

Service principal names - Win32 apps

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A *service principal name (SPN)* is a unique identifier of a service instance. [Kerberos authentication](#) uses SPNs to associate a service instance with a service sign-in account. Doing so allows a client application to request service authentication for an account even if the client doesn't have the account name.

If you install multiple instances of a service on computers throughout a forest, each instance must have its own SPN. If there are multiple names that clients can use for authentication, a service instance can have multiple SPNs. For example, because an SPN always includes the name of the host computer on which the service instance is running, a service instance might register multiple SPNs, one for each name or alias of its host. For more information about SPN format and composing a unique SPN, see [Name formats for unique SPNs](#).

Before the Kerberos authentication service can use an SPN to authenticate a service, the SPN must be registered on the account object that the service instance uses to sign in. A given SPN can be registered on only one account. For Win32 services, a service installer specifies the sign-in account when an instance of the service is installed. The installer then composes the SPNs and writes them as a property of the account object in Active Directory Domain Services. If the sign-in account of a service instance changes, the SPNs must be re-registered under the new account. For more information, see [How a service registers its SPNs](#).

When a client wants to connect to a service, it locates an instance of the service, composes an SPN for that instance, connects to the service, and presents the SPN for the service to authenticate. For more information, see [How clients compose a service's SPN](#).

In this section

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- [Name formats for unique SPNs](#)
- [How a service composes its SPNs](#)
- [How a service registers its SPNs](#)
- [How clients compose a service's SPN](#)

See also

- [Mutual authentication using Kerberos](#)

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