Prospect

Version 8.0.7

Vendor Administration Guide Addendum for Nortel EVDO8.1/CDMA MTX17

Note

Before using this information and the product it supports, read the information in Notices on page 25.

This edition applies to version 8.0.7, release 4, modification 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 Nortel EVDO8.1/CDMA MTX17 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 CDMA and EVDO configuration. CDMA and EVDO are the two main technologies that are used in the industry. In these chapters, you can find general configuration information such as configuring the MSC or RNC as well as specific EVDO information.

The information pertains to IBM Prospect 8.0 (8.0.7) for Nortel EVDO8.1/CDMA MTX17 (Release Point 16.5 and Release Point 16.6).

This guide was last updated March 31, 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.
- 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

Format	*Examples*	*Description*
ALL UPPERCASE	• GPS • NULL • MYWEBSERVER	Acronyms, device names, logical operators, registry keys, and some data structures.
Underscore	See Document Conventions	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.
Bold	• **Note**: The busy hour determiner is...	Heading text for Notes, Tips, and Warnings.
SMALL CAPS	• The STORED SQL dialog box... • ...click VIEW... • In the main GUI window, select the FILE menu, point to NEW, and then select TRAFFIC TEMPLATE.	Any text that appears on the GUI.
Italic	• A *busy hour* is... • A web server *must* be installed... • See the *User Guide*	New terms, emphasis, and book titles.
`Monospace`	• `./wminstall` • `$ cd /cdrom/cdrom0` • `/xml/dict` • `http://java.sun.com/products/` • `addmsc.sh` • `core.spec` • Type `OK` to continue.	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.

`Monospace Bold`	**`[root] # pkginfo | grep -i perl`**
	`system Perl5 On-Line Manual Pages`
	`system Perl 5.6.1 (POD Documentation)`
	`system Perl 5.6.1`
		For contrast in a code example to show lines the user is expected to enter.

Table 1: General document conventions (Continued)

Format	*Examples*	*Description*
<Mono-space italics>	`# cd <oracle_setup>`	Used in code examples: command-line variables that you replace with a real name or value. These are always marked with arrow brackets.
[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

Document	*Description*
Administration Guide	Helps an administrator configure and support IBM Prospect core server software to analyze network performance and perform other network or database management tasks.
Administration Guide Addendum	Provides instructions for configuring and supporting IBM Prospect for Nortel EVDO8.1/CDMA MTX17 software
Administrator's Quick Reference Card	Presents the principal tasks of a IBM Prospect core server administrator in an easy-to-use format.
Expressions Technical Reference	Provides detailed information about expressions used in special calculations for reports.
Installation Guide	Instructions for installing and configuring the IBM Prospect software.
Open Interface API Guide	Describes how the Open Interface tool enhances your access to information about database peg counts and scenarios.
Performance Data Reference	Provides detailed information including entity hierarchies, peg counts, primitive calculations, and forecast expressions specific to your organization.
Release Notes	Provides technology-specific and late-breaking information about a given IBM Prospect release and important details about installation and operation.
Server Preparation Guide	Provides instructions for installing and setting up Solaris and Oracle software before you install IBM Prospect software.

Table 2: IBM Prospect User Documentation (Continued)

Document	*Description*
Server Sizing Tool Guide	Helps an administrator use the sizing tool to calculate the system space needed for the IBM Prospect software and database.
User Guide	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

All of the user publications are available in Adobe Portable Document Format (PDF). To open a PDF, you need the Adobe Acrobat Reader. You can download Adobe Acrobat Reader free of charge from the Adobe Web site. For more details about the Acrobat Reader, see the Adobe Web site http://www.adobe.com/ .

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

2 Nortel Specific Administrator commands

This chapter contains the Nortel specific commands and configuration options that are common to both CDMA and EVDO technologies. This includes the scripts that are used to maintain a list of network element names and the key identifiers for them. The network element names are RNCNAME or MSCNAME. The key identifiers are the System_Id (or Sys_Id) and the NE_Id, which are numbers used to load the data into the Oracle database.

