

# ZENworks and eDirectory

Ensuring scalable design

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A little history...

# A little history... NDS and eDirectory

- NDS was first released in 1993 with NetWare 4.0
  - At this time networks tended to be LAN centric
  - Primary protocol was still IPX
  - Designs rarely took account of WAN connections
- eDirectory was released in 1999
  - Ran on multiple platforms – NetWare, Windows and Solaris
  - Designed to be scalable
  - Preferred protocol now TCP/IP
  - WAN aware designs

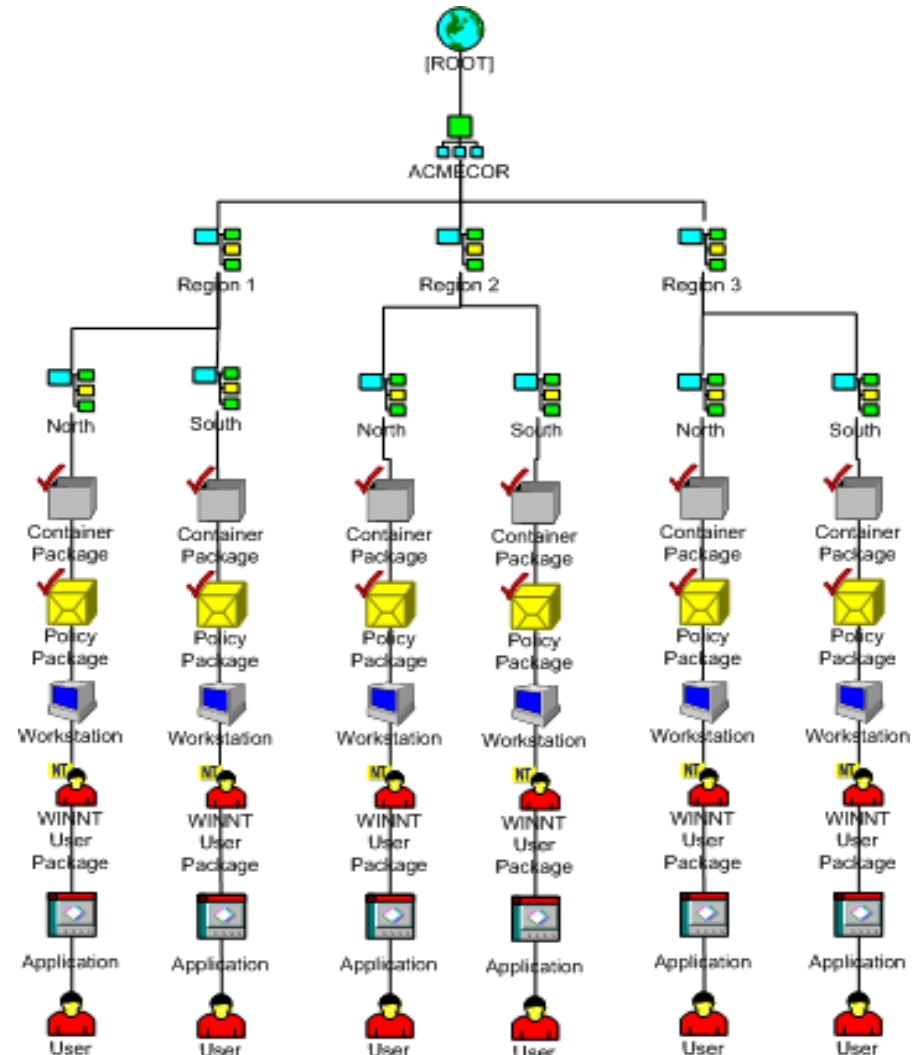
# A little history... ZENworks

- ZENworks for Desktops 1.0 was released in 1998
  - Managed only desktops – no server product
  - Relied on the NetWare Client
- ZENworks 6 Suite released in 2003
  - Provided an suite to manage desktops, servers and handhelds
  - Supported 'clientless' with the ZENworks Middle-Tier
- ZENworks 7 released in 2005
  - Stronger integration between products
  - Now includes ZENworks Asset Management
  - OEM agreement for Patch Management

# NDS design for ZENworks

# NDS Design for ZENworks

Once upon a time,  
all NDS designs  
looked similar to  
this one.



