

Naval Mission Planning Systems



PMA-233

NavMPS – JMPS Server/Network Options May 2000

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NERTS Quote of the Day

"A computer lets you make more mistakes faster than any invention in human history, with the possible exceptions of handguns and tequila."

-- Mitch Ratcliffe,

Technology Review, April 1992



Setting Expectations

- What I have here are some options...
 - This is not a decision brief
 - It is not a list of server requirements
- What is here needs fleshing out & details
 - Pluses and Minus
 - Past Experiences
 - Other options
- No obvious answers



Things to Consider

- Secure Computing
- GCCS Stability/Interfaces
- ADMACS/Other external systems
- Non-Carrier Locations
- Low Bandwidth Locations
- REDS and its progeny
- Security
- Interconnection to GCCS Segments
- NSWPC/SPF
- RIP/Feral Software
- Current JMPS design



Things Off the Table

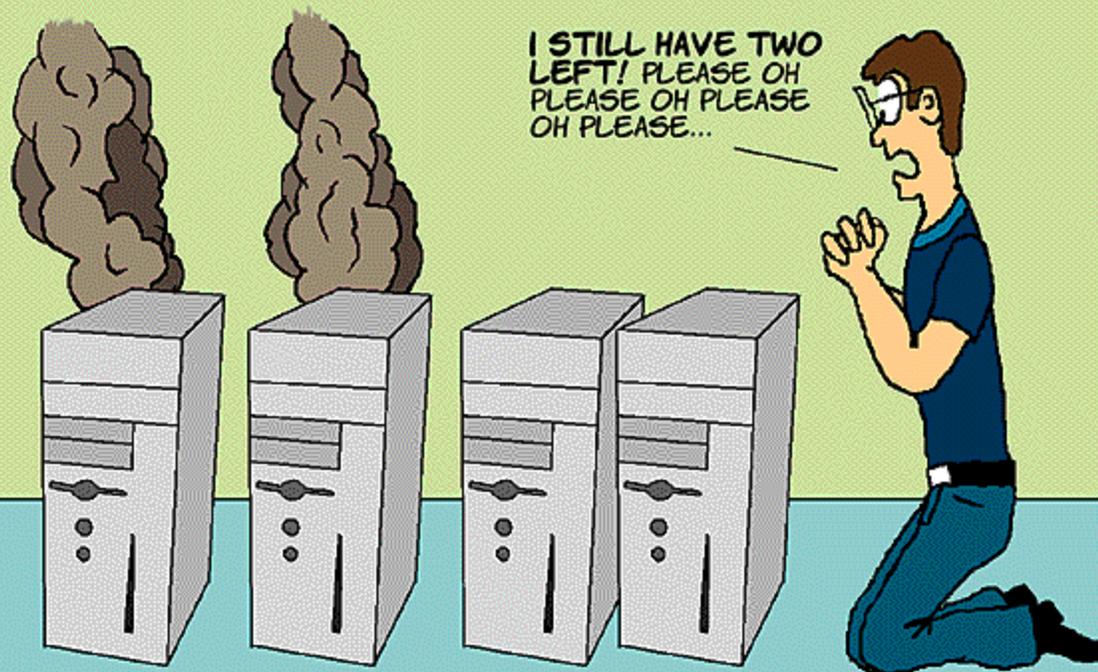
- Reach Back Concepts
- JMPS as a GCCS application/segment
- Who buys the H/W



NMA-233

Cartoon of the Day

R.A.N.T.S
(REDUNDANT ARRAY OF NT SERVERS)