Add, modify or delete an MSC or RNC in msc_list file

Use the `addmsc.sh` script to maintain the `PROSPECT_HOME/msc_list` file. The `msc_list` file contains all the MSCs, RNCs and UAS network elements that are picked up by the Prospect middleware specifically, **sentry** and loaded into the database. Its very important to maintain `msc_list` file, add or make changes to this file in the following cases:

- Add new entries when new network elements such as SDMs or RNCs are added.
- Change the NE_Type of RNC entries when appropriate from RNC to RNC9000.
- Change the **concat** flag to `Y`, and then add correct EMSIP and RNCIP when an RNC switches from using non-concatenated to concatenated data format.
- Update the EMSIP when an RNC is re-homed to another EMS.

Run the script `addmsc.sh`. Use the following syntax:

```
addmsc.sh -insert|-help|-cancel|-output|-remake [-name <NE Name>]
          -sys <sys ID>] [-ne <NE ID>]
          -type <NE type>] -p <prefix>] [-bss 30|60]
          -emsip <EMSIP Address> -concat <Y|N> -rncip <RNCIP Address> ]
```

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

Option	*Description*
`-insert`	Adds new entry to `msc_list` and derived files.
`-help`	Contains examples and usage infomation.
`-cancel`	Removes entry from `msc_list` and derived files.

Option	*Description*
`-output`	Shows current contents of `msc_list`.
`-remake`	Updates files with `makeArg` and `makeSentry`.
`-name <NE_name>`	Name of the network element in file names. Required for `-insert` and `-cancel`.
`-sys <sys_ID>`	Integer ID for the system. Required for `-insert` and `-cancel`.
`-ne <NE_ID>`	Integer ID for the network element. Required for `-insert` and `-cancel`.
`-type <ne_type>`	Network element type. Required for `-insert` and `-cancel`. Valid entries are: • MSC for MTX switches • RNC or RNC9000 for 1xEVDO • PDSNFA for PDSN FA module • PDSNHA for PDSN HA module • PDSN16000 for PDSN 16000 module • PVG for Packet Voice Gateway • UAS for Universal Audio Server
`-p <prefix>`	Default MSC name for the data file.
`-bss <30|60>`	Time interval of collected data. Required for `-insert`.
`-emsip`	Contains the IP Address of the EMS corresponding to the `NE-Name`. The EMS server contains EVDO data. This option is only to be specified for element type RNC. A default value of 0.0.0.0 will be filled in this column when Prospect for Nortel EVDO 8.0 upgrade is done.
`-concat`	Contains `Y` or `N`. The default value is `N` and will be set during upgrade.
`-rncip`	Contains the IP Address of the RNC named in the `NE-Name` column. This option is only to be specified for element type `RNC`. A default value of 0.0.0.0 will be set in this column during upgrade.

Note: Run the following command after making changes to the `msc_list` file such as adding or removing network elements or changing some options such as **concat**.

```
addmsc.sh -remake
```

If you add new elements then you must bounce the **sentry** as well by using the following command:

```
ps-mgr restart sn
```

To support SDM data load, add all MSCs that will load concatenated data to the Prospect system using the following command:

```
[flexpm] $ addmsc.sh -insert -name "new-Seattle-MSC" -sys "1200" -ne "20" -
bss "30" -type "MSC" -p "new-Seattle-MSC"
```

To support EVDO data loading, add all RNCs that will load concatenated data to the Prospect system using the following command:

```
[flexpm] $ addmsc.sh -insert -name "new-haven-ems" -sys "1300" -ne "1" -bss
"30" -type "RNC" -p "new-haven-ems" -emsip "123.123.234.230" -concat "Y" -
rncip "67.23.67.198"
```

