

Hi everybody!

Last November, I sent out a query to many listservs and Usenet groups, trying to get an idea of what people are doing as far as setting up Internet services on the Macintosh. I had *MANY* good responses, but I've been swamped with mucho projects, and been busy at home too, moving into my first home!!! Finally, I've had a chance to summarize the responses, which I'm submitting to Info-Mac. I'm sending this memo out to all the groups that received the original memo, to let everyone know that it's there. If you wait a few days, it should propagate to all the sumex mirror sites. Thanks for everyone's input.

----- Original Memo -----
From: Tom Scott (11/22/93)

I'm putting together a paper outlining various Internet services that could be provided on the Mac. From the server perspective, not the client. I'd like to hear any input from people that have set up servers to provide Listserv, Gopher, FTP, Telnet, WWW, Usenet or any other Internet services based on the Mac OS. I'd like to hear:

- * What server software you're using, along with an FTP site where it's available.
- * Your impressions with it's features and performance; along with a "wish list" of features that you wish it had (in other words, it's strengths and weaknesses).

I'd also like to get feedback from people setting up similar systems on a Mac running A/UX 3.x. I'd like answers to the above questions, as well as why you chose A/UX instead of running under the Mac OS or running it on a Sparc?

I know probably the primary consideration for running an Internet service on a Mac is cost; Mac CPUs can cost a fraction of what SUN CPUs do. I'm sure that there are a number of reasons to run FTP/Gopher/WWW/etc. services on a Unix system, and I'd like any insights to specifics why Unix on a SUN is better than a Mac running A/UX, and why a Mac running A/UX is better than a Mac running its native OS for providing Internet services. But the primary focus of this paper is options for providing Internet services using the Mac OS. I'll post a summary of responses to sumex when I'm finished, which I hope to have done in the next week or so [Whoops, didn't make it! ;-) -Tom]. So please reply directly to me with your feedback at tas2@cornell.edu ASAP. Thanks!

P.S. I'm posting this to several lists and Usenet groups. Sorry for any duplication.

Thomas Scott, Systems Manager, College of Engineering
Cornell University, Carpenter Hall Annex, Ithaca, NY 14853

=====
=====
From: xrjdm@twinpeaks.gsfc.nasa.gov (Joe McMahon)

I've had experience with the following:

- FTPd 2.0.1
- Written by Peter Lewis.
- Shareware (\$10)
- Provides both Gopher and ftp for the Mac.
- Multiple connections supported.
- Anonymous FTP supported.
- Uses System 7 Users and Groups for security.
- Simple to set up and run.
- Handles BinHex and MacBinary.
- Supports site descriptions and directory descriptions.

Defined users may change their own passwords.

I have been running this to support an FTP site for the EMUSIC-L discussion list. The site has back issues of the list discussions and various related files. I have been able to access it nicely from line-mode at other sites, via Mosaic (though the Gopher interface), and through Fetch on other Macs in various places.

Works well, quite stable, doesn't use much memory (<300K). Recommended. Available at sumex or any of its mirror sites.

MacHTTP 1.0d9

Provides WWW support on a Mac via MacTCP. Works fine with NCSA Mosaic when the two are running on different platforms. I had trouble trying to run them on the same machine. It worked well enough to demo some local Mosaic pages - if there wasn't much else going on, on the machine, it should be perfectly fine as a small-scale server.

Works well, best if isolated. Recommended. Available at sumex and its mirrors.

=====
=====

From: tony@info.anu.edu.au (Tony Barry)

Any Mac software worth using is available from the Stanford or Michigan Mac archives or from an archie site.

Listserv

Servers - none

Clients - many. Eudora is by far away the best.

Gopher

Servers - gopher, Gopher Surfer, ftpd

Clients - Turbogopher, Mosaic and a swathe of others

FTP

Servers - ftpd. Forget the others ftpd is so much better.

Clients - Fetch, Xferit, Hyperftp, Mosaic, MacIP

Telnet

Servers - I guess you could count Timbuctu

Clients - NCSA telnet, Mosaic, MacIP

WWW

Server - httpd

Clients - Mosaic, Macweb

Usenet

Servers - I beleive there is some sort of non IP serials line program

Clients - Nuntius, TheNews, NewsWatcher.

All the above work well. It's largely a matter of taste which you use.

You forgot wais. There are no servers and all the clients are goos. I prefer

MacWAIS.

