



**8 Steps to**

# **Intranet Deployment Guide**

# WEB DEVELOPMENT TRAINING FOR YOU AND YOUR ORGANIZATION



<HTML TRAINING>

HotMetal PRO

INTRODUCTION TO  
JAVASCRIPT  
PROGRAMMING!



<% ASP TRAINING %>  
((( ACTIVE SERVER PAGES )))



**XNU.COM**

PHONE: 1.877.644.3444

416.675.1881

FAX: 416.675.9217

EMAIL: info@xnu.com

WEB: www.xnu.com

**CLICK HERE FOR MORE INFO**

## Share these FREE Courses!

Why stuff your friend's mailbox with a copy of this when we can do it for you!

Just e-mail them the link info – <http://www.trainingtools.com>

Make sure that you visit the site as well:

- MORE FREE COURSES
- Weekly Tool Tips
- Updated course versions
- New courses added regularly

## So don't copy files or photocopy - Share!

### End User License Agreement

Use of this package is governed by the following terms:

#### A. License

TrainingTools.com Inc, ("we", "us" or "our"), provides the Licensee ("you" or "your") with a set of digital files in electronic format (together called "the Package") and grants to you a license to use the Package in accordance with the terms of this Agreement. Use of the package includes the right to print a single copy for personal use.

#### B. Intellectual Property

Ownership of the copyright, trademark and all other rights, title and interest in the Package, as well as any copies, derivative works (if any are permitted) or merged portions made from the Package shall at all times remain with us or licensors to us. This Package is protected by local and international intellectual property laws, which apply but are not limited to our copyright and trademark rights, and by international treaty provisions.

#### C. Single-User License Restrictions

1. You may not make copies of the files provided in the Package
2. You may not translate and/or reproduce the files in digital or print format
3. You may not rent, lease, assign or transfer the Package or any portion thereof
4. You may not modify the courseware



## World Class Provider of Web Hosting E-COMMERCE AND CUSTOM INTERNET SOLUTIONS

### Quality Web Hosting ✓

is the foundation for a Successful and effective internet presence.

At OLM, we define quality web hosting by :



- *Internet Connection Speed*
- *Connection Reliability*
- *Custom Service*

### Web Hosting STARTING @ \$13.95/MONTH

- FTP & FrontPage 2000 Access
- Full Web Control System
- MySQL & mSQL Database Access
- Redundant DS3 High Speed Connections
- 24 X 7 Monitoring & Technical Support
- 15 cgi-scripts Provided

### E-COMMERCE STARTING @ \$29.95/MONTH

- On-line Payment Service Available
- Secure Server (SSL) Encryption
- Browser-Based Store Creation
- Merchant Accounts Available On-Line
- Multiple Plans Available

<http://olm.net>

Telephone: 1-877-265-6638

### Copyrights and Trademarks

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means – electronic, mechanical, recording, or otherwise – without the prior written consent of the publisher.

Netscape Navigator is a trademark of Netscape Communications Corp.  
Windows 3.1, Windows 95, Windows NT, and Internet Explorer are trademarks of Microsoft Corporation.

All trademarks and brand names are acknowledged as belonging to their respective owners.

Published by

# XtraNet

180 Attwell Dr., Suite 130 Toronto, Ontario, Canada M9W 6A9  
Phone: 416-675-1881 Fax: 416-675-9217 E-mail: [info@xnu.com](mailto:info@xnu.com)

Copyright © 1999 by XtraNet

All Rights Reserved

January 1999

First Edition

1 2 3 4 5 6 7 8

## Table of Contents

Step 1: Gather Information	1
Step 2: Document Definition / Navigation Standards	2
Step 3: Publishing Paradigm	3
Step 4: Template Creation	3
Step 5: Choosing Your Tools	4
Step 6: Training	5
Step 7: Deploying the Solution	5
Step 8: Maintaining the site	5
Example Document Standard	7,8,9
Example Template	10

