

Clustering Internet Services

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About clustering Internet Services



Note

There is no need to set up a cluster if you only have one instance of Internet Services set up on a separate machine from the server.

Clustering refers to running multiple services of the same type, for example Internet Services or Voice Services, from a single FirstClass server. You can use clustering to route different Internet protocols (for example, SMTP or HTTP) to better organize your FirstClass environment. For example, you can dedicate a clustered machine to only handle one protocol or you can have multiple clusters for the same protocol to balance the traffic. You can also run multiple clusters on separate machines gatewayed to one FirstClass server on Mac and Windows platforms.

In all cases, you must have Internet Services already installed on your clustered machines. You also need to have the client installed to configure your gateway login settings file and for testing purposes.

Although each clustered service is set up and configured independently, it is possible to share components such as web content or filters using FirstClass folder linking.

The examples we discuss here are by no means exhaustive. Once you understand Internet Services clustering, you can configure multiple combinations for your FirstClass site. For clarity, we highly recommend you diagram your clustered environment before you create it.

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Creating a clustered service

To create a basic FirstClass clustered service:

- 1 Click the New IS Cluster rule button in the Clustered Services folder on the administrator's Desktop.
- 2 Fill in the gateway information for your new cluster.

We recommend you use logical ID numbers for the Gateway User ID to assist you in identifying a gateway if you require technical support. For example, if your primary Internet Services ID is 1000000000, use 1000000001 or 2000000000. Do not use the 4000000000, 9000000000, or 9000000001 ID, as they relate to Directory Services, Voice Services, and Call Answer respectively.

- 3 Choose which cluster you want to create from the FCDialog window (in this case, an Internet Services cluster).

Inside the Clustered Services folder you will find a folder for each cluster that you created.

The new folder name is the gateway (service) name with the word Config after it. In this folder, you will find all of the same folders and forms that are in your primary Internet Services folder.



Warning

Never delete the primary Internet Services folder from the administrator's Desktop or move it to another place.

4 Configure the [Basic Internet Setup form](#).

Clear "Start Internet Services automatically" on the General tab. Enabling this on a clustered service would result in multiple copies of Internet Services being started.

The information you enter on the Basic Internet Setup form may vary for each clustered service. There is no generic setup.

5 Open the new gateway form for the service you created.

Both "Service name" and "Service account number" should already be filled in on the Main tab.

6 Make a change to the form (for example, retype the name at "Gateway name") and save it.

7 Reopen the form.

You will see something like this, confirming that your new clustered service has been successfully created:

Main | Scheduling | Directory

Use this tab to set up a connection to your Internet Service Provider, and enable Directory synchronization in multisite environments.

Service name:

Service account number:

Multisite

☐ Exclude this service Hides this service on other sites

Routing cost: Used when calculating the cost of a route

Maximum inbound message body size:



Note

The Internet Services monitor is bound to the service account number. If you change this number, you will need to use FirstClass scripting to bind the Internet Services monitor to the new number. This can be done using the PUT command as shown below:

```
PUT "<PATH TO CLUSTER>:Internet Services monitor" 1302 0 <NEW SERVICE ACCOUNT NUMBER>
```

For example, if we changed the service account number of New cluster to 200000080, then we would use this command:

```
PUT "Clustered services:New cluster Config:Internet Services monitor" 1302 0 200000080
```

8 Click "Directory Information" and fill in the password for the gateway on the Gateway Directory Information form.

If you already use Directory filtering, you can specify one or more gateways in "Allow this group to view these groups" on the Directory tab.

9 Close and save both the new cluster Gateway Directory Information form and the new cluster gateway form.

Connecting your new service to the server machine

After you have created your clustered service, you must install a copy of Internet Services for it. Follow the installation procedures as you would for a regular Internet Services install.

If you create multiple clustered services, you must install a copy of Internet Services for each, and configure each service to gateway to the server machine.

To gateway a clustered service to the server machine:

- 1 Double-click the inetsvcs.fc settings file to open the FirstClass Login screen.
- 2 Create a new settings file for this clustered service, as described in the Client Help.
You must use the same password as you used on the gateway form on the server machine.
- 3 Log into the server using the new settings file.

After you have successfully logged in, you can close your client on this machine.

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Clustering by domain

One way to cluster Internet Services is by domain. For example, you have a company with a large customer base and want to route all your customer and employee traffic through two different domains to reduce congestion.