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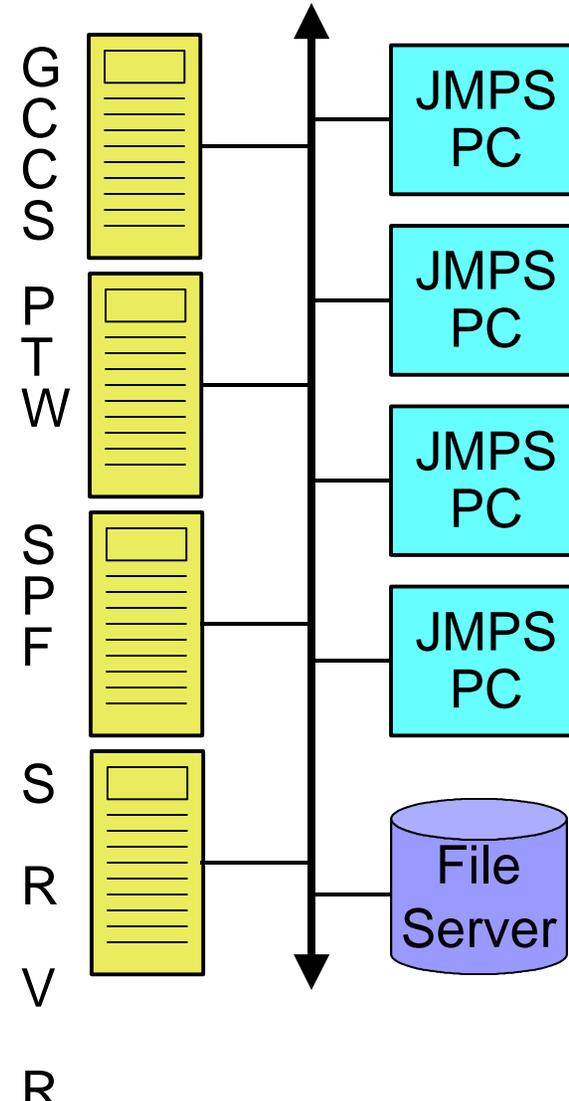


Options Overview

- 1. No JMPS Server**
Direct GCCS Client
- 2. 3 Tier**
Looks a lot like TAMPS & REDS
- 3. GCCS Proxy**
2 or 3 Tier
- 4. Peering**
Clients supporting each other
- 5. Serengeti/Wildcat**
- 6. Bitty Server**
Special case for special stuff

No JMPS Server

- PCs networked to GCCS and other servers or systems
- No Dedicated Server
- Pulls data via SQL or Equivalent APIs
- Ad Hoc Storage
 - Locale dependent





No JMPS Server

PLUSES

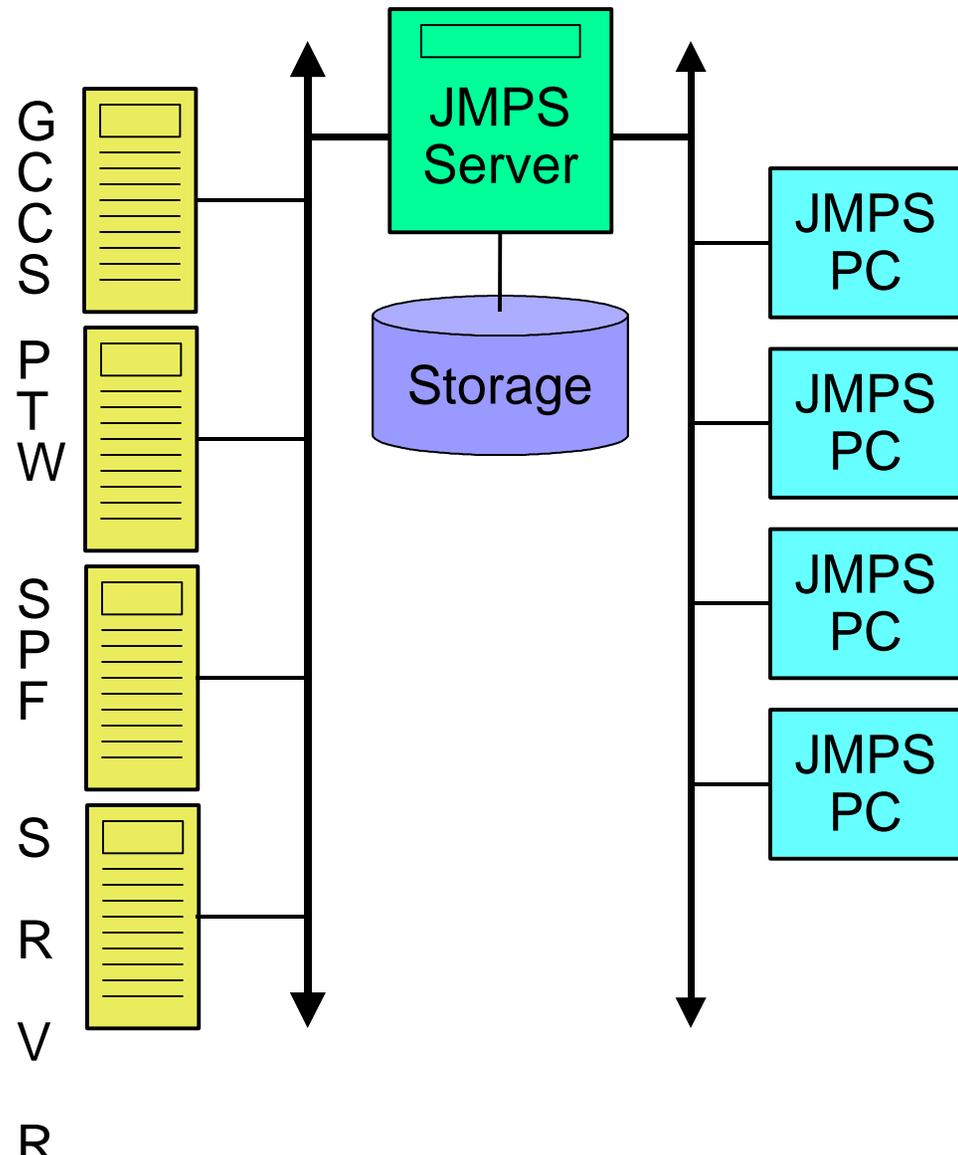
- **No server costs**
- **Flexible Configuration**
- **Easy expansion via RIP etc**