# The 8 Steps to Successful Intranet Deployment

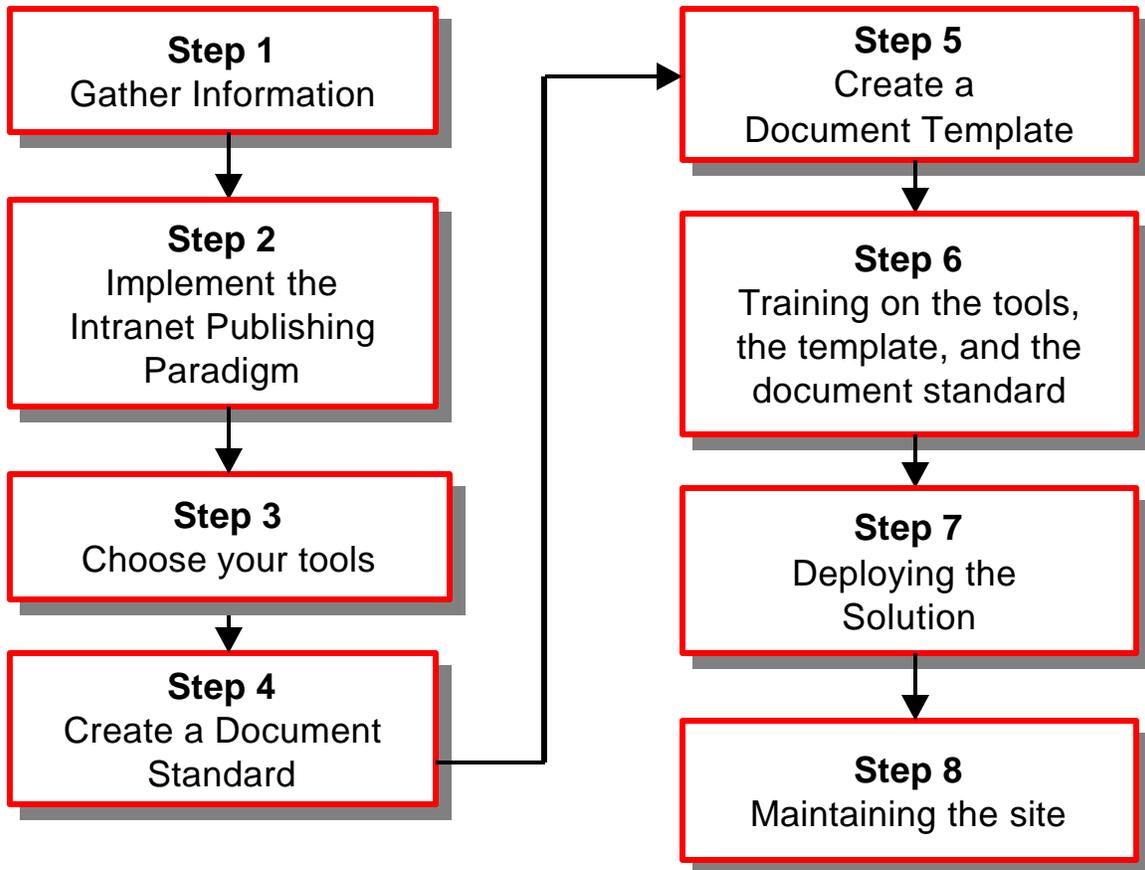


Figure 1 Eight Steps Flow Chart

## Step 1: Gather Information

### Objectives:

1. Identify procedures and methods of locating information about the business that can be improved through the deployment of an Intranet.
2. Gain an understanding of the current technologies in use within the organization so they can be integrated into the overall plan.
3. Determine types of “Legacy Documents” that need to be converted.

### Section 1.1: Identify Business Objectives, and Information for large-scale distribution

Objective 1: identify procedures that can be streamlined in terms of time required to complete, improving accuracy, reducing paperwork, and information updated rapidly but is distributed slowly. Below are a list of Business Objectives that might be helpful in determining the area that can be served best initially and create the most return on investment.

#### Sample Business Objectives:

- Improved Customer Satisfaction
- Savings on operations
- Increases in revenue
- Increased Opportunities
- Time savings
- Increasing operational efficiencies
- Lowering the cost of operations
- Improved Business processes
- Profile your prospects
- Profile your customers

#### Sample Information for large-scale distribution:

- What are employees looking for / what do they need
  - Company phonebook
  - Organizational chart
- Breaking News / What's New / Hot off the Press
- Customer service ( Internal or external Customer )
  - Pre/Post Sale Information
  - Research and Development Information
  - Project Info – Status, Progress to Date

## **Section 1.2: Determine Existing Technology Deployment**

Objective 2: Gather Information to determine what you have in terms of existing technology. This is useful information when we move into the later steps of the process. It saves duplication of effort; helps align project plans and focus effort on common goals. Below is a list of information you may want to gather about your environment.

### **Network Infrastructure**

- Current status with respect to the Internet
- Mail and messaging environment
- Security and Firewalls
- Transport Protocols in place
- Available bandwidth

### **User & Desktop**

- Operating systems and standards
- Applications standards and support guidelines
- Communications and e-mail
- Browser and access restrictions
- Assess knowledge level

## **Section 1.3: Locate and Identify Legacy Documents**

Objective 3: is to determine the type and number of existing documents that need to be converted to a format supported on your Intranet. Below is a sample list of information you may want to gather.

### **Legacy Documents**

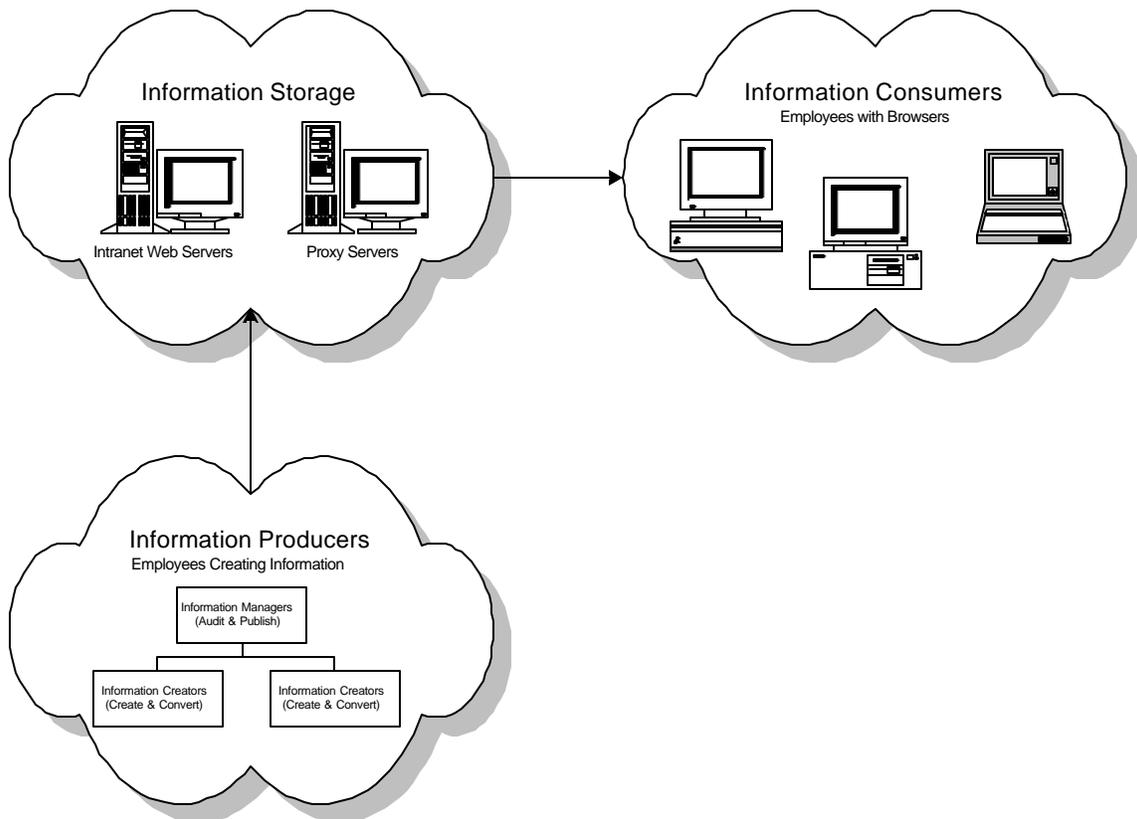
- What file formats are currently being used for
  - Word-processing
  - Spreadsheets
  - Presentations
  - Graphics
- What documents should be converted to electronic form only?
- What documents need to be converted to an electronic form and maintain a paper copy?
- How many documents need to be converted in total?

