Informatica Port Administration
Abstract

Domain and application services ports can either be static ports or dynamic ports. The Informatica domain and domain components are assigned to static ports. Certain application services are also assigned to static ports while others run on dynamic ports.

Supported Versions

- Informatica Data Explorer 9.5.1, 9.6.0
- Informatica Data Quality 9.5.1, 9.6.0
- Informatica Data Services 9.5.1, 9.6.0
- Informatica PowerCenter 9.5.1, 9.6.0

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Informatica Port Administration Overview

When you install the Informatica domain and server, the installer sets up the ports for components in the Informatica domain. During the same installation, the installer designates the
range of ports to use for application service processes that run on the node where you install Informatica. The required ports depend on the version of Informatica that you install. Not all application services discussed in this article apply to version 9.5.1 and 9.6.0. The Search Service is new in version 9.6.0. The Data Director Service is obsolete as of version 9.6.0.

**Static and Dynamic Ports**

Domain and application services ports can either be static ports or dynamic ports. Static ports are ports that are assigned dedicated port numbers that do not change. The Informatica domain and domain components are assigned to static ports. Certain Informatica services are also assigned to static ports; these services will always start on the static ports. Dynamic ports are ports that are not assigned port numbers. Instead, the Informatica Service Manager dynamically allocates port numbers to each of the application services processes as they start up.

**Dynamic Port Behavior**

Certain Informatica application services use port numbers that are dynamically allocated upon service startup. When the application services and processes start up, the Informatica Service Manager assigns port numbers from a range of pre-defined port numbers to the processes. The Service Manager starts with the minimum port number of the pre-defined range and incrementally works its way up the range to find the first available port. The Service Manager repeats this process for each of the application services as they start up.

You define the range of port numbers in the domain when you install Informatica. The port range starts with the minimum port number and ends with the maximum port number.

If you do not define the port range during the installation, the installer uses the following default minimum and maximum port numbers:

<table>
<thead>
<tr>
<th>Default Number of dynamic ports</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Minimum Port Number</td>
<td>6013</td>
</tr>
<tr>
<td>Default Maximum Port Number</td>
<td>6113</td>
</tr>
</tbody>
</table>

**Dynamic Port Design**

The Informatica mechanism of dynamic port allocation across pre-defined ranges has been carefully designed over a multi-year period to handle a wide range of scenarios. There are several benefits to this design:

- Dynamically assigning the port number upon service startup means that users do not have to manually assign port numbers to the services they create.
- Setting the range of port numbers gives users the flexibility to set the range to a desirable size.
- Limiting the dynamic ports to a specific range of numbers allows the IT team to efficiently troubleshoot issues.

**Informatica Domain Ports**

The Informatica domain and domain components are assigned to static ports. The following table lists the default port numbers for each of the domain components:

<table>
<thead>
<tr>
<th>Port Name</th>
<th>Default Port Number(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node Port</td>
<td>6005</td>
</tr>
<tr>
<td>Service Name</td>
<td>Static or Dynamic?</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Analyst Service</td>
<td>Static</td>
</tr>
<tr>
<td>Content Management Service</td>
<td>Static</td>
</tr>
<tr>
<td>Data Director Service</td>
<td>Static</td>
</tr>
<tr>
<td>(Obsolete effective 9.6.0)</td>
<td></td>
</tr>
<tr>
<td>Data Integration Service</td>
<td>Static</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Metadata Manager Service</td>
<td>Static</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Repository Service</td>
<td>Dynamic</td>
</tr>
<tr>
<td>PowerCenter Integration Service</td>
<td>Dynamic</td>
</tr>
<tr>
<td>PowerCenter Repository Service</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Reporting and Dashboards Service</td>
<td>Static</td>
</tr>
<tr>
<td>Reporting Service</td>
<td>Static</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SAP BW Service</td>
<td>Static</td>
</tr>
<tr>
<td>Service</td>
<td>Type</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Search Service (New effective 9.6.0)</td>
<td>Static</td>
</tr>
<tr>
<td>Web Services Hub</td>
<td>Static</td>
</tr>
</tbody>
</table>

**Static Port Configuration**

Defining the Port Numbers for the Informatica Domain (Graphical Mode)
The port numbers are defined in the following pages of the Informatica installer.

