Colossal Dynamics Corporation

Sample Internal Network Documentation

Colossal Dynamics Corporation

Sample Internal Network Documentation

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

OVERVIEW

This file is a combination of various documents ranging from policies to topologies with emphasis on the content; mainly to showcase the different technologies I have had exposure to in a professional environment and the thought processes behind them. The following documents have been heavily altered and are currently out of date as implementation is concerned, these documents are examples of older topologies and policies that were either implemented successfully or phased out completely by newer policies.

These documents do not include any proprietary company information and are owned by Colossal Dynamics Corporation; distribution is strictly prohibited, and the included documents are only allowed for use within this portfolio.

Colossal Dynamics Corporation

Board Meeting Agenda

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

NAMING CONVENTION OVERVIEW

The current network is in dire need of an organization overhaul; this will allow for easier machine identification, structured environment, and easier network troubleshooting and management. We have created the following departments for general use.

- Production – Office Team
- Development – Programmers & Information Technology Team
- Design – Apple Environment & Designers
- Offsite – VPN Users & Remote Sales

PROPOSED USERS & EXCHANGE SCHEME

In regards to user & exchange naming structure; the first initial of the individual will be used in conjunction with their complete last name. ie. John Smith would be JSmith.

The current situation does not allow for a complete transition to the new nomenclature, however, all new users from here on in will be using the presented scheme.

CURRENT SCHEME

MACHINE	USER	USERNAME	OS	DEPTARTMENT	PROPOSED
dev-renatto	Renatto		WIN	Development	CDC-D01
CDC-ws-07	XPS		WIN	Development	CDC-D02
ws-21	Rob	rshoenstein	WIN	Development	CDC-D03
Jkhp	Charles		VIST	Development	CDC-D04
Vista002	Brian	bCDCiano	WIN	Production	CDC-P01
confrencemedia	N/A	customerservice	WIN	Production	CDC-P02
CDC-freelance	Bob		VIST	Production	CDC-P03
CDC-spare	N/A, C&P	N/A	WIN	Production	CDC-P04
CDC-ws-03	Elizabeth		WIN	Production	CDC-P05
CDC-ws-22	Erin		WIN	Production	CDC-P06
Kate-new	Karen		WIN	Production	CDC-P07
Kate-tablet	Katelynn		WIN	Production	CDC-P08
Reception	Sherri		WIN	Production	CDC-P09
Ron	Mark		WIN	Production	CDC-P10

Server01	N/A	Administrator	WIN	Server	SRV-DC
Si-srv-sql	N/A	N/A	WIN	Server	SRV-SQL
Si-srv-web	N/A	N/A	WIN	Server	SRV-WEB
cdc-web-01	N/A	N/A	WIN	Server	SRV-DWEB
Si-srv-xmpie	N/A	N/A	WIN	Server	SRV-XMPIE
Studio-Bobbie	Bobbie		OSX	Design	Studio-Bobbie
Studio-Christen	Christen		OSX	Design	Studio-Christen
Studio-JT	JT		OSX	Design	Studio-JT
Studio-Lenny	Lenny		OSX	Design	Studio-Lenny
Studio-MacPro3	Mali		OSX	Design	Studio-Mali
Studio-Matt	Matt		OSX	Design	Studio-Matt
Studio-Ryan	Ryan		OSX	Design	Studio-Ryan
StudioServer	N/A	N/A	OSX	Design	Studio-Server
Kris Velez's Computer	Kris				

CURRENT ISSUES

MACHINE	USER	USERNAME	OS	DEPTARTMENT	PROPOSED
Kris Velez's Computer	Kris			Offsite	UPGRADE
RECEPTION	N/A		VIST	Production	UPGRADE
SALES_1	N/A		VIST	Production	UPGRADE
SALES_2	N/A		VIST	Production	UPGRADE
Studio-Lenny	Lenny		OSX	Design	UPGRADE
Studio-Bobbie	Bobbie		OSX	Design	UPGRADE
Studio-Christen	Christen		OSX	Design	UPGRADE

The issue remains that Vista Home Premium does not allow Active Directory integration; thus users cannot login with their network credentials and must use local administrator accounts to complete their day-to-day duties.

The OSX machines are in need of upgrading for other purposes; their integration with active directory will soon be discontinued and it is imperative that they be upgraded to leopard so that everyone on the design team can have some structure, format and share structures.

