e-DEMOCRACY
ICT - A DRIVER FOR IMPROVING DEMOCRACY
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Advanced Infrastructure as a Foundation for e-Democracy Solutions

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Introduction

- Why do we need underlying infrastructure for e-Democracy solutions
- What are the characteristics of such infrastructure
  - Secure
  - Available
  - Expandable
  - Interoperable
  - Manageable

Current environment

- Isolated Islands, silos
- Difficult or No integration at all
- Poor scalability, difficult management, questionable security
- No high availability or disaster recovery

Automated e-mail management system?	2007	2008
Yes	21%	21%
Planning or considering	32%	25%
No and not planning or considering	47%	54%

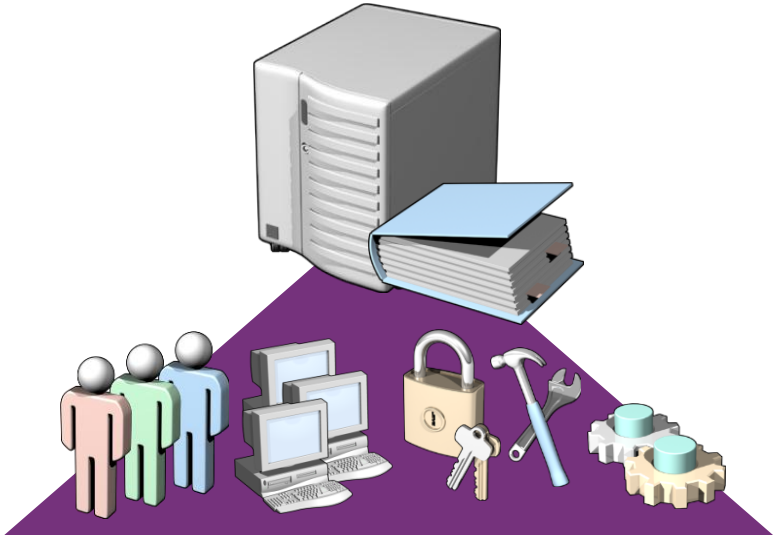
Source: World e-Parlament Report Survey 2009,

Modern ICT Infrastructure Ingredients

- Directory services
- Messaging & collaboration
- Security
- Mobility
- High availability and disaster resilience
- Virtualization
- Management

Directory Service

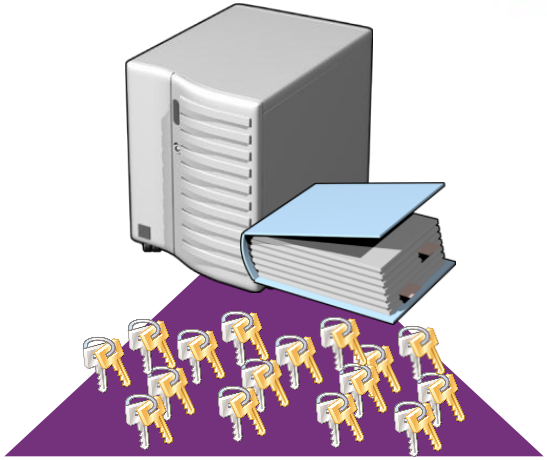
- Stores directory data
- Manages communication between users and domains,
  - including user logon processes, authentication, and directory searches
- Manage policies applied to users and computers

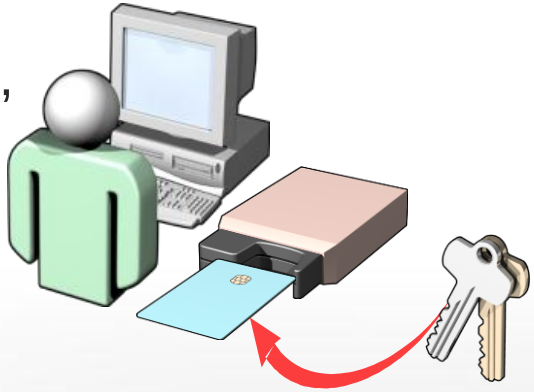


Microsoft Active Directory is most commonly used Directory Services

Directory services - Extensions

- Certificate Services – PKI
  - Services for issuing digital certificates for authentication between devices, users, and applications.
  - enables secure exchange of information
  - strong authentication
  - and secure communication across the Internet, extranets, intranets, and applications
- Digital Rights Management
  - help prevent sensitive information from intentionally or accidentally getting into the wrong hands