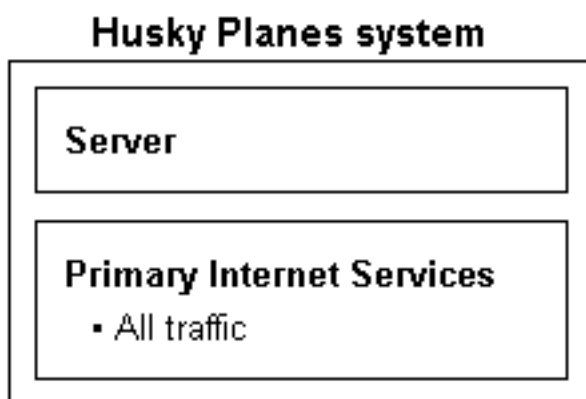
Note

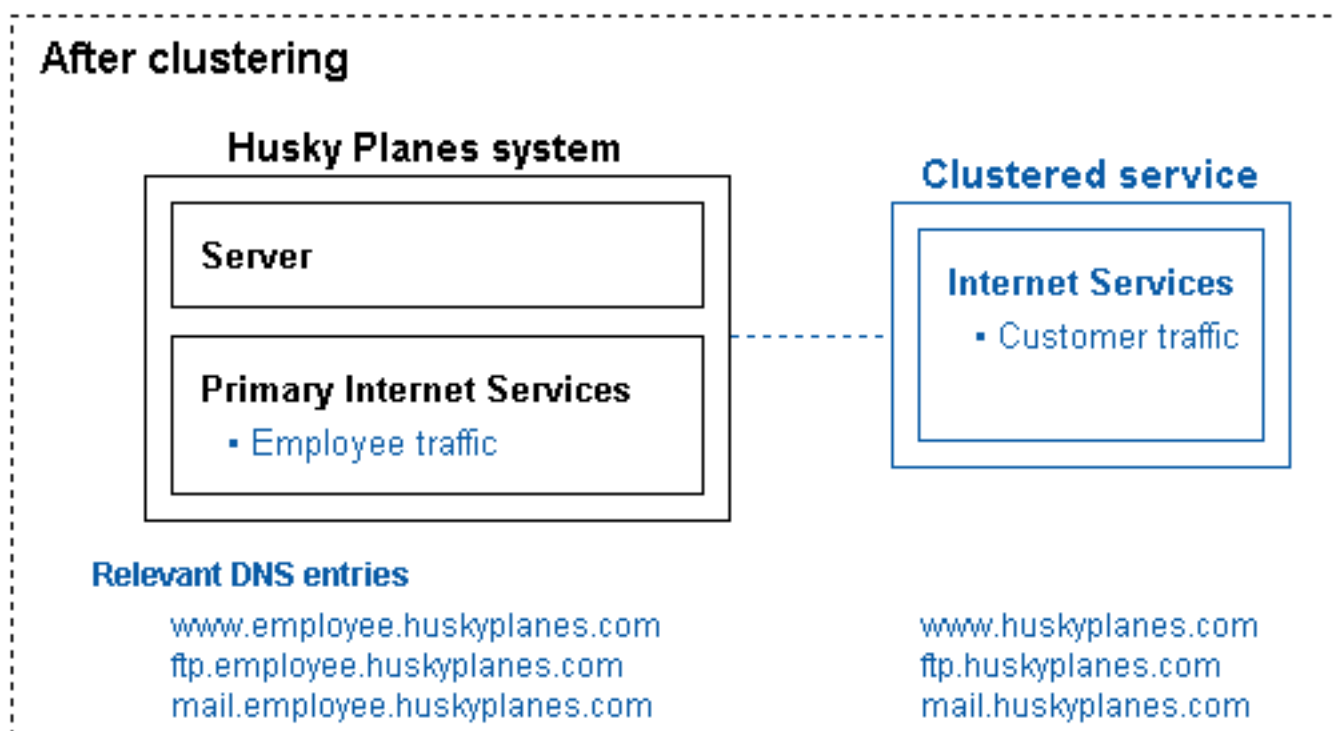
You must register any external domain names you use on your system.

You may also want your customers and staff to view different websites. This is handy if you do not want your customers to have access to confidential company information or have to authenticate each time they access your site.

In this scenario, we decided to route all employee traffic on the primary Internet Services domain and all customer traffic on a cluster with a separate domain. By doing this, we provide both our customers and employees with totally different home pages and company information, while reducing the mail and web traffic for both groups of users.