PROPOSED SCHEME

In the past many different naming conventions have been implemented within this network in regards to workstation names; it is time to stop and re-evaluate the network's current situation. As far as efficiency is concerned; nobody can locate the machines that are currently catalogued and there is no common understanding of where anything is located.

- [P<#>] - Production – Office Team
- [D<#>] - Development – Programmers & Information Technology Team
- [Studio<Name>] - Design – Apple Environment & Designers
- [R<#>] - Offsite – VPN Users & Remote Sales

IMPLEMENTATION: PART I
Workstation Naming Scheme

There are two paths that can be taken to implement these changes to the network; 1] A gradual transition to the new naming structure; 2] a complete network transition all at once.

Each scenario has its advantages and disadvantages, a gradual transition will allow for a smooth transition over an extended period of time, however, this process requires constant attention and care as each machine is transitioned and monitored. The second scenario will revamp the network all at once and require a day or two to iron out any and all errors that might occur due to the transition.

Either scenario will result in partial network downtime. The first scenario will extend the implementation and ease into the transition smoothly, while the latter will be executed quickly and then closely monitored until fully functional.

IMPLEMENTATION: PART II
User Naming Scheme

This portion of the naming convention implementation can take quite some time depending on which, if any, implementation method is chosen. At this moment in time, there are many different username & email naming schemes in use within Colossal Dynamics.

Some users have john@CDCorp.com while others have jsmith@CDCorp.com; this is somewhat acceptable in smaller businesses that only have a few employees. As this company continues to expand, a scheme needs to be implemented that will allow future users to be added without confusion or duplication of existing users.

If the current system is acceptable, future users will be named according to this new scheme that will be the end of it; however, if the current scheme becomes problematic and requires an update, the following plan can be initiated.

IMPLEMENTATION: PART III
Email Transitioning Procedure

The following outlines the procedure that would be exercised when transitioning to the new email addresses.

- Every user will have their proper email addresses assigned to them; jsmith@CDCorp.com.
- Their old mailboxes will be configured to forward all their email to their new address.
- Their old email will also be configured to reply to every email sent to that address, notifying the recipient of the user's new address.
- Business Cards can still be used; and when necessary they can be updated with less hassle.

Colossal Dynamics Corporation

Network Upgrade Proposal

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

NETWORK UPGRADE OVERVIEW

The current network is in dire need of an upgrade and an organizational overhaul; this will allow for easier machine identification, structured environment, and more efficient networking overall. We have created the optimal solution to bring the network to a stable and efficient level.

PROPOSED SCHEME

PROPOSED	DESCRIPTON	REASON	COST	STAGE	CURRENT
SRV-VM	Upgrade RAM			I	SI-SRV-SQL
SRVM-C&P	Create a VM			I	N/A
SRVM-WEBDEV	Convert to VM			I	N/A
SRVM-SQLDEV	Convert to VM			I	N/A
SRV-EX	Exchange Only			II	SI-SRV-WEB
SRV-DC	Domain Controller			II	FAB-WEB-01
SRV-FILE	File Only			III	FAB-SRV-FILE
SRV-SNAP	Backup Only			III	SRV-DC
SRV-XMPIE	XMPIE Only			III	SI-SRV-XMPIE

NETWORK IMPLEMENTATION STAGE I

The first stage encompasses a few key elements that must be completed before the remainder of the network can be upgraded.

1. Virtualize Servers using VMWare converter
2. Create VMWare Server with SI-SRV-SQL.
    - Windows Server 2008 with VMWare Server or VMWare ESXi
3. Load all virtual servers are fully functional.

At this point during the entire implementation, if these virtualized servers cannot provide services a choice must be made to either stop or continue; the domain controller (SRV-DC) must be in fully functioning condition for us to move forward with this implementation. If SRV-DC cannot establish services, the entire operation must stop until these issues are resolved.

NETWORK IMPLEMENTATION STAGE II

At this current moment in time, we have one server managing multiple items, which it was not meant to handle. The needs of the network have grown and our existing server cannot meet those demands. Splitting up SRV-DC's responsibilities is the next best course of action.

1. Migrate AD to SRV-DC (FAB-WEB-01)
    - DNS / DHCP / PRINT / AD
    - Verify Settings for SRV-DC
2. Migrate Exchange to SRV-EX (SI-SRV-WEB)
    - Verify Settings for SRV-EX
    - External & Internal

NETWORK IMPLEMENTATION STAGE III

Stage three requires the configuration of SRV-DC to handle the backup snapshots for the VMWare server which we have just setup. This snapshot server will be maintaining the backups for the virtualized servers and will be an essential part of the process.