# NDS Design for ZENworks

- This design is based on NDS rules:
  - Partition around the WAN at the top of the tree
  - Do not have more than 1,500 objects in a partition
  - No more than 15 child partitions to a parent
  - No more than 10 replicas per partition
  - Replicate locally where possible
- Although these were only guidelines, they were followed strictly until the release of eDirectory.
- NDS WAN traffic is kept to a minimum with this design

# NDS Design for ZENworks

- There is nothing wrong with this design, however it has limitations.
  - Management is de-centralised as objects are located at leaf-points in the tree
  - Requirement for multiple objects to be created
  - Difficult to support roaming for users
  - Makes upgrades more complex

What has changed?

# What has changed?

Things have changed. These changes allow more flexibility in eDirectory design and include:

- More powerful hardware
- Cheaper hardware
- Faster and more efficient WAN links
- Improved LAN configuration
- TCP/IP is now the primary protocol
  - > more efficient on large networks than IPX
- New eDirectory features
  - > Transitive Synchronisation
  - > Changes in the numbers of objects, replicas, partition placement rules

# What has changed?

- These changes and improvements have allowed for a more 'service' orientated ZENworks design model to be developed.
- The design framework has become known as :  
**the 'ZENMaster Model'**
- It is used by Novell Consulting in ZENworks engagements worldwide
- It is a set of guidelines and recommendations for providing a standard and stable eDirectory design for ZENworks.

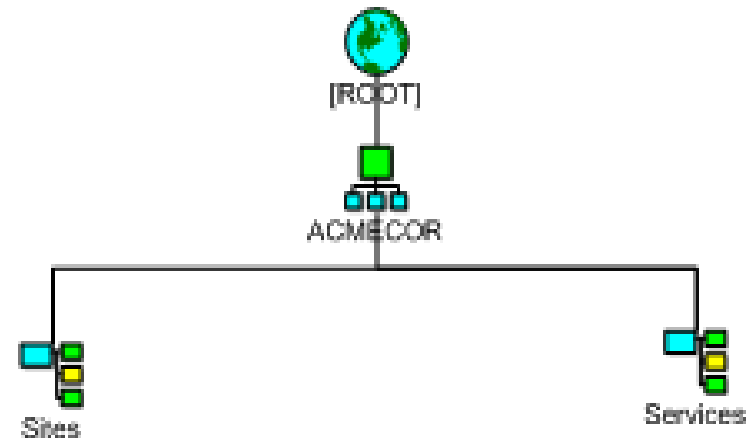
# eDirectory design for ZENworks

# Important Note

- The ZENMaster Model is a set of guidelines (as mentioned on the previous slide).
- It is not the 'gospel' for eDirectory and ZENworks design.
- The intention of the model is to provide a flexible, but manageable, infrastructure design which can be modified to work for many customers.
- The next slides will build an example ZENMaster model as deployed by Novell Consulting in the UK.

# Top level design

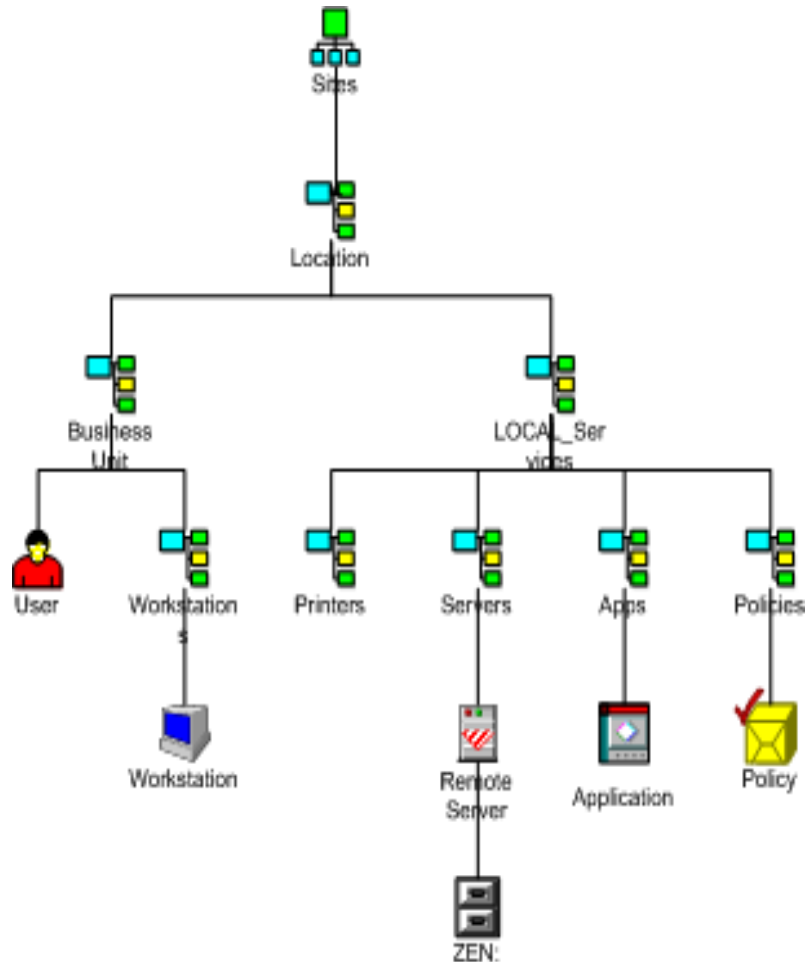
- At the top of the tree we have two Organisational Unit objects :
  - > Site / Region / Organisation
  - > Services



