

## Parameters and Substitutions

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Each subscriber who uses the SRC network is associated with an entry in the directory. You do not need to configure a policy for each subscriber, however. You can define a smaller number of policies that contain *parameters*. A parameter is a general definition for a property, such as an IP address, and is analogous to a variable in a computer program.

The SRC software defines some global parameters and system (runtime) parameters in the policy repository. You can also define your own global parameters in the policy repository, your own local parameters in policy groups, and your own local parameters in other specified items, such as services. When the SAE activates a subscription to a service for a subscriber, it constructs an exact policy for that subscriber by obtaining specific values for parameters. The SAE acquires one or more values for each parameter from a number of different sources. These sources can also contain local parameters for which other sources can provide specific values. The SAE selects a value based on a ranking of sources from specific to general. The process of providing a value or a new definition for a parameter is a *substitution*.

One or more sources can define a parameter as fixed. Fixing prevents acquisition of values from more specific sources in the ranking list. For example, if a parameter is fixed in a subscription for a parent subscriber, a subordinate subscriber cannot provide a more specific value for a parameter in the subscription it inherits from the parent. If a parameter is fixed in more than one place, the SAE uses the setting in the source that is classified as more general.

You can fix a parameter without specifying a value. Doing so specifies that the value for the parameter cannot come from a more general source than the one that contains the fixed setting and that a value will be available at some point. For example, you could fix the value of the system parameter `interface_speed` in the service scope to prevent more specific sources in the ranking list, such as subscribers, from providing a value for this parameter. The SAE could acquire an actual value for this parameter when it starts managing an interface.

The SAE fixes global and system parameters at a set point in the acquisition chain. Consequently, the SAE can acquire values for these types of parameters only from a service scope, from information the SAE obtains when it starts managing an interface, or from the default value in the global parameter definition.

When you are designing policies, services, portals, and applications, you need to consider how you will use substitutions throughout the software. As a simple example, you can define the general settings for a rate limiter in a policy, insert a parameter for a rate in the policy, and provide specific values for the rate in each service that uses this policy. In a more complex example, you can use parameters and substitutions to track the use of a particular service by different departments in an enterprise.

- Related Topics**
- Overview of Global and Local Parameters
  - Parameter Types
  - Expressions in Parameters
  - Formatting Substitutions
  - Example: Parameter Value Substitution