1. Migrate SQL to SRVM-SQLDEV
2. Migrate Web to SRVM-WEBDEV
3. Create SRV-SNAP for backups
    - Install & Configure Windows Server with VMWare Server or VMWare ESXi.
4. Install & Configure Office Communicator & Sharepoint on SRV-FILE

Colossal Dynamics Corporation

Apple Network Upgrade Proposal

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

OVERVIEW

The Apple portion of the network is in need of a management overhaul; the current setup integrates the Mac workstations with the Windows Active Directory, which does not allow for a deep level of control over the users.

If a new Mac server was purchased, it could be configured to manage user backups, provide structure to the Mac portion of the network, in addition to acting as a second layer of control to prevent unauthorized use of company equipment.

CURRENT SITUATION

Our current setup is not utilizing the existing Mac Server; all of the Mac machines are linked to our Windows Active Directory Domain, which leaves the existing server to handle aperture and file transfers.

If this existing server were to handle user management, backups, file transfers, and aperture all at the same time; there would be serious issues. Right now, the server is having issues handling aperture by itself, loading additional tasks for it to handle would not be a wise choice.

SENARIO A

CODE	DESCRIPTION	PURPOSE	QTY	TOTAL
DTINQ34825	MacPro 2x2.8 Ghz Quad Core /2x1GB/320/256MB ATI HD2600	New Open Directory Server	1	$2,599.99
HDDMS66993	1TB Segate SATA 7200RPM Hard Drive	Server Internal Storage	3	$569.97
APINQ3489	MacPro RAID SAS Controller	Server RAID Controller	1	$800.00
APINT08266	Apple Care Warranty	Warranty	1	$249.00
SWINU3612	Mac OSX Leopard Single User	Tiger to Leopard	3	$389.97
SVCOMM001	Customer Service	Network Configuration	6	$750.00
			Total + Tax	$5,726.41

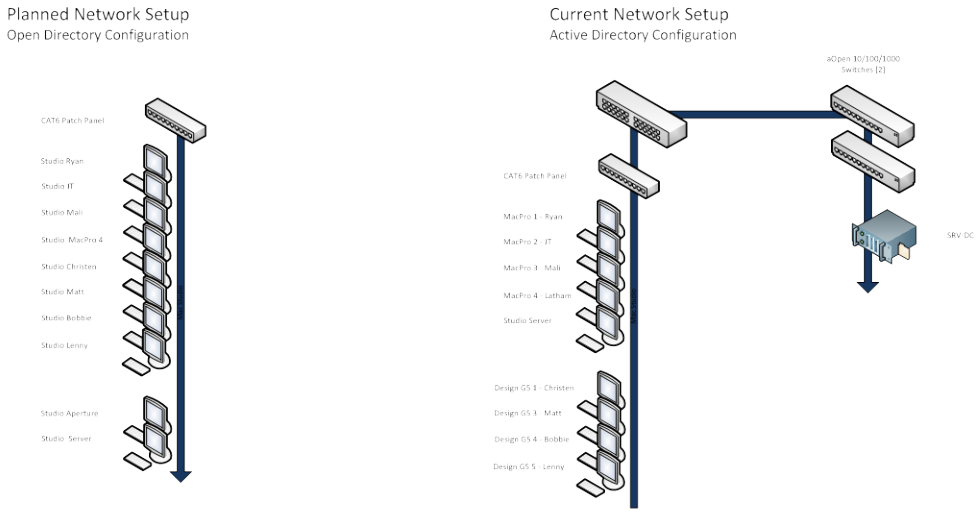
This solution would provide 3TB of internal storage for time machine backup of each individual users ‘work in progress’ data and offload user data backup to the second partition onto their data secondary data drives. The current 3TB storage solution would remain as the network’s archive storage.