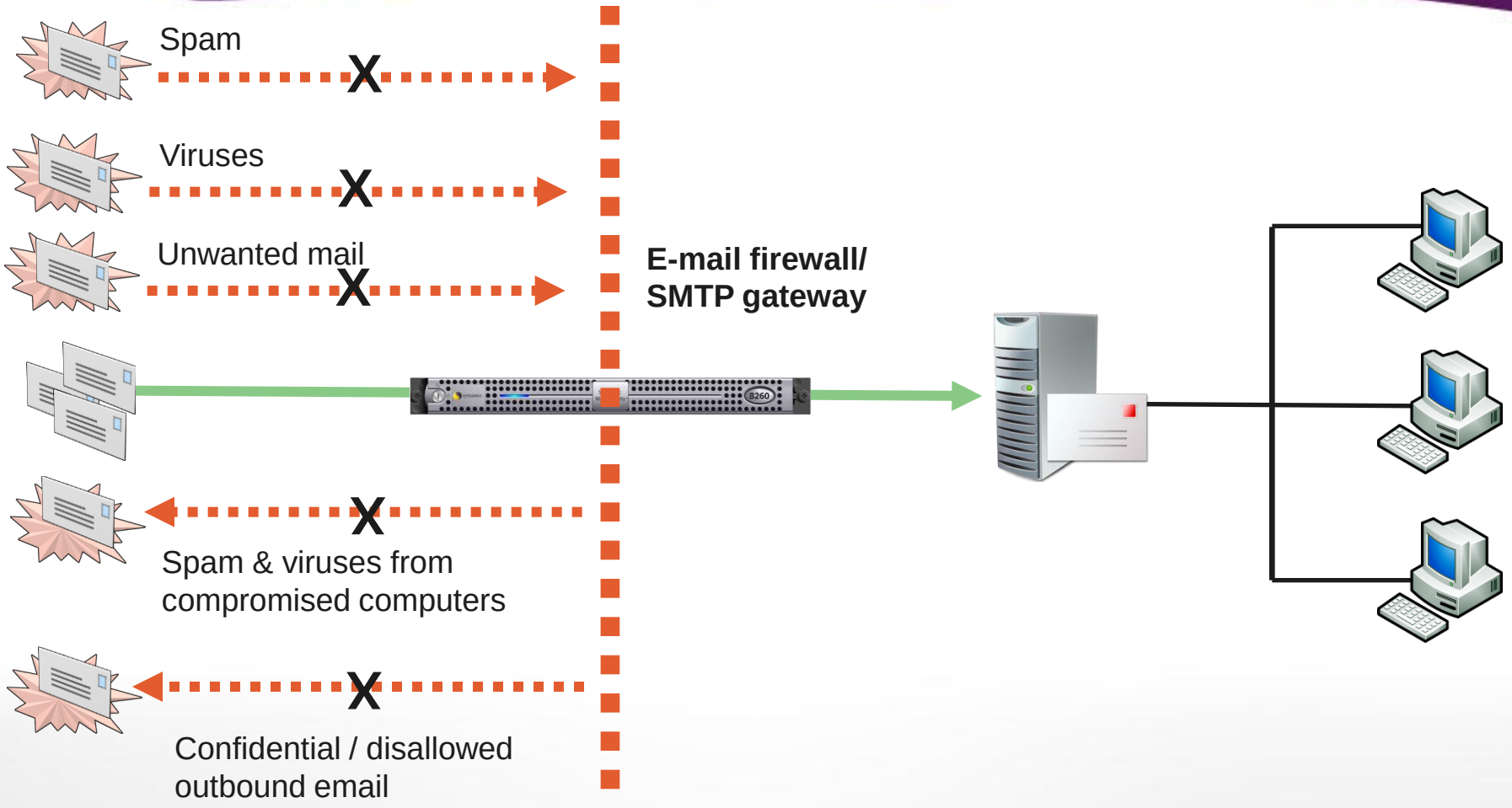




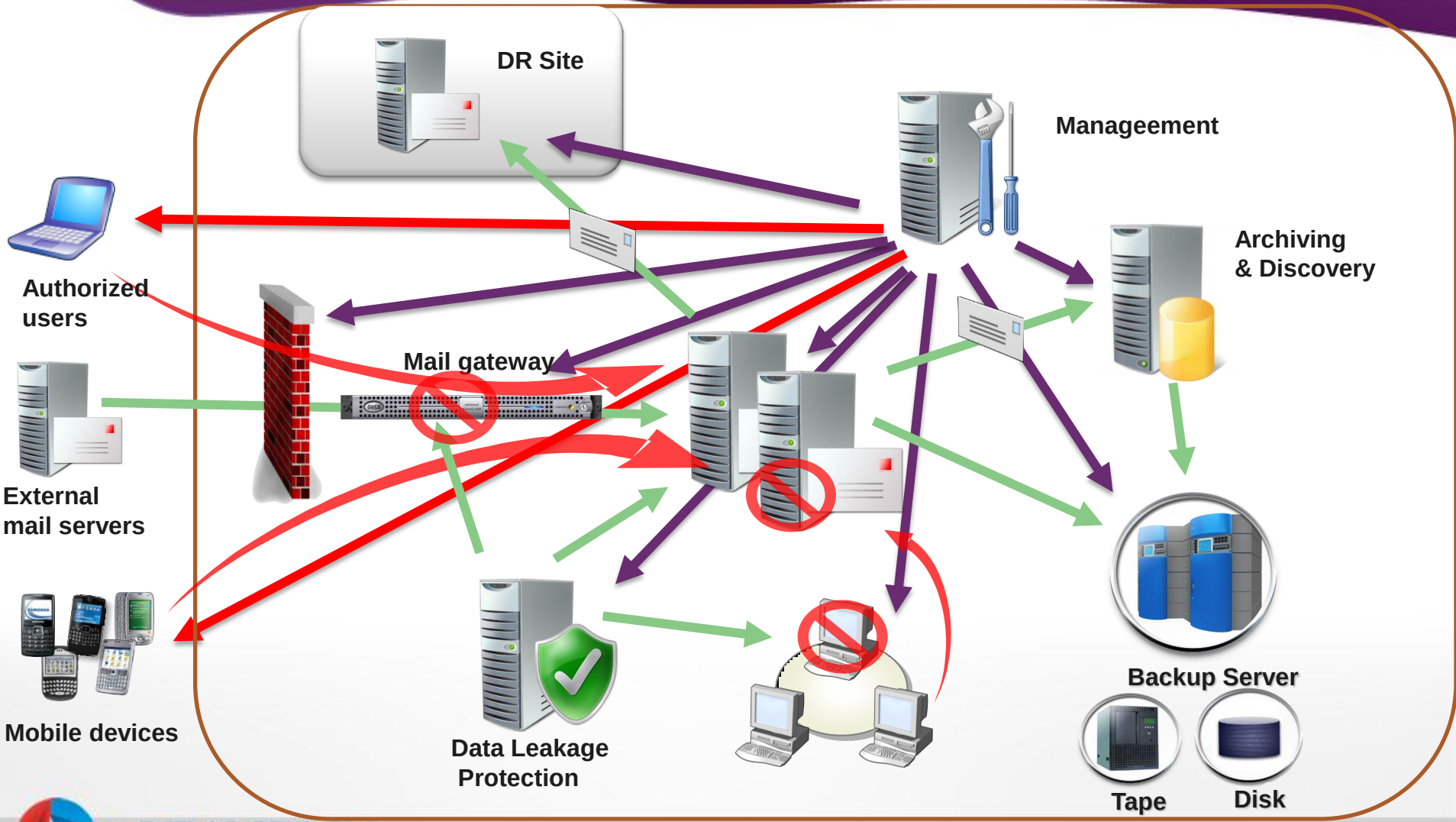
Messaging – Unified communication

- Unified communication enhances e-mail messaging
  - E-mail, instant messaging, voicemail, fax
- Securely Accessible from anywhere
  - and any device
- Accessible anytime (high availability, disaster recovery)
- Keeping messaging hygiene
- Retention policies, archiving
- Must support ever incising volumes of data