To support EVDO data loading, add all RNCs that will load non-concatenated data to the Prospect system using the following command. We are assuming the NE_Type is "RNC9000" in this case though it could be "RNC" as well. The rncip and emsip are not needed because this RNC uses non-concatenated data format.

```
[flexpm] addmsc.sh -insert -name "new-haven-1" -sys "1300" -ne "2" -bss
"30" -type "RNC9000" -p "new-haven-1" -emsip "0.0.0.0" -concat "N" -rncip
"0.0.0.0"
```

To support UAS data file loading, run the following command to add one UAS:

```
$ addmsc.sh -insert -name "UAS_NAME" -sys 100 -ne "UAS_node" -type "UAS" -
bss "60"
```

You need to use a real UAS name and UAS node in the command above. For example, the following commands add two different UAS nodes in msc_list under $PROSPECT_HOME:

```
$ addmsc.sh -insert -name "UAS_NEW2" -sys 100 -ne "SNANUAS2" -type "UAS" -
bss "60"
$ addmsc.sh -insert -name "UAS_NEW1" -sys 110 -ne "SNANUAS1" -type "UAS" -
bss "60"
```

Clearing Entity Information

The `clear_msc.sh` script allows you to delete the data for a network element and delete all of the elements under the network element.

Use the `clear_msc.sh` script with the following syntax:

```
clear_msc.sh <sysID> <element_ID>
```

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

Option	***Description***
<*sys_ID*>	ID for the system.
<*element_ID*>	ID for the network element.

Clearing a System's Scenarios

The `clear_scenario.sh` script removes the scenarios for a system. Use the `clear_scenario.sh` script with the following syntax:

```
clear_scenario.sh <sysID>
```

For the *<sysID>* parameter, substitute the system ID.

3 CDMA configuration

This chapter contains Nortel configuration information specific to the CDMA technology. The commands pertain to file types that contain CDMA data such as MTXpm, SDMcsv, or the NBSS datatypes such as MCBTS, BSSpm, CNFP, CSVS data etc.

A mapping file with channel and carrier information

In order to associate performance data for a channel with a logical carrier entity, you must manually maintain a channel-to-carrier mapping. This information is used by the CDMA data loaders to map the traffic data to correct carrier information and it is very important that this file is updated whenever there are new MSCs or BSCs added or when there is a change in the channel or carrier association. Otherwise the CDMA data will not be loaded properly and some parts of it may be discarded due to lack of proper mapping.

Maintaining the mapping file

Use the `addcarr.sh` script to maintain the `$PROSPECT_HOME/carr_list`. The `addcarr.sh` script has the following syntax:

```
addcarr.sh -insert|-delete|-output|-update -n <MSC> -s <sys_ID> -m <MSC_ID>
           -b <BSC_ID> -l <channel> -c <carrier>
```

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

Option	*Description*
<*MSC*>	Name of the MSC.
<*sys_ID*>	ID for the system.
<*MSC_ID*>	ID for the MSC.
<*BSC_ID*>	ID for the BSC.
<*channel*>	Channel number.
<*carrier*>	Carrier number.

After adding or deleting a mapping, you must type the following command:

```
$ addcarr.sh -update
```

The `addcarr.sh` script uses the `carr_list` to update a database table that is used in the loading process to map carriers to cells and BSCs. The script updates both the `$FLEXPM_HOME/pm/adm/$PROSPECT_HOME/carr_list` file and configuration in the database.

4 EVDO configuration

This chapter contains the Nortel configuration information specific to the EVDO technology. EVDO is a rapidly evolving technology that is used in most Prospect implementations. This chapter explains the configuration options for EVDO to help load the data correctly. EVDO data can be obtained in two different forms from the EMS: non-concatenated and concatenated. The concatenated is a new concept. This chapter describes the changes in Prospect configuration when an EMS moves from **non-concat** data to **concat** data.