SENARIO B

CODE	DESCRIPTION	PURPOSE	QTY	TOTAL
DTINQ34825	MacPro 2x2.8 Ghz Quad Core /2x1GB/320/256MB ATI HD2600	New Open Directory Server	1	$2,599.99
HDDMS66993	1TB Segate SATA 7200RPM Hard Drive	Server Internal Storage	3	$569.97
MISC	6TB VTRACK SATA RAID Array [8 x 750]	External RAID Array	1	$11,149.00
APINT08266	Apple Care Warranty	Warranty	1	$249.00
SWINU3612	Mac OSX Leopard Single User	Tiger to Leopard	3	$389.97
SVCOMM001	Customer Service	Network Configuration	6	$750.00
			Total + Tax	$16,930.56

This solution provides 6TB of usable space for time machine backup which would be backing up all user data as well as 'work in progress' data. The Raid Array storage solution has sixteen bays available for use, each bay accepting SATA drives and at this moment in time, only eight out of the sixteen bays would be filled.

Colossal Dynamics Corporation – Network Topology
Logical Apple Network Diagram – Layout I
Revision Date: Tuesday, January 20, 2009, Alijohn Ghassemlouei



RECCOMENDED SOLUTION

For a long-term solution, it would be a better choice to select 'Scenario B'; this will allow you to add additional hard drives as time goes along when necessary.

Colossal Dynamics Corporation

Internal Drive for Studio-Matt [Matt]

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

REASONING

Within the Macintosh environment each workstation has two internal hard drives; the main hard drive which contains the operating system and applications; the secondary drive contains each individual's work in progress and a backup of the main drive.

At this moment in time, Studio-Matt [Matt's Machine], has no secondary drive; he had a bad drive a while back and it was dumped; currently he is working out of the main drive; which can be dangerous, especially when drive itself is unreliable [old & without a backup solution].

To conform to the rest of the network and to provide a secure location for his files and backup; a single terabyte hard drive is required to act as a secondary drive within Matt's computer. This item can be purchased through MacMedia and will cost roughly $180.00; however, if purchased through Newegg will only cost $120.00.

