

Agent and ZIS Messaging Clarifications

SIF Infrastructure Working Group

Revision 1.0

# Revision History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Comments** |
| DRAFT 1.0 | 08/30/2010 | Andrew Elmhorst | Initial Draft.  |
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**Overview**

This set of changes addresses concerns around missing information in the agent and ZIS messaging sections of the specification. These concerns were raised as part of the SIF 2.4 review process

**4.1.1.7 SIF\_Provision**

The SIF\_Provision message provides an agent the ability to register the objects it provides and to which it subscribes in a single operation, replacing whatever settings the ZIS has on record for the agent. In effect it is an alternative to SIF\_Provide, SIF\_Unprovide, SIF\_Subscribe and SIF\_Unsubscribe, though an agent may choose to use this message or those, or a combination of these messages.

This message also allows the agent to fully describe the operations it will perform in a Zone beyond those that can be communicated with SIF\_Provide and SIF\_Subscribe, including the types of events it will publish, the requests to which it will respond with or without being the Provider for requested objects, and the objects for which it sends requests.

The agent must have the appropriate access control settings to successfully register any of the corresponding information included in SIF\_Provision. Note that the list of access control settings can be determined by examining the SIF\_AgentACL object returned in the SIF\_Register or SIF\_GetAgentACL message protocols.

Note that SIF\_Provision will also fail if the agent is attempting to provide an object that is already provided by another agent in the applicable Zone Context. The list of Providers in a Zone can be found in SIF\_ZoneStatus.

As of version 2.0 of this specification, SIF\_Provision is the preferred method for provisioning an agent. Support for SIF\_Subscribe, SIF\_Unsubscribe, SIF\_Provide and SIF\_Unprovide may be removed in a future major release of this specification.

| Step | Process | Flow Control |
| --- | --- | --- |
| 1 | Prepare a [SIF\_Message/SIF\_Provision](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/Infrastructure.html#SIF_Provision) message with [SIF\_Header](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/Infrastructure.html#SIF_Header) containing a new GUID in SIF\_MsgId, your agent's agent Id in SIF\_SourceId and the current time in SIF\_Timestamp; other SIF\_Header elements do not apply.Include SIF\_ProvideObjects and for each object your agent would like to provide, place a SIF\_Object element with an ObjectName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted). Your agent can also state its support for SIF\_ExtendedQuery in SIF\_ExtendedQuerySupport, which defaults to false. Include SIF\_SubscribeObjects and for each object to which your agent would like to subscribe, place a SIF\_Object element with an ObjectName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted). Include SIF\_PublishAddObjects, SIF\_PublishChangeObjects and SIF\_PublishDeleteObjects elements and include a SIF\_Object element with an ObjectName in the respective sections for each event type your agent publishes with regard to that object. Optionally specify for each object one or more SIF\_Context names (which default to SIF\_Default if omitted). Include SIF\_RequestObjects and for each object your agent requests, place a SIF\_Object element with an ObjectName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted). Your agent can also state its support for SIF\_ExtendedQuery in SIF\_ExtendedQuerySupport, which defaults to false. Include SIF\_RespondObjects and for each object for which your agent processes requests (including those listed in SIF\_ProvideObjects), include a SIF\_Object element with an ObjectName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted). Your agent can also state its support for SIF\_ExtendedQuery in SIF\_ExtendedQuerySupport, which defaults to false. Optionally, if your agent provides SIF Zone Services, include SIF\_ProvideService and for each service your agent would like to provide, place a SIF\_Service element with a ServiceName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted).Optionally, if your agent responds to SIF\_ServiceInput requests, include SIF\_RespondService for each service for which your agent processes requests (including those listed in SIF\_ProvideService), include a SIF\_Service element with a ServiceName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted).Optionally, if your agent supports sending SIF\_ServiceInput requests, include SIF\_RequestService and for each service your agent requests, place a SIF\_Service element with a ServiceName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted). Your agent can also state its support for SIF\_ExtendedQuery in SIF\_ExtendedQuerySupport, which defaults to false. Optionally, if your agent supports subscribing to SIF Zone Service notifications, include SIF\_SubscribeService and for each object to which your agent would like to subscribe, place a SIF\_Service element with a ServiceName and optionally one or more SIF\_Context names (which default to SIF\_Default if omitted).  | Send SIF\_Message to ZIS over appropriate transport. |
| 2 | Receive [SIF\_Ack](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/Infrastructure.html#SIF_Ack) in response. Is [SIF\_Error](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/Infrastructure.html#SIF_Error) present? | If yes, go to Step 6. |
| 3 | Is SIF\_Status/SIF\_Code 0? | If no, go to Step 5. |
| 4 | Your agent is now registered with the corresponding settings in the Zone. Any previously recorded settings with regard to the operations your agent performs have been replaced. | Messaging protocol complete (success). |
| 5 | Messaging protocol has failed due to a [SIF\_Status/SIF\_Code](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/CodeSets.html#InfrastructureStatusCodeType) of 8 (ZIS is asleep) or 7 (your agent sent a duplicate SIF\_MsgId). | Messaging protocol complete (failure). |
| 6 | Messaging protocol has failed due to a [SIF\_Error](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/Infrastructure.html#SIF_Error) condition. See [Error Codes](file:///Users/andrew/Documents/Work/SIF/Specifications/Official/2.4/out/CodeSets.html#InfrastructureErrorCategoryType) with SIF\_Category and SIF\_Code, and examine SIF\_Desc and SIF\_ExtendedDesc, if included. | Messaging protocol complete (failure). |

Table 4.1.1.7-1: SIF\_Provision Protocol