**Domain and Node Configuration**

![Informatica Domain and Node Configuration](image)
Port Configuration

Use the following guidelines to determine the port numbers:

- The port number you specify for the domain and for each component in the domain must be unique.
- The port number for the domain and domain components cannot be within the range of the port numbers that you specify for the application service processes.
- The highest number in the range of port numbers that you specify for the application service processes must be at least three numbers higher than the lowest port number. For example, if the minimum port number in the range is 6400, the maximum port number must be at least 6403.
- The port numbers that you specify cannot be lower than 1025 or higher than 65535.

Defining the Port Numbers for the Informatica Domain (Command Line)

Run the infasetup DefineDomain command with the following options to define the port numbers.

```
infasetup DefineDomain
<-NodeAddress|-na> node_host:port
[<-ServiceManagerPort|-sp> service_manager_port]
[<-ServerPort|-sv> server_shutdown_port]
[<-AdminconsolePort|-ap> admin_tool_port]
[<-AdminconsoleShutdownPort|-asp> admin_tool_shutdown_port]
[<-HttpsPort|-ha> https_port]
```

Modifying the Port Numbers for the Informatica Domain (Command Line)

Run the infasetup UpdateGatewayNode command with the following options to modify the port numbers.

```
infasetup UpdateGatewayNode
<-NodeAddress|-na> node_host:port
[<-ServiceManagerPort|-sp> service_manager_port]
[<-AdminconsolePort|-ap> admin_tool_port]
[<-HttpsPort|-ha> https_port]
[<-ServerPort|-sv> server_shutdown_port]
[<-AdminconsoleShutdownPort|-asp> admin_tool_shutdown_port]
```
Defining the Static Port Number for an Informatica Service (Informatica Administrator)
From Informatica Administrator, define the port properties when you create the service.

Defining the Static Port Number for an Informatica Service (Command Line)

**Analyst Service**
When you run the infacmd as createService command to create the Analyst Service, set the following option to define the port.

```
infacmd.sh as createService
   <-HttpPort> http_port
```

**Content Management Service**
When you run the infacmd cms createService command to create the Content Management Service, set the following option to define the port.

```
infasmd.sh cms createService
   [<-HttpPort> http_port]
```

**Data Director Service**
When you run the infacmd idd createService command to create the Data Director Service, set the following options to define the ports.

```
infasmd.sh idd createService
   [<-HttpPort> http_port]
   [<-HttpsPort> https_port]
```

*Note:* Data Director Service is obsolete effective in version 9.6.0.

**Data Integration Service**
When you run the infacmd dis createService command to create the Data Integration Service, set the following options to define the ports.

```
infacmd.sh dis createService
   [<-ServiceOptions>-so> option_name=value ...(GeneralOptions.HttpPort, GeneralOptions.HttpsPort)]
```

**Metadata Manager Service**
When you run the infacmd isp createMMService command to create the Metadata Manager Service, set the following option to define the port.

```
infasmd.sh isp createMMService
   [<-ServiceOptions>-so> option_name=value ...(PortNumber, AgentPort)]
```

**Reporting Service**
When you run the infacmd isp createReportingService command to create the Reporting Service, set the following option to define the port.

```
infacmd.sh isp createReportingService
   [<-ServiceOptions>-so> option_name=value ...(HttpPort, sslPort)]
```

**Search Service**
When you run the infacmd search createService command to create the Search Service, set the following option to define the port.

```
infacmd.sh search createService
   [<-SearchServicePort>-sp>] search_service_port_number
```

*Note:* Search Service is new effective in version 9.6.0.