Tony Barry, Centre for Networked Access to Scholarly Information
| fone +61 6 249 4632
Australian National University Library | phax +61 6 249 4063
Canberra A.C.T. 0200, AUSTRALIA | tony@info.anu.edu.au

=====
=====
From: chavey@beloit.edu (Darrah Chavey)

I run an ftp server and gopher server on my Mac (cs.beloit.edu) using MacOS. We use ftpd for the later, and "Gopher" from Minnesota for the later. We are considering switching to using ftpd for the later also, since the new version supports that, but we haven't done so yet. We are in the process of setting up an email reflector (our pseudo-listserv) using Eudora and the "EMail Reflectors" hypercard stack that comes with it. I expect to do that within the next week or so. We expect to eventually set up a WWW server using MacHTTP, but that probably won't happen til next summer. The only complaint I have about any of the products is that ftpd crashes if it doesn't have enough memory to handle the incoming connections. You can limit the number of incoming connections, and expand the memory given to it, but I know of no way to determine what the "right" amount of memory is for a given max. number of connections (and the author gave me no answer to that question). I wish ftpd had better report facilities (e.g. "How many people have downloaded file XXX?" "Give me email addresses of everyone who downloaded YYY so I can tell them about the upgrade." etc.) I may write such a report generator myself eventually. I also wish gopher had the capability to report download statistics (this is on other wish lists I've seen).

>I'd like to hear: * ... with an FTP site where it's available.

The usual suspects (sumex, umich, wuarchive).

--Darrah Chavey Department of Math & Computer Science
chavey@beloit.edu Beloit College; 700 College St; Beloit, Wisc.
(608)-363-2220 fax: (608)-363-2052 53511

=====
=====
From: Steve Weatherford <smw@U.WASHINGTON.EDU>

The only internet service I export to the macs (currently) is Eudora 1.3 mail - it works fine. There is a company called INTERCON - we use their NFS-Share package to mount NFS volumes on a MAC - it works ok, but is complex to install.

Intercon also makes a package call TCP-Connect which provides ReadNews, mail, and FTP services, I own this package but have not tried it yet.

=====
=====
From: "Mike Schatzberg" <Mike_Schatzberg.Q#u#Z@m1mail.sbi.com>

While I hope to grab what you post as a result of your research, just to make sure that I see it, could you send me an email copy of your results?

We do not use the Macintosh platforms here at Salomon for internet services, in general. I am one of the few who know anything about MacTCP here. Part of the problem is that we are pretty much a Sun workstation house, with thousands of them around. In using my Mac for FTP service, I find that the performance of 20-30KB/sec is rather low. Sun servers can run at 2-3 times that performance at least.

Mike Schatzberg, Salomon Inc, 745 Route 3, Rutherford, NJ 07070
Phone: (201) 896-7622 Email: mschatzberg@sbi.com

=====
=====

From: ehfm@midway.uchicago.edu (Eric Hoffmann)

Hi, we ran FTP'd to provide Gopher/FTP access on the Quadra 700 which also hosted our tech support BBS. I was very happy with the ease of setup, but the performance was S L O W. We have since moved these services onto a Sun Classic, which isn't that much more expensive than a high-end Mac. These services now run much faster.

Before FTP'd I used the Mac Gopher server available from the U. of Minnesota. It was much faster than FTP'd but hogged CPU cycles and really put a strain on the BBS side of things. Also there was no log to speak of. The main advantage to both of these setups is that I could 'alias' tech support notes and files and thus provide equivalent access to dial-up users and network users via the same machine. This was fun to set up and administer, but not the best choice when viewed from a performance perspective.

```

+-----+
| Eric Hoffmann          312/702-7500 voice |
| [ehfm@midway.uchicago.edu] 312/702-3185 fax |
| [Eric.Hoffmann@ccsbbs.uchicago.edu] |
| FidoNet address: 1:115/702 312/702-2146 BBS |
| University of Chicago Computing Organizations |
| Campus Computer Stores Technical Support |
+-----+

```

```

=====
=====
From: "John Carson" <carson@138.80.128.3> (11/28/93)

```

Adam Engst who writes the mac electronic newsletter called TidBits has written a book that lists all of the mac based software for Internet connections. It is called the "Internet Starter Kit" by Haden Books you can contact Adam on "ace@tidbits.com".

John Carson
Education Faculty
Northern Territory University
PO Box 40146 Casuarina NT 0811 Australia
Carson@darwin.ntu.edu.au
Ph: 089 466119

```

=====
=====
From: John Brien <jpbrien@laurel.ocs.mq.edu.au> (11/28/93)

```

Thomas, saw your note.

