

# Activity of Processes

## Activity of processes within redundant group

### Application server processes

After connecting to the server, application server processes receive the information on the current state of the server in the view of the redundant group (HS or SBS states). They control own activity according to the state. If the server is in the HS state, process performs its task according to the configuration of its children ([DODM relations](#)). If the process is connected to a SBS server, its activity depends on the type of process. If the processes support instance mode (e.g. `/WSELF,1`), the active instance connected to HS performs its task and in other three cases (passive instance connected to HS, any instance connected to SBS) its activity depends on the type of process

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### D2000 Event Handler

<b>Connection by means of /RD or /RF parameters</b>	Yes
When changing the server state (HS->SBS or SBS->HS), the process is stopped and started again according to the process configuration.	
<b>Activity when connected to a server in the SBS state</b>	
No object of <a href="#">Event</a> type will be started.	
<b>Activity when changing the server status HS-&gt;SBS</b>	
All running object of <a href="#">Event</a> type stop their operations with no possibility to react. If a list of pending requests for starting events exists, it will be cleared.	
<b>Activity when changing the server status SBS-&gt;HS</b>	
The activity of the process D2000 Event Handler is the same as when starting. <a href="#">Start Up events</a> and <a href="#">Server Events</a> will be started.	

Process supports the instances (parameter `/Wmeno, instNr`). If the process is active (on HS), its activity is obeyed a configuration of relevant children (objects of [Event](#) type). If the process is inactive, all the ESL scripts are inactive, too. When process changes from active state to inactive one all the ESL scripts are stopped. The situation is the similar as when server transfers from HS state to SBS state. A log about it will be created for each aborted script into log database.

### D2000 KOM

<b>Connection by means of /RD or /RF parameters</b>	Yes
When changing the server state (HS->SBS or SBS->HS), the process automatically finds a new HS and connect it. Further it keeps its normal activity.	
<b>Support of instance mode via parameter /Wname,instance</b>	Yes
In the instance mode when the instance is active and connected to HS server, the process works normally.	
<b>Activity when connected to a server in the SBS state or in instance mode the passive instance connected to HS server or any instance connected to SBS server</b>	
The state is only supported by some communication protocols, the support is described in the individual documentations of communication protocols. Communication protocols supporting the state do not perform active communication. If it is a communication protocol on serial communication line, the protocol tries to monitor the data swapped between the KOM process connected to the HS and measuring devices (I/O devices) and its analysis. Changes of I/O tag values are not further propagated into the system. For further information on communication protocols see the chapter <a href="#">Communication protocols</a> .	
<b>Activity when changing the server status HS-&gt;SBS or when instance becomes passive</b>	
Communication protocols supporting redundancy stop the active communication (stop transmission, close sockets,...) and if it is technically possible, they trace the communication among the KOM process connected to the HS and measuring devices (I/O devices) and perform its analysis. Changes of I/O tag values are not further propagated into the system. For further information on communication protocols see the chapter <a href="#">Communication protocols</a> .	
<b>Activity when changing the server status SBS-&gt;HS or when instance becomes active</b>	

Communication protocols supporting redundancy start the active communication, if it is possible, when the communication of the previous KOM process connected to the HS was finished. Changes of I/O tag values are to be propagated into the system.  
 For further information on communication protocols see the chapter [Communication protocols](#).

**WARNING:**

We strongly recommend not using the communication protocols, which do not support redundancy, in the redundant systems with 2 or more KOM processes.

The correct configuration is to run a single KOM process on a selected computer using [/RD](#) or [/RF](#) parameters.

## D2000 CALC

<b>Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters</b>	No
<b>Activity when connected to a server in the SBS state</b>	
The process operates according to configuration of <a href="#">eval tags</a> , but possible changes of their values are not further propagated into the system. It ensures, that inner states in the expressions of called functions are continuously updated.	
<b>Activity when changing the server status HS--&gt;SBS</b>	
The process stops propagating the values of <a href="#">eval tags</a> .	
<b>Activity when changing the server status SBS--&gt;HS</b>	
The process starts propagating the values of <a href="#">eval tags</a> .	

## D2000 ARCHIV

<b>Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters</b>	Yes
When changing the server state (HS->SBS or SBS->HS), the process automatically finds a new HS and connect it. Further it keeps its normal activity.	
<b>Support of instance mode via parameter <a href="#">/Wname,instance</a></b>	Yes
When running in instance mode the process always archives (unless the archiving is disabled because of shared archive database - see the parameter <a href="#">/DBSH</a> - this is not a recommended configuration!). The difference in behaviour of active and passive instance is that, the active instance receives requests for reading data via process D2000 Serverz.	
<b>Activity when connected to a server in the SBS state</b>	
The process operates (archiving, calculations, ...) according to its configuration regardless of the state of the server, it is connected to. If the process is connected to SBS server, it does receive requests for reading data.	