**Web Services Hub**
When you run the infacmd isp createWSHubService command to create the Web Services Hub, set the following options to define the ports.

```
infacmd.sh isp createWSHubService
   [<-ServiceOptions>-so> option_name=value ...(HubPortNumber, httpsHubPortNumber, InternalPortNumber)]
```
Modifying the Static Port Number for an Informatica Service (Informatica Administrator)
From Informatica Administrator, edit the service properties.

Modifying the Static Port Number for an Informatica Service (Command Line)

**Analyst Service**
Run the infacmd as updateServiceProcessOptions command with the following options to modify the port number.

```
infasmd.sh as updateServiceProcessOptions
    [<Options|-o> option_name=value ...(GeneralOptions.HttpPort)]
```

**Content Management Service**
Run the infacmd cms updateServiceProcessOptions command with the following options to modify the port numbers.

```
infasmd.sh cms updateServiceProcessOptions
    [<Options|-o> option_name=value ...(GeneralOptions.HttpPort)]
```

**Data Director Service**
Run the infacmd idd updateServiceProcessOptions command with the following options to modify the port numbers.

```
infasmd.sh idd updateServiceProcessOptions
    [<Options|-o> option_name=value ...(SecurityConfiguration.httpPort,
        SecurityConfiguration.httpsPort)]
```

**Note:** Data Director Service is obsolete effective in version 9.6.0.

**Data Integration Service**
Run the infacmd dis updateServiceProcessOptions command with the following options to modify the port number.

```
infacmd.sh dis updateServiceProcessOptions
    [<ServiceOptions|-so> option_name=value ...( GeneralOptions.HttpPort,
        GeneralOptions.HttpsPort)]
```

**Metadata Manager Service**
Run the infacmd isp updateMMService command with the following options to modify the port numbers.

```
infacmd.sh isp updateMMService
    [<ServiceOptions|-so> option_name=value ...(PortNumber, AgentPort)]
```

**Reporting Service**
Run the infacmd isp updateReportingService command with the following options to modify the port numbers.

```
infacmd.sh isp updateReportingService
    [<ServiceOptions|-so> option_name=value ...(HttpPort, sslPort)]
```

**Search Service**
Run the infacmd search updateServiceOptions command with the following option to modify the port number.

```
infacmd.sh search updateServiceOption
    [<Options|-o> option_name=value ...(SearchServicePort)]
```

**Note:** Search Service is new effective in version 9.6.0.

**Web Services Hub**
Run the infacmd isp updateWSHubService command with the following options to modify the port numbers.

```
infacmd.sh isp updateWSHubService
    [<ServiceOptions|-so> option_name=value ...(HubPortNumber,
        httpsHubPortNumber, InternalPortNumber)]
```
**Dynamic Port Configuration**

The port range represents the range of port numbers that the Informatica Service Manager uses to dynamically assign port numbers to the application service processes.

**Defining the Range of Port Numbers for the Informatica Services (Graphical Mode)**

If you are installing Informatica in graphical mode, the range of port numbers is specified in the Port Configuration page of the Informatica installer.

When you specify the port range during the installation, at a minimum, the number of ports in the range must be at least twice the number of application service processes that will run on the node.

**Defining the Range of Port Numbers for the Informatica Services (Command Line)**

If you are installing Informatica using the command line, run the `infasetup DefineDomain` command with the following options to define the range of port numbers.

```
infasetup defineDomain
  <-MinProcessPort|-mi> minimum_port
  <-MaxProcessPort|-ma> maximum_port
```

When you specify the port range during the installation, at a minimum, the number of ports in the range must be at least twice the number of application service processes that will run on the node.

**Modifying the Range of Port Numbers for the Informatica Services (Informatica Administrator)**

From Informatica Administrator, define the range of port numbers through the node Properties view.

**Modifying the Range of Port Numbers for the Informatica Services (Command Line)**

Run the `infacmd isp updateNodeOptions` command with the following options to modify the range of port numbers.
infasmd.sh isp updateNodeOptions

[<-NodeOptions|-no> option_name=value ...{MaxProcessPort, MinProcessPort}]

Authors

Carol Chan
Principal Technical Writer

Shankar Subramanian
Senior Director, Development

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