Down here at the Graduate School of Management Macquarie University Sydney Australia I have set up a Mac Gopher Server.

`gopher// gsmgopher.gsm.mq.edu.au`

Im using the Gopher server software 1.3 `ftp: boombox.micro.umn.edu /pub/Mac`

I have an SE/30 dedicated to the task of running the Gopher.

It works well. You use a little Hypercard stack to organise the links to other gophers.

The gopher serves up gif photos of the school's faculty and buildings.

Problems: There were some memory problems in the older version 1.2. But this 1.3 is very stable.

WWW

My next task is to build web server. I have the NCSA Mosaic Mac client and am about to ftp the HHTP server.

Big Wish:

It would be great to have one server that could handle both gopher and WWW at the same time.

I havent tried this, but my guess was that gopher workers on port 70 and WWW on port 80. so could have the gophe e and the web servers on the same machine...

If you need some info let me know

Regards John Brien

Research Office
Graduate School of Management
Macquarie University
Sydney Australia

=====
=====

From: "David Gitlin: Systems Manager & Analyst Scott Library"
<DGITLIN@JEFLIN.TJU.EDU> (11/23/93)

Hi. Sounds like an interesting paper. Our experience with a MAC server running gopher is mixed. We found that all of the MAC machines we tried bombed when there were more then 2 or 3 people making requests for files. It seemed to handle the stress better when we had several people using gopher links to other sites. This makes sense since links are not nearly as resource intensive as file transfers. Also the MAC is really not a multi user platform. We finally decided that because of the reliability issue we would use a different gopher server, i.e. a VAX/VMS system. We already had a VAX running and we were able to find server software that seems quite robust. One advantage of the MAC however is that it is somewhat easier to use and install. However, if reliability is an issue, which it is in most sites, you need a true multiuser platform. Unix or VMS are the most common.

=====
=====

From: sdorner@qualcomm.com (Steve Dorner)

In article <2cqj21NNlcr@newsstand.cit.cornell.edu>, you wrote:

> services on a Unix system, and I'd like any insights to specifics why
> Unix on a SUN is better than a Mac running A/UX

I run an A/UX system myself. It's slow. Porting programs is unpleasant (though not terribly hard). A/UX is very expensive. It is picky about peripherals and only runs on certain macs anyway. A/UX has trouble with serial ports.

The main reasons UNIX is better than MacOS for servers are two; protection and fork(). Since processes are protected from one another, one errant server process does not halt the entire machine. And since individual servers can be forked for each user, servers do not have to manage multiple connections, making them quite a bit simpler.

--

Steve Dorner, Qualcomm Inc

=====
=====

From: Dale Mead <dcm@gallant.apple.com>

I have run all of the above at some time under A/UX 3.0 for internal Apple purposes. I use CNews for Usenet, NCSA httpd for WWW, the ftpd and in.telnet that come with A/UX, but would use the Gnu versions if I was doing more heavy duty work with those.

Why A/UX over MacOS? MacOS is great as a client, but MacOS was specifically designed to be a *personal* computer and not a server. While it was designed to live on a network, it was intended to be a client machine on the nets doing one or two network operations at once, not dozens and ease of use was the foremost consideration. Unix, of course, is the exact opposite.

Another reason for Unix over MacOS is that most people are using the Unix versions, which translates into programs that are better debugged and have more net support than the Mac versions. Gopher was even written under A/UX.

I really haven't had any significant problems running these programs under A/UX. I had a little problem porting the Unix Listserv and NCSA httpd did not have an A/UX makefile option (so I had to compile by hand [use c89]), but all of them were doable.

Capacitywise, A/UX will not take the number of hits that a Sun will, but unless you are putting up major internet servers, it will probably take the load. The Apple Higher Ed Gopher (info.hed.apple.com) is pretty well maxed out, but is handling 130,000+ hits per month. Ftp.apple.com is also an A/UX box.

I would be happy to answer any other questions that I can.

=====
=====

From: emv@garnet.msen.com (Edward Vielmetti)

386 or 486 PCs running Unix (one of NetBSD, FreeBSD, or the commercial BSDI) cost a darn site less than equivalnet Mac hardware, and have better serial ports as well.

That would be my inclination relative to Suns.