Messaging Hygiene

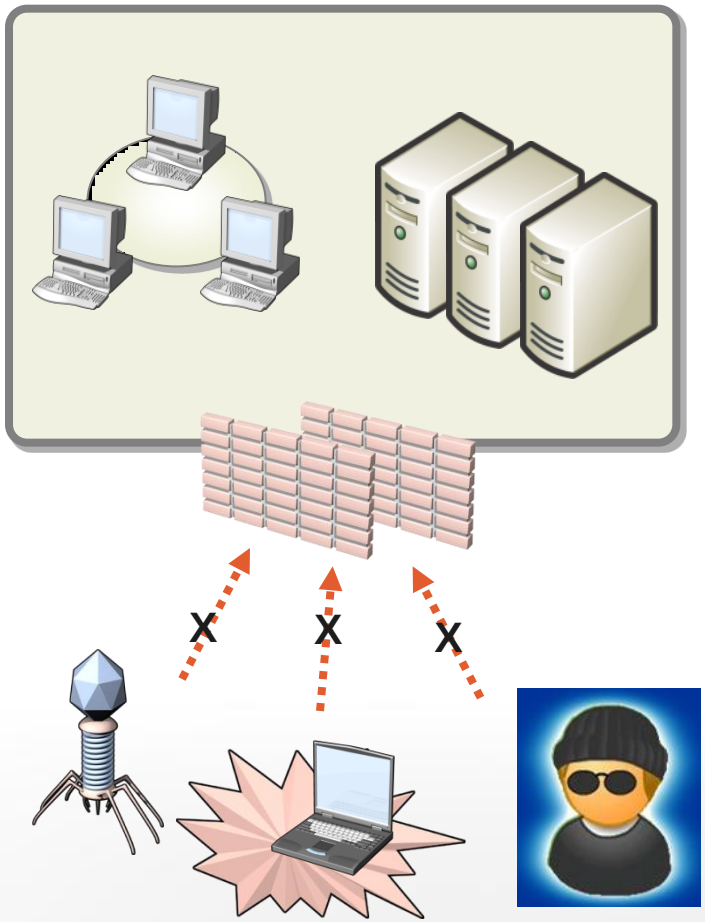


Messaging continued



Security

- Ongoing process
- Defense in depth
  - Perimeter
    - Firewalls, content filtering & control, mail gateways, IPS
  - Wireless
  - Securing server & workstations
    - Patching & updating
    - Antivirus & antyspyware
  - Securing stored data and in transport
  - Network – NAP
  - People & processes



Mobility

- Allow authenticated users to access information anytime
- Not a commodity, it’s a must
- Until now – e-mail access, limited access to portals
- VPN for full network access
  - Limited from some networks and hotels

