

# Chapter 6: Configuring the DecisioNet System Environment

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## Overview

This chapter describes how to configure the DecisioNet System environment after the software is installed. Configuration is accomplished using an ASCII editor, such as Windows Notepad, and editing the parameters in the configuration files listed below. All of these files are located in the `/dnet/data` directory following installation.

- DecisioNet CBS Configuration files (`dncbsconfig.xml`)
- DecisioNet Configuration File (`dnconfig.xml`)
- DecisioNet Host Bridge Conguration file (`dnhostbridge.xml`)
- DecisioNet Task Manager Configuration file (`taskman.cfg`)

Three of these files are in XML format. XML is a mark-up language that enables different programs to understand the structure of a file. This facilitates the exchange of information between programs. When editing these XML format files, care must be taken to only modify the parameter or option setting.

The fourth file listed is the Task Manager file. This is not an XML format file, but still may be modified using an ASCII editor. Details are provided in the following sections on how to access and change parameters in these files.

## XML File Format

XML files use element tags to identify the specific entries or sections within the file. It is very important that the element tags not be modified. When changing parameters with an ASCII editor, you need to locate the parameter in the file and change the parameter setting to one specific to your site. The following shows the first part of the DecisioNet Configuration file (dnconfig.xml). The shaded areas identify the formatting information that should not be changed.

```
<?xml version="1.0"?>

<!DOCTYPE config SYSTEM "dnconfig.dtd">

<config>
  <section name="Ipc">
    <!-- <param name="ServerIP">127.0.0.1</param> -->
    <param name="TraceLevel">0</param>
  </section>

  <!-- ***** -->
  <!-- * LogTally Manager Configuration parameters * -->
  <!-- ***** -->

  <section name="LogTally Manager">

    <!-- Section: LogTally Manager -->
    <!-- -->
    <!-- SystemLogging -->
    <!-- -->
    <!-- Specifies whether or not to log to the OS system log. d -->
    <!-- -->
    <!-- Values: Y(yes) or N(no) -->
    <!-- -->
    <!-- Default = Y (yes) -->
    <param name="SystemLogging">Y</param>
```

### Identifying a Parameter in an XML Format File

All information inside of a greater than (<) and less than (>) symbol is part of the mark-up language and should not be changed. Only the parameter entry can be changed and still have the file function properly. A parameter entry is identified as follows:

```
<param name="SystemLogging">Y</param>
```

Notice the parameter that may be changed is *pointed to* by the ending less than symbol (<) of the parameter name tag and the beginning greater than symbol (>) or the parameter close tag (</param>). In this example, the parameter that can be changed is the bolded **Y** character .

### Commented Information

Comments are identified with comment tags, <!-- at the start of a line and --!> at the end of the line. Some parameters are commented out as is shown in for the ServerIP parameter in the previous example. Before you can use a commented out parameter, you must remove the comment tags at both ends of the line.

### Using an Editor to Locate a Parameter

This section described how to use Notepad to open the DecisioNet Configuration file (dnconfig.xml) and use the search option to locate and change a specific parameter.

1. Click the **Start** icon at the bottom left of the screen.
2. Select **Programs > Accessories > Notepad**.
3. In Notepad, select **File > Open...**
4. Use the Open dialog to locate the dnet\data directory.
5. Use the drop down arrow and change the **Files of Type:** selection to **All Files (\*.\*)**.
6. Select the dnconfig.xml file and click **Open**.
7. Select **Search > Find...** and then enter the parameter name you want to locate and change in the Search dialog **Find What:** entry box.
8. Click the **Find Next** button.

If you locate the parameter name in the comments area of the parameter you are looking for, click the **Find Button** again. For example, if you searched for MaxNumberUpdateRetries, the parameter name entry that you are looking for would look as follows:

```
<param name="MaxNumberUpdateRetries">10</param>
```

