



**Vendor Administration Guide Addendum  
for Motorola CDMA/AMPS/EVDO R23/S19/**

**Note**

Before using this information and the product it supports, read the information in [Notices](#) on page 19.

This edition applies to version 8, release 8.0.7, modification 5.1 of IBM Prospect and to all subsequent releases and modifications until otherwise indicated in new editions.

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# 1 About This Documentation

The *Vendor Administration Guide Addendum* provides instructions for configuring and supporting IBM Prospect for Motorola CDMA/AMPS/EVDO R23/S19/R10 software. The instructions in this guide are specific to this product and are not applicable to other technology packs in IBM Prospect. The *Vendor Administration Guide Addendum* is divided into three major sections with different chapters for Motorola Specific Administrator commands, information related to EVDO loader and Useful hints.

The information pertains to IBM Prospect 8.0 (8.0.7) for Motorola CDMA/AMPS/EVDO R23/S19/R10 (Release Point 5.1)

This guide was last updated April 15, 2010.

Please see the current release notes on this product for a list of revision dates for all IBM Prospect publications.

## **Audience**

This guide is intended as a roadmap for system implementers who are responsible for maintaining IBM Prospect software within an enterprise. This document refers to the person who fills this role as the overall *administrator*. It applies a different term, *IBM Prospect system administrator*, to the person who operates the computer systems and networks used to run IBM Prospect software. In general, the reader of this guide is also referred to as "*you*." By contrast, "*we*" refers to the IBM Prospect development and technical staff who support this product.

## **Required Skills and Knowledge**

Some implementations may require knowledge of relational databases (such as the Oracle database), or other third-party systems, such as performance databases.

The *Administration Guide* also assumes that you are familiar with the following:

- UNIX® basics (such as file structures, text editing, and permissions).
- A UNIX-based text editor, such as vi or emacs.
- Shell and `awk` scripting.
- UNIX system administration.

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About This Documentation

- High-level concepts of object-oriented systems such as objects, classes, and inheritance.
- Java™ applications development

This guide also assumes that you are familiar with your company's network and with procedures for configuring, monitoring, and solving problems on your network.

## Document Conventions

This document uses the typographical conventions shown in the following table:

**Table 1:** General document conventions

<b>Format</b>	<b>Examples</b>	<b>Description</b>
ALL UPPERCASE	<ul style="list-style-type: none"> <li>• GPS</li> <li>• NULL</li> <li>• MYWEBSERVER</li> </ul>	Acronyms, device names, logical operators, registry keys, and some data structures.
<u>Underscore</u>	See <a href="#">Document Conventions</a>	For links within a document or to the Internet. Note that TOC and index links are not underscored. Color of text is determined by browser settings.
<b>Bold</b>	<ul style="list-style-type: none"> <li>• <b>Note:</b> The busy hour determiner is...</li> </ul>	Heading text for Notes, Tips, and Warnings.
SMALL CAPS	<ul style="list-style-type: none"> <li>• The STORED SQL dialog box...</li> <li>• ...click VIEW...</li> <li>• In the main GUI window, select the FILE menu, point to NEW, and then select TRAFFIC TEMPLATE.</li> </ul>	Any text that appears on the GUI.
<i>Italic</i>	<ul style="list-style-type: none"> <li>• A <i>busy hour</i> is...</li> <li>• A web server <i>must</i> be installed...</li> <li>• See the <i>User Guide</i></li> </ul>	New terms, emphasis, and book titles.
Monospace	<ul style="list-style-type: none"> <li>• <code>./wminstall</code></li> <li>• <code>\$ cd /cdrom/cdrom0</code></li> <li>• <code>/xml/dict</code></li> <li>• <code>http://java.sun.com/products/</code></li> <li>• <code>addmsc.sh</code></li> <li>• <code>core.spec</code></li> <li>• Type OK to continue.</li> </ul>	Code text, command line text, paths, scripts, and file names.  Text written in the body of a paragraph that the user is expected to enter.
<b>Monospace Bold</b>	<pre>[root] # pkginfo   grep -i perl system Perl5 On-Line Manual Pages system Perl 5.6.1 (POD Documenta- tion) system Perl 5.6.1</pre>	For contrast in a code example to show lines the user is expected to enter.
<Mono-space italics>	<code># cd &lt;oracle_setup&gt;</code>	Used in code examples: command-line variables that you replace with a real name or value. These are always marked with arrow brackets.



**Table 1:** General document conventions (Continued)

<b>Format</b>	<b>Examples</b>	<b>Description</b>
[square brackets]	log-archiver.sh [-i] [-w] [-t]	Used in code examples: indicates options.

