

Windows Servers and Services Managed by TRIUMF Computing Services

Server Hardware Descriptions


TRWINAPP1
Dell 2850 w/ single Xeon 3.0G
and 2 x 730B SCSI, Win 2003 Server


TRWINV01
Dell PowerEdge 2950
w/ two Quad-core Xeon E5430 CPUs,
16GB 400MHz Memory,
6x1TB SATA HDDs in RAID5, 4Gb Nics,
Virtual host for
TRWINDATA
TRAINING
SMARTSTND (TRWINDEPLOY)
TRWINION - soon
Win 2008 Server


TRWINDC
Running on Virtual host VM017
768MB ram allocated
16GB disk space allocated
Win 2003 Server


TRWINSECURITY
Dell PowerEdge 1950
w/Xeon E130 CPU @ 2.0Ghz,
4GB RAM, 3x 140GB SAS drives in RAID5
Win 2003 Server


TRWINBACKUP
Dell PowerEdge 860
Win with 1.6GHz 2160 CPU,
4GB ECC RAM, 2 x 250GB HDD in RAID1
Win 2003 Server


MD1000 Storage Array
15 x 750GB SATA HDDs in RAID5-9.1TB


TRWINION
Running on Xen Virtual host VM01
3GB ram allocated
14GB disk space allocated
Win 2003 Server


TRWINDATA
Running as a virtual host on TRWIN-V01
1.5GB RAM allocated
Disk space allocated:
C: 1 GB
Data (Users) - 1TB
Data (Groups) - 1 TB
Data/Apps/Admstrch - 250GB
Win 2003 Server


PC565
Clone PC with P4 3.2GHz, 2GB RAM,
250GB System disk and 4x400GB JBOD array
Win 2003 Server


TRN7K3
Dell PowerEdge 2050
Dual 3.0GHz Xeon
6GB RAM
2 x 80GB SATA disks - RAID 1


SMARTSTND
Running as a virtual host on TRWIN-V01
768MB RAM allocated
Disk space allocated:
C: 60GB
Win 2003 Server


WINPRINT01
Dell PowerEdge SC1425
Single Xeon 3.0GHz
4GB RAM
2 x 80GB SATA disks - RAID 1


WINPRINT02
Dell PowerEdge SC1425
Single Xeon 3.0GHz
4GB RAM
2 x 80GB SATA disks - RAID 1


TRIDOM01
Dell PowerEdge SC1425
Single Xeon 3.0GHz
2GB RAM
2 x 80GB SATA disks - RAID 1


TRIDOM01
Dell PowerEdge SC1425
Single Xeon 3.0GHz
2GB RAM
2 x 80GB SATA disks - RAID 1

The diagram, titled "Other Managed Systems", is enclosed in a rounded rectangle. It contains four distinct categories, each represented by a vertical line on the left and a text block on the right:

- PHOTOBADGE**
Photo capture and management
workstation for security badges
- KIPPC**
Controller PC for Design Office
KIP plotter
- SECURITY**
Door entry monitoring
workstation in Cyclotron Control
Room
- GASCANPC**
Trailer Gg workstation for
document scanning
- DOWIDEO**
Design Office presentation PC
and large screen.
- XP01 to XP11**
Public Windows PCs
- PC9xx**
Pool of older PCs for loan

Services Provided per Server	
TRWINDATA - Data Storage for: - Groups folders - User home folders - APPS & Scratch Folders - Print spool for Design Office	TRWINAPPS - ACAD License Pool - Track it work order and asset mgmt - EDMWorks server - SolidWorks distribution - AM Workflow
TRWINDC Primary Domain Controller for TRWIN	TRWINBACKUP - Attempo - laptop backup service - CA BrightStor Windows backup service - HS for CA BrightStor
PC866 Temporary data imaging of TRWINDATA using Robocopy	SMARTSND - Netix SmartSend - MS Configuration Service
TRWINSECURITY - Symantec Antivirus Management - Solidworks License Manager - License managers for: Mentor Graphics, Vector Fields-Opera, GeoDTool, Cadence - Webdoor access to TRWINDATA - WSUS - Windows Server Update Services	TRAINING Adobe Connect Pro
TRWINPRINT Windows Print server - pending	TRWINMON - Symantec Endpoint Protection Manager - OpenML Server - license monitoring
TINTZ63 Windows Terminal server	WINPRINT0102 Cluster Windows Print server
MISWIN01 Summit eNVI Security server	TRWINW01 Windows Hypervisor hosting several Win2003 servers
	TRIDM00102 Domain Controllers for TRULIF Domain

