



Domain Name System Procedures

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A. General

The following procedures provide guidance on the administration of the University’s Domain Name System:

1. The VPIT/CIO delegates responsibility for implementing the DNS Policy to the Telecommunication and Network Services (NETTEL) unit of Information Technology Services Division (ITS).
2. The Director of ITS NETTEL is responsible for the management of DNS servers for the University and will establish procedures for documentation, management, and periodic review of the DNS service. The NETTEL Director’s appointed staff are the only authorized actors responsible for the implementation, editing, and maintenance of DNS service entries.
3. Requests which are denied by NETTEL may be appealed to the Chief Information Officer who will consult with the appropriate Vice President for final resolution.
4. If the justification for a non-standard domain name changes, the assignment of the name will be reviewed. For example, if grant funding ends and a research unit/center is no longer officially recognized, the domain name assignment will be reviewed.
5. If the domain name does not respond to network inquiry for two months, the assignment of the name may be terminated. Two weeks’ notice to the name owner will be given first, if possible, to attempt resolution prior to termination.
6. The following information shall be provided when registering a domain for the University.

Registrant:

Georgia Southern University
PO Box 8025
Statesboro, GA 30460
UNITED STATES

Administrative Contact:

IT Services Networking - Domain Admin Services
Georgia Southern University
PO Box 8025

Statesboro, GA 30460
UNITED STATES
(912) 478-8411
gsudomainadmin@georgiasouthern.edu

Technical Contact:

IT Services Networking - Domain Admin Services
Georgia Southern University
PO Box 8025
Statesboro, GA 30460
UNITED STATES
(912) 478-8411
gsudomainadmin@georgiasouthern.edu

B. DNS Standards Within the georgiasouthern.edu Domain

The format of DNS service entries is "**department.georgiasouthern.edu**", where:

1. The naming structure is intended to follow the organizational affiliation.
2. Department subdomains in the georgiasouthern.edu domain must be the names of schools, colleges, or organizational units that are officially recognized by the Georgia Southern University. The subdomain name is determined by Marketing & Communications and the administrative department or college. For example, cobra.georgiasouthern.edu.
3. Services provided by University auxiliary units (Bookstore, Housing, etc.) must be registered under the georgiasouthern.edu domain.
4. The unit responsible for the service may select the hostname component of the domain name.
 - a. The hostname component of the domain name may reflect generally accepted practices, used by the Internet-at-large and provided by sites internationally, including www and ftp. For example, the "www" in www.georgiasouthern.edu.
 - b. The hostname component of the domain name may reflect the name of the service program or may follow a naming scheme within the department. For example, the "gilfind" in gilfind.georgiasouthern.edu. is a service name offered by the library.
 - c. Length limit for hostname and department subdomain names is 63 characters each.
 - d. Server and computer hostnames should not be trademarked or copyrighted terms.
 - e. Server and computer hostnames must not be distasteful, obscene, or used to misrepresent their purpose.
5. Exceptions for hostnames within the georgiasouthern.edu domain may be allowed only if all of the following conditions are met:
 - a. The proposed name is for a consortium of many different organizations either within or outside the University.
 - b. The proposed name is the name of a service or service unit, center, or institute and not the name of a department or other organizational unit.
 - c. The proposed name is for a University-wide service that is not easily identified with a single department or unit, or it is for a service that is being offered primarily to

people or groups that are outside the University and who are not likely to be familiar with the details of the University's internal organizational structure.

- d. The proposed name is not now, and is not likely to become, ambiguous if it is used as a hostname without other department or unit qualification.
- e. The proposed name is not likely to change.
- f. The placement of the proposed name as a hostname within georgiasouthern.edu has the explicit approval of the unit administrator of the school, college, institute, or unit with which the name would otherwise be associated.

C. DNS Requirements - Outside the georgiasouthern.edu Domain

Establishing domain names outside georgiasouthern.edu must meet the following eligibility criteria, approvals and guidelines.

1. Eligibility

Eligibility is contingent upon meeting one of the following scenarios:

- a) The Proposed domain is associated with a service offered by Georgia Southern University to a non-Georgia Southern community. For example, GSEagles.com or GADaily.com
- b) The proposed domain service is hosted by the University on behalf of another recognized organization. For example, the University could provide DNS and web service on a pro bono basis for a scholarly journal, edited by a University faculty member.
- c) The proposed name references a University Foundation function.
- d) The proposed name signifies an organization or venture, commercial or noncommercial, that is not explicitly part of the University but is managed by the University.
- e) The proposed name is for a research project or entity with external funding, and approved by the Vice President for Research. (e.g. Herty.com)
- f) The proposed name is for a public-private venture and approved by the responsible Vice President.

2. Approvals

A domain name outside of the georgiasouthern.edu domain must be reviewed and approved by the Director of Marketing & Communications and have the explicit approval of the university administration of the college, center, institute, or equivalent unit to which the name is otherwise associated.

3. Implementation Guidelines

When implementing domains outside georgiasouthern.edu, the following considerations apply:

- a) All services listed outside the georgiasouthern.edu domain must obtain their own IP address space. The network administrator of these external services must contact gsudomainadmin@georgiasouthern.edu to coordinate associated domain name

service and IP routing issues before requesting the domain name or configuring services related to the domain name or IP address space.

- b) The proposed name should have either primary or secondary name service provided by georgiasouthern.edu hosts.
- c) The proposed name should not be confusable with the name of a Georgia Southern University department or unit.

D. Securing DNS

DNS shall be secured using the following best practices:

1. External DNS

- a) Use dedicated external name servers
- b) Turn off all services except for DNS
- c) Restrict access to DNS ports to outside users
- d) Use authenticated zone transfers - For each secondary server, use a unique Transaction Signature (**TSIG**) key or some other means to authenticate zone transfers (e.g. IPSec).
- e) Authoritative name servers (especially primary name servers) should be configured with an allow-transfer access control designating the list of hosts from which zone transfer requests can be accepted.
- f) Place recursive servers at the DMZ
- g) Define recursion-list - Although recursion is enabled, the recursion-allowed list should be tightly set so that only a small set of systems can send queries to the recursive server.
- h) Define query-list - This is similar to the recursion allowed list. Only a small set of IP's should be allowed to query these servers.
- i) DNS servers must be protected by firewalls and other inherited controls
- j) DNS server logs should be actively monitored by an integrated security information and event management (SIEM) infrastructure and considered critical information assets by incident response staff.

2. Internal DNS

- a) Set up DNS forwarding - The internal authoritative servers should only forward DNS queries to the dedicated recursive servers. These should not be allowed to recurse or query outside.
- b) Authoritative name servers (especially primary name servers) should be configured with an allow-transfer access control designating the list of hosts from which zone transfer requests can be accepted.
- c) Disperse name servers - Name servers should be spread across multiple switches and sites to minimize the impact of outages.
- d) Define query-list - This is similar to the recursion allowed list. Only the internal clients should be listed on the query list.
- e) Block Access from Outside - The internal name servers should not be reachable from the outside world.
- f) All internal hosts must resolve to the authoritative DNS server(s)

E. Definitions

The IP address is a 32-bit number, commonly represented as four 8-bit numbers separated by dots, used to identify a host on the Internet. The IP address is used by the network to route messages from one host to another.

Domain Name System (DNS) is the method or scheme for associating names with an IP address and other data. It contains information about computers and in some cases the services they provide.