(We have turned off two older Sun 3s and a Mac running A/UX in favor of 486s running BSDI. Much happier that way.)

a data point, tho the mac clients are really cool i have to give you that,

=====
=====

From: Bill Beasley <bbeasley@rust-dev.gsfc.nasa.gov>

The primary advantage of running A/UX as opposed to the Macintosh interface is that A/UX is multitasking and the Mac OS is not. If you attempt to service several requests in a short period of time the performance of the system will be greatly affected. The other advantage of using A/UX is that it's Unix, and thus many of the Apps for Unix also work on the Mac. I'm currently working with a Workgroup Server 95 running Appleshare Pro, and I've enabled FTP but only for a small number of users. It works but then it's not a real world example.

Bill Beasley
AlliedSignal Technical Services Corporation
(301) 805-3736

=====
=====

From: Stephen C.Trier <trier@odin.INS.CWRU.Edu>

Recently, a price/performance analysis suggested BSDI BSD/386 on appropriately configured 486 systems would be cost effective.

As for services under MacOS, right now, the infrastructure isn't there. It's like providing them on MS-DOS or Windows. Most server programs lack the

configurability, robustness, and logging of Unix servers, the OS isn't quite as stable as a Unix system, and you lose simple remote management.

=====
=====

From: jqj@phloem.uoregon.edu (JQ Johnson)

Management is the big issue. Is SNMP polling of your MacOS server enough, or do you need to be able to telnet to the box and poke around? How do you back up your MacOS server? How do you accept email-based complaints and failure reports from users? Etc. These are all solvable problems, but they've already been solved in the Unix world (at least at many academic sites) so you have to factor in the cost of figuring out Mac solutions into the MacOS answer.

--

JQ Johnson	Office: 250E Computing Center
Director of Network Services	Internet: jqj@ns.uoregon.edu
1212 University of Oregon	Voice: 503.346.1746
Eugene, OR 97403-1212	FAX: 503.346.4397

=====
=====

From: mstark@UCSD.EDU (Mike Stark)

At UCSD's Academic Computing Services I'm using a Mac Quadra 950 as a gopher server as well as a campuswide Appleshare Server and a dial in BBS server. I did it this way so that I would only have one platform to support with several access methods. The machine via gopher is userserve.ucsd.edu if you want to peek at it. I use the gopher server to distribute both information about licenses etc, as well as the most popular mac software. With KnokKnok running I get logs of who is accessing on all the network connections, and I run FTPd for the gopher server software as it is real easy and effective.

Mike Stark U.C. San Diego, I.C.C., Academic Computing Services
Mac & PC Support Voice (619) 534-4060 fax (619) 534-7018
internet: mstark@ucsd.edu / bitnet: mstark@ucsd
Compuserve:[70425,1164]/ Applelink:Stark4/ Delphi&AOL:MWS85/GENIE:M.STARK

=====
=====

From: behr@math.niu.edu (Eric Behr)

I set up an A/UX Mac as a server for a department of mathematics (about 45 faculty) at a Midwestern state university. It's been serving that department since Dec. 91 without major problems.

The reason it was a Mac was the relatively small investment -- if the experiment failed, we'd only be down by the \$500 or so for A/UX, while the Ilsi which ran it could be used as a "normal" Mac. Besides, given the mindset of decision-makers at that time, I could hardly justify buying a "real" Unix workstation.

The Mac runs a POP server, gopher server, anon. ftp, CAP (aufs and lwsrv); it is the primary master nameserver for the network.

A/UX is quite good, despite its quirks and the Sys V flavor. For reasons of performance I almost never used the Mac environment under it, but the few times that I did, it was a joy to play with.

SunOS is obviously more mature, and since it is perhaps the most popular variant of Unix in existence, any package you can dream of has been ported to it. By contrast, some popular software requires major tweaking to run under A/UX. Still, many knowledgeable people have done a lot of work porting to A/UX, and I never felt I was using an obscure or orphaned system. By the way, the comp.unix.aux gang is invaluable.

Why did I choose to use Unix rather than MacOS? Two reasons; first, Unix is much more versatile when it comes to networking, and it's a much more flexible operating system in general. I could write 50 pages of examples here. Apple itself recognized this by choosing A/UX for their Workgroup Servers. Second, it was obvious that when the Mac runs out of steam, we would move to faster hardware, which would almost certainly be a Unix box, and in that case moving all the services from A/UX would be trivial.

Hope this helps.

--
Eric Behr, behr@math.niu.edu
Northern Illinois University, Math

=====
=====

From: yankee@pole (Tim Snyder)

Well, I thought I'd spit back a service most people don't consider... fsp.