## **User Publications**

IBM Prospect software provides the following user publications in HTML or Adobe Portable Document Format (PDF) formats.

**Table 2:** IBM Prospect User Documentation

<b>Document</b>	<b>Description</b>
<i>Administration Guide</i>	Helps an administrator configure and support IBM Prospect core server software to analyze network performance and perform other network or database management tasks.
<i>Administration Guide Addendum</i>	Provides instructions for configuring and supporting IBM Prospect for Motorola CDMA/AMPS/EVDO R23/S19/R10 software
<i>Administrator's Quick Reference Card</i>	Presents the principal tasks of a IBM Prospect core server administrator in an easy-to-use format.
<i>Expressions Technical Reference</i>	Provides detailed information about expressions used in special calculations for reports.
<i>Installation Guide</i>	Instructions for installing and configuring the IBM Prospect software.
<i>Open Interface API Guide</i>	Describes how the Open Interface tool enhances your access to information about database peg counts and scenarios.
<i>Performance Data Reference</i>	Provides detailed information including entity hierarchies, peg counts, primitive calculations, and forecast expressions specific to your organization.
<i>Release Notes</i>	Provides technology-specific and late-breaking information about a given IBM Prospect release and important details about installation and operation.
<i>Server Preparation Guide</i>	Provides instructions for installing and setting up Solaris and Oracle software before you install IBM Prospect software.
<i>Server Sizing Tool Guide</i>	Helps an administrator use the sizing tool to calculate the system space needed for the IBM Prospect software and database.
<i>User Guide</i>	Provides conceptual information and procedures for using IBM Prospect software for performance and trending analysis.

## Viewing the Desktop Client Help Publications

To view the desktop client Help publications, select a guide from the HELP menu of the IBM Prospect graphical user interface or press F1 for context-sensitive Help. To update the Help files, click the HELP menu on the IBM Prospect Explorer, and select UPDATE ALL HELP FILES.

When Help files are updated, they are downloaded automatically from the IBM Prospect server to the IBM Prospect client. A message box notifies you when this download occurs.

## Viewing the Publications in PDF

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## Viewing the Publications in IBM Information Center

All of the IBM Prospect publications, including Release Notes, are available online from the IBM Information Center website as follows:

[http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp?topic=/com.ibm.netcool\\_pm.doc/IBM\\_Prospect\\_060308.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp?topic=/com.ibm.netcool_pm.doc/IBM_Prospect_060308.htm)

## 2 Motorola Specific Administrator Commands

This section contains the Motorola specific commands and configuration options that are common to both CDMA and EVDO technologies. This includes scripts that are used to maintain a list of network element names and the key identifiers for them such as `addNE.sh` and `addNEJ.sh`.

### ***Adding a Top-Level Network Element by using addNE.sh***

The command `addNE.sh` is used to add the top level network elements such as OMCR, MSC and RNCs to the `ne_list` file so that they can be loaded. Element names have a maximum length of 30 characters. The key identifiers are the `System_Id` (or `Sys_Id`) and the Network ElementID (or `NE_Id`), which are used to load the data into the Oracle database.

#### **To add a network element to a system**

1. Run the script `addNE.sh`. Use the following syntax:

```
addNE.sh [ -insert | -cancel | -output | -remake ]
          [ -n | -name ne_name ][ -s | -sys sys_id ] [ -ne | -ne_id ne_id ]
          [ -r | -rev release ] [ -p prefix ]
          [ -ns | -ne_sys ne_system] [ -t | -ne_type ne_type ]
```

The options for `addNE.sh` are described in the following table.

<b><i>Option</i></b>	<b><i>Description</i></b>
<code>-insert</code>	Adds new entry to <code>ne_list</code> and derived files.
<code>-cancel</code>	Removes entry from <code>ne_list</code> and derived files.
<code>-output</code>	Shows current contents of <code>ne_list</code> file.
<code>-remake</code>	Updates pertinent files with information from the current <code>ne_list</code> file. For an example of how to use this parameter, see <a href="#">Using addNE.sh With the -remake Option</a> on page 13.
<code>-n &lt;ne_name&gt;</code>	Name of the network element. Required for <code>-insert</code> and <code>-cancel</code> .

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<b>Option</b>	<b>Description</b>
-s <sys_ID>	Integer ID for the system. Required for -insert.
-ne <ne_ID>	Integer ID for the network element. Required for -insert.
-r <release>	Network element software release number. Required for -insert.
-p <prefix>	Default network element name for the data file.
-ns <ne_sys>	Network element system or module name. Required for -insert.
-t <ne_type>	Name of network element type. Required for -insert.

