

# Parameters for D2000 Server

## Parameters for the D2000 Server process

The [D2000 Server](#) process reads the following parameters from the system registry during its start. Values are adjusted using the process [D2000 Application Manager](#) (D2Smc.exe).

Parameter	Possible values	Meaning
AckForValue	0/1	If the parameter value is 1, every new value in the system will be set to the attribute <i>NoAckValue</i> . An operator can acknowledge that he saw the value in the object control window.
AlarmsWithoutFocus	0/1	If the value of this parameter is 1, the window opened by a new alarm doesn't take the focus of another window of the HI process
AllowNonAdminConfLogin	0/1	If the value of this parameter is 1, users without administrative rights are allowed to log in to the configuration processes of the D2000 system. The default value is 0. That means, non-administrative users can not log in to configuration processes.
AuditDepth_RES_GROUP		The value differing from 0 sets the <a href="#">full monitoring of changes</a> in the configuration of the <a href="#">Object group</a> . It represents the time depth of the stored information in months. The value 0 (or absence of parameter) deactivates the monitoring.
AuditDepth_USER		The value differing from 0 sets the <a href="#">full monitoring of changes</a> in the configuration of the <a href="#">User</a> . It represents the time depth of the stored information in months. The value 0 (or absence of parameter) deactivates the monitoring.
APPL_NAME		Application name.
AuthMethod		Default <a href="#">authentication method</a> . The parameter can acquire the following values: <ul style="list-style-type: none"><li>• <a href="#">D2000</a></li><li>• <a href="#">NTLM</a></li><li>• <a href="#">Kerberos</a></li></ul> Detailed information about the parameter is mentioned in the topic <a href="#">Authentication in D2000</a> , part <a href="#">AuthMethod</a> .
AuthSecPrinc		Security principal for <a href="#">Kerberos</a> authentication. Detailed information about the parameter is mentioned in the topic <a href="#">Authentication in D2000</a> , part <a href="#">AuthSecPrinc</a> .
BackupSysCfgDeep		Depth of <a href="#">configuration database backups</a> that are created automatically. The backups older than defined depth are automatically deleted. It is defined in seconds.  <b>Note:</b> If the value is 0 (zero), the automatic backup of the configuration database is disabled.
BackupSysCfgOffset		A shift of <a href="#">automatic backup</a> of configuration database in a given period. It is defined in the format HH:MM, i.e. shift in hours and minutes.
BackupSysCfgPath		Path to directory in which the <a href="#">backups of configuration database</a> , created automatically, are to be stored. Default setting is %D2000_APP%\%application_name%\SysCfgBackup.  <b>Note:</b> For proper functionality of automatic backup of configuration database, no other directories and files should be created in the directory where these backups are stored.
BackupSysCfgPeriod		Period of an <a href="#">automatic backup</a> of the configuration database. it is defined in the format <i>NX</i> , where <i>N</i> is integer and <i>X</i> is a time unit. The permitted time units are H - hour, D - day, W - week, M - month.  <b>Note:</b> If you set an empty value or <i>0H</i> , the backup of the configuration database is disabled.
ColorMandatoryItems		Background color for a mandatory item in pictures ( <a href="#">Text entry field</a> and <a href="#">List box</a> ). Default value = FFFFFFFF – i.e. no background. The color is represented by the number that can be derived from the RGB by the following formula: $R + 256 * G + 65536 * B$ (see <a href="#">%MakeRGB</a> function)
ColorConditionalItems		Background color for a conditional item in pictures ( <a href="#">Text entry field</a> and <a href="#">List box</a> ). Default value = FFFFFFFF – i.e. no background. The color is represented by the number that can be derived from the RGB by the following formula: $R + 256 * G + 65536 * B$ (see <a href="#">%MakeRGB</a> function)
ConfigBackupTimeout	0...	Maximum time [s] of backup of the configuration database. The backup is executed through the external process. If the parameter is: > 0 - the process is ended forcibly if the backup has not been executed successfully in a defined time. = 0 - the process is ended after the database backup is executed. It can take very long when the process is jammed.
ConfigSynchronizationTimeout	0...	Maximum time [s] of synchronizing of the configuration database. If the parameter is: > 0 - the synchronization is ended forcibly if it has not been finished in a defined time. = 0 - the synchronization can take unlimited time.