COLOSSAL DYNAMICS

Colossal Dynamics Inc. – Skynet Colocation Network Topologies

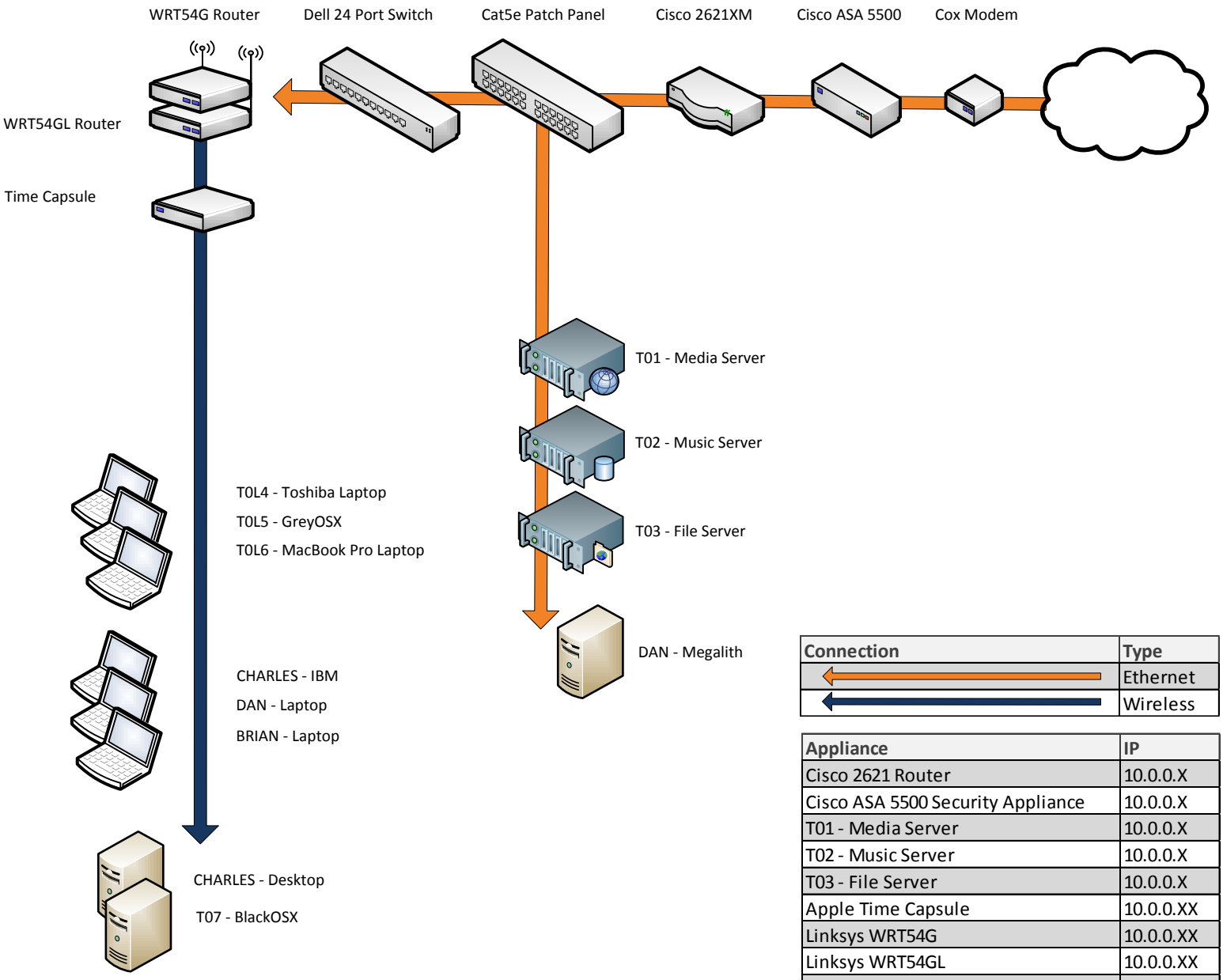
Information Technology Master Document

Revision Date: Saturday, December 6, 2008, Alijohn Ghassemlouei

Colossal Dynamics Inc. – Skynet Network Documentation

Logical Network Diagram – Layout I

Revision Date: Saturday, December 6, 2008, Alijohn Ghassemlouei



