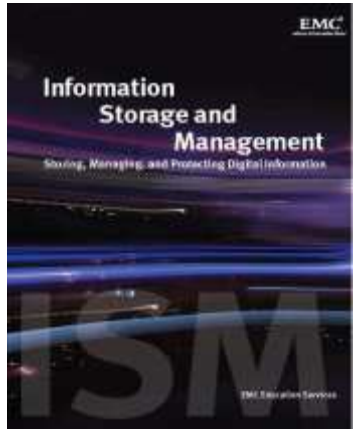
Enroll in the Course Today . . .



- **Course Name/Number: <enter # and name>**
- **Course Description:**
  - **<enter description>**
- **Course Schedule: <enter semester, days and times>**
- **Instructor: <enter name>**

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Q&A

Univeristy of Zagreb

Faculty of Traffic and Transportation Sciences

The Department of Information and Communication Traffic

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