It has gotten a lot of bad rep, but is a very nice file transfer protocol. I am running an fsp server on my A/UX box. It works great... just as good as the one I set up on a DEC 5000/200 (with less hassle)

(as a side note... fsp is a connectionless transfer protocol. It is much nicer to the network and to the machine running the server than is ftp. When it was first introduced, it was chosen by pirates because any user can run the server. That has since passed. several major ftp sites, including wuarchive.wustl.edu, are mirroring their ftp sites with an fsp server)

fsp can be found at: ftp.germany.eu.net

I've also had up to 10 people telnetted or rlogined to my machine with no difficulties. I sometimes serve several X-applications.

Of course, I also serve my macintosh disks to 4 or 5 users on an appletalk network, and am also running CAP to serve my Unix space to people via appletalk also. CAP is MUCH MUCH MUCH easier to set up and use on an A/UX machine than it is on any other.

(CAP is a program used to interface a Unix box and an appletalk network. You can do file sharing, serve ethernetnetted printes to appletalk machines or also serve appletalk laserwriters to ethernetnetted Unix boxes. If you run it on something other than a mac running A/UX on ethernet with ethertalk, you need extra hardware. This is one case where an A/UX machine wins hands down.)

cap can be found at: (I forget, and my archie search is running slow)

>I'd also like to get feedback from people setting up similar systems on a
>Mac running A/UX 3.x. I'd like answers to the above questions, as well
>as why you chose A/UX instead of running under the Mac OS or running it
>on a Sparc?

Well, I already talked about CAP. Run on a Mac, it kicks butt against any other Unix box, since the appletalk stuff is built in. If you didn't use CAP on a mac, in order to serve appletalk printers to your workstations, or line printers to your macs on appletalk, you need to buy a Gatorbox or Fastpath or something similar (\$900-\$2000)

Most of this stuff could be run under the MacOS (if it were written, I do not know if it is or not). If it is not there, it can be written. Of course, to do it this way again requires the gatorbox etc.

I am running a Centris 650 8/230 (+340) with ethernet and A/UX 3.0.2

This system, with a 14" monitor, can be had through a package deal for \$3000 plus the purchase of A/UX.

When logged in via the mac process (the unix program that makes A/UX look like a mac) I wish I had more memory. Otherwise, I have had no troubles in that area.

--Tim

PS The one trouble I have had is my return addresses on mail. It's something I screwed up, and can't seem to fix. :) Besides my own screw-ups, I have had no troubles...

--
Tim Snyder (* yankee@nermal.catt.ncsu.edu, yankee@pole.catt.ncsu.edu *)
(* tgsnyder@eos.ncsu.edu, snyde-t@aza.csc.ncsu.edu *)

=====
=====

From: PHILIP@shark.stmarys.ca (Philip Howard (Computer Services))

We run our campus gopher system on an SE running System 7 with 2Mb RAM and an

80Mb SCSI external drive. The system is connected to our campus network via ethernet. We're running the Mac Gopher server version 1.0.1. This is because I encountered problems with the latest version from boombox. micro.umn.edu when it ran with AppleShare 3.0.

Performance: slow but fairly dependable. The SE is doing double duty and it shows; Our Gopher server is also an AppleShare file server. I have set our AppleShare service to a max. of 50% of available cpu in order to give gopher users a chance. We use AppleShare to distribute public domain software including Info-Mac CD-ROM. Neither is available through the Gopher, though.

When I can get gopher server software running under our UnixWare system I will move our 'burrow' to that PC.

You can visit us at gopher.stmarys.ca 70.

I would be interested in reading a summary and your paper when/if it is available.

=====
=====

From: slb@bbn.com (Susan Bernstein)

Tom, in response to your inquiry re macintosh-based internet servers, in which you also express interest in comparisons with other platforms, but argue that the Mac platform keeps the cost down, I am sending you information on BBN's Copernicus Server, whose platform is a BSD Unix system on a low-cost Intel PC (which we thought was the best price/performance compromise). Since you must be a Mac user, I'm attaching the WORD version of the description, but I also recommend you point your gopher client at copernicus.bbn.com to see some of the ways in which instances of this server are being used in K-12 education, and to get a text version of the attached document.

[NOTE: I didn't include the documentation, but you can grab it from their gopher server. -Tom]

=====
=====

From: Scott W Brim <swb@nr-tech.cit.cornell.edu>

Tom, I suspect that 486-based systems, running BSDI, for which we have a site license) would cost even less.

=====
=====

From: Tom Karches <karches@feenix.metronet.com>

MacFTP is available on sumex, I believe. It turns a Mac into an FTP server.