## Step 2: Implement the Intranet Publishing Paradigm

### Objectives:

1. Define the Intranet Publishing Paradigm
2. Define the Information Publishing Flow
3. Define the Intranet Team. Determine who is going to fill the positions on the team, and adjust the MBOs, or job descriptions of the people contributing to the Intranet to include their new responsibilities.
4. Create a mission statement for the Intranet and give it a name.

### Section 2.1: Intranet Publishing Paradigm



**Figure 2 Intranet Publishing Paradigm**

The Intranet publishing paradigm describes the fundamental change occurring within organizations today. Presently, making a document created by an employee available to other employees is a slow process, if at all possible. The Intranet provides a, because it allows all of the information consumers within an organization to get to information as soon as it is published. The content creator

can create a high quality document in HTML, PDF, or another approved format for distribution.

#### Information / Content Creators:

- Anyone within the organization that authors documents
- May need skills upgraded
- Usually the person that owns that information

#### Information Manager / Content Auditor:

- Manager Level within the organization
- Business Unit Manager
- Corporate Communications Staff
- May need skills upgraded
- Audits the information for accuracy
- Will return documents to the Information Creator with revision comments.

#### Technical Auditor:

- Pagemasters (Highly skilled in HTML and related technologies.)
- Checks the document to make sure it fits within the document standard
- Will return documents to the Information Creator with revision comments.

#### Publisher / Webmaster / Site Maintainers:

- Takes documents from the Technical Auditor and publishes them to the staging server.
- Moves the content from the staging server to the production Intranet Server.
- Webmasters (usually IS staff that maintain the web servers)

#### Information Consumers

- Employees with browsers installed.
- There are two types, the bottom end and the high-end
- Off-line browsing and replication

## Section 2.2: Information Publishing Flow

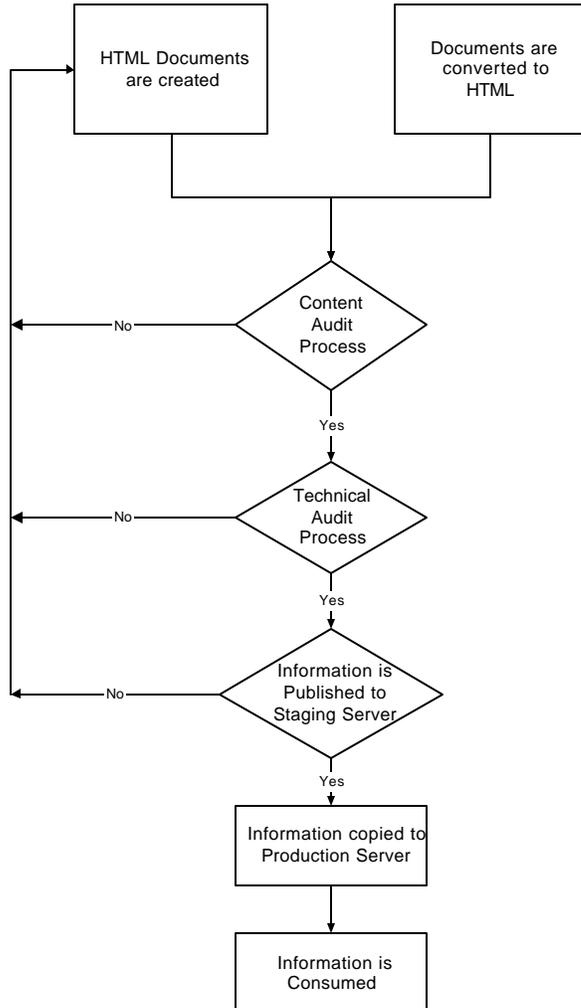


Figure 3 Information Flow Flowchart

The "Content Auditor" position gives someone control over the "Content Creators" content area to approve it or send it back for further revisions.

The "Technical Auditor" is someone with excellent knowledge of the document standard (defined later) and the publishing technology. This person approves or sends the document back for further revisions based on technical merit.

If the document passes both audits it can be published. Publishing may be a two step process (See Information Flow diagram) in which it is first published to a staging server to make sure all links are working and that it connects properly with existing content. If the document is ok it is moved to the production site. If not, it is sent back with comments for revision.

**Section 2.3: Define the Intranet Team. Determine who is going to fill the positions on the team and adjust the MBOs or job descriptions of**

the people contributing to the Intranet to include their new responsibilities.