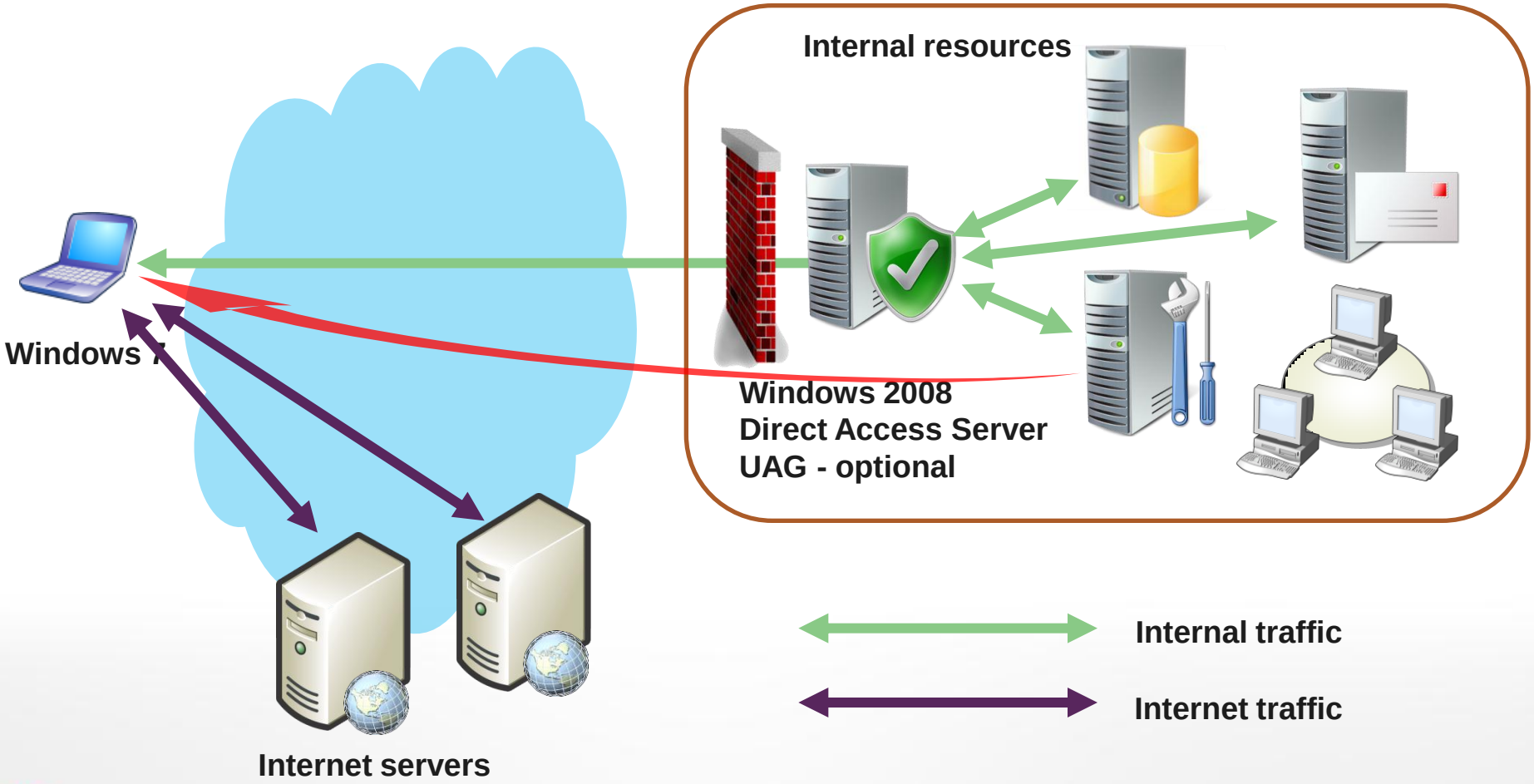
Mobility, continued

- What if you can securely access your internal resources anytime you get internet connection?
- Always ON scenario is possible
- Always (secure) access to internal information, services and applications
- Always on also means always managed by administrators policies
  - Updates, antivirus definitions, new or changed policies…

Mobility, continued

- Direct Access Technology
  - Windows 2008 R2 and Windows 7 (enterprise/ultimate)
  - Unified Access Gateway (optional)
- Uses IPv6, IPSec, PKI, NAP for strong authentication encryption and client health validation
- Can also use certificates and smartcards for user authentication as additional layer of security