The available network element systems and types are as follows:

**Table 3:** Available network element systems and types

<b>Network element system</b>	<b>Network element type</b>	<b>Release</b>
<b>Supported ne_list types</b>		
MotoCDMA	MSC	R22, R21, R20, R19, R18
MotoCDMA	OMCR	R22, R21, R20, R19, R18
MotoCDMA	PMServer	R22, R21, R20, R19, R18
MotoEVDO	OMC_DO	R9, R8, R7, R6, R5
<b>Supported nej_list types</b>		
MotoCDMA	CDL	R22, R21, R20, R19, R18
MotoEVDO	CDL	R8, R7, R6, R5

**Examples:**

*Add a network element*

```
addNE.sh -insert -name "aems444MSC" -sys "8888" -ne "138" -rev "R21" -
ne_type "MSC" -p "aems444MSC." -ne_sys "MotoCDMA"
addNE.sh -insert -name "aems444" -sys "8888" -ne "138" -rev "R21" -ne_type
"OMCR" -p "aems444." -ne_sys "MotoCDMA"
addNE.sh -insert -name "somc229" -sys "8888" -ne "138" -rev "R21" -ne_type
"PMServer" -p "somc229." -ne_sys "MotoCDMA"
addNE.sh -insert -name "hrpda2" -sys "8888" -ne "2" -rev "R7" -ne_type
"OMC_DO" -p "hrpda2." -ne_sys "MotoEVDO"
```

*Remove a network element*

```
addNE.sh -cancel -n HOU00
```

*Display all added network elements*

```
addNE.sh -output
```

The preceding example displays the contents of the `ne_list` file, which contains all the network elements that have been added to the system and the `addNE.sh` script option values.

---

**Note:** When adding a top-level network element, you need to consider the planning data established during the system-planning phase. The sizing of the database table space, roll-back segments, and other structures are based on that analysis. Therefore, if the number of top-level elements increases, you should review database sizing and possibly recalculate it.

---

## Using `addNE.sh` With the `-remake` Option

Once you become familiar with the `ne_list` file, you can configure the Sentry by simply editing the `ne_list` file in the `$PROSPECT_HOME` directory using a text editor. The fields in `ne_list` are delimited by spaces.

For example, if you upgrade a network element from an old release to a new release, you can modify the `ne_list` under the 'rev' column for the network element and run the following command:

```
$ addNE.sh -remake
```

The `-remake` argument rebuilds the `Sentry.txt` and `Argument.txt` files from the current `ne_list` file.

You can also add a new network element by adding an entry in the `ne_list` file and running the script using the `remake` parameter.

## Using `addNEJ.sh` to configure the `nej_list`

For loaders that use the Java Sentry loader, an additional step is required before starting the middleware. There is a file in `$PROSPECT_HOME/nej_list` directory, which must be updated before the data files can be loaded correctly.

This configuration file is used by both MotoCDMA and MotoEVDO modules. Data types such as AEMSC with the file extensions like `aemsC30min`, `aemsC10min`, `aemsC4x30min`, `aemsCDO10min`, `aemsC13x30min` must update the `nej_list` properly before they can be loaded.

The steps to configure the Java Sentry loader are as follows:

- a. Prepare the `$PROSPECT_HOME/nej_list`. This file must have only one header and it must use a space delimiter.
- b. For CDMA, there must be one logical entry with an `ne_type` of CDL for each revision. Therefore, all entries must contain a single `system_id`. Multiple `system_ids` are not supported for CDMA CDL configurations in the `nej_list`. This is consistent with the previous Release Point 3 release. The following are examples of CDMA CDL filenames:

```
wakko30CSR.00005.200710090800.aemsC2x10min.tar.gz  
wakko30CSR.00005.200710090800.aemsC4x30min.tar.gz  
wakko30CSR.00005.200710090800.aemsC13x30min.tar.gz
```

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```
wakko33CSR.00002.200710090800.aemsC2x10min.tar.gz
wakko33CSR.00002.200710090800.aemsC4x30min.tar.gz
wakko33CSR.00002.200710090800.aemsC13x30min.tar.gz
```

- c.** For EVDO, the file must have the BSCDO ID as `ne_name` with `ne_type` of CDL. The BSCDO ID comes from the filename. This configuration in `nej_list` is new since Release Point 4. The `ne_name` of the EVDO entries must be configured using the BSCDO ID as `ne_name`. The following are examples of EVDO CDL filenames:

```
hrpda1011.01011.200710090800.aemsCDO10min.tar.gz
hrpda1012.01012.200710090800.aemsCDO10min.tar.gz
```

The following is an example of `nej_list` based on the sample filenames mentioned before. Note that the first two are for CDMA, while the others are for EVDO:

<code>ne-name</code>	<code>1000</code>	<code>1</code>	<code>rev</code>	<code>prefix.</code>	<code>ne-system</code>	<code>ne-type</code>
wakko33CSR	5555	2	R21	wakko33CSR.	MotoCDMA	CDL
wakko30CSR	5555	5	R21	wakko30CSR.	MotoCDMA	CDL
01011	5555	1011	R7	hrpda1011.	MotoEVDO	CDL
01012	5555	1012	R7	hrpda1012.	MotoEVDO	CDL

To register `nej_list` in the system, run the following commands:

```
$ cd $PROSPECT_HOME/scripts
$ addNEJ.sh (no additional parameters)
```

## 3 EVDO Configuration

This chapter contains information about EVDO datatypes such as EVDOpm.

The order in which fields appear in the raw PM data files may change from release to release. Therefore, IBM Prospect implements separate loader modules for each EVDO release.

The EVDO version number appears in the first line of each PM files collected from the BSC\_DO/EMH Core Server. The version string at the top of the file looks like this: #FORMAT <Ver> where Ver is EVDO version number (For example, 8 for EVDO R8). This string changes with each new EVDO release. In RP5.0 and prior releases, Prospect loader validates the data format version by checking the version. If the version string found in the PM file is not supported, the Prospect loader will discard the invalid file and continue to load other files in that directory. Prospect loader will produce error messages in the loader log file indicating invalid files.

The version number check in EVDOpm loader is removed in RP5.1 release. That means that files from any major release can be crossloaded in any other directory. Except for EVDO 6.1 which still needs to be loaded in the R6/in directory. This will help customers to continue to load data when there are new releases from the vendor.

### Troubleshooting Data Loading

The following table describes types of errors that might occur and possible solutions.

**Table 4:** Troubleshooting Data Loading

<i>When this happens</i>	<i>Do this</i>
Data for a particular location is missing.	Check the \$PROSPECT_HOME/./ftpIN/<subdirectory>/fail directory to see if an error has occurred. If no data is received, check the connection between the managed network and the IBM Prospect server.
Data is missing or corrupt.	Check Loader log files to see what the error message is and where it is located. Check the connection between the managed network and the IBM Prospect server. Retransmit the file if necessary.
A file remains in the /in directory.	Verify that the file is named correctly. Check the Sentry log file to see whether the file is being loaded.

**Table 4:** Troubleshooting Data Loading

<i>When this happens</i>	<i>Do this</i>
The Sentry does not attempt to load a file.	Check to make sure that the Sentry is running.
Some files might not load in the first attempt. Error messages are logged if this occurs.	Deadlocks can occur occasionally when data is loaded while partition maintenance is running. This problem is generated in the Oracle database code that is not under IBM Prospect development control. The loaders automatically retry these failures.
Data files move to <code>/fail</code> directory with "Missing mapping" or "Zero Data" error message.-	Ensure that the ConfigPM files are loaded successfully before any MotoCDMA PM, SDU,VPU and SAR data is loaded..
Data files for Aemsc data type remains in the <code>/in</code> directory	Check the Java Sentry and Java Loader to see whether the Java Sentry loader is started. Try to restart the middleware.



## Appendix A: Useful Hints

These are some useful hints for Administrators:

### ***aemsC data file loading scenario creation***

After loading the aemsC data file, it is possible that the scenario may not appear in the scenario list. If this issue occurs, load the PM data type with the same system id as defined in the nej\_list. This will create the correct scenario for the aemsC file loaded, which can be used for reporting purposes.

### ***APC\_IP to APC\_ID mapping***

The loading of the new aemsC DO CDL files contains APC\_IP. In order to get the APC\_ID displayed in the reports, the \*.cfgmap files with the necessary APC\_IP to APC\_ID mapping must be loaded first.

If the mapping information for a particular APC\_IP is not found in the cfgmap file, the APC and APC\_Modem fullkeys will be formed using the APC\_IP as the APC\_ID.

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**Note:** BTSDO\_ID no longer requires mapping information from the \*.cfgmap files.

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### ***VPU pcalcs populated by VPUpm file***

The TotVPF\* pcalcs at the VPU entity level may be unable to be report generated with the "No data" error message.

If this is this issue is encountered, kindly ensure the SAR file with the corresponding VPU instance and timestamp is loaded before attempting to generate reports based on these pcalcs.

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