Connection	Type
	Ethernet
	Wireless

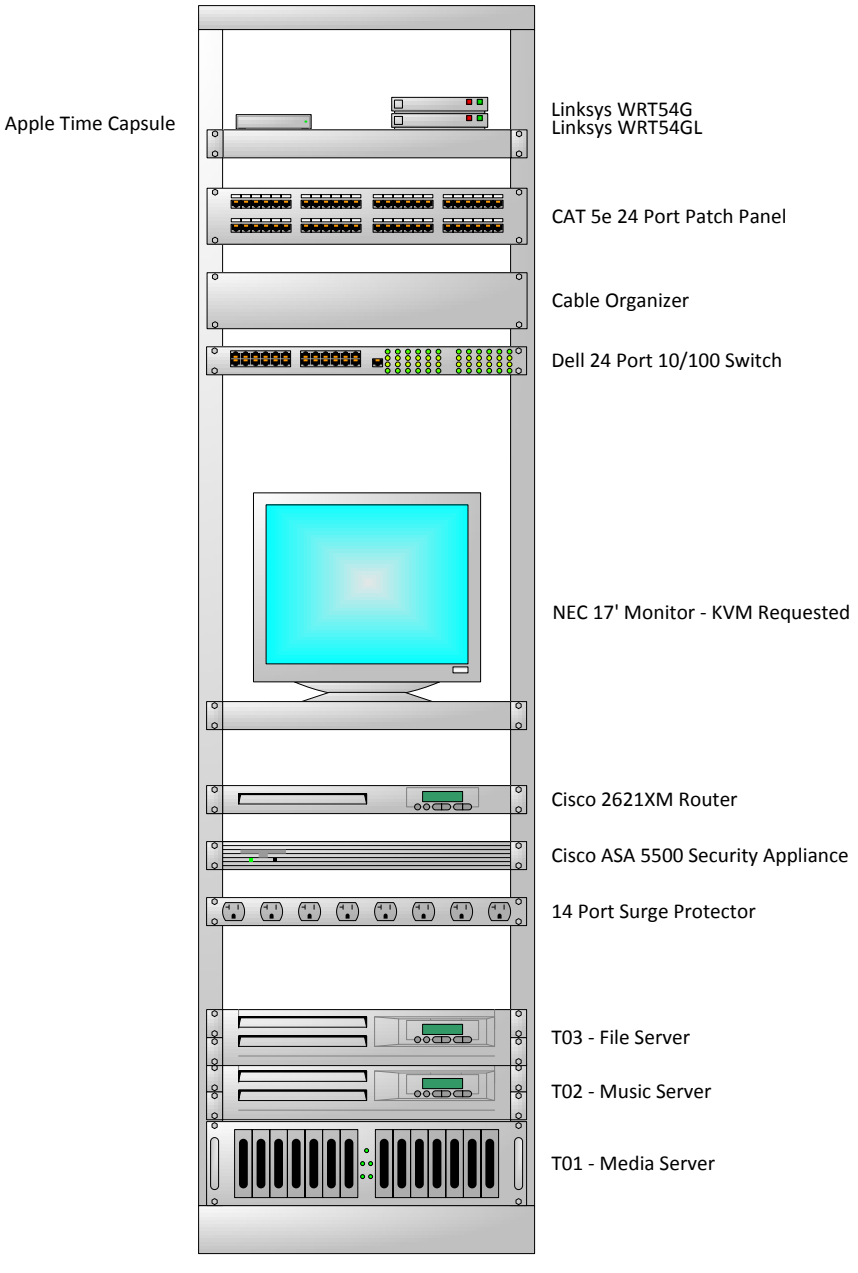
Appliance	IP
Cisco 2621 Router	10.0.0.X
Cisco ASA 5500 Security Appliance	10.0.0.X
T01 - Media Server	10.0.0.X
T02 - Music Server	10.0.0.X
T03 - File Server	10.0.0.X
Apple Time Capsule	10.0.0.XX
Linksys WRT54G	10.0.0.XX
Linksys WRT54GL	10.0.0.XX
Network Camera	10.0.0.XX