The company that sells Versa-Term includes an FTP server with one of their products. I think it is called Versatilities.

I have used a product called IpDaemon which runs on a Mac that allows Unix systems to print to AppleTalk attached laser printers. The Mac running the software acts as a gateway.

For a complete solution that could probably run any internet service you want, check out MachTen. It is BSD Unix with a Mach kernel (excuse the techno jargon if it makes no sense) that will run on ANY Mac, including a Mac Plus and any PowerBook. It comes with telnet, FTP and all standard unix networking utilities. You can buy an optional developer package which would let you port any other package (like Gopher) to run on it. Available from Tenon Intersystems, info@tenon.com, 1-800-6-MACH10. I have it running on my PowerBook 160.

Let me know if you need more info on anything I mentioned.

Regards,
Tom Karches
karches@metronet.com

=====
=====
From: jan3@po.cwru.edu (James A. Nauer)

Currently, I'm running an FTP/Gopher dual-protocol server, and an HTTP (WWW) server on a Mac (Centris 650). The FTP/Gopher server is Peter Lewis' FTPd, version 2.10 (available at all the major Mac FTP sites: sumex-aim.stanford.edu, mac.archive.umich.edu, wuarchive.wustl.edu, etc.) The setup is quite elegant, since it uses the System 7 File Sharing Users & Groups database for usernames & passwords, and use the access privileges set up by File Sharing to determine who can read/write what. The only problem is that it is NOT optimized for speed, and the performance shows it. I only use it for personal use.

The HTTP server is Chuch Shotton's MacHTTP 1.1. The URL for the MacHTTP home page (with documentation & links to the current distribution file) is: "http://www.uth.tmc.edu/mac_info/machttp_info.html". I've been using this server for prototyping a new campus-wide information system; so far it has worked quite well. The performance (speed-wise) is less than impressive, but adequate for now; I will probably switch to a Unix server (A/UX) for production systems though.

> I'd also like to get feedback from people setting up similar systems on a
> Mac running A/UX 3.x. I'd like answers to the above questions, as well
> as why you chose A/UX instead of running under the Mac OS or running it
> on a Sparc?

I am also running a Gopher/HTTP dual-protocol server under A/UX 3.02; so far, I'm only serving gopher data with it, but it works very well. I'm using John Franks' excellent "Gn" server (v 1.07, FTP or gopher to hopf.math.nwu.edu). Not suprisingly, the performance is *much* better than any of the Mac-based servers. (It helps that I'm running it on a WorkGroup Server 95, but all things being equal, A/UX still has *much* faster network and disk i/o than the MacOS).

> I know probably the primary consideration for running an Internet service
> on a Mac is cost; Mac CPUs can cost a fraction of what SUN CPUs do. I'm
> sure that there are a number of reasons to run FTP/Gopher/WWW/etc.
> services on a Unix system, and I'd like any insights to specifics why
> Unix on a SUN is better than a Mac running A/UX, and why a Mac running
> A/UX is better than a Mac running its native OS for providing Internet
> services.

If you already have a good enough '040 Mac (or the money to buy one) A/UX is probably the best option; it provides the higher performance of a UNIX server and IMHO is *much* more flexible since almost all of the TCP/IP-based servers are developed in UNIX and can be compiled/run on A/UX. That flexibility just isn't available in MacOS.

On the other hand, if you have (or can get) a middle- to low-end Sun SparcStation, running SunOS 4.1.x, you can get the same or better performance for about the same price as a high-end Mac + A/UX, but compiling the various servers available on the 'net will be much easier since they invariably work "right out of the box" on SunOS; often, a bit of tweaking is needed to get things to work on A/UX. On the third hand, watch out for machines running Solaris 2.x; many of the server apps. floating around on the 'net have yet to be ported to Solaris (although that is changing rapidly since Sun finally seems to have gotten most of the nasty bugs out of it...).

--

James A. Nauer | "I shall not yield one whit of maturity,
L.I.T. Facilities Manager | not grace, not respectability, to the
Library Information Technologies| passing of time. I declare that I shall
Case Western Reserve University | forever be, if not a child, certainly
(216) 368-MACS | childish" --Kennet Shardik

=====
=====

From: Arno.Wouters@phil.ruu.nl (Arno Wouters)

I'm running a gopher server on a MAC Classic. It's the original gopher server available by anonymous ftp from boombox.micro.umn.edu. The main reason for running a server on a MAC rather than on a SUN is that for security reasons my systems administrator won't allow me to run a server on the SUN. The main problem with the server is that for unknown reasons it crashes about five times a week. I've "solved" this problem by running autoboot, a utility from mac.archive.umich.edu that automatically reboots the mac after a crash. I also tried gopher surfer, but that caused so many problems that I returned to the original server after a week. One of the niceties of the MAC server is that I don't have to learn UNIX and that I'm used to the graphical interface. My wish list: -Unix like link files (with name= , path= and so on) -the ability to log connections -the ability to index files.

