Role of the Business Service Administration Subsystem

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The Business Service Administration subsystem consists of a table-driven server environment based in Natural. Typically, the Business Service Administration subsystem is used for three types of activities:

Activity	Tasks
System administration	● Install and set up the Business Service Administration subsystem. For information, see the Natural Business Services Installation on Mainframes. ● Deploy the Business Service Administration subsystem in one or more production or development environments. For information, see Deploying the Administration Subsystem. ● Set up and maintain servers. Natural Business Services interacts with EntireX and your network to automate communication between the business service components on the client and on the server, as well as handle security checking for a business service (Natural Business Services security or Natural Security). For information, see Defining and Managing Servers. **Note:** These servers are not required for business service development environments. ● Access the business service control record to adjust Entire Net-Work timeout values, enable or disable Natural Security, and specify a security exit, if required. For information, see Using the Business Service Control Record. ● Monitor and adjust the performance of the Business Service Administration subsystem, such as synchronizing the security cache and cleanup queue and resetting the security cache. For information, see Using Natural Business Services Tools.

Activity	Tasks
Security	• Add users and groups to either Natural Business Services security or Natural Security (depending on the business service control record). This task can only be done on the server. • Define group access privileges to domains, services, and methods. **Tip:** Although this task can be done on the server, it is easier to do in Natural for Windows. ○ For information on defining these privileges on the client, see Define Security for Domains. ○ For information on defining these privileges on the server, see Setting Business Service Security Options. ○ For information on defining users and groups, see Defining Users and Security Groups.
Business service administration	• Access the Business Service Administration subsystem to maintain business service definitions. • Access the Business Service Administration subsystem to define a steplib chain and domain. • Access the Business Service Administration subsystem to maintain business service definitions.

Note:
Some administrative activities can be performed on the client. For information, see Natural Business Services Eclipse Plug-in or Natural Business Services Natural Plug-in.

This section covers the following topics:

- System Administration Activities
- Business Service Administration Activities
- Security Administration Activities

System Administration Activities

The Business Service Administration subsystem provides dynamic, online management of tables used by servers. All data required by the servers to start, stop, and perform requested functions is maintained here. The subsystem also provides mechanisms to enhance the functionality of EntireX, such as a security mechanism, service start-up and shutdown mechanisms, and messaging mechanisms. It is also used to expose some of the EntireX parameters through table-driven maintenance functions, including defining Broker service settings.

System administration involves the following tasks:

- Defining servers

  Servers, which include attach, dispatch, and security servers, interact with EntireX and the network to automate the communication between business service components on the client and on the server. The server definitions enable the servers to make themselves known to EntireX and to configure themselves for the environments in which they are expected to run.

- Managing business service servers

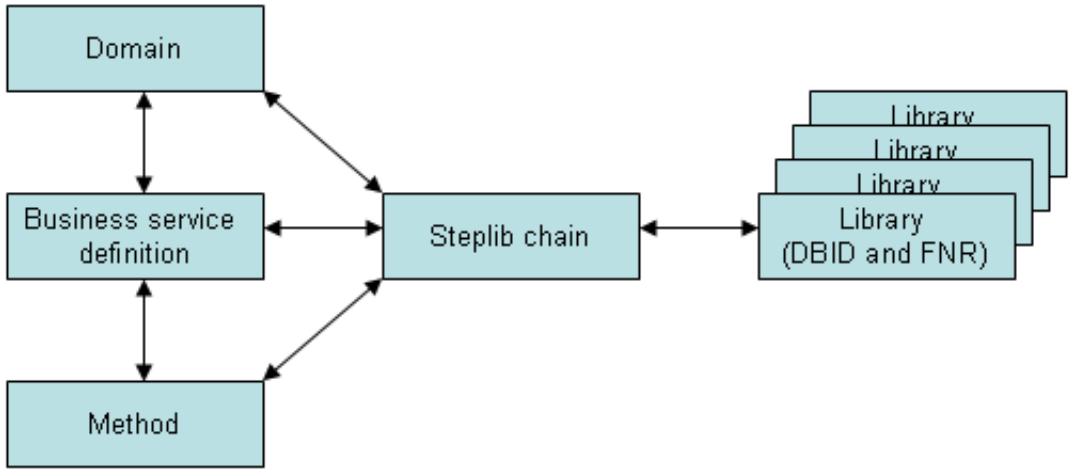
  Using the Business Service Administration subsystem, administrators can start, stop, and check (ping) business service servers.

- Viewing information logs

  Logs maintained by the Business Service Administration subsystem contain updates to all system tables, information generated by running the business service servers, errors related to communication with the business service dispatch server, and security violations.

Business Service Administration Activities

Another way of looking at the architecture of a business service is to view the Business Service Administration subsystem components that participate in directing requests from the client to the appropriate method on the server. The following diagram illustrates the relationships between these components:



These components are:

Component	Description
Steplib chain containing step libraries	Defines a set of Natural libraries that a business service dispatch server must access to call a subprogram proxy. The dispatch server accesses the libraries in the order they are listed in the steplib definition. **Note:** For information on subprogram proxies, see Natural Business Services Subprogram-Proxy-Client Model.
Domain	Identifier used to group business services or define the boundaries of a business service. For example, all services in an Order Entry business service (such as Customer, Order, and Product) can share a single domain.
Business service definition and method	Groups a domain, business service, and version information under one identifier that describes the business service. This definition specifies all the methods of a business service, which subprogram proxies enable access to specific methods, and where the subprograms are located (steplibs).

Application administrators and developers use the Business Service Administration subsystem to define steplibs and domains. Business service definitions are also stored in the subsystem, where they can be modified as needed.

Security Administration Activities

The Business Service Administration subsystem is also used to define security settings that control user access to domains, business services, and methods.

First define the user IDs, then assign each user ID to one or more groups. Groups provide a mechanism for identifying users who need to access the same combination of domains, business services, and methods. Groups usually associate people who perform similar tasks. For example, an organization might have groups for Quality Assurance, Sales, and Management.

Note:
Users and groups can also be defined in Natural Security, rather than Natural Business Services security.

Once users and groups are defined in the Business Service Administration subsystem, security settings can be defined at multiple levels, as shown in the following table:

Level	Description
Domain	When a group is granted access to a domain, its members can use all services and methods in the domain.
Service	Within domains, individual services can have security settings defined so users can only access selected services.
Method	Access privileges can also be explicitly granted or revoked for individual methods of a service.

Security Cache for Natural Business Services

Because security data is located in the Business Service Administration subsystem, it can be maintained centrally. In addition, the subsystem includes a dynamically updated cache mechanism that improves throughput. When a business service dispatch server receives a request from the client, the Natural Business Services security server assigned to it checks the user's security privileges. The security server builds a security cache when it first checks the security for a given request. Thereafter, only one table lookup is required to check the access privileges of a user to requested data, thereby improving response time after the initial request.

The contents of the security cache are always dynamic. If changes occur in the Business Service Administration subsystem data that affect security, the security cache is automatically updated. The security cache is maintained as a separate encrypted table in an external data source.