Network Info and Physical Location of Servers

The diagram illustrates the process of migrating a Windows domain from TRWIN to TRIUMF. At the top, a vertical dotted line represents the migration path. On the left, the TRWIN Domain is shown with a server icon and a list of servers: TRWINDATA, TRWINAPPS, TRWINDC, TRWINSECURITY, TRWINBWIN, TRWINBACKUP, TRWINVOL1, TRWINWINRDC, PCS06, and TRWINDEPLOY. Below this is a list of users represented by three person icons. On the right, the TRIUMF Domain is shown with a server icon and a list of servers: WINRRNT01, WINRRNT02, TRIDCM01, and TRIDCM02. Below this is a list of users represented by three person icons. In the center, a large purple arrow points from TRWIN to TRIUMF, with the text 'Domain migration complete: Q2 2010' above it. Below the arrow is a blue and yellow interlocking puzzle piece icon with the text 'Trust Relationship' below it. At the bottom, a horizontal dotted line represents the network connection. Below this line, the text 'Windows PCs and laptops' is shown.

Windows Domain Migration

Domain migration complete: Q2 2010

TRWIN Domain

Servers

- TRWINDATA
- TRWINAPPS
- TRWINDC
- TRWINSECURITY
- TRWINBWIN
- TRWINBACKUP
- TRWINVOL1
- TRWINWINRDC
- PCS06
- TRWINDEPLOY

Users

TRIUMF Domain

Servers

- WINRRNT01
- WINRRNT02
- TRIDCM01
- TRIDCM02

Users

Trust Relationship

Windows PCs and laptops

Printers		
Printers available on the WINPRINT print queues. Updated May 28, 2009		
Printer Name	Manufacturer/Model	Location
CLAS10 HP	CP3235	MOB - Information Office Room 5
CLAS11 QMS	Magic	Trailer 6g
CLAS12 Kyocera	FS-C5020N	Chem Annex Rm 204
CLAS13 Canon	IR 2000	SAC II Area 241
CLAS14 HP	Color LaserJet 3600	Safety Trailer 8b
CLAS14 HP	Color LaserJet 4700	Main Cx. Control Room
CLAS14 Kyocera	FS-C5020N	Trailer 1h
CLAS5 HP	Color LaserJet 4550	Trailer 6g
CLAS6 HP	Color LaserJet 4550	SAC II Area 241
CLAS7* HP	Color LaserJet 2500n	Spare
CLAS8 Kyocera	FS-C5030N	Proton Therapy
JET10 HP	DesignJet 5500PS	SAC II Area 241
JET8 HP	DesignJet 2000CP	SAC II Area 241
JET9 HP	DesignJet P5500M	MOB Rm 97
LAS11 HP	LaserJet 6MP	Service Annex Rm 211
LAS12 HP	LaserJet 4000N	Service Annex Rm 210
LAS13 Xerox	M201	Service Annex Rm 210
LAS14 HP	LaserJet 1200dn	Biomed Building
LAS15* HP	LaserJet 4000N	Trailer 1M
LAS16 HP	LaserJet P3005	Biomed Building Rm 311
LAS17 HP	LaserJet 4050	M11 Counting Room
LAS17B HP	LaserJet 1200	SAC I
LAS18 HP	LaserJet 2015	Machine Shop
LAS19 Xerox	M201	Machine Shop
LAS20 HP	LaserJet 4000N	Trailer 4g
LAS21 HP	LaserJet 4000N	Trailer 1F
LAS22* HP	LaserJet P2015DN	Trailer A
LAS23* HP	LaserJet 4250	Trailer 1h
LAS27 HP	LaserJet P1615DN	Chem Annex - Rm 007
LE33 Lexmark	Optio 1512	MOB Annex Office - Rm 101
LE34 HP	LaserJet 1200	MOB Rm 91
LAS32* HP	2101NT	Trailer 2g
LE35 HP	LaserJet 2430	Trailer 3F
LE37 HP	LaserJet 351	MSA Area 36
LAS38* HP	LaserJet P2015dn	Trailer 8v
LAS4 HP	LaserJet+4	Main Cx. Control Room
LAS41 Lexmark	T630	MOB Rm 84
LAS45 HP	LaserJet 561	MOB Cx. Control Room Rm 102
LAS53+ HP	LaserJet 4+	Safety Office
LAS54 HP	P3005DN	Accounting
LAS55* Ricoh/IBM	Infoprint 1532	Stores Office
LAS56 HP	LaserJet 4050N	MOB - II - 9F Group
LAS58 HP	LaserJet 351	MOB Rm 119
LAS6 HP	LaserJet 4000	SAC I Rm 233
LAS61 HP	LaserJet 4000N	SAC I Counting Rm 118
LAS62 HP	LaserJet 4100	SAC I Rm 3
LAS63 HP	LaserJet 6MP	SAC I Rm 3
LAS65 HP	LaserJet 2500C	Main Cx. Control Room
LAS68 HP	LaserJet 4050	SAC I Rm 130
LAS69 HP	LaserJet 4050TN	SAC I Rm 130
LE57 Brother	Easey Printer	TRIUMF House
LE57B HP	LaserJet 4050	SAC I HE Counting Room
LE57Z HP	LaserJet 4MP	Remote Handling
LE57S HP	LaserJet 2100	MOB Rm 85
LE57A HP	LaserJet 251	MOB Counting Rm
LE57B HP	LaserJet 4050N	MOB Counting Rm
LE57E HP	LaserJet 5000	Remote Handling
LE57T HP	LaserJet 4050	Detectors Facility
LE57H HP	LaserJet 1200DNT	MOB Rm 37
LAS8 Spare	Printer	
LAS80 HP	LaserJet 4100	Remote Handling
LAS84 HP	LaserJet 2300	ISAC I Rm 109
LAS85 HP	LaserJet 4100	M11 Counting Rm
LE36 HP	LaserJet 1150	MOB
LE587 Xerox	M201	MOB - Director's Office
LE588 Xerox	M201	ISAC I - Design Office
LE589 Xerox	M201	Detectors Facility
LA55 HP	LaserJet P2015	SAC I Rm 131
LA59 HP	LaserJet P2015DN	SAC I Rm 130
XEROX001 Xerox	7655	MOB Rm 101
XEROX002 Xerox	7675	MOB Mail Room
XEROX003 Xerox	7675	MOB Mail Room
XEROX004 Xerox	7675	MOB Mail Room
XEROX005 Xerox	7655	SAC I Rm 130