MINUSES

- **Clients reactive to outside programs (vice dedicated server)**
- **Ad Hoc connectivity**
- **Need for common storage**
- **Fat Client**

3 Tier

- JMPS Dedicated Server
- JMPS Sever connected to GCCS and other servers or systems
- JMPS PCs pulls data from JMPS Server
- Includes mass storage
- Sun or NT





3 Tier

PLUSES

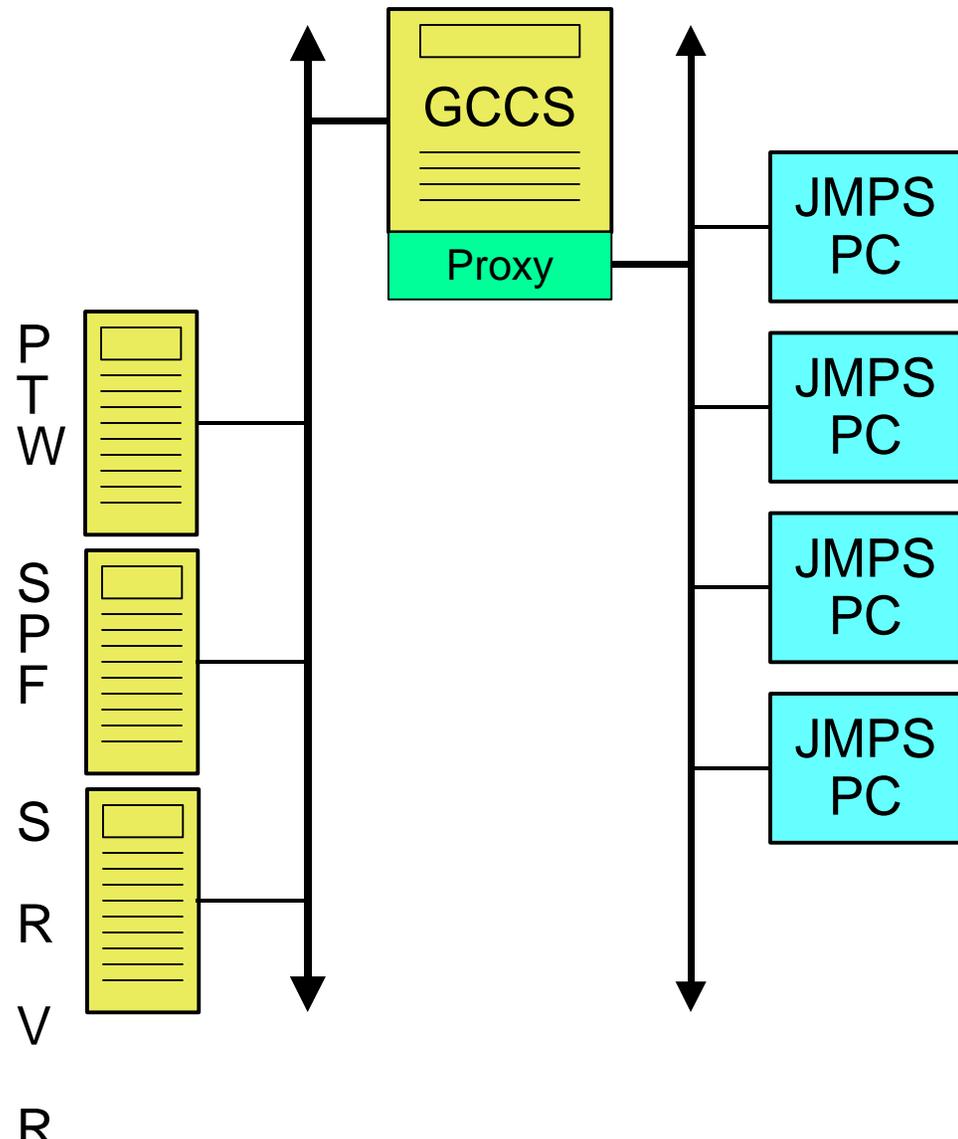
- We own it
- Stable environment for client
- CORBA based computational resource
- Could be data storage only