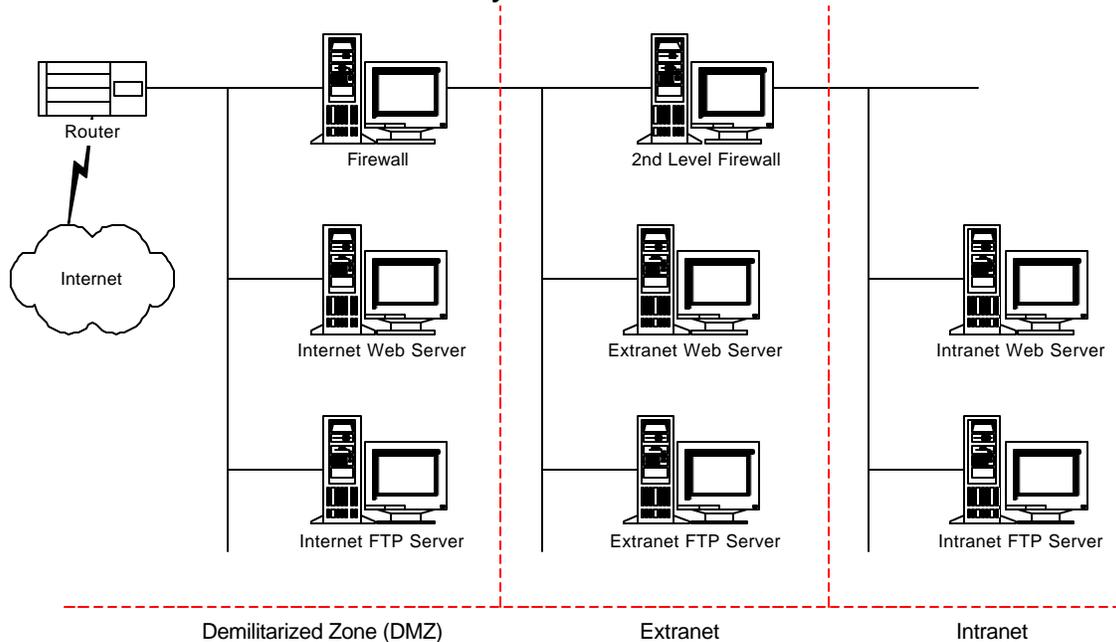
Section 2.4: Create a mission statement for the Intranet and give it a name.

## Step 3: Choose your tools

### Objectives:

1. Choose the tools (server and client) required in the creation of your Intranet.
2. Determine your Intranet Application Development architecture.

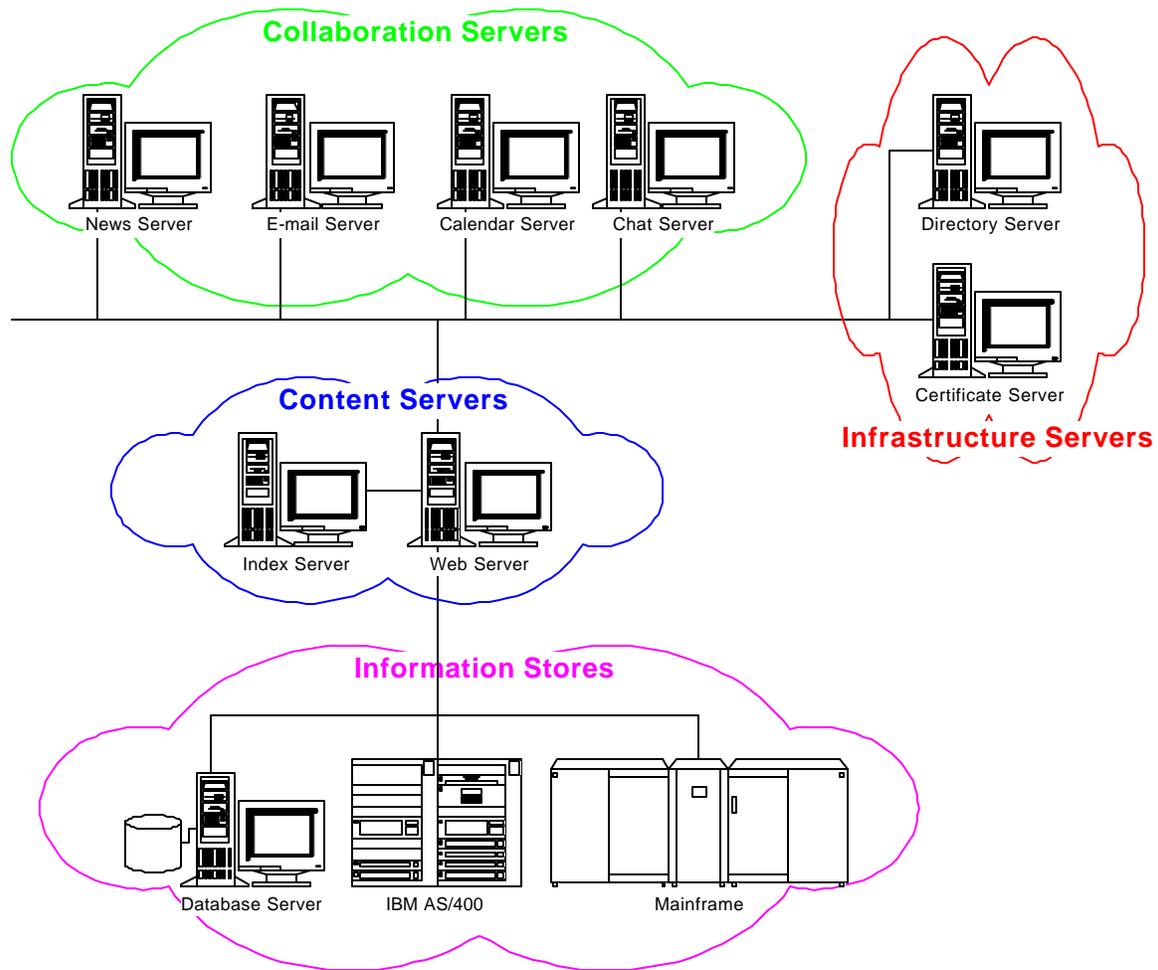
### Section 3.1.a: Internet Security Structure



**Figure 4 Internet Security Structure**

Figure 4 is an architectural diagram of a secure Internet environment. In consideration of the tools and resources required, security plays an important role in your Intranet design. Depending on the scope of your project you may need to include some of the elements detailed in Figure 4.

## Section 3.1.b: A Full Service Intranet



**Figure 5 Full Service Intranet**

Figure 5 represents an architectural diagram of an Intranet and includes a number of components that you may not have been considering. An Intranet today is far more than just an internal web server with some static web pages.

