IBM Prospect RP16.6 for Nortel EVDO8.1 / CDMA MTX17®
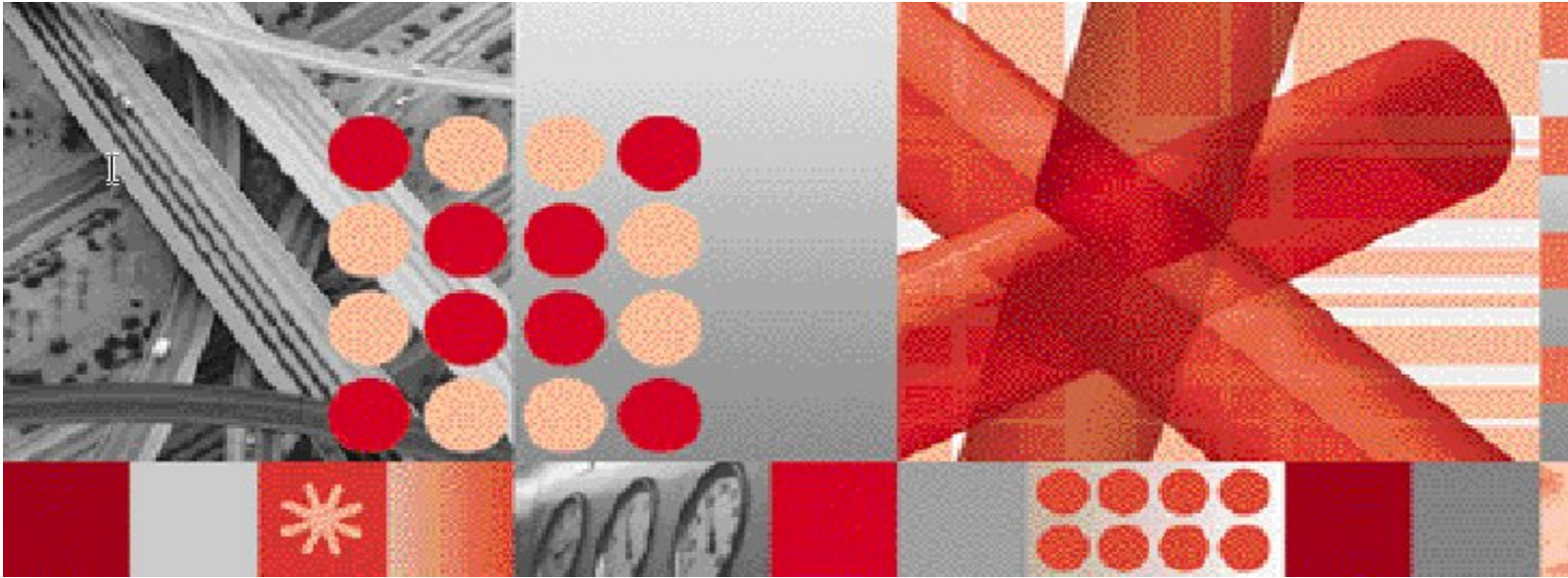
RP16.6 for Nortel EVDO8.1 / CDMA MTX17

(17.0.16.6-TIV-PROSPECT-NORCDM-FP0000.tar)

Release Notes

Document Revision Number *(v4.0)*

> **Note:** Before using this information and the product it supports, read the information in Notices section in this document.

This edition applies to IBM Prospect Nortel RP16.6 for EVDO8.1 / CDMA MTX17 and to all subsequent releases and modifications until otherwise indicated in new editions.

1 Table of Contents

2 About this Documentation

Table 1 below details the information provided by the *IBM Prospect®* Nortel EVDO 8.1/CDMA MTX17 RP16.6 Release Notes **hereafter called Nortel RP16.6**

Table 1 - About this Documentation

Chapter	*Description*
About this Documentation	An overview of the Prospect® Nortel RP16.6 documentation, which gives details of the intended audience and the structure of the guides.
Release Contents	Information on the release content included in the release.
Media Content	Details of media provided for the release.
Hardware Requirements	Details of hardware required for the release.
Software Requirements & Installation Information	Details on the Software required and the guides to be followed during the installation of the product for the release.
Known issues	Details on known issues included in the release and workarounds, if available.

2.1 Audience

The target audience of this guide is system administrators of Prospect or a person who installs / upgrades the Prospect system.

IMPORTANT: Before attempting an installation of Prospect® Nortel RP16.6 you are strongly advised to read these release notes. Failure to consult the release notes may result in a corrupt, incomplete or failed installation.