MINUSES

- Requires a server
- Must bridge changes between sources and clients
- SA/DBA needs
- Certification of CORBA

GCCS Proxy Segment

- **JMPS GCCS Segment built to support JMPS PCs**
- **Proxy collects data from and supplies it to clients**
- **Data Storage TBD**





GCCS Proxy Segment

PLUSES

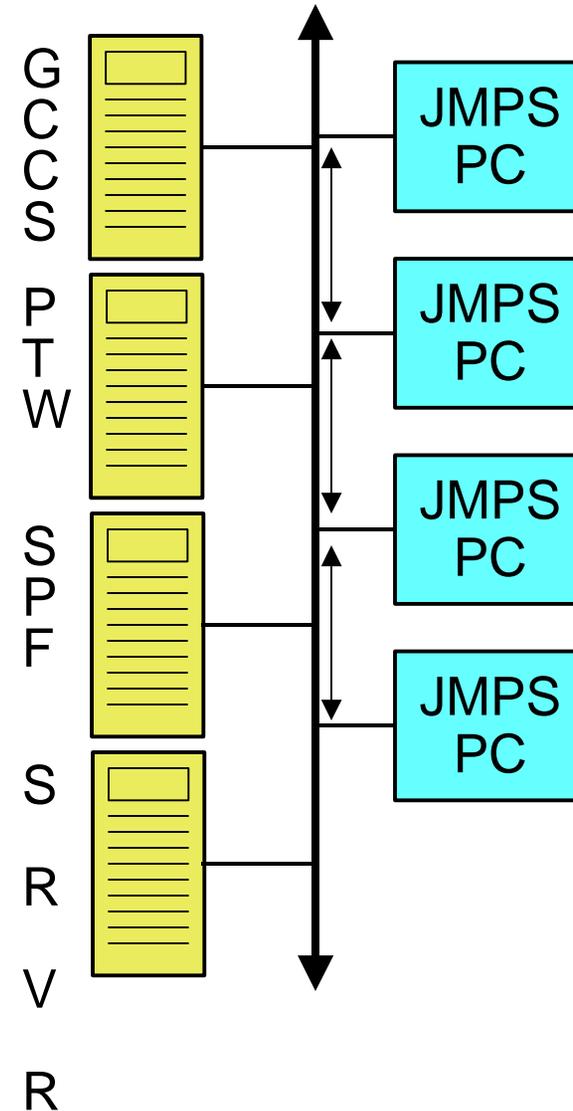
- **Not a server**
- **Stable GCCS interface for clients**

MINUSES

- **May not be able to support all server needs**
- **GCCS Politics**
- **Inter segment APIs**
- **GCCS S/W Dev.**
- **Data Storage**

Peering

- PCs networked to GCCS and other servers or systems, and each other
- No Dedicated Server
- PCs share/publish data amongst themselves
- PCs can pull data direct from servers
- Ad Hoc/Adaptive Storage





Peering

PLUSES

- No Sever
- Flexible Configuration
- Easy expansion
- Shared peer storage
- More generic

MINUSES

- Development of Peering software
- Client reactive to outside programs (vice dedicated server)
- Ad Hoc connectivity
- Certification
- Performance