Your Intranet should make it easier for the employees to communicate information and collaborate on projects.

Since the browser makes things truly a point and click interface you should be thinking of ways to present information from your traditional information stores in this format.

You should consider each one of these areas specifically.

### Section 3.1.b.i: Infrastructure Servers

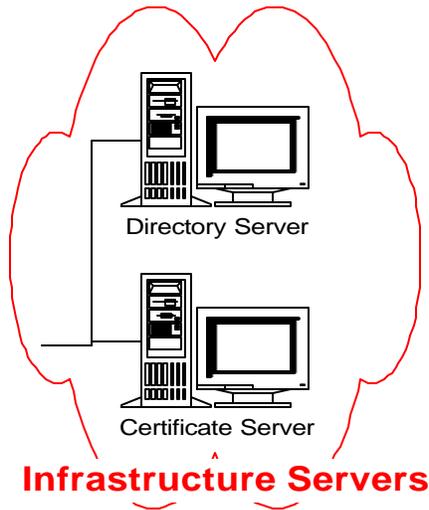


Figure 6 Infrastructure Servers

### Section 3.1.b.ii: Collaboration Servers

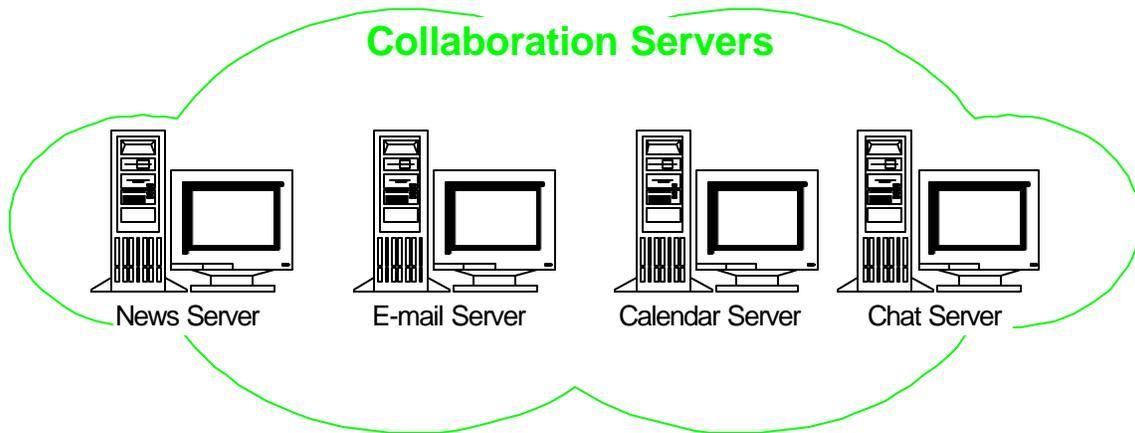
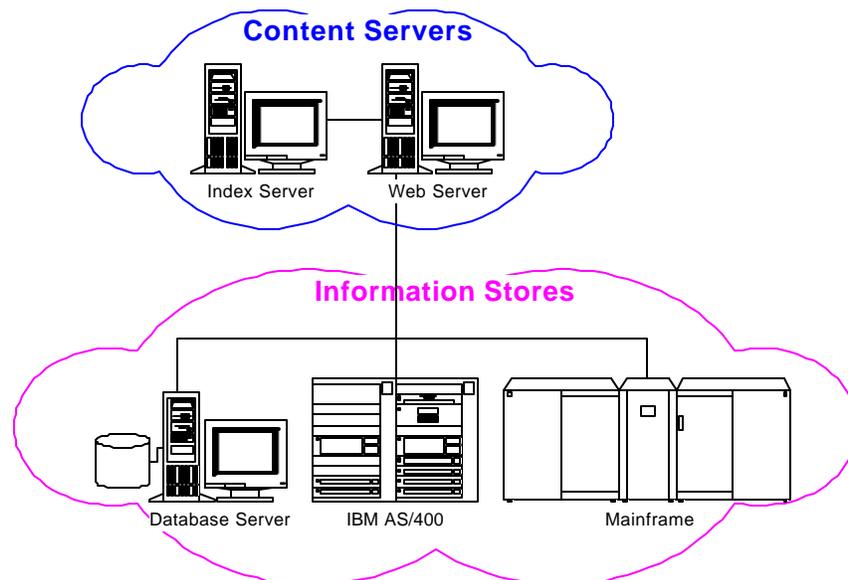


Figure 7 Collaboration Servers

#### Collaboration Tools

- Netmeeting
- Chat servers
- Video Conferencing
- News servers
- E-mail servers
- Calendar servers

## Section 3.1.b.iii: Content and Information Servers



**Figure 8 Content Servers and Information Stores**

### Web Server

- Netscape Enterprise or Microsoft Internet Information Server
- Server side scripting language and tools
- 5250 & 3270 gateways

## Section 3.1.c: Site Management Tools & Reporting Tools

- MKS
- Netscapes
- SoftQuads
- Microsofts

## Section 3.1.d: Programming tools

- Visual Interdev (Microsoft)
- Visual Studio (Microsoft)
- Visual JAVAScript (Netscape)

## Section 3.1.e: Authoring Tools

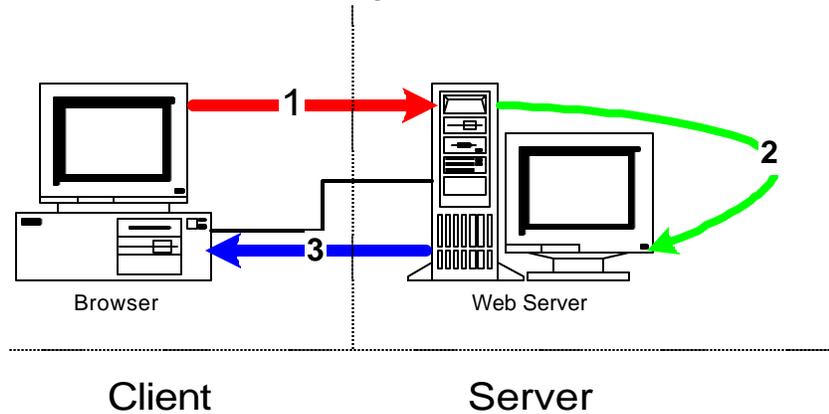
- SoftQuad – HoTMetal PRO
- Microsoft – Frontpage 98
- Netscape – Composer
- Sausage – HotDog Professional
- Allaire – HomeSite
- Macromedia - Dreamweaver