Non-concatenated versus concatenated EVDO data

The Nortel EVDO traffic data is cumulative in nature in EVDO release 7.0 and earlier. The template data files at the EMS are written to each sampling period. The file size grows and becomes large towards the end of the day. This format of data is referred to as nonconcatenated EVDO data or **non-concat** data. This imposes a heavy load on the EMS and the Data Acquisition (DA) server. Therefore, Nortel introduced the concatenated file feature which is available for EVDO 8.0 and later releases. This feature concatenates OMs from all nodes (RNC and DOM) for the same EMS and generates only one OM file per RNC or DOM template per collection interval. The collection interval can be 15, 30 or 60 minutes. A file generated on the EMS with **concat** feature turned on is called concatenated EVDO data or **concat** data.

Due to the **concat** feature, there are some changes in IBM Prospect side. When the **concat** feature is turned on at the EMS, the file format produced by Nortel is slightly different from EVDO 7.0. This results in smaller files coming into the `1xRaw` directory. The Prospect loader is updated to handle this new data format.

Calling callPreparse.sh in concat and non-concat mode

For non-concatenated data `callPreparse.sh` is invoked on the command line as follows:

```
[flexpm]$ cd $PROSPECT_HOME/1xEVDO/scripts
[flexpm]$ callPreparse.sh <RNCNAME> N
```

RNCNAME is the name in the `NE-Name` field in the `msc_list`.

The `N` indicates **concat** option is turned off.

For concatenated data, `callPreparse.sh` is invoked on the command line as follows:

```
[flexpm]$ cd $PROSPECT_HOME/1xEVDO/scripts
[flexpm]$ callPreparse.sh <EMSIP> Y
```

EMSIP is the IP Address of the EMS as specified for this RNC in the `msc_list` file.

The `Y` indicates **concat** option is turned on.

Examples for both **concat** and **non-concat** formats are as follows:

```
callPreparse.sh  SeattleRNC  N
callPreparse.sh  99.99.99.99 Y
```

Cron job entries for callPreparse.sh

In Nortel EVDO/CDMA RP16.5 and later releases, the `callPreparse.sh` cron job processes one raw file at a time. Whereas before RP16.5, the files are processed sequentially for an RNC. The subsequent runs of the cron can pre-parse files from the same RNC. Whereas before RP16.5, one raw file must finish processing before the next one can start.

The DAT ensures that files arrive in the increasing order of timestamp so that pre-parsing can be done correctly. The changes in `callPreparse.sh` can make better use of the available CPU resources in the system. Customers must change the cron job frequency to be between 1 min - 10 min so that in a backload situation, `callPreparse.sh` can load multiple RNC files quickly. The frequency of the cron job should be at least one minute more than the time taken to pre-parse each file. You can determine the pre-parse timing by checking the standard output of the `callPreparse.sh` call for the RNC or EMS. The start and end timings in this output are the time taken to pre-parse a file from this market.

The frequency of the cron must be monitored and changed if necessary depending on the load on the system. This is true for both **concat** and **non-concat** RNC data.

Note: Due to the changes for parallel loading of files for same RNC, it is important that the value of `PREPARSER_LIMIT` is slightly less than the number of CPUs in the system. Otherwise, it is possible that there are too many perl pre-parser processes spawned. The value of `PREPARSER_LIMIT` can be set to two less than the number of CPUs in the system. For example,

for a 24 CPU server, set this value to 22. Monitor the server for load times and if it is high, tune it accordingly.

Updating the scenario label with RNCName

In Nortel releases RP16.5 and later, the software can update the RNC scenario label with RNCNAME. The steps to update the scenario are as follows:

1. Upgrade the Prospect server to RP16.5 and load at least one datafile for all RNCs defined in `$PROSPECT_HOME/msc_list`.
2. Stop the **Sentry** program and make sure EVDO data load is complete.

Important: All the logs for EVDO should show that the data load is complete. Do not proceed to next step if loaders are hanging or logs are incomplete due to some other reason. Halt the middleware if necessary and let all the loader processes complete.