9. Edit the parameter as needed and click **File > Save** to save the change.

## Configuration File Comments

Configuration files contains comments to describe each parameter. The following example shows the "Maximum Number of Bedcheck Retries" parameter from the ESL Manager section of the DecisioNet Configuration file.

```
<!-- Section:  ESL Manager                                -->
<!--
<!-- MaxNumberBedcheckRetries                            -->
<!--
<!-- Maximum number of times an Bedcheck request is retried -->
<!-- at the ESL Manager level when errors occur.  After    -->
<!-- retries are exhausted, spool record is marked with last -->
<!-- error received.  The record is always retried so that -->
<!-- both the minimum number of retries have been done and so -->
<!-- that the minimum retry period has elapsed, but retrying -->
<!-- stops when either the maximum number of retries have -->
<!-- have been done or the maximum retry period has elapsed, -->
<!-- whichever comes first.                               -->
<!--
<!-- Values:  non negative integer                       -->
<!--
<!-- default = 10                                        -->
<param name="MaxNumberBedcheckRetries">10</param>
```

All of the configuration file parameters and their defaults are listed in this chapter to assist you to search, locate and change site-specific parameters.

Refer to *Appendix B: DecisioNet Configuration Files* and read the specific parameter comment section for details about each parameter.

## Setting Performance Boost in Windows NT 4.0

Following installation, set the foreground and background applications to get equal time.

1. Select the **Control Panel** from the Settings menu from the **Start** icon.
2. Choose the **System** icon.
3. Click on the **Performance** tab.
4. Slide the Boost Selector to “None” to indicate “No Performance Boost.”
5. Click on **Apply** to accept these changes.
6. Click on **OK** in the Performance Dialog Box.
7. Close the Control Panel.

Configure the system as described in this chapter, beginning with the section “Configuring the CBS Communications.”

## Configuring the DecisioNet System

After installing new software, you must configure the following DecisioNet System parameters for your store's environment:

- CBS address configuration
- Site-specific DecisioNet software application configuration

### CBS Configuration

DecisioNet 3.0 uses Ethernet to communicate with CBSs installed at your site. Each CBS must have a unique number and host name or IP address specified in the DecisioNet CBS Configuration file (`dncbsconfig.xml`). Refer to the "CBS Hardware Configuration" section in *Chapter 3, Installing the Hardware Infrastructure* for details about setting IP addresses and host names.

#### Hostname

The hostname format is as follows:

```
ncrdnetnnnnnn.<domain>
```

where:

nnnnnn is the last 6 digits of the MAC address that is listed on the serial number label of the CBS.

#### IP Address

The IP address format is as follows:

```
xxx.xxx.yyy.z
```

where, depending on the type of IP addressing:

xxx represents network IDs

yyy is the subnet ID

z is the host ID

A unique number (1-99) is assigned to the CBS during RF infrastructure installation as described in the *CBS Installation* section of Chapter 3 in this guide. Whether you use a hostname or IP address is determined by the type of Ethernet environment in your store.

### Static IP Addressing

For stores that use static IP addressing, a block of addresses are assigned to the site. Check with the local IT Administrator concerning the network addressing scheme used in the store. Unique IP address are selected from the site block to identify each CBS used at the site.

### Dynamic IP Addressing

For sites that use a DHCP Server and use Auto DNS to dynamically assign IP addresses, hostnames would be used to identify the CBSs used at the site.

### Setting CBS Parameters

Use an ASCII text editor as described earlier in this chapter to open the DecisioNet CBS Configuration File (`dncbsconfig.xml`). The default file looks as follows:

```
<?xml version="1.0"?>
<!DOCTYPE cbsconfig SYSTEM "dncbsconfig.dtd">
<cbsconfig>
  <cbs>
    <id>1</id>
    <hostname>ncrdnetnnnnn.atlantaga.ncr.com</hostname>
  </cbs>
</cbsconfig>
```

1. Depending on the number of CBSs that you have at your site, copy and paste the *outlined* section of the file to create a `<cbs>` section for each CBS.

2. Edit the <id> parameter to identify a unique number (1-99) for each CBS.
3. Edit the <hostname> parameter to identify the IP address and domain name, or a host name and domain name for each CBS.
4. Save the file.