Role View	
Domain Controllers • TRAVINC - primary • TRWINAPPS • TRWINHORIZ	Data Storage • TRWINDATA
Virtual Host Serving • TRWINHV01	Automation /Productivity • SMARTSEND - MS Deployment Service • TRWINAPPS - Track it • TRWINMON - Open-ML Platform
Printing • TRWINPRINT (pending) • WINPRINT • TRWINDATA - for Design Office	Applications • TRWINAPPS • TRWINDATA
Protection • TRWINBACKUP - CA Backup, Atropo • TRWINSECURITY - Symantec AV • TRWINSECURITY - Windows Server Update Service • TRWINAV - Symantec AV • PC505 - Server data imaging	License Serving • TRWINSECURITY • TRWINAPPS
Web Services • MISWEB - desktop.humt.ca • TRWINSECURITY - Webfolders	

Connecting to Windows Servers and Services

The diagram illustrates a network architecture for connecting to Windows Servers and Services. A central hub, labeled **TRIUMF Switches**, is connected to several key components:

- TRIUMF WLAN**: A wireless network interface.
- TRIUMF Firewall**: A network security device.
- TRIUMF Router**: A network router.
- TRIUMF VLAN**: A Virtual Local Area Network.
- Domain Controller**: A server that manages authentication and authorization for users.
- TRIUMF Security**: A server responsible for security management.
- TRIUMF Data**: A server for data storage and management.
- TRIUMF Printers**: A server for managing printers.

External connections include:

- Internet**: A cloud representing the global network.
- Users connecting from home**: A group of users with a laptop and a house icon.
- All other Windows Servers**: A group of server icons.

Additional labels and components include:

- Users and computers within TRIUMF**: A group of users with a laptop and a desktop computer.
- Webdav control for external access to TRIUMFDATA folders**: A label indicating a specific service provided by the TRIUMF Security server.
- Authentication on Windows Domain Controllers**: A label indicating a specific service provided by the Domain Controller.
- TRIUMF printers via WINPRINT**: A label indicating a specific service provided by the TRIUMF Printers server.