ControlRight ForKvit	0/1	If the parameter value is 1, a user can acknowledge an alarm only if he/she has the access right with the level Control or higher to the alarm. If the value is 0, the user needs the access level with the level Read (default state) only.
character_en coding_APP _DEFAULT		Initial character encoding in the application. This parameter is used, when there is "@APP_DEFAULT@" encoding in the ESL function. The initial value is "@OS_ACTUAL@".
CheckDOD MTreesInter val		<p>Defines DODM tree consistency check in regular intervals. A default value is 0 (zero) in seconds. The time of next processing of the parameter value depends on the parameter value that has been set while processing it (it may be changed while the system is running):</p> <ul style="list-style-type: none"> <li>• <b>value &gt; 0:</b> it starts the DODM tree consistency check and then calculates the time of next processing (clock + interval [s]),</li> <li>• <b>otherwise:</b> a check is disabled; the processing starts in a minute (clock + 60[s]).</li> </ul> <p>Start <a href="#">Debug info</a>, via <code>DBG.CHECK.DODM_TREES</code>, to see the information on the process of the DODM tree consistency check.  <a href="#">More detailed reports</a> regarding this activity are mentioned thereafter.</p>
CtrlAckDialog	0/1	<p>Confirm setting a new value by opening a new window asking: <i>Do you want to set the X value?</i></p> <p>0 - no, 1 - yes.</p>
CtrlCloseAft erSetValue	0/1	<p>Auto close control window based on application parameter</p> <p>0 - no, 1 - yes.</p>
descInTitleB ar	0/1	<p>Displaying of description in the title bar of graphs, reports, pictures, or structures instead of the object name.</p> <p>0 - hide description (shows object name only), 1 - show description</p> <p>The parameter is not valid for users with Administrator access rights.</p>
dynamGraph MaxTime		Time length [min], that determines the range of the horizontal (time) axis of <a href="#">dynamic graphs</a> .
dynamGraph ShiftTime		The parameter [min] determines the shift of the time axis of <a href="#">dynamic graphs</a> when drawing a graphic flow reaches the right margin of the axis.
dynamGraph LineType	0/1	<p>Definition of a <a href="#">graphic flow type</a> for <a href="#">dynamic graphs</a>.</p> <p>0 - a smooth line, 1 - a straight line.</p>
dynamGraph DescTable	0/1	<p>Displaying the descriptive table of <a href="#">dynamic graphs</a>.</p> <p>0 - hide table, 1 - show table.</p>
dynamGraph AllStatistics	0/1	<p>Displaying all the graphic flows of statistic values in <a href="#">dynamic graphs</a>.</p> <p>0 - hide graphic flows, 1 - show graphic flows.</p>
dynamGraph MultiArch	FALSE /TRUE	<p>Opens the archive objects in multigraphs.</p> <p>TRUE - the archive objects are opened in separate multigraphs (default).</p> <p>FALSE- the archive objects are opened together with other objects in the multigraphs.</p>
dynamGraph Pointer	0/1	<p>Displaying the pointer on opening <a href="#">dynamic graphs</a>.</p> <p>0 - hide the pointer, 1 - show the pointer</p>
HeapArrSize Ref		It represents the size of auxiliary "HEAP" arrays. The parameter is set automatically when the application is started for the first time. The default value is 100 000. It enables the optimization of some bulk allocations. The setting is especially important for <a href="#">XML Import</a> . An example of the log of allocated space for "HEAP" arrays is available <a href="#">here</a> .
ExpandTree	0/1	If the value of the parameter is 1, then all selection windows in the system will consist complete list of logical groups (expanded). If the value is 0, then all the windows will consist list with basic logical groups only (collapsed list).
KeepObject ValueAfterS ave	0/1	<p>0 - after saving the configuration, the object value is set to "invalid" - (standard behavior - the default value of the parameter).</p> <p>1 - after saving the configuration, the object value is not invalidated.</p>
LIC_DoNotAl lowConsole OverLimit	0/1	Disables the logon of the console (HI) if the license limit is exceeded. Default = off (0).
LIC_DoNotAl lowSysProc OverLimit	0/1	Disables the logon of the system process if the license limit is exceeded. Default = off (0).
LIC_Postpon eLicWrrnToU sers	DWORD	When a problem with the license occurs, first the administrator is informed until this time expires. After this, all users will be informed. The default value is 1 hour. The permitted maximum is limited by the time Constant Integer := 10*24; – [hours].