- The 'Site' organisation can be split to represent countries, geographies or different sites.
- The 'Services' organisation will hold regional and global service objects

# Sites Organisational Unit

- The Sites OU holds users, workstations, and ZENworks objects.
- All application objects in the Sites OU have been replicated using Tiered Electronic Distribution (TED)



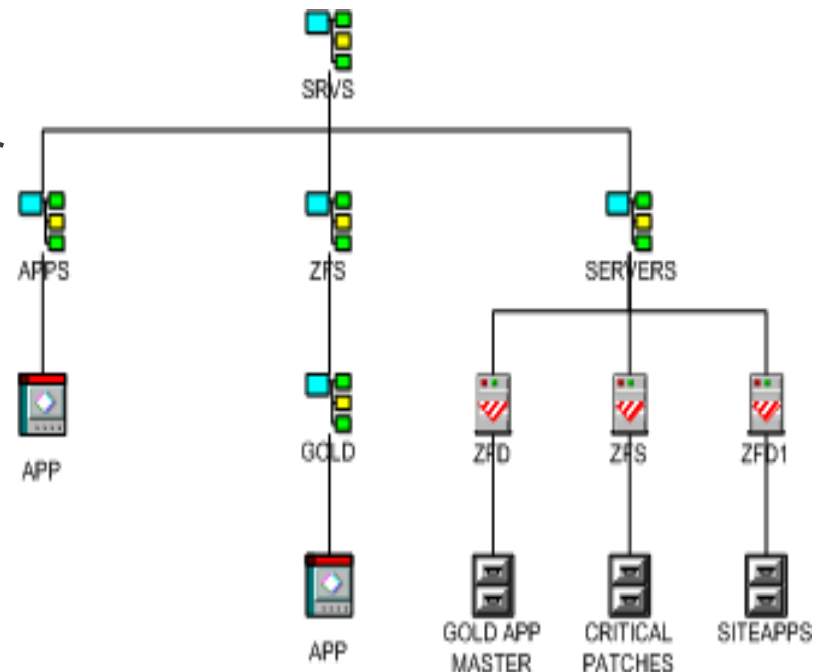
# Sites Organisational Unit

- Ensures that each site can operate in the case of a WAN failure.
- Intelligent partitioning and replication of the 'users' container will allow for roaming between sites. Design for this at the outset.
- Where possible avoid the use of groups. Design so that ZENworks objects can be container associated. Groups can slow things down!
- Site containers should be identical. Create naming conventions and stick to them.

# Services Organisational Unit

- The Services OU holds global IT services objects. For ZENworks these will include:

- ZENworks TED Distributor
- AWSI Server / Imaging Server
- Gold Build application server