CBS Number	CBS MAC Address
1	08000E382EE7
11	08000E383B45
12	08000E39412E
13	08000E39C245

For example, if your site had a domain name of STORENET and CBSs installed as shown in the table above, the DNCBSCONFIG.XML file would be as follows:

```
<?xml version="1.0"?>

<!DOCTYPE cbsconfig SYSTEM "dncbsconfig.dtd">

<cbsconfig>
  <cbs>
    <id>1</id>
    <hostname>ncrdnet382EE7.STORENET</hostname>
  </cbs>
  <cbs>
    <id>11</id>
    <hostname>ncrdnet383B45.STORENET</hostname>
  </cbs>
  <cbs>
    <id>12</id>
    <hostname>ncrdnet39412E.STORENET</hostname>
  </cbs>
  <cbs>
    <id>13</id>
    <hostname>ncrdnet39C245.STORENET</hostname>
  </cbs>
</cbsconfig>
```



## Application Configuration

Site-specific application parameters are defined in the following three files:

- DecisioNet Configuration file (`dnconfig.xml`)
- DecisioNet Task Manager configuration file (`taskman.cfg`)
- Decisionet Host Bridge Configuration file (`dnhostbridge.xml`)

**Note:** This section identifies the parameters in the first two files. Changes to the Host Bridge Configuration file are typically done by the programming team to match the site-specific requirements of the Custom Data Reader. Details about changing the Host Bridge Configuration file are included in the "Host Bridge Utility Guide" on the *DecisioNet Implementation Guide (B005-0000-1250)*.

### DecisioNet Configuration file (`dnconfig.xml`)

The DecisioNet Configuration contains the following sections with parameters specific to the individual DecisioNet software module.

- Inter-Process Communication (IPC)
- Log and Tally Manager
- CBS Manager
- ESL Manager
- DecisioNet Console
- Data Reader

The following tables show each parameter and the default value following software installation.

#### *IPC Section*

Parameter	Default
ServerIP	127.0.0.1
TraceLevel	0

**Log and Tally Manager Section**

Parameter	Default
SystemLogging	Y
CheckAction	Y
MaxTallies	50
TallyUpdateFrequency	10
TraceLevel	0
TraceFile	dnltmanager.trc
EventsMax	10000
EventsNumberToRemove	1000
EventsDaysToRemove	30
HandleEmail	Y
HandleAlarm	Y
HandleConsole	Y
HandleSystemTray	Y
HandleExecProcess	Y
HandlePager	Y
HandleEslTag	Y
HandleThirdParty	N
HandleSnmpTrap	N
ManualTagLinkID	MANUAL
ManualTagLinkType	99
PagerTagLinkID	PAGER
PagerTagLinkType	98

**CBS Manager Section**

Parameter	Default
MaxWorkerThreads	20
MaxConnectionsPerCBS	10
TODUpdateFrequency	60
NumberCBSAttempts	3
NumberESLAttempts	5
BroadcastSends	5

Parameter	Default
ConnectTimeout	10
ResponseTimeout	15
MaxFailureFrequency	15
TallyUpdateFrequency	60
ResultTableExpirationTime	60
BufferFullAttempts	20
BufferFullPause	2
CBSBusyAttempts	20
CBSBusyPause	2
QuickFind	1
SimulationMode	0
StoreID	255
TraceLevel	0
TraceFile	cbsmanager.trc

### *ESL Manager Section*

For all recurrence or lifetime settings:

P=period xY=year xM=month xD=day

T=time xH=hour xM=minutes xS=seconds

where x = length of time

For all start date settings, format is YYYYMMDDhhmmss

Parameter	Default
PeriodicVerify	0
VerificationRecurrence	P0Y0M0DT1H0M0S
VerificationStartDate	20000101000000
PeriodicExistenceBedcheck	0
ExistenceBedcheckRecurrence	P0Y0M7DT0H0M0S
ExistenceBedcheckStartDate	20000101000000
PeriodicHardwareBedcheck	0
HardwareBedcheckRecurrence	P0Y1M0DT0H0M0S
HardwareBedcheckStartDate	20000101000000