## Section 3.1.f: Graphics Tools

- Adobe Photoshop
- GIF Animators
- Illustrator
- Corel Photopaint

## Section 3.2: Determine your Intranet Application Development architecture

### Section 3.2.a: Simple CGI Program

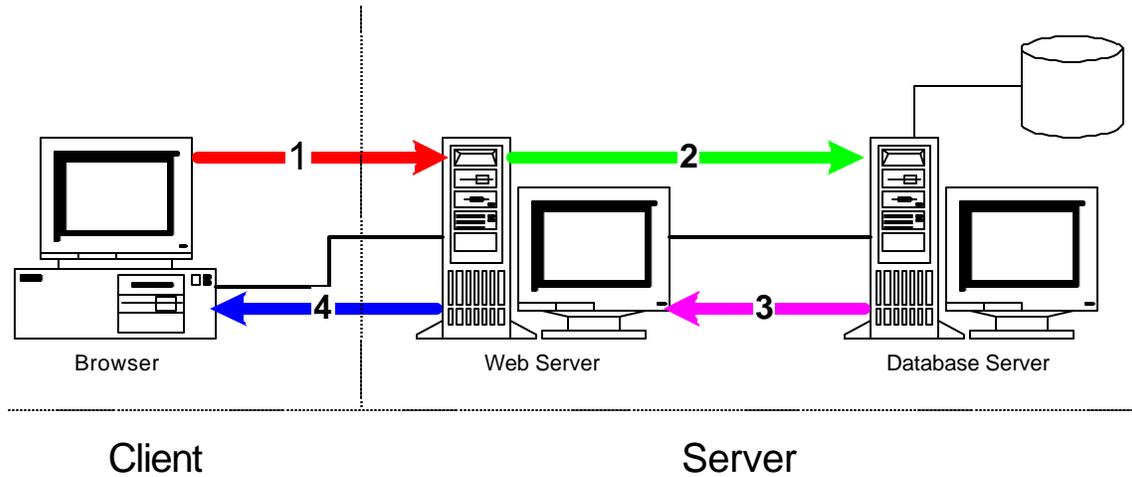


**Figure 9 CGI Program Process**

1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.
2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is call a CGI (Common Gateway Interface) program. It can be written in a number of languages; VBScript, JAVAScript, PERL, C++, etc. It can perform a number of different functions.
3. The CGI program creates a new HTML document on the fly and sends it to the client.

Browser	Web Server	CGI Program
Netscape Navigator	Netscape Enterprise Server	- NSAPI -C++ - PERL - Server side JAVAScript
Microsoft Internet Explorer	Microsoft Internet Information Server	- ISAPI -C++ - PERL - Active Server Pages (ASP) JScript or VBScript

## Section 3.2.b: Three-Tier Web Application Development



**Figure 10 Three-Tier Web Application Development**

1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.

2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is called a CGI (Common Gateway Interface) program. It can be written in a number of languages; VBScript, JAVAScript, PERL, C++, etc.

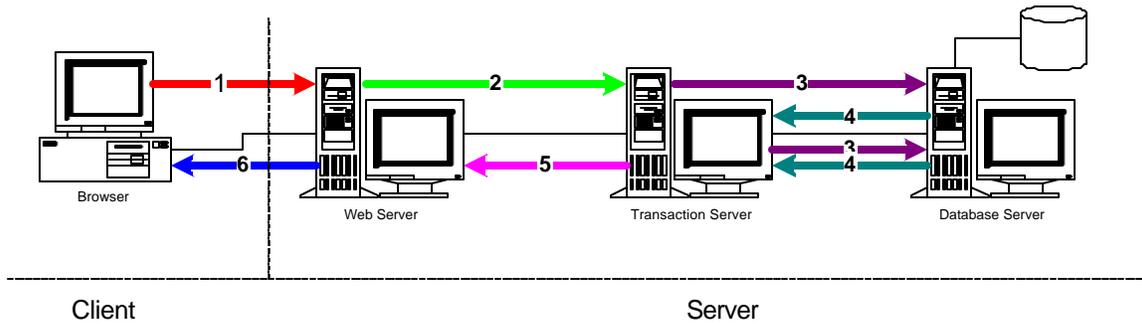
*The program in this case creates a command and issues it to the database server.*

**3. The Database Server receives the command and issues it against the database. The data returned from the command is then sent back to the CGI application running on the web server.**

4. The CGI program creates a new HTML document on the fly with the data returned from the database server and sends it to the client.

Browser	Web Server	CGI Program	Database Server
Netscape Navigator	Netscape Enterprise Server	<ul style="list-style-type: none"> <li>- NSAPI -C++</li> <li>- PERL</li> <li>- Server side JAVAScript</li> </ul>	<ul style="list-style-type: none"> <li>- Oracle</li> <li>- Informix</li> <li>- Sybase</li> <li>- Microsoft SQL</li> <li>- Other ODBC compliant</li> </ul>
Microsoft Internet Explorer	Microsoft Internet Information Server	<ul style="list-style-type: none"> <li>- ISAPI -C++</li> <li>- PERL</li> <li>- Active Server Pages (ASP)</li> <li>- JScript or VBScript</li> </ul>	

## Section 3.2.c: Four-Tier Web Application Development



**Figure 11 Four-Tier Web Application Development**

1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.

2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is called a CGI (Common Gateway Interface) program.