--
Arno Wouters.

Dept. of Philosophy, Utrecht University, The Netherlands
Email: Arno.Wouters@phil.ruu.nl

=====
=====

From: Niels Jonker <niels@opup.org>

A company I used to work with, Knoware, based in The Netherlands, Europe, is running ALL of their internet service from Macs. We experienced a lot of problems there, most of which were related to faulty hardware and a buggy A/UX.

I am personally a fan of using UNIX boxes, even PC's running Linux or BSD to provide internet service... It is my experience that the process is not as painful.

I suggest that you send the people at Knoware a little note if interested, try mailing root@utrecht.knoware.nl.

To me, having had some not do great experiences, this is an interesting subject though. Could you, when you get the paper done, or have more info on this, please send me a copy?

--
Niels Jonker, Operation Uplink II System Administrator, Niels@OpUp.ORG

=====
=====

From: Christine Walczyk <tinew@emx.cc.utexas.edu>

you might want to contact Tom Newell here at UT. He has set up a FTP server and a gopherhole via mac. you can reach him at tnewell@bongo.cc.utexas.edu

Tine Walczyk |Internet: tinew@emx.cc.utexas.edu
Computer Programmer Services Assistant |
Training Services |AKA: lady christine or sprite
Computation Center |
University of Texas at Austin |Sprites... Visitors from a Slightly
Austin, TX 78713 |Different Dimension

=====
=====

From: Scott W Brim <swb@nr-tech.cit.cornell.edu> (11/15/93)

Tom, I have no idea what the answer is to your real question. I just wanted to recommend that you try using GN as your server software (runs under Unix), since it responds to WAIS, Gopher, *and* WWW HTTP. Release 1.1 just came out.

Scott

=====
=====

The last two entries here are on the same topic, but include a lot of back and forth one-on-one discussion. I've combined discussions over several memos with the same person into one memo and deleted some of the extraneous "stuff".

- Tom

=====
=====

From: Roger Jagoda <rogerj@lps.cornell.edu>

You say:

> I'm working on a collaborative project with our Engineering Library to
> provide a gopher server for the College. We're hoping to put our server
> on a Quadra 650 with 32MB RAM and a 500 MB hard drive, running under
> A/UX. We're currently running it under Mac OS on a Ilci 80/8. The GUI
> of the Mac makes it very easy to administer and add items to the archive.
>

Well, are you SURE you want the server to be a MAC? CIT is running several gopher servers, mostly on SUNs, a few on MACs and one on a PC. The PC and MAC servers are woefully slow. One of the MAC servers is an FX crammed with RAM. Mostly, it's not the CPU but the OS where the bottleneck comes.

How about a UNIX machine? UNIX is a "connection" oriented, socket/TCP-IP based OS. It's MADE just for this task! Built-in to the OS is the very service Gopher uses, TCP/IP. On a MAC or PC it's an Add-On that the OS has to "address" when it want to use it. UNIX also undertsands and manages multisession calls whereas the MacOS or anything on the PC is written to be single session but hacked to be multisession. you get the drift.

> I was wondering about the interoperability of the Mac OS and A/UX. The
> main reason we'd like to use A/UX is the WAIS indexing capabilities
> allowing full-text searches, but to NOT give up the ease of archiving
> info in the Gopher hierarchy under the Mac GUI.

All UNIX Gophers are now GUI-based. They also can be command-line for remote administration! Also, there's five flavors of WAIS for UNIX, pick one!

> We originally wrote a proposal which the server was to be a Sparc 10 Model 20
> with 64MB of RAM and a 1.424GB internal hard drive. List price on this when we
> wrote the proposal (about a year ago) was \$20K, educational price was about
> \$12.6K. Adding a 5GB tape backup and a CD-ROM drive jacked the educational
> price up another \$3K. We were having a hard time getting funding for it.

Bummer.