Parameter	Default
PeriodicSumcheckBedcheck	0
SumcheckBedcheckRecurrence	P0Y0M1DT0H0M0S
SumcheckBedcheckStartDate	20000101000000
TransactionRecordLifetime	P0Y0M0DT2H0M0S
SuccessfulSpoolRecordLifetime	P0Y0M0DT0H1M0S
ErroredSpoolRecordLifetime	P0Y0M3DT0H0M0S
MaxNumberUpdateRetries	10
MaxUpdateRetryPeriod	PT10M
MinNumberUpdateRetries	2
MinUpdateRetryPeriod	PT1S
MaxNumberBedcheckRetries	10
MaxBedcheckRetryPeriod	PT10M
MinNumberBedcheckRetries	2
MinBedcheckRetryPeriod	PT1S
MaxNumberFindRetries	2
MaxFindRetryPeriod	PT5M
MinNumberFindRetries	0
MinFindRetryPeriod	PT1S
MaxNumberAssignRetries	10
MaxAssignRetryPeriod	PT10M
MinNumberAssignRetries	2
MinAssignRetryPeriod	PT1S
MaxNumberForceSearchModeRetries	10
MaxForceSerchModeRetryPeriod	PT10M
MinNumberForceSearchModeRetries	2
MinForceSerchModeRetryPeriod	PT1S
MaxCBSUpdateResponseWait	PT5M
SumcheckCorrectiveAction	1
PingUnresponsiveTags	1
IgnoreUnresponsiveTags	1
AutoFindAfterNoResponse	1
SearchModeAfterNotFound	1
AutoAssignAfterFind	1
ForceSearchModeAfterFindFail	1
UnresponseTagRecurrence	P0Y0M1DTH0M0S

Parameter	Default
UnresponsiveTagStartDate	20000101000000
PriceChecking	1
DefaultUpdatePriority	3
DefaultBedcheckPriority	5
DefaultVerifyPriority	7
DefaultFindPriority	10
DefaultAssignTimeslotPriority	3
DefaultForceSearchModePriority	3
TransactionResolveSleepTime	50
TransactionThreadSleepTime	500
SpoolLogThreadSleepTime	200
ProcessingThreadSleepTime	0
MaxHistoryDepth	10
MaxAutofindSequence	1
MaxPricecheckCorrectiveDepth	3
MaxTransactionRecordBlock	128
MaxESLTransactionRecordBlock	128
MaxESLRecordBlock	128
MaxUpdateImageBeforeRefresh	P0Y0M7DTH0M0S
OperatingMode	NORMAL

#### *DecisionNet Console Section*

Parameter	Default
TraceFileName	dnConsoleTrace.trc
TraceLevel	0
PrintOverlaysEnabled	1
ForcePrintEnabled	0
PriceLevelPresent	1
ProductUnitPresent	1
ESLDefaultToProduct	1
ReportSQL1	(Details for Report 1)
ReportSQL1SelectColumn	1
ReportSQL1KeyColumn	3

Parameter	Default
ReportSQL1Button	1
ReportSQL2	(Details for Report 2)
ReportSQL2SelectColumn	1
ReportSQL2KeyColumn	4
ReportSQL2Button	1
ReportSQL3	(Details for Report 3)
ReportSQL3SelectColumn	0
ReportSQL3KeyColumn	2
ReportSQL3Button	0
ReportSQL4	(Details for Report 4)
ReportSQL4SelectColumn	0
ReportSQL4KeyColumn	3
ReportSQL4Button	0
ReportSQL5	(Details for Report 5)
ReportSQL5SelectColumn	0
ReportSQL5KeyColumn	3
ReportSQL5Button	0

#### *Data Reader Section*

Parameter	Default
PriceDecimalPosition	2
UnitPriceDecimalPosition	2
DebugFilename	DataReaderServer.log
DebugLevel	2
PriceLessThanDollar	CentSign
UnitPriceLessThanDollar	LeadingZero
DecimalSymbol	Comma
RoundingType	Normal

## DecisioNet Task Manager (taskman.cfg)

The DecisioNet Task Manager starts as a service and automatically starts DecisioNet applications as tasks. The Task Manager configuration file (taskman.cfg) specifies how to manage the DecisioNet tasks. The table lists each parameter and the installed default.

This is not an XML format file. You can still use an ASCII editor to search for the parameter and then change the default. The format of the parameter setting is:

```
<PARAMETER>=<SETTING>
```

For example:

```
KILLINTERVAL=15
```

Parameter	Default Setting
FREQUENCY	1
KILLINTERVAL	15
DEADCHECK	3
EXCEPTION	excphdr.exe -v
CONTEXT	DNET
TFILES	dnet.tm\*.inf
CONTEXT	TASK_MANAGER
TFILES	taskman.tm\*.inf

## Starting a Windows NT DecisioNet System

DecisioNet Release 3.0 software is configured to start as an automatic service when you re-boot your system. When you have finished setting configuration parameters, re-boot the system so all DecisioNet environment variables and system options are set.