Before clustering





To support employee traffic on the primary domain, we updated the Basic Internet Setup form in the primary Internet Services folder as follows:

- selected "Enable SMTP", "Enable POP3", and "Enable IMAP4" on the Mail tab
- typed the employee mail server name (mail.employee.huskyplanes.com) at "SMTP server domain name" on the Mail tab
- selected "Enable HTTP" and typed the employee web server name (www.employee.huskyplanes.com) at "HTTP server domain name" on the Web tab
- selected "Enable FTP" and typed the employee FTP server name (ftp.employee.huskyplanes.com) at "FTP server domain name" on the File tab.

To support customer traffic on its own cluster, we:

- created a new clustered service called Customer Services
- entered the user group "Customer" on the Directory tab of the Customer Services cluster's gateway form
- typed the password for Customer Services on the Customer Services cluster's Gateway Directory Information form
- updated the Customer Services cluster's Basic Internet Setup form as follows:
 - selected "Enable SMTP" and typed the customer mail server's domain name (mail.huskyplanes.com) at "SMTP server domain name" on the Mail tab
 - selected "Enable HTTP" and typed the customer web server name (www.huskyplanes.com) at "HTTP server domain name" on the Web tab
 - selected "Enable FTP" and typed the customer FTP server name (ftp.huskyplanes.com) at "FTP server domain name" on the File tab.

Next, we configured the domain names and Mail Exchange (MX) records on our DNS server.

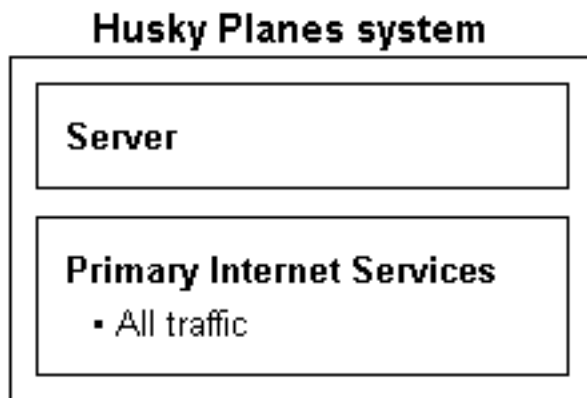
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Clustering by protocol and user group

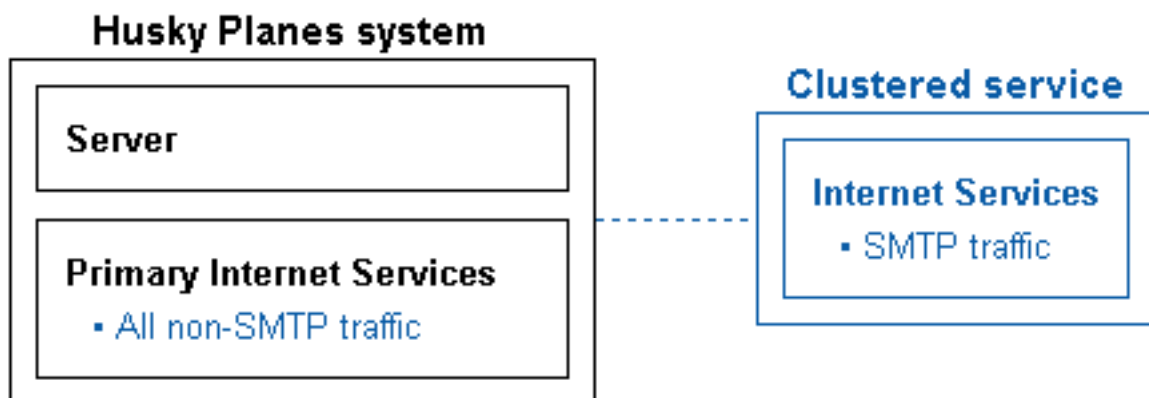
To make your system run more efficiently, you can cluster Internet Services by protocol. Think of dedicating one Internet Services cluster to one protocol as similar to having a dedicated Internet phone line in your house. Your Internet phone line is only used for logging on to the Internet, whereas your regular phone line is used for all other incoming and outgoing calls.

In this scenario, we decided to put all SMTP traffic on a cluster. This way, all other services (for example, HTTP, FTP, and so on) can run more efficiently on our primary Internet Services machine.