*In this case the program invokes a transaction on the transaction server.*

*3. The Database Server receives a command from the transaction server and issues it against the database.*

*4. The data returned from the command is then sent back to the transaction, this cycle will continue until the transaction fails or completes.*

*5. When the transaction completes successfully or unsuccessfully it passes the result to the web server.*

6. The CGI program running on the web server then creates a new HTML document on the fly with the data returned from the transaction server and sends it to the client.

### Transaction Server Choices:

- Microsoft Transaction Server
- Netscape Application Server
- Oracle Application Server

## Step 4: Create a Document Standard and Navigation Standard

### Objectives:

- 1) Create a reference document
  - (a) Define technologies that can be used.
  - (b) Elements that must be included on every page.
  - (c) Define how a page should look.
- 2) Create a site navigation plan and directory structure.

### Section 4.1: The Document

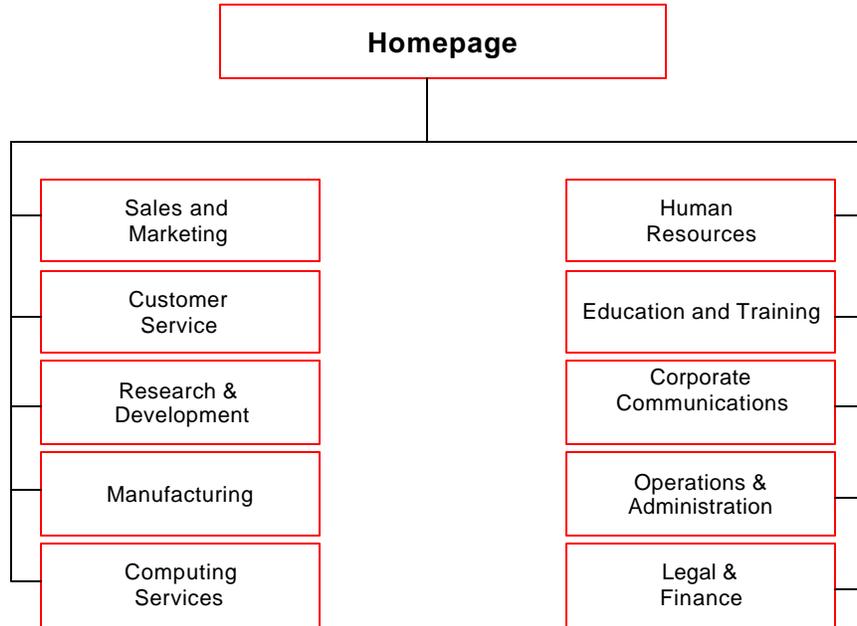
- Author's name on every page.
- Author's e-mail address on every page.
- Date the document was published.
  - Use of Meta Tags, or on the page
- Graphics – max size, supported formats
  - Image maps support ( yes / no )
- Font type – primary and secondary
- Consistent document colors
- Server side includes
- Standard template
  - Tables for formatting
- Document Size limit

### Section 4.1.a: Technology Choices

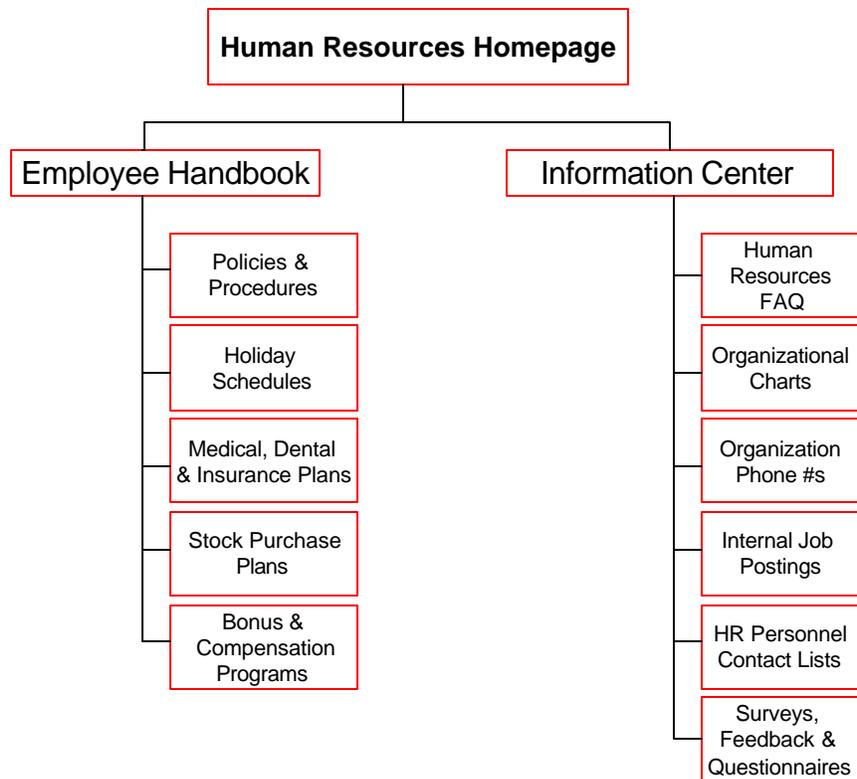
- Browser ( Netscape / Microsoft )
  - Browser Version
- Screen Resolution
  - 640x480, 800x600, 1024x768
- Frames ( yes / no )
- JAVA Applets ( yes / no )
- ActiveX Controls ( yes / no )
- JavaScript or VBScript
  - JavaScript Version or Jscript
- Client-side or Server-side or both
- Cascading Style Sheets support ( yes / no )
- How are you going to tackle FORMS & CGI
  - Perl, ASP, Livewire, etc.
- Legacy Document Conversion
  - Word – Import into Publishing tool
  - Excel – Cut and Paste into Publishing tool
  - PowerPoint – Export using wizard

## Section 4.2: Site Navigation Plan and Directory Structure

- Image Maps verses Links
- Departmental
- Project Based
- Organizational
- Special Interest Groups



**Figure 12 Web Site Navigation**



**Figure 13 Human Resources Navigation**

## Step 5: Create a Document Template

### Objective:

1. Using the Document Standard create a Document Template and tie it into your authoring software.
2. Leverage Server Side Include technology to help maintain look and feel and simplify content creation.
3. Add navigation as per your navigation model.
4. Create Standard Graphics, put them in a common directory.