LogRecsLateSynchro	0/1	<p>Defines whether <b>CfgSynchroAuto</b> will be started with or without <i>/NO_OBJLIFE</i> parameter (the object life logs are not synchronized). CfgSynchroAuto is called by <b>D2000 Server</b>, which is in a HOT state when it receives a request for synchronization of the configuration database from another <b>D2000 Server</b> connecting to a redundant group.</p> <p>Allowed values:  0 - default synchronization  1 - synchronization with <i>/NO_OBJLIFE</i></p> <p>Detailed meaning of the parameters for <b>CfgSynchroAuto</b> is described in <a href="#">Synchronization of configuration databases</a>.</p>
LogTrezorPath		Path to the directory, where the <a href="#">log database depository</a> will be created.
LogTrezorCompressPath		Path to the directory for storing compressed <a href="#">log database depositories</a> .
LogTrezorCompressTime		<p>Time period, during which disconnected <a href="#">log database depository</a> is available for writing delayed data. The database will be compressed after the expiration of this period. The value of parameter <b>LogTrezorCompressTime</b> must be less than the value of the parameter <b>LogTrezorPeriod</b>. It is given in the format NX, where N is an integer number and X gives a time unit.</p> <p>Permitted time units: H - hour, D - day, W - week, M - month.</p>
LogTrezorPeriod		<p>Period for creating the <a href="#">log database depository</a>. It is given in the format NX, where N is an integer number and X gives a time unit.</p> <p>Permitted time units: H - hour, D - day, W - week, M - month.</p> <p>Zero value (e.g. <i>0H</i>) disables the log database depository. The default value of this parameter is <i>0H</i>.</p>
MailingAddress		The email address to which the user <a href="#">can send</a> the application error information.
MaxMonitorItems		The maximal number of items, that the process <b>D2000 Server</b> gives to the process <b>D2000 HI</b> on request for the list from the log database.
numLastUsers		<p>The number of last entered users in the list of Logon dialog box of HI and GrEditor - max. 10.</p> <p>If the number is equal to 1, a text box is displayed instead of a list box.</p> <p>If the number is greater than 1, the list of the last entered &lt;numLastUser&gt; users is displayed.</p>
OEM_ProtX_Name		<p>Name of OEM protocol nr. X, as will be displayed in the <b>D2000 CNF</b> environment.</p> <p>For more details, see the description of the <b>D2000 KomAPI</b> interface.</p>
OEM_ProtX_DLL		<p>Name of a dynamic library (.dll on Windows, .so on Linux), in which the communication protocol OEM nr. X is implemented. The name is specified without a suffix.</p> <p>For more details, see the description of the <b>D2000 KomAPI</b> interface.</p>
OldMasks		<p>Change of the <a href="#">format masks</a> behavior.</p> <p>0 - the character # after the decimal point means that the occurrence of number is not required  1 - the character # after the decimal point is identical with the character 0 (required number occurrence) - compatible with D2000 v5.0 and older versions.</p>
SecurityPolicy	0/1	If 1 - activation of new rules, if 0 - default behavior during a change of user's password.
ShowConsoleUsers	0/1	It determines if the users of console type (*.HIP.LOG) will be displayed in the <a href="#">List of objects</a> .
SingleCommand	0/1	If the value of this parameter is 1, just one control window can be opened for one object at the same time in the process <b>D2000 HI</b> .
SP_MinLength	0...20	Minimal password length.
SP_MinLowerCaseLetters		Minimal count of lower case in the password.
SP_MinNumbers	0...10	Minimal count of numbers in password.
SP_MinSpecials	0...10	Minimal count of special symbols (e.g. ! @ # \$ % ^ & a pod.) in a password.
SP_MinUpperCaseLetters		Minimal count of upper case in the password.
SP_Similarity	0...100	The ratio for similarity of the new password to previous ones. The value can be within the interval 0...100.
SP_History	0...10	The number of previous passwords, which are to be compared with the new password.
SP_AccountLockoutDuration		Time [s], which determines how long a user's account will be blocked, when the user exceeds the permitted count of logons.