Before clustering



After clustering



To accomplish this, we:

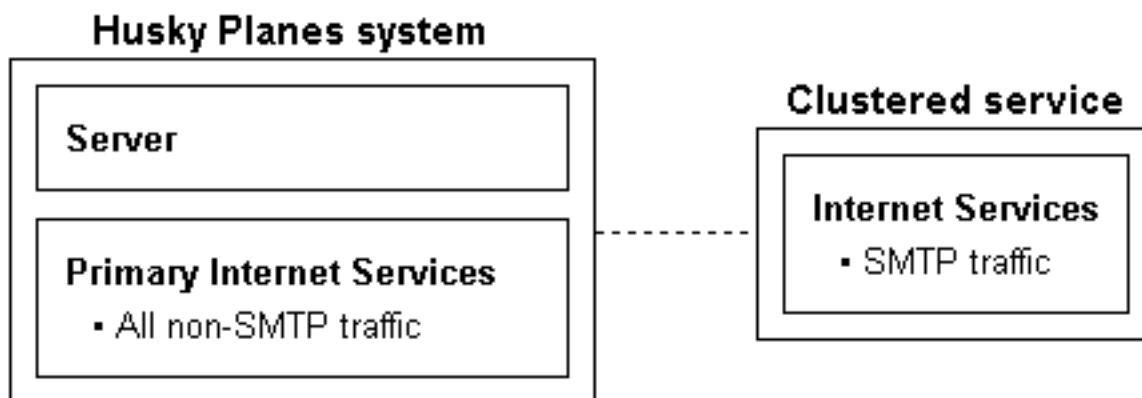
- created a new clustered service called Mail Services
- updated the Mail Services cluster's Basic Internet Setup form as follows:
 - selected "Enable SMTP" and typed the SMTP mail server's domain name (mail.huskyplanes.com) at "SMTP server domain name" on the Mail tab (all other protocols were clear)
 - typed Mail Services at "Service account" on the Service tab
- disabled all SMTP traffic on our primary Internet Services by clearing "Enable SMTP" on the Mail tab of the primary Basic Internet Setup form.

Dedicating user groups to a clustered service

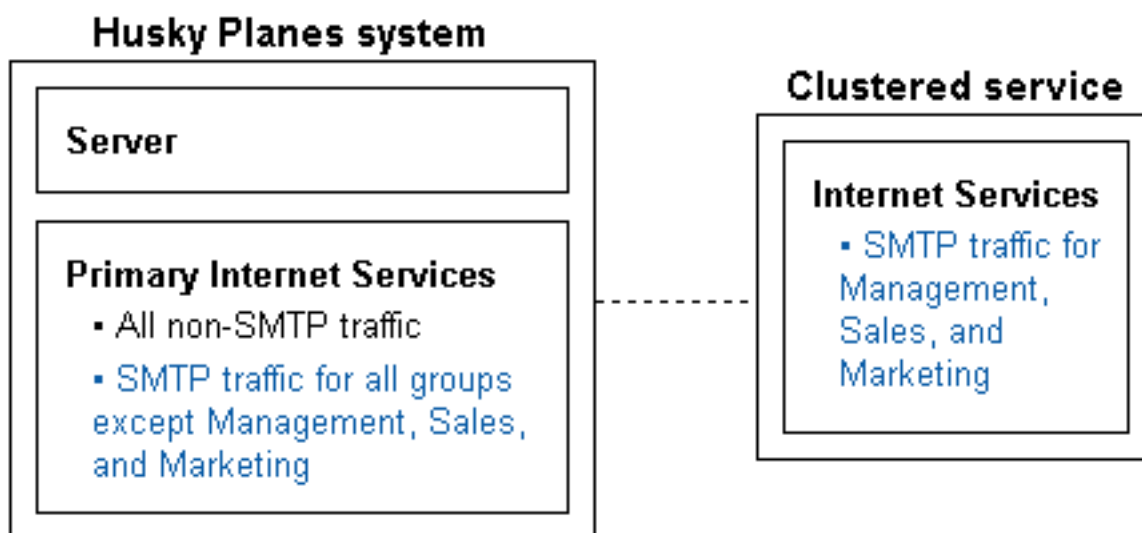
You can separate your system load even more by binding one or more user groups to a clustered service. For example, you could have all SMTP traffic for certain user groups route through one clustered service and the traffic for the rest of your employees route through your primary Internet Services.

In this scenario, we decided to route SMTP traffic for the Management, Sales, and Marketing groups through a separate mail clustered service and have all other employee traffic (including SMTP traffic) continue to route through the primary Internet Services.