After the system re-boots, use the following procedure to start the DecisioNet Console.

1. Click on the **Start** icon.
2. Select **Programs > DecisioNet > DecisioNet Console**.



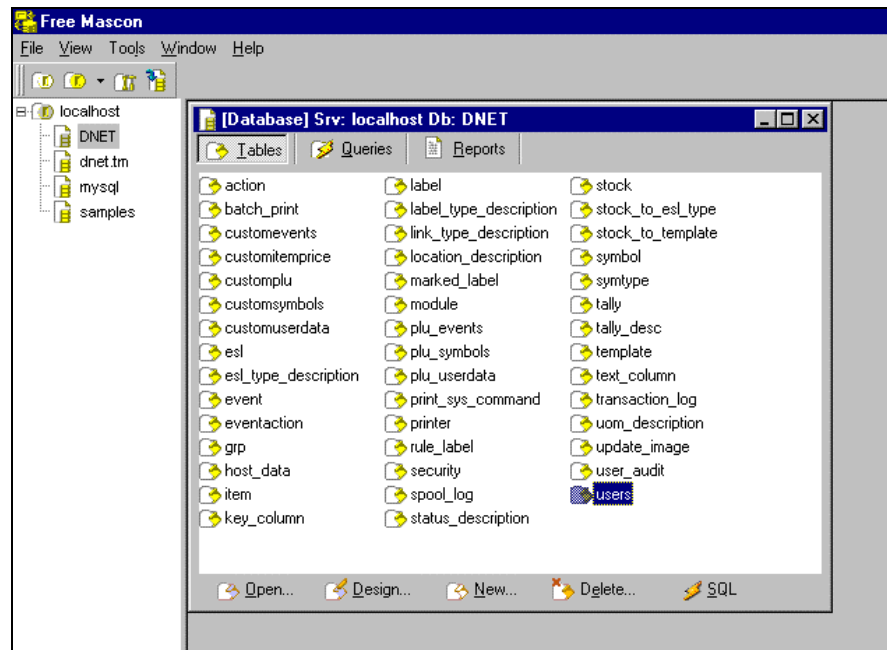


## About Passwords

You must enter a Username and Password to access the DecisioNet Console. The default Username is **system** and the default password is **manager**. To protect the DecisioNet System from unauthorized access, it is recommended that you change the password on the **system** Username to a password other than **manager** once you have installed the system.

## Maintaining Username/ Password

You can add, change, or delete a Username and Password by using a MySQL database editor and editing the *User* table in the DNET database. The following example shows how to use the FreeMascon database editor to add a new user.



1. Start the FreeMascon database editor.
2. Select **localhost** to display the available databases.

3. Select **DNET** to display the DecisioNet database tables.
4. Do one of the following to open the DecisioNet **users** table:
  - Double-click on the **users** table icon, or
  - Click the **users** table icon to highlight it and then click **Open...** at the lower left corner of the screen.

The screenshot shows a window titled "[Table View] Srv: localhost Db: DNET Table: users". The table has five columns: USER\_ID, SECURITY\_L..., OS\_USER\_N..., PASSWORD, and DEFAULT\_LA... The first row contains the values 1, 0, system, manager, and 0. The bottom status bar shows the SQL query "select \* from users LIMIT 0,10" and "Records: 1".

USER_ID	SECURITY_L...	OS_USER_N...	PASSWORD	DEFAULT_LA...
1	0	system	manager	0

The initial entry in the table is the default Username (OS\_USER\_NAME), **system**, and the default Password (PASSWORD), **manager**.

5. Click the + (plus) icon on the bottom of the screen to add a new record.
6. Enter the new user information. The maximum length of each field is 25 characters.

The screenshot shows the same window as before, but now with two records. The second record has USER\_ID 2, SECURITY\_L... 0, OS\_USER\_N... charkins, PASSWORD est330, and DEFAULT\_LA... 0. The bottom status bar shows the SQL query "select \* from users LIMIT 0,10" and "Records: 1".

USER_ID	SECURITY_L...	OS_USER_N...	PASSWORD	DEFAULT_LA...	
*	2	0	charkins	est330	0
	1	0	system	manager	0

7. Enter other users as needed.
8. Close the FreeMascon editor when finished.