> By going the Mac route (Q650, 32MB RAM, 500MB HD, CD-ROM) we were able to shave
> off about \$10K. Now, Cornell Society of Engineers is interested in providing
> funds to set this up, primarily from the standpoint of offering this as a
> service to alums and incentive to join CSE. They were a little hesitant when I

> mentioned the \$16K figure, but after John Saylor and I met to discuss options,
> we decided on this configuration.

Sounds good. Of course should you get the UNIX box, you could always use it for other things to...a mini-news server, WWW server, etc.

> I saw a presentation given by Mark McCahill (the project leader on the UMN
> Gopher development team) as the NYSERNET conference. The main top-level gopher
> servers at UMN are running on Mac Ilci's with 20MB RAM running A/UX, and EACH
> of those servers (there's 4 of them) can handle 50,000 transactions/day before
> the traffic gets too much for it to handle. So I'm not sure if your conclusion
> of a Mac being an inadequate gopher server is justified.

I misspoke, or you misunderstood. At UMN they run A/UX (a UNIX derivative, a poor one, but still UNIX) on lots of little machines. You are setting up just one target and I suppose, for your load, it will be adequate for now, but little or no room for growth. Upgrades from a Quadra to a ...what...a PowerPC? Perhaps, but not for a while. Upgrade a SPARC 10...just add another processor!

> OK, valid points. But if just ONE of UMN's top-level servers is able to handle
> 50,000 transactions/day with no problem on a Mac Ilci w/ 20MB RAM, I think that
> a Quadra 650 with 32MB of RAM would be more than capable of handling a few
> hundred hits per day. I understand where you're coming from....you're
> dedicated to that platform and that's your platform of choice, and you
> evangelize it well. I'm as much a Mac advocate/evangelist as you are a UNIX
> advocate.`

Well we use MACs too, just not for multi-user/session anything. They're just not right for it under MacOS. My one limited stint with A/UX was a disaster. It was just awful, and that was on a 950!

> Like I said, good evangelism! I'm not sure I buy it though. I realize that we
> would give up certain things by not getting a SparcStation, but not so much
> that could possibly justify an additional \$10K!!! Convince me.
> ---

The additional 10K buys you flexibility and growth through minimal charges. Suppose this takes off and you want to do more. A WWW server or something. the QUADRA might not be able to cut it. SPARC 10, add another processor. The cheaper solution will be the SPARC. Thinking long term, the SPARC has a lower cost growth path....JMHO.

Good luck with the project, no matter what platform you choose. It's been a general consensus in my field, that CISC CPUs like the 68040 are sort of at the end of power scale. UNIX on those processors is pretty limited. I've run A/UX on the 040s and 3 flavors of UNIX under 486/66s, everything is slower than the slowest SPARC I have here. The RISC processors are just much better suited for the high clock speeds and fast caches that UNIX deals with.

Roger Jagoda -- A wise person adapts
Systems and Network Manager him/herself to a changing world.
Plasma Computing Center -- A foolish person tries
Cornell University to force the world to adapt to him/her.
(607) 255-6115 -- Therefore most
roger@lps.cornell.edu progress is due to foolish people.

=====
From: "Mark P. McCahill" <mpm@boombox.micro.umn.edu> (11/17/93)

In message <93Nov17.121829est.577303-5@router.mail.cornell.edu> "Tom Scott" writes:

- > What about over the net? My colleague receives items to be posted sometimes
- > via e-mail. Then he mounts the gopher server (via file sharing) and posts
- > items in their appropriate folders through drag-and-drop. What are his
- > connectivity options if the server is running A/UX?

A/UX 3 looks like MacOS system 7 so in theory you ought to be able to mount the machine as an appleshare file server. I haven't tried this myself, but I think it would work.

- > >Another option (if you can wait a bit) is to wait for us to finish up the
- > >code to make Apple's AppleSearch software appear as a Gopher search engine.
- > >We are working to integrate AppleSearch with the Gopher Surfer product so
- > >that if you buy AppleSearch it also looks like a gopher search engine if
- > >you are running Gopher Surfer. I think we will have a test version of this
- > >limping by next week.
- >
- > If I understand you correctly then, this updated Gopher Surfer will give you
- > WAIS-like index search capabilities under the Mac OS?

yes, if you purchase Apple's AppleSearch software.

- > What other features of A/UX would be missing in this scenario?

cron tasks. Unix cron tasks are convenient for automating recurring tasks.

Mark P. McCahill

gopherspace engineer/University of Minnesota
mpm@boombox.micro.umn.edu
612 625 1300 (voice) 612 625 6817 (fax)

=====
=====