SP_AccountLockoutThreshold		The number of permitted invalid logons. If the number is exceeded, the user's account will be blocked for the time defined by the parameter <b>SP_AccountLockoutDuration</b> . If the value of the parameter <b>SP_AccountLockoutThreshold</b> is 0, the user's account will never be blocked.
SP_MaxConsecutiveCharacters		The maximum number of consecutive characters included in the password.
SP_CheckMinCharacters	0/1	If the value is 1 - the number of digits and non-digits in the password is to be also checked. In this case, the value of the parameter <b>SP_MinNumbers</b> defines the minimum number of both digits and non-digits.
SrvApplHelpType	HelpFileChm	Selection of Application Help Types - NoHelp, HelpFileChm, HelpWebServerConfluence, HelpWebServerHtml, HelpSharedDir, HelpLocalAppDir, HelpLocalAnyPath
SrvApplHelpPath		Set the location of the help by type SrvApplHelpType.
SrvApplHelpMainPage		Default application help page.
SrvD2000HelpType	HelpWebIPS	Selection of help types for D2000 - HelpWebIPS, HelpWebServerHtml, HelpSharedDir, HelpLocalD2000Dir, HelpLocalAnyPath
SrvD2000HelpPath	<a href="https://doc.ipesoft.com/label/D2DOCV">https://doc.ipesoft.com/label/D2DOCV</a>	Set the location of the help by type SrvD2000HelpType. Popis nastavenia umiestnenia závisí je vysvetlený je nižšie.
TCP_NO_DELAY	DEFAULT TRUE FALSE	During registration of every client connecting via TCP/IP protocol (start parameters <a href="#">/TP</a> or <a href="#">/TTP</a> ) the process <a href="#">D2000 Server</a> can change the value of the socket parameter TCP_NODELAY to TRUE/FALSE. More details are available in the description of the <a href="#">TCP_NO_DELAY</a> command. If the value of the TCP_NO_DELAY parameter is not set or is equal to <i>DEFAULT</i> , parameter TCP_NODELAY will not be changed.
TestVersion		The color distinction of production and test server in the process D2000 HI: <ul style="list-style-type: none"> <li>• 0 - the server is a production server, not a test server (default)</li> <li>• 1 - the server is a test server: the heading of D2000 HI has a red color</li> </ul> Note: Parameter is implemented since version 7.02.001.
TNS_ServiceName		Configuration parameter for the configuration and log databases on Oracle platform - defines TNS of the database the configuration and log tablespaces are in.
UseServerTimeZone	0/1	Allows the client processes to use the server time zone offset (KERNEL). By default, each process uses its system time zone offset.
WinDisColorUse		Indication for the usage of the defined color in WinDisColorValue as the color in disable wincontrols in schemes. 0 - no 1 - yes
WinDisColorValue		Colour in banned window controls in schemes (text input, buttons, trees, and lists). The color is represented by the number that can be derived from the RGB by the following formula: $R + 256 * G + 65536 * B$ (see <a href="#">%MakeRGB</a> function)
XmlGitRepositoryEnabled	0/1	If the value is 1 and the path to the GIT repository is set - all changes to objects in D2000 are stored in the GIT object history
XmlGitRepositoryPath		Path to GIT repository where all changes of objects are stored.
XmlGitSharedRepoInRedundancy	0/1	If the value is 1 and the system is in redundant mode and storing changes into the GIT repository is enabled - all changes are written only by the active (hot) server

The following four parameters allow setting the logical beginning and end of the day for the application. The settings have an effect on the dialog boxes for defining a time interval - when you define time interval, hours and minutes are to be adjusted according to the parameters.

Parameter	Meaning
day_start_hour *	Hour of the beginning of the day. Default value: 0.
day_start_min *	Minute of the beginning of the day.
day_end_hour *	Hour of end day.
day_end_min *	Minute of end day.

day_end_strong_ineq **	<ul style="list-style-type: none"> <li>• TRUE - for a selected time interval, the following will be valid: <i>StartTime</i> interval&lt;<i>EndTime</i></li> <li>• FALSE - for a selected time interval, the following will be valid: <i>StartTime</i> interval<i>EndTime</i></li> </ul>
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\* Example - technological day begins at 06:00 o'clock and ends the next day at 06:00 o'clock.