Client	IP
T0L4 - Toshiba Laptop	DHCP
T0L5 - Grey OSX	DHCP
T0L6 - MacBook Pro Laptop	DHCP
T07 - BlackOSX	DHCP
DAN - Laptop	DHCP
DAN - Megalith	DHCP
CHARLES - IBM	DHCP
CHARLES - Desktop	DHCP
BRIAN - Laptop	DHCP

Colossal Dynamics Inc. – Skynet Network Documentation

Physical Network Rack – Layout I

Revision Date: Saturday, December 6, 2008, Alijohn Ghassemlouei



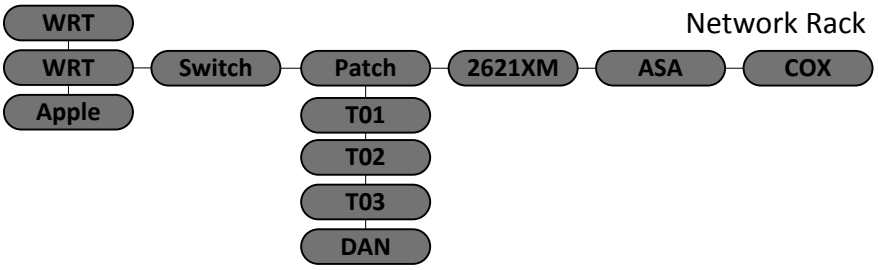
Cox Cable Modem

Colossal Dynamics Inc. – Skynet Network Documentation

Logical Network Diagram – Layout II

Revision Date: Saturday, December 6, 2008, Alijohn Ghassemlouei

Logical Network Diagram



Wireless Clients

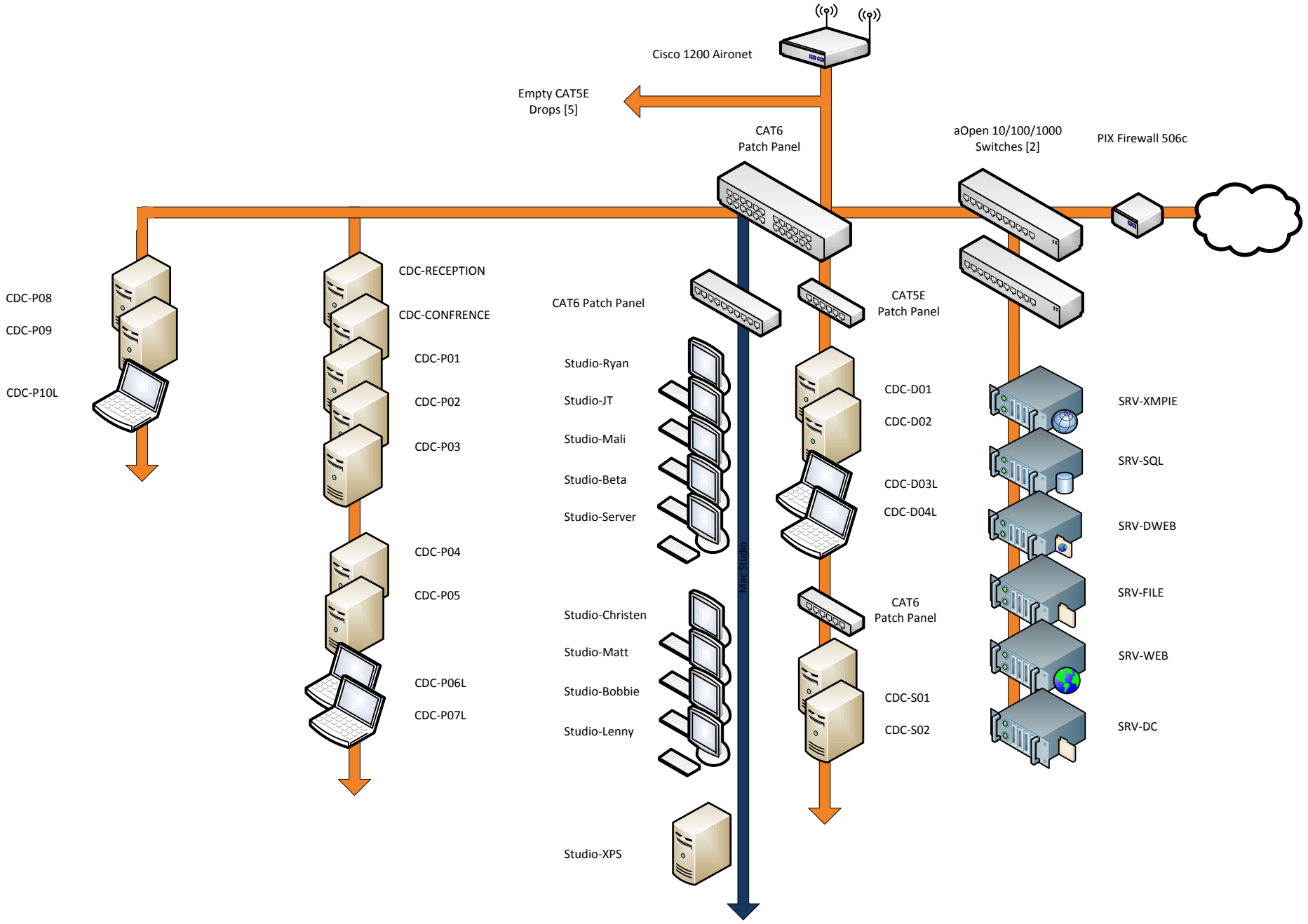
Appliance	IP
Cisco 2621 Router	10.0.0.X
Cisco ASA 5500 Security Appliance	10.0.0.X
T01 - Media Server	10.0.0.X
T02 - Music Server	10.0.0.X
T03 - File Server	10.0.0.X
Apple Time Capsule	10.0.0.XX
Linksys WRT54G	10.0.0.XX
Linksys WRT54GL	10.0.0.XX
Network Camera	10.0.0.XX

Client	IP
T0L4 - Toshiba Laptop	DHCP
T0L5 - Grey OSX	DHCP
T0L6 - MacBook Pro Laptop	DHCP
T07 - BlackOSX	DHCP
DAN - Laptop	DHCP
DAN - Megalith	DHCP
CHARLES - IBM	DHCP
CHARLES - Desktop	DHCP
BRIAN - Laptop	DHCP

Colossal Dynamics Corporation – Network Topology

Logical Network Diagram – Layout I

Revision Date: Monday, April 20, 2009, Alijohn Ghassemlouei



Colossal Dynamics Corporation

Network Upgrade Proposal

Revision Date: Sunday, October 25, 2009, Alijohn Ghassemlouei

OVERVIEW

The Apple portion of the network is in need of a management overhaul; the current setup integrates the Mac workstations with the Windows Active Directory, which does not allow for a deep level of control over the users.

INSTALLATION/USAGE

Default Applications

The policy that is currently in effect requires the following applications to be installed by default on all Apple Workstations within the Colossal Dynamics domain; Adobe CS4 Design Premium, Microsoft Office 2008, Extensis Suitcase Fusion, Firefox, Fetch, Stuffit Deluxe, Adium, Quicksilver, Aperture, Disk Tracker, and Toast Titanium. Printer drivers for the Fiery Print Server must also be installed by default.