3. Get the `system_id` and `msc_id` from the `SYS_ID` and `NE_ID` columns respectively of the `$PROSPECT_HOME/msc_list` file. Both `SYS_ID` and `MSC_ID` should be numeric values. Use the following command to determine this:

   Substitute <*RNCNAME*> with actual name of the `RNC`. RNCNAME is the prefix for the files in the `1xRaw` directory.

   ```
   grep <RNCNAME> $PROSPECT_HOME/msc_list
   ```

4. Login as `flexpm` user, and then run the following script.

   ```
   [flexpm]$ cd $PROSPECT_HOME/1xEVDO/scripts
   [flexpm]$ ./del_key_lookup.pl <SYS_ID> <RNC_ID>
   ```

5. Repeat steps 2 and 3 for all the RNCs for which the label needs to be updated.
6. Start the **Sentry** program.
7. Load the pre-parsed data for all the RNCs that are being worked on.
8. Start the Client or Pweb to see the scenario name updated with RNCNAME as seen in the `msc_list`. Earlier it would be the label DO_RNC for all RNCs.

Interface changes between DA and IBM Prospect Server for concat option

There are two important changes to the interface between DA and IBM Prospect when the **concat** option is turned on.

- The filename that is sent from DA server to IBM Prospect `$PROSPECT_HOME/../ftpIN/1xRaw/MTXnn/1xRaw` is called:

  `<EMSIP>.<TSTAMP>.30.RNCpm.gz` (`TSTAMP` is in the format `YYYYMMDDHHMI`)

  Sample file: `9.127.97.74.200903101100.30.RNCpm.gz`

The filename that goes to the `$PROSPECT_HOME/../ftpIN/1xRaw/MTXnn/ok` directory is called `<RNCNAME>.<tstamp>.30.RNCpm`.

- The *`<EMSIP>.candidateRncQuery<tstamp>`*`.txt`. is now sent to `$PROSPECT_HOME/../ftpIN/evdo_cfg` directory for the IBM Prospect pre-parser to make the association between RNCs and DOMs. In RP16.4 and earlier releases, this file was used by the DAT software and not sent to Prospect server. This file will be sent to IBM Prospect server only for EMSs that have the **concat** feature turned on. The file is collected and transferred to IBM Prospect server by the `rnccfg` datatype DAT script.

  Sample file:

  `9.127.97.74.candidateRncQuery09112009.txt`

  This file should be readable by `flexpm`

Note: After the Nortel EVDO / CDMA RP16.5 upgrade, if the customer plans to use the `CONCAT=Y` option in `callPreparse.sh`, then it is important that there is a `<EMSIP>.candidateRncQuery<tstamp>.txt` file (for current day or the prior day) in the `$PROSPECT_HOME/../fptIN/evdo_cfg` directory before EVDO data loading can start. If the file is not present, the file is not pre-parsed. Therefore, the file is not loaded.

---

set_evdo_option script

The `set_evdo_option` script is used for the following purposes:

- Setting `pp` (`PREPARSE_LIMIT`).
- Setting `chan`. This is used to decide whether to get the channel number from the RNC config data or from the traffic data itself.

PREPARSE_LIMIT

`PREPARSE_LIMIT` is the number of `callPreparse.sh` scripts that can run simultaneously. Set the `PREPARSER_LIMIT=3` by using the following `set_evdo_option` command:

```
[flexpm] $ set_evdo_option pp=3
```

Note: Typically, the value of the `PREPARSER_LIMIT` is determined by CPU speed, load on the box and `MAX_COMMANDER` value. For example, if `MAX_COMMANDER=16` on a 20 CPU box, then you might need at least 16 `callPreparse.sh` processes to be pre-parsing at any given time. At the same time, you might not want more than 18 -19 `callPreparse.sh` processes. That means `PREPARSER_LIMIT` can be between 16 and 18.

`PREPARSER_LIMIT` can be changed at any time depending on machine load. There is no need to bounce **sentry** after making this change. The default value of the `PREPARSER_LIMIT` is 10.

chan option

There is a new flag called `chan` for the `set_evdo_option` script. This affects customers who collect the following DOM Sector templates:

- RNCPerfBySectorCarrier
- HHOInhibit
- AirlinkResourceAllocationPerfBySectorCarrier

The flag can take two values 0 or 1. The default value is 0.