## D2000 DbManager

<b>Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters</b>	Yes
When changing the server state (HS->SBS or SBS->HS), the process automatically finds a new HS and connect it. Further it keeps its normal activity.	
<b>Support of instance mode via parameter <a href="#">/Wname,instance</a></b>	Yes
In the instance mode when the instance is active and connected to HS server, the process works normally.	
<b>Activity when connected to a server in the SBS state or in instance mode the passive instance connected to HS server or any instance connected to SBS server</b>	
DbManager in this state does not process any requests coming from D2000 Server. During transition to this state all databas operations are terminated, the ROLLBACK operation is performed on all database connections and the process waits, till it becomes active again (when server goes to HS state or when the instance of DbManager becomes active). If the parameter <a href="#">/DBSH</a> is used, all database connections will be closed.	
<b>Activity when changing the server status SBS--&gt;HS or when instance becomes active</b>	
DbManager starts processing requests coming from D2000 Server. If the parameter <a href="#">/DBSH</a> is used, the database connections will be reopened.	

## D2000 ALARM

<b>Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters</b>	No
<b>Activity when connected to a server in the SBS state</b>	
The process operates according to configuration of objects of <a href="#">Alarm</a> type, but possible changes of their values are not further propagated into the system.	
<b>Activity when changing the server status HS--&gt;SBS</b>	
The process stops propagating the values of objects of <a href="#">Alarm</a> type.	
<b>Activity when changing the server status SBS--&gt;HS</b>	

The process starts propagating the values of objects of [Alarm](#) type.

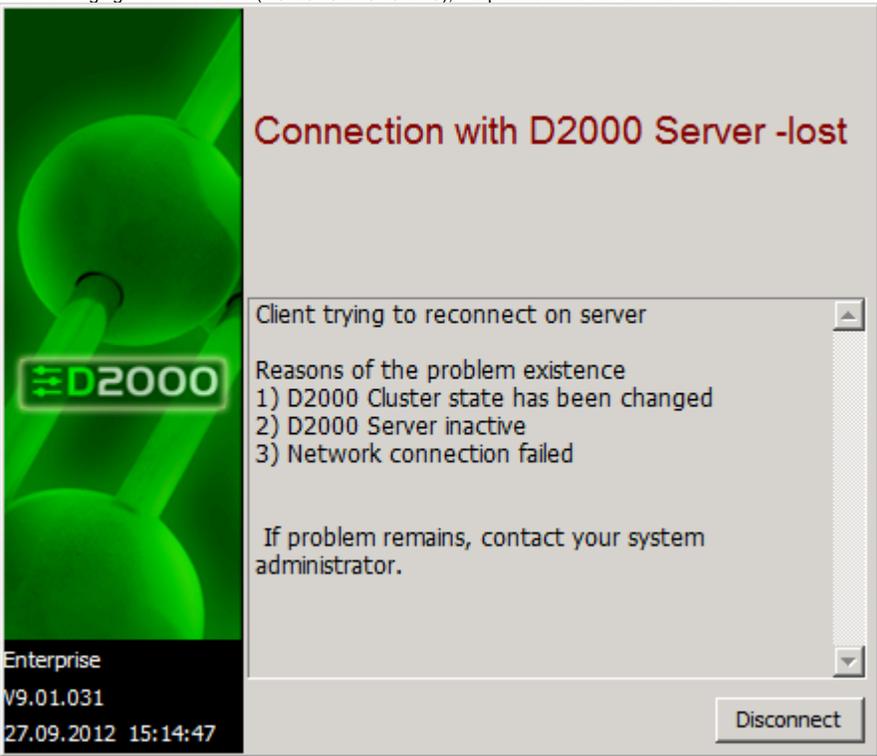
## D2000 GATEWAY

Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters	No
Activity when connected to a server in the SBS state	
The process operates according to its configuration regardless of the state of the server, it is connected to.	

## D2000 CNF

Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters	Yes
When changing the server state (HS->SBS or SBS->HS) the process is stopped.	
Activity when connected to a server in the SBS state	
The process is in the READ ONLY mode.	
Activity when changing the server status HS-->SBS	
Stopping the process.	
Activity when changing the server status SBS-->HS	
Stopping the process.	

## D2000 HI

Connection by means of <a href="#">/RD</a> or <a href="#">/RF</a> parameters	Yes
When changing the server state (HS->SBS or SBS->HS), the process shows the information:	
	
Activity when connected to a server in the SBS state	
No change in behaviour.	
Activity when changing the server status HS-->SBS	
If the connection has been established by means of the parameter <a href="#">/S</a> , process operates with no change.	
Activity when changing the server status SBS-->HS	

If the connection has been established by means of the parameter /S, process operates with no change.

## D2000 GrEditor

<b>Connection by means of /RD or /RF parameters</b>	Yes
When changing the server state (HS->SBS or SBS->HS), the process is stopped.	
<b>Activity when connected to a server in the SBS state</b>	
The process notifies you that the server is not in the Hs state and will be terminated.	
<b>Activity when changing the server status HS-&gt;SBS</b>	
The process notifies you of the state change and will be terminated.	
<b>Activity when changing the server status SBS-&gt;HS</b>	
The process notifies you of the state change and will be terminated.	



### Related pages:

[D2000 system application within redundant system](#)