Data Protection Services

The diagram illustrates the Data Protection Services architecture. It shows data sources on the left (Windows Servers, TRIUMF Windows PCs, TRWINDATA Groups, Users, Apps, PC505 (mirror)) and data targets on the right (MAC Systems, TRIUMF Laptops, MD1000 Storage array, Tape unit). The central component is the TRWINBACKUP server. Data flows from the sources to the TRWINBACKUP server and then to the targets. Specific services are labeled: Nightly Sync with Robocopy, Backups with CA BrightStor Clients, Data sync via Attempo, and Archive to Tape.

```

graph LR
    subgraph Sources
        WS[Windows Servers]
        TWPC[TRIUMF Windows PCs]
        TRW[TRWINDATA Groups, Users, Apps]
        PC505[PC505 (mirror)]
    end

    subgraph Targets
        MS[MAC Systems]
        TL[TRIUMF Laptops]
        MDA[MD1000 Storage array]
        TU[Tape unit]
    end

    TRW -- "Nightly Sync with Robocopy" --> PC505
    TRW -- "Backups with CA BrightStor Clients" --> TRWB[TRWINBACKUP]
    TRWB -- "Data sync via Attempo" --> MS
    TRWB -- "Data sync via Attempo" --> TL
    TRWB -- "Archive to Tape" --> TU
    TRWB -- "Archive to Tape" --> MDA
  
```

Hyper-V Allocations on TRWHV01

TRWHV01

- Dell PowerEdge 2950
- Dual Xeon quad-core E5430, 2.5Ghz,
- 2GB cache
- 16GB Memory
- 6 x 1TB SATA drives in RAID5

CPU - Total 8



Category	Allocation
TRWHV01DATA	2
SQAARTSD	2
TRAINING	2
TRWHV01MON	2
Host System	0
available	0

Memory - Total 16GB



Category	Allocation
TRWHV01DATA	6.4
SQAARTSD	3.2
TRAINING	1.6
TRWHV01MON	1.6
Host System	1.6
available	1.6

Disk space - Total 3.7TB



Category	Allocation
TRWHV01DATA	1.85
SQAARTSD	0.37
TRAINING	0.37
TRWHV01MON	0.37
Host System	0.37
available	0.37

The diagram illustrates the Windows Update Service architecture. At the top, the **Microsoft Windows Update Centre** is connected to the **Internet**. The Internet cloud contains a box stating: "WISUS downloads all relevant updates and stores them." Below the Internet, the **TRINSECURITY Windows Server Update Services** are shown. A box here states: "Each update is checked by TRIMUP Computing Services to ensure it is stable and required." An arrow points from the TRINSECURITY services to a box labeled: "Updates are pushed out to Windows P.Cs, laptops, and servers which are joined to the TRWIN Windows Domain." This box is connected to a large green box representing the domain, which contains icons of various devices and the text: "362 systems as of March 31, 2009". Below the TRINSECURITY services, a decision diamond asks: "Update ready for distribution?". If the answer is "N" (No), the flow loops back to the check step. If the answer is "Y" (Yes), the flow proceeds to the distribution step.

Terminal Service

TNT2K3 is a Windows 2003 server providing remote Windows desktops for Linux, Mac, and Windows systems.

Authentication via TRWVN (preferred) or TRUIMP domains.

Applications available on TNT2K3:

- Adobe Acrobat 7 Pro
- Java: Base Pack Pro 9
- FSecure SSH Client 5.2
- GSView 4.7
- USB4U 8.0
- Macromedia Dreamweaver MX 2004
- Microsoft Office 2003 – Word, Excel, Access, PowerPoint, Publisher
- Microsoft Project 2007 Pro
- Mozilla – Firefox, Thunderbird
- Origin 7.5
- SolidWorks DWGEDITOR 2007
- SRM 2005
- Matlab K2000a
- Mathematica 6

Windows Software licensing

Software license pools on TRWINAPPS and TRWINSECURITY:

- AODD 2000
- Solidworks 2006 Pro
- DWGEditor 2007
- Master Graphics
- Opera Pagine
- ADS 2006 (Advanced Design System)

Standalone software – Charge backs or Purchase orders may be required:

- Microsoft Office XP Pro
- Microsoft Office 2007 Pro
- Microsoft XP Pro OS
- Microsoft Project 2007 Pro
- Microsoft Visio 2007 Pro
- New CD/DVD burner
- Symantec AntiVirus
- CA BrightStor Backup
- Attemp Backup
- WinZip 8
- Adobe Acrobat 8 Pro Win/MAC
- Adobe Acrobat 8 Std Win
- Adobe Photoshop Elements 6
- Adobe Dreamweaver CS3
- MalwareBytes