Sample usage:

```
$ set_evdo_option chan="1"
$ set_evdo_option chan="0"
```

The `chan` option =1 tells the pre-parser to load data by using the channel number from the `IS856` file and is the correct value to use though the older reports have different key values compared to the new ones you will generate. Use this value if you are not looking at historical EVDO data for the counters in the above templates.

The `chan` option=0 tells the pre-parser to continue by using the `channelRecordSc` as in Nortel AMPS/TDMA/CDMA/MTX16 Release Point 16.3. This is the default value. Use this value if you have historical data that is used for busy hour or summation reports based on the counts in the above templates.

Important: This causes a change in key formation at the `DOM_Sector` entity level and will invalidate old data for customers. Hence the change is optional and can be set by using the following script:
`$PROSPECT_HOME/scripts/set_evdo_option`

Background information

Previously, for the DOM_Sector templates that are indexed by `rnIpAddress`, `channelRecord` and `pnOffset` (the 3 templates listed above), the following was true:

`<DOM_ChanNo_ID>` in the key is same as `channelRecord` which is obtained from data file. The `channelRecord` contains the channel number in its 11 lowest significant bits. Its not the channel number itself.

However other RNC DOM_Sector templates use channel number from the `IS856ChannelElement` Config data file. Hence reports that contain both RNC Sector and DOM Sector counters result in 2 rows for each key value like the table below. After the change in

Nortel AMPS/TDMA/CDMA/MTX17 Release Point 16.4, there is one row for channel 625 in the Prospect report as described in the table below:

System/DO_RNC/DO_BTS/DOM/DOM_ChanNo/ DOM_Sector	*DO_BTS*	*DOM_Sector*	*Counter1*
TOTALS			84,275.02
4384 6 1 RNCNAME_BSC1/MC1900BTS001/8 2673 X	1	X	
4384 6 1 RNCNAME_BSC1/MC1900BTS001/8 2673 Y	1	Y	
4384 6 1 RNCNAME_BSC1/MC1900BTS001/8 2673 Z	1	Z	
4384 6 1 RNCNAME_BSC1/MC1900BTS001/8 625 X	1	X	359.6687012
4384 6 1 RNCNAME_BSC1/MC1900BTS001/8 625 Y	1	Y	328.869751

The `chan=1` option uses the `IS856CHANNELELEMENT` configuration file to get the channel number for a particular `pnOffset` and `DOM_IP combination`.

This causes a change in key formation at the `DOM_Sector` entity level and will invalidate old data for customers. Hence the change is optional and can be set by using the script `set_evdo_option` (`$PROSPECT_HOME/scripts`).

Support for RNC9000 type

For EVDO 8.1 release, RNC 9000 has been introduced. Due to architectural differences, the slot numbers for the RNC 9000, where the RNSM, SC, BIO, SM cards are located is different from the slot numbers in RNC 8600 or 8500. So for OMs that are available on a per slot basis, it is important to use the correct mapping based on the platform the OMs are collected from. Also some statistics on RNC 9000 are also collected on Do App basis depending on the OM. For example, overload control, memory etc.

Action for admin users:

The customer needs to determine whether the data is coming from RNC 9000 or RNC 8500/ 8600. This information can be obtained from the EMS Admin. The customer should populate this information under `NEType` field in `msc_list` file. If these values are not updated, EVDO data does not load properly and data is discarded.

- If RNC is RNC8500 or RNC8600, set NEType to RNC. The loader uses the existing Slot or Card Lookup table for RNC_Card_ID.
- If RNC is RNC9000, set NEType to RNC9000. The loader uses the new DO_RNC Slot or Card Lookup table for RNC_Card_ID.

Run the following command after you edit the `msc_list` file.

```
[flexpm] $ addmsc.sh -remake
```

Note: There is no need to bounce the **sentry**.