# Services Organisational Unit

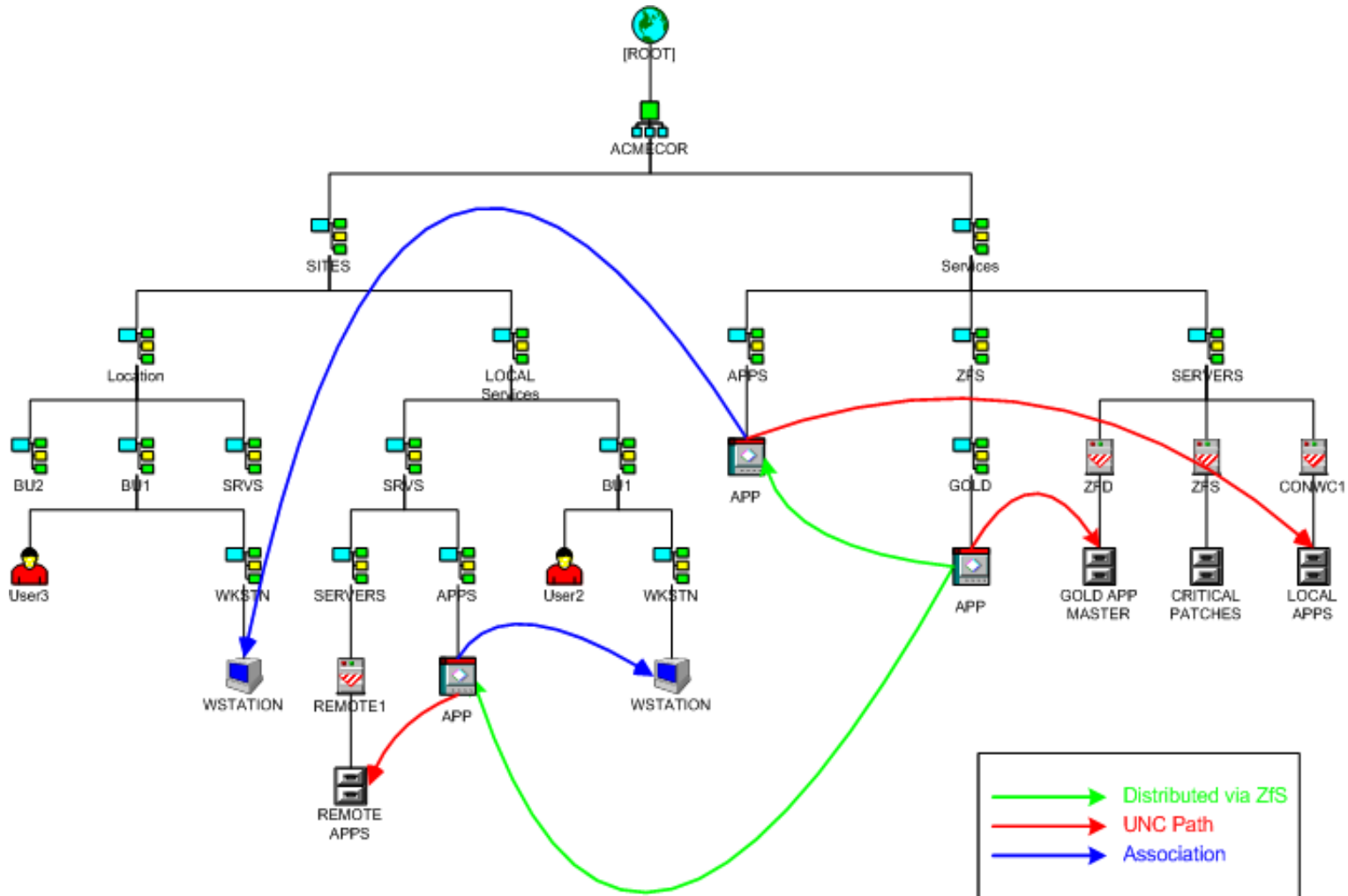
- The Services OU represents physical resources in the company datacentre.
- Multiple datacentres can be in a single Services OU – but only if the WAN is LAN-Speed.
- The Services OU is not unique to Resource Management objects. It can hold the DS replica servers, border servers, Identity Manager servers and more.

Tying it all together

# Tying it all together

- TED Gold objects are created or updated in the Services OU ONLY
- Applications can be replicated, and associated, to either user or workstation containers as long as they have separate subscribers.
  - This is because a subscriber can only support one 'working context'
- An update to a Gold object will replicate automatically to all locations at the next scheduled Distributor refresh

# How does this all look?



What are the benefits?

# What are the benefits?

- Reduced administration for corporate objects since the 'Gold' master is replicated as a master object.
- Central control ensures that applications remain organised and containers to not become cluttered with 'local' versions.
- Common object location and view for all sites.
- Simpler object association between sites.
- Better security control can be implemented.

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