Mobility, Continued

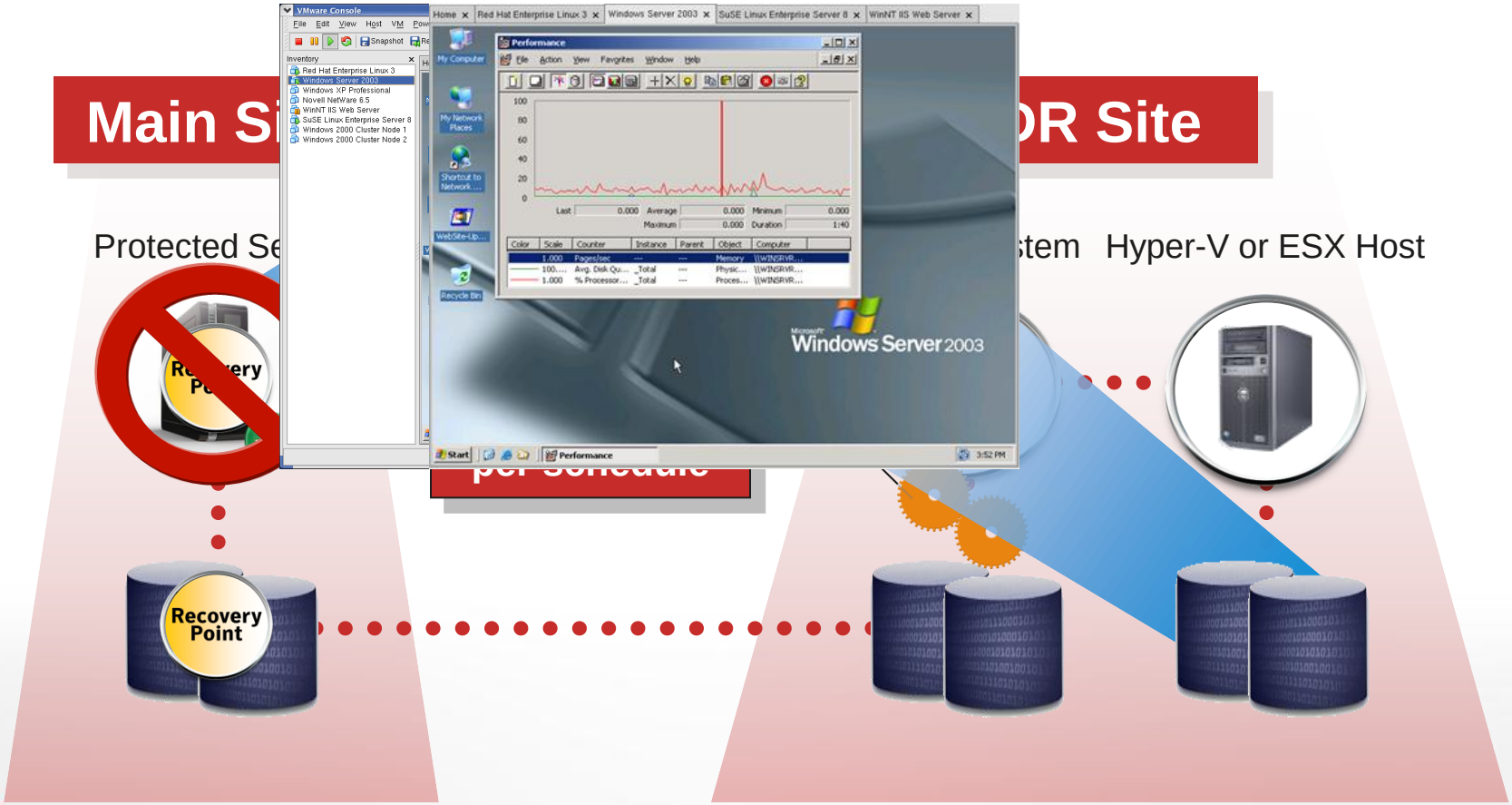


High Availability and Disaster Resilience

- Everybody wants uninterrupted services!
- Define and prioritize your mission critical services?
- What is the required uptime for those
  - 99.9? 99.99? 99.999? 99.999999……99?
- More nines often means more $$$$$ (licenses and HW)
- Start by defining RTO & RPO
- Combine different technologies and products to achieve your goals
- Do not forget about backup, regardless all other HA/DR mechanisms in place

High Availability and Disaster Resilience

- Simple, low cost scenario for business continuity

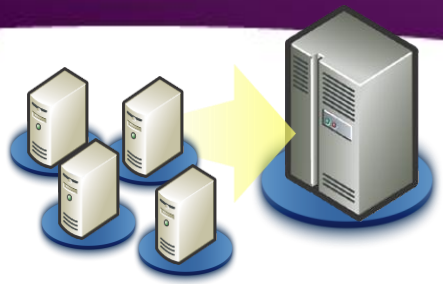


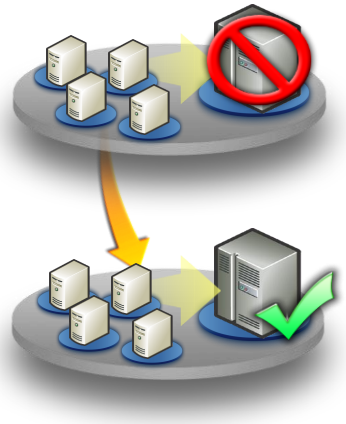
Virtualisation

- Hot topic, helping to make ICT greener
- Virtualizing everything
  - Server virtualization, application virtualization , desktop/session virtualization
- Already available good HA mechanisms and dynamic memory management
- Also introducing challenges:
  - Security
  - Management
  - Backup

Virtualisation, continued

- Production server consolidation
  - Consolidate low-utilization workloads
  - Legacy OS and application re-hosting
  - Resource partitioning (limit resources per VM)
- Business continuity management
  - Workload deployment and provisioning
  - OS and application patching (swap VMs)
  - Isolation / sandboxing
- Dynamic data center
  - Workload mobility
- Development and test
  - Rapid provisioning of multiple virtual machines
  - Undo-disk and save state helpful





Management

- Managing Servers (physical or virtual), workstation even mobile devices
  - Operating System Deployment
  - Software Distribution
  - Software Update Management
  - Asset Intelligence
  - Desired Configuration Management
- Recommendation to use specialized suites
  - Symantec Altiris suit
  - Microsoft System Center portfolio

How to get there

1. Define long term goals
2. Research available solutions and technologies
3. Divide large infrastructure project into phases
4. Invest in people

> “It is not the beauty of a building you should look at; its the construction of the foundation that will stand the test of time.”

David Allan Coe

Thank You

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