- day\_start\_hour = 6
- day\_start\_min = 0
- day\_end\_hour = 30
- day\_end\_min = 0

\*\* Example - user selects the entire day of January 1st 2005:

- if **day\_end\_strong\_ineq=TRUE**, then **StartTime=1.1.2005 00:00:00.000** and **EndTime=1.1.2005 23:59:59.999**
- if **day\_end\_strong\_ineq=FALSE** then **StartTime=1.1.2005 00:00:00.000** and **EndTime=2.1.2005 00:00:00.000**

**Note::** Individual parameters of the process [D2000 Server](#) can be changed after selecting the particular parameter in the right part of the window and pressing Enter, or after double-clicking the parameter.

## Parameter CheckDODMTreesInterval - detailed reports

When [Debug info](#) is activated via `DBG.CHECK.DODM_TREES` for this activity, these messages are written into [D2000 Server](#) log:

```
CheckDODMTreesConsistency.START[All:N=<name_tree_count>,T=<type_trees_count>,I=<id_trees_count>]
CheckDODMTreesConsistency.END[Static:N=<name_tree_count>,T=<type_trees_count>,I=<id_trees_count>]
```

**Start** means the beginning of the DODM tree consistency check containing all items in each tree.

**End** means the end of DODM tree consistency check containing the static items in each tree.

The following messages (errors) may occur:

1. An exception occurs while the item is being processed: `%%%[src_tree_name]:!EXCEPTION:[name_or_id_key]/[step_enum]"`
2. Name of element is different than the object one: `%%%[src_tree_name]:elmN<>refN:[src_object];[name_key]"`
3. ID of the element is different than the object one: `%%%[src_tree_name]:elmI<>refI:[src_object];[id_key]"`
4. Type of the tree is different than the object one: `%%%[src_tree_name]:TYPE<>refT:[src_object];[tree_type]"`
5. Src element is not in cmp tree: `%%%[src_tree_name]:FIND?[cmp_tree_name];[src_object];null"`
6. Src element is different in cmp tree: `%%%[src_tree_name]:ADDR?[cmp_tree_name];[src_object];[cmp_object]"`
7. An exception for complete check: `"CheckDODMTreesConsistency.END[EXCEPTION]"`

The messages are written into D2000 Server log.

These reports may be imported in the form of CSV data into MS Excel.

The messages relating to the name tree elements are **a/b/c**, or **e/f** when the name tree is compared with ID tree.

The messages relating to the type tree elements are **a/b/c**, or **e/f** when the type tree is compared with ID tree.

The messages relating to the ID tree elements are **a/c**, or **e/f** when the ID tree is compared with the name tree or type one.

## The log of allocated space for "HEAP" array after starting the application with parameter HeapArrSizeRef - value 100 000:

```
[05-08-2010 13:22:48] RecRef.HeapArrayCore_COL_REF.Initialize: HeapArray is allocated with size = 5200008.
[05-08-2010 13:22:48] RecRef.HeapArrayCore_COL_REFS.Initialize: HeapArray is allocated with size = 2800008.
[05-08-2010 13:22:48] RecRef.HeapArray_ColRefName.HeapElementArray.Initialize: HeapArray is allocated with size = 6800008.
[05-08-2010 13:22:48] RecRef.HeapArray_ColRefIdx.HeapElementArray.Initialize: HeapArray is allocated with size = 3200008.
[05-08-2010 13:22:48] RecRef.HeapArrayCore_TData.Initialize: HeapArray is allocated with size = 16000008.
[05-08-2010 13:22:48] RecRef.HeapArray_HobjRefTObjName.HeapElementArray.Initialize: HeapArray is allocated with size = 10000008.
[05-08-2010 13:22:48] RecRef.HeapArray_HobjRefHOBJ.HeapElementArray.Initialize: HeapArray is allocated with size = 3200008.
[05-08-2010 13:22:48] RecRef.HeapArray_HobjRefD2UID.HeapElementArray.Initialize: HeapArray is allocated with size = 10000008.
[05-08-2010 13:22:48] HeapArray total allocated size: 57200064 bytes
```



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