Figure 14 Sample Document Template

## **Step 6: Training on the tools, the template, and the document standard**

### **Objective:**

1. Train all of the content creators, content auditors, technical auditors, and publishers/site maintainers on the tools to increase their productivity.

Develop a specific training program for the company based on its technologies and skillset.

With a successful training program you have a number of authors that can publish good effective content using the document template and the document standard.

# Step 7: Deploying the Solution

## Objective:

1. Get a proof of concept, test with small audiences, get feedback and make adjustments before the Full Public Release.

## Section 7.1.a: Alpha Release

The Alpha Release is an opportunity to find out where you have errors, and discuss ideas you have omitted.

For the Alpha Release you should choose an area of high interest, or high return on investment, that can be created using as many of the tools you chose in employing your document standard, navigation standard, and you document template.

Alpha Users should be few in number, highly versed in the area of content and technology, and be willing to suffer a lot of pain. This group may only contain members of the immediate project team; however, the team is usually biased and does not give the project a fair rating. For this reason we suggest the Alpha Users not be members of the immediate project team.

This release will tell you whether everything is going to work the way you planned it or whether you are going to have to go back to the drawing board.

## Section 7.1.b: Beta Release

In the Beta Release the user group is larger. Issues discovered in the Alpha Release should be worked out by this time.

This release should have more content with a deeper navigational structure, and fully use the tools you chose earlier. You also want to get more of the content creators involved, as well as content auditors, technical auditors, and publishers. This helps put publishing the paradigm in place.

## Section 7.1.c: Preview or Limited Release

Preview Release should include managers from all departments. These people will then turn into your promotional staff. These people will be able to tell you whether you have solved the business objectives you set out to accomplish.

As a percentage your Preview group should be 10-30% of your total information consumer population.

### Section 7.1.d: Full Release

In this release everyone should be an information consumer and should be told about the great things that exist on the Intranet for them.

In order to move to Full Release, you should have a large amount of content created and your publishing paradigm should be in full swing. The applications required should be created and tested by this release. You should have a content update schedule planned to keep content consumers coming back for more.

## Step 8: Maintaining the site

**Objective:**

1. Keep the site up to date and running smoothly.

- Fixing and maintaining links
- Aiding in the expansion of the site
- Monitoring hit rate
- New active content is a winner every time
- Dead links and Broken links can be really discouraging
- Constant ongoing responsibility

# Example Document Standard for Content Creators

## Content Guidelines

Content must be business or company related. Acceptable content includes (but is not limited to):

- Program or process documentation, help files.
- Group related information, including group activities, employee locations, phone numbers and addresses, schedules, and contact lists.
- Information relating to activities of the company such as sponsored organizations, events, etc.
- Links to external pages containing information related to company business or activities or to vendors and suppliers of equipment or software used by the company. The page creator should ensure external page contain useful and accurate information. However the page creator cannot be held responsible for information on an external site.

## Format Guidelines

1. Each directory should contain an "index.html" page, describing the contents of the directory. The index page may also double as the directory or hierarchy's home page.
2. Each page header should contain the following:
  - A <TITLE> element clearly describing the page's subject.
  - A <LINK> element identifying either the page's author or the group's web coordinator.
  - Keyword elements describing the contents of the page, for use with a search engine. (Specific keyword elements have not been determined.)
3. Each page should clearly display marked navigation buttons, with links to the following locations:
  - top of group's hierarchy.
  - back one page in hierarchy (where applicable).
  - "help" page (where applicable).
4. Pages should be logically organized into directories, and should use relative URLs where possible (permits easy relocation of document hierarchy).
5. Pages should be viewable by text only browser with minimum loss of content.
6. Pages should not rely on browser-specific features or plugins. Pages should be written to feature set of the browser chosen by the corporation.
7. Pages should pass weblint checks <<http://web.xyzcorp.com/cgi-bin/weblint>>

## Example Document Standard for Publishers

The XYZ Corp Intranet provides individual groups with the ability to electronically publish information they deem necessary to their operation. The information is immediately accessible to any web browser equipped computer in the company (or to limited groups, if required). IT involvement will be limited to configuration and maintenance of the server and generation and maintenance of top-level document hierarchy.

Any group may publish information on XYZ Corp's intranet. Each group must create its own document hierarchy. The group must also designate a "web coordinator" whose responsibilities include managing the document hierarchy, and the server, and insuring the documents meet XYZ Corp web content guidelines.

The webmaster designates space on the internal web server for the group and generates a login account on the server for the web coordinator. The webmaster creates links from the top level hierarchy into the hierarchy as requested by the group's coordinator. It provides authoring software and provides basic support for the software.

### Publisher's responsibility:

- Generate and manage group's document hierarchy, including definition of content turnover and release procedures.
- Coordinate with webmaster to ensure availability of adequate disk space.
- Ensure documents meet XYZ Corp web content guidelines.
- Maintain master copies of document hierarchy.
- Download released document hierarchy to web server.
- Submit CGI scripts to webmaster for security evaluation.

## Webmaster / IT responsibility:

- Configure and manage server software, hardware, disk allocation, and top level document hierarchy.
- Provide adequate disk space for group web pages as specified by group coordinators.
- Provide backup service for information placed on the server.
- Provide authoring software and basic support for software.
- Provide assistance in restricting access to document hierarchy (if required).
- Provide site management software (if applicable) and basic support for software.
- Provide basic information on document hierarchy design and implementation.
- Generate links from top level hierarchy into group's hierarchy.
- Provide basic web infrastructure, including icons, company logos, and other stock images.