Serengeti

- **NDA required**



Serengeti

PLUSES

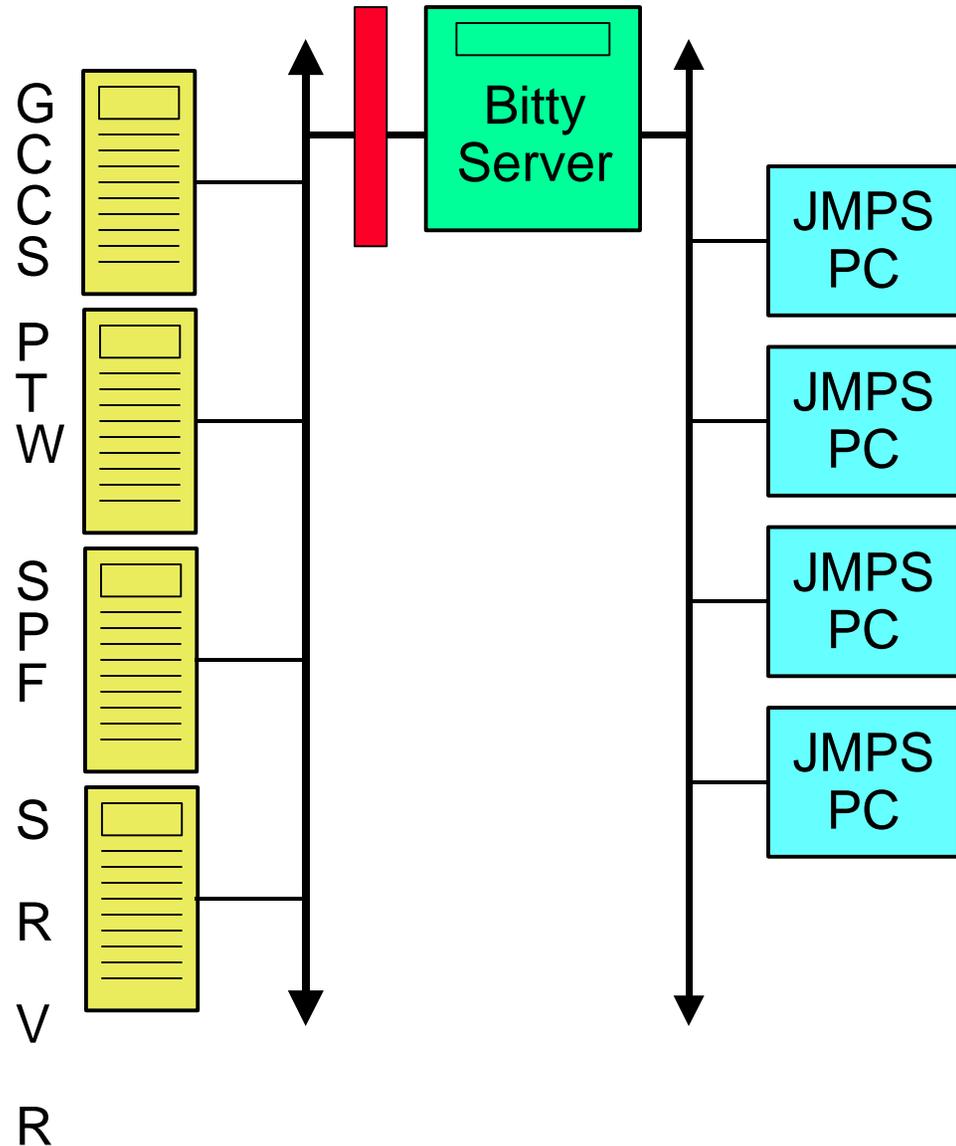
- No Server H/W Cost
- Sun's leading edge architecture
- Could support CORBA based backend processing

MINUSES

- Sun's leading edge
- Unknown interface to other domains
- Co-hosted
- RMA thresholds

Bitty Server

- Addresses unique need of Trusted
- Looks like server to its clients
- “Understands” the environment
- Will have to support local storage
- Could be combined





Bitty Server

PLUSES

- Really helps Trusted
- Client does not have to know about its location
- Could be combined with other Trusted components

MINUSES

- Additional variant
- Certification issues
- NT vs. Solaris



Summary

- We need some form of server
 - Needing a server != owning a server
- All options presented are viable
 - All have pluses and minus
- Looking for more options
 - Variations
 - Hybrids
- GCCS Is a moving target
 - 10K lb gorilla

Joe “Salami” Gattuso is correct when he says:
We need to target where users will want us to be
in 2003, not just where they are today.



Lets Not Go Here



MISTAKES

IT COULD BE THAT THE PURPOSE OF YOUR LIFE IS
ONLY TO SERVE AS A WARNING TO OTHERS.