Application Usage

Any application that has not been approved by an IT administrator or a Design administrator will be promptly removed. Unapproved installation of pirated software or illegal media on the Colossal Dynamics domain will not be tolerated; legal action will be taken accordingly.

DIRECTORY BINDING

The workstations within the Apple environment will be bound to two directory services; Open Directory (Apple) and Active Directory (Microsoft). The binding order is to be in that order, Apple then Microsoft.

FONTS

General Fonts

Colossal Dynamics utilizes an extensive library of fonts through an application called ‘Suitcase Fusion’ if the user does not see a Colossal Dynamics Font’s folder within Extensis please notify IT before using the program. Any and all Colossal Dynamics fonts will be located in the ‘/Library/Colossal Dynamics Fonts/’ directory.

Personal Fonts

Any personal fonts designers wish to keep must be kept in the '/Library/Colossal Dynamics Fonts/[user]/' directory.

MOUNTS/SHARES

Clients Share

Located on Studio-Server, the Apple server within our Colossal Dynamics domain, is a folder named 'CLIENTS; this folder is to be used to store and archive client data across the network for the design team. This folder is for archiving and should not be utilized for 'work in progress'; keeping to the folder structure and naming files properly is required for this folder and its subfolders. If users cannot maintain an organized environment, there will be repercussions, lost data, unknown data and junk everywhere. Please keep this directory organized.

Transfer Share

To access this share from the windows environment, the user must first open an explorer window and type in '\\studio-server' and then select the folder they wish to access, however to access the transfer folder directly the user may also type in '\\studio-server\transfer\'

To access this share from the mac environment, the user must first open a finder window and navigate to their 'SHARED' column on the left hand side of the window and select 'Studio Server' and select the desired folder from that point. There is also another method of navigating to this share through the use of the 'Connect to Server' option in finder, which can be found by navigating to finder and then selecting 'Go' at the main taskbar at the top of the screen and selecting 'Connect to Server' then typing in the '\\studio-server'.

Clients & Profits Database Share

Currently located on SERVER01, our primary server within our Colossal Dynamics domain is a folder named 'Active Databases'; this folder holds our C&P database which is essential for our day-to-day operations here at Colossal Dynamics. It is available for anyone to access; both windows and mac environments have access to it. **Do not tamper with any files or folders within this directory.**

LOGIN ITEMS

The design team within the apple environment requires a number of applications and items to startup upon login. They are as follows: Extensis, Quicksilver, Transfer Sharepoint, Clients Sharepoint, and the Active Database Sharepoint.

NAMING & SAVING PROCEDURE

Please refer to Christen Calhoun for further information.

__ - _____ - _____ Description
yr client code

TRANSFER PROCEDURE

Located on Studio-Server, the Apple server within our Colossal Dynamics domain is a folder named 'TRANSFER';

this folder is to be used to share data across the network for the design team to access. It is available to anyone for use; both windows and mac environments have access to it. This folder is not a location where users can store their data for long periods of time. **This folder will be emptied out each Friday unless specifically requested.** The reasoning behind file cleanup is to maintain a working environment in which the server does not become overwhelmed with files and it is easier for users to locate the current data.

To access this share from the windows environment, the user must first open an explorer window and type in '\\studio-server' and then select the folder they wish to access, however to access the transfer folder directly the user may also type in '\\studio-server\transfer\'

To access this share from the mac environment, the user must first open a finder window and navigate to their 'SHARED' column on the left hand side of the window and select 'Studio Server' and select the desired folder from that point. There is also another method of navigating to this share through the use of the 'Connect to Server' option in finder, which can be found by navigating to finder and then selecting 'Go' at the main taskbar at the top of the screen and selecting 'Connect to Server' then typing in the '\\studio-server'.

ARCHIVING PROCEDURE

Please refer to Christen Calhoun & JT Martin for further information.

APPLICATION USAGE

Aperture

This particular application requires a bit more consideration when it is in use; mainly it needs to be shutdown promptly after use so that it can save its library properly. If this application is not shutdown and maintained properly it will become too large to manage and will become a burden to use.

When importing please refer to the current file/folder structure that we have in place.

At some point in time, we require someone to sit down and sort through all the unorganized files and properly place them their respective folders.

Suitcase Fusion

Upon installation of Suitcase Fusion, the Colossal Dynamics fonts folder needs to be imported. If you do not see the Colossal Dynamics Fonts Folder within Suitcase Fusion please notify someone within IT before using the program.