Table 3: Sample entries in $PROSPECT_HOME/msc_list

NE_NAME	*RNCIP*	*SYS_ID*	*NE_ID*	*BSS*	*Prefix*	*NEType*	*EMSIP*	*CONCAT*
CRNC	0.0.0.0	25	5	30	CRNC	RNC		N
Seat-tleRNC	0.0.0.0	30	5	30	Seat-tleRNC	RNC9000	0.0.0.0	N

RNC configuration changes from non-concat data to concat data

This section describes the changes in the configuration when an EMS switches to output **concat** format data. All the RNCs associated with the EMS (hence forth called associated RNCs) need configuration changes. The checklist of the things to do when the EMS administrator notifies the Prospect admin of this switch to **concat** data format is given below. The process starts by verification of this information at the EMS, DA changes and finally Prospect configuration changes. The data load on the Prospect server and the loader log are the final verification steps that the change is completed correctly.

1. Make sure that the data files on the EMS are in the **concat** format and contain just 30 min of data. To check this you need to logon to the EMS.

   Sample filename when **concat** option is turned on the EMS:
   `CapacityLicensingPerf_R8.1_2009-0626_0730-0800.dat`

2. Make changes to the DAT configuration based in the Data Acquisition Tools guide. Once the Data Acquisition changes are done, and the data is coming to the Prospect `1xRaw` directory - then it is time to change the Prospect configuration to load this new data format.

Prospect Configuration changes:

To change the Prospect configuration, follow these steps:

1. Changes in the `msc_list` are as follows:
   - Set `CONCAT=Y` for ALL the RNCs that belong to the EMS.
   - Set the EMSIP to the correct EMS IP Address.
   - Set the RNCIP to the correct RNCIP Address.
   - Run the following script:

```
addmsc.sh -remake
```

- Bounce the **sentry**.

2. Make sure the `<EMSIP>.candidateRncQuery<tstamp>.txt` is present in `$PROSPECT_HOME/../ftpIN/evdo_cfg` directory . The `<tstamp>` in the filename must be the current date.
3. Make changes to crontab for `callPreparse.sh`.
   - Comment out all calls for `callPreparse.sh` for the affected RNCs.
   - Add a call for the EMS associated with the RNCs instead:

     ```
     callPreparse.sh <EMSIP> Y
     ```

     Where EMSIP the IP Address of the EMS associated with affected RNCs. The EMSIP must match with the DAT configuration as well.

     `Y` indicates **concat** option is on.
   - The frequency of new entry should be once every 1min -10 min depending on the load on the box. You may want to start with 10 min frequency and monitor the box.
4. Make sure there is data in the `$PROSPECT_HOME/../ftpIN/MTXnn/1xRaw` directory. Check for new `RNCpm` files in the `$PROSPECT_HOME/../ftpIN/MTXnn/in` or the `$PROSPECT_HOME/../ftpIN/MTXnn/ok` directory. Then, check the `$PROSPECT_HOME/../ftpIN/MTXnn/logs`. Specifically, run the following statements:

   ```
   grep ROWS <RNCNAME>.<tstamp>*
   ```

   If you get rows back, then the data is loading ok.

   ```
   grep ORA-    <RNCNAME>.<tstamp>*
   ```

   If you get rows back, then there might be an issue with data loading. Contact product support if needed.

Rehoming of an RNC from one EMS to another when concat option is Y

This section contains the steps needed when an RNC is rehomed to point to another EMS. For **non-concat** RNCs, there are no changes since the mapping is done by DAT. For **concat** RNCs update the configuration as shown below:

- Update the `msc_list` with the new EMS IP address, and then run the following command:

  ```
  addmsc.sh -remake
  ```
- Bounce the **sentry**.
- Make sure the new `<EMSIP>.candidateRncQuery<tstamp>.txt` file is present in `$PROSPECT_HOME/../ftpIN/evdo_cfg` directory.

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