Before dedicating to a user group



After dedicating to a user group



To accomplish this, we started with the protocol configuration described above, then:

- enabled SMTP traffic on our primary Internet Services by selecting "Enable SMTP" on and typing the mail server's domain name (mail.huskyplanes.com) at "SMTP server domain name" on the Mail tab
- updated the Mail Services cluster's gateway form as follows:
 - typed Mail Services at "Service name" on the Main tab
 - entered the user groups Management, Sales, and Marketing at "Allow these groups to use this service" on the Directory tab
- clicked the Directory Information button on this gateway form and typed the same password as the primary Internet Services password at "Password"
- entered all the remaining user groups at "Allow these groups to use this service" on the Directory tab of the primary Internet Services gateway form
- entered Other Sites at "Allow this group to view these groups" on the Directory tab of each user group's privileges form, to enable groups to see other gateways.

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Clustering by protocol and domain

You can cluster Internet Services by combining protocols and domains in your setup. In this scenario, we decided to separate HTTP/FTP and Mail (SMTP) services for both employees and customers. In total, we have four Internet Services machines running a combination of domains and protocols.

Before clustering

Husky Planes system

Server

Primary Internet Services

- All traffic

After clustering

Husky Planes system

Server

Primary Internet Services

- Employee mail traffic
- Employee news traffic

Relevant DNS entries

www.huskyplanes.com
ftp.huskyplanes.com
mail.huskyplanes.com

www.employee.huskyplanes.com
ftp.employee.huskyplanes.com
mail.employee.huskyplanes.com

Clustered service

Internet Services

- Customer Directory Services

Clustered service

Internet Services

- Customer HTTP traffic
- Customer FTP traffic

Clustered service

Internet Services

- Employee HTTP traffic
- Employee FTP traffic
- Employee Directory Services



ote

We left any fields not discussed below empty, and cleared these fields if they were not empty.

First, we created three new clusters:

- C Dir Services Config (customer Directory Services cluster)
- C Web Services Config (customer web services cluster)
- E Web & Dir Services Config (employee web and Directory Services cluster).

Second, we updated the customer web services cluster's Basic Internet Setup form as follows:

- filled in "Primary domain name" (huskyplanes.com), "Primary DNS", and "Postmaster name" on the General tab
- selected "Enable HTTP" and typed the customer web server name (www.huskyplanes.com) at "HTTP server domain name" on the Web tab
- selected "Enable FTP" and typed the customer FTP server name ([ftp.huskyplanes.com](ftp://ftp.huskyplanes.com)) at "FTP server domain name" on the File tab
- typed the gateway name (C Web Services) at "Service account" on the Service tab.

Third, we updated the Directory Services cluster's Basic Internet Setup form as follows:

- filled in "Primary domain name" (huskyplanes.com), "Primary DNS", and "Postmaster name" on the General tab
- selected "Enable LDAP" on the Directory tab
- typed the gateway name (C Dir Services) at "Service account" on the Service tab.

Fourth, we updated the employee web and Directory Services cluster's Basic Internet Setup form as follows:

- filled in "Primary domain name" (huskyplanes.com), "Primary DNS", and "Postmaster name" on the General tab
- selected "Enable HTTP" and typed the employee web server name (www.employee.huskyplanes.com) at "HTTP server domain name" on the Web tab
- selected "Enable FTP" and typed the employee FTP server name ([ftp.employee.huskyplanes.com](ftp://ftp.employee.huskyplanes.com)) at "FTP server domain name" on the File tab
- selected "Enable LDAP" on the Directory tab
- typed the gateway name (E Web & Dir Services) at "Service account" on the Service tab.

Fifth, we updated the primary Internet Services' Basic Internet Setup form as follows:

- selected "Enable SMTP", "Enable POP3", and "Enable IMAP4" on the Mail tab
- typed the employee mail server name (mail.employee.huskyplanes.com) at "SMTP server domain name" on the Mail tab
- typed the gateway name (Internet) at "Service account" on the Service tab.

Sixth, we updated "Allow these groups to use this service" on the Directory tabs of the gateway forms for each service as follows:

- entered Customer on the C Dir Services gateway form
- entered Customer on the C Web Services gateway form
- entered Employee on the E Web & Dir Services gateway form
- entered Employee on the primary Internet Services gateway form.

Finally, we configured the domain names and Mail Exchange (MX) records in the DNS server.

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