2.2 Required Skills and Knowledge

This guide assumes that you are familiar with the following:

- *Knowledge of Solaris.*

- *General IT and telecommunications principles*

- *Basic knowledge of Oracle database*

- *Ability to run shell and Perl scripts.*

- *Knowledge of Prospect administrator scripts and client / Pweb interface*

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.

2.3 Document Conventions

The following command prompts can be seen throughout this document where the user has to enter commands at the command line:

- # (hash): This prompt will be displayed if the user is logged in as user root.

- $ (dollar): This prompt will be displayed if the user is logged in as either the server or oracle user.

Please note the above prompts are not part of commands. All commands must be entered after these prompts.

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

Table 2 - General Document Conventions

Format	*Examples*	*Description*
ALL UPPERCASE	GPS NULL MYWEBSERVER	Acronyms, device names, logical operators, registry keys, and some data structures.
Link	See www.sun.com	For links within a document or to the Internet.

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`
	 `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 5.005_03 (POD Documentation) system Perl 5.005_03	For contrast in a code example to show lines the user is expected to enter.
`<Monospace 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 bracket]	log-archiver.sh [-i][-w][-t]	Used in code examples: indicates options.

2.4 User Publications

The following user publications are provided with the Prospect® Nortel RP16.6 software in Adobe® PDF and HTML formats.

Table 3 - Prospect® Nortel RP16.6 User Publications

Document	Description
DA_Tools.pdf	Prospect Data Acquisition Tools Guide
VendorAdminGuideAddendum.pdf	Prospect Vendor Admin Guide Addendum (new in this release)

2.5 Accessing Publications online

All of the IBM Prospect publications, including Prospect Core 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

2.6 RP16.6 Release Description

This document provides information on the upgrade release to Prospect® 8.0 Nortel RP16.6 (17.0.16.6.0.3). The software is named 17.0.16.6-TIV-PROSPECT-NORCDM-FP0000.tar

The RP16.6 release is a cumulative upgrade that contains the following upgrade releases.

- RP16 (EVDO 6.0 along with Core 8.0.5)
- RP16.1 (MTX16/NBSS16 support),
- RP16.2 (EVDO7 support)
- RP16.3 (EVDO8 support)
- RP16.4 (MTX17/NBSS17 support)
- RP16.5 (Support for concatenated EVDO data)
- RP16.6 (EVDO 8.1 support).

That means customers on RP15.3 can upgrade to RP16.6 directly. However due to certain issues with the above cumulative upgrade path, it is recommended to follow the suggested upgrade path in the next section.

Other features of this release are listed below.

- RP16.6 upgrade is a vendor release only.
- The Core versions certified against this release are Core 8.0.6.5, Core 8.0.6.6, Core 8.0.7, Core 8.0.7.1, Core 8.0.7.2 and **Core 8.0.7.3 (See Note 2 on this release below).**

This means that the Prospect server needs to be at Core 8.0.6.5 at the very least to install RP16.6

Note 1: (For customers who have not installed RP16.5)

It **is very important that customer apply the Core 8.0.6.5 patch before applying RP16.5. (Otherwise the upgrade of RP16.5 will fail).**

Note 2: (For customers on Core 8.0.7.3 irrespective of the vendor version)

If the current Prospect server is on Core 8.0.7.3, then it is very important that you run the wminstall for RP16.6 in the preview mode. The preview mode will invoke a script (check_for_invalid_cons.ksh) which will find and fix the incorrect constraints. The result of this check should be PASS in the preview. If you find the result to be FAIL, then please contact product support as the upgrade could fail without the fix.

Note 3: (For customers on Core 8.0.6.1 or older Core releases)

Core 8.0.6.3 or Core 8.0.6.4 are no longer needed as Core 8.0.6.5 is a cumulative upgrade. If customer still needs to apply Core 8.0.6.3 or Core 8.0.6.4 patches, it is important to apply them after RP16.3 only. **(Otherwise EVDO load will be impacted)**

- The DA Toolkit certified against this release is 7.1**.**

    There is an update to DA for RP16.6 that supports the new templates for EVDO 8.1. (7.1.16.6-TIV-PROSPECTDA-NORCDM-FP0000.tar)

- The Oracle Database version certified against this release is Oracle 9i (9.2.0.8) and Oracle 10g (10.2.0.4).

Please see the table in the Prerequisites section for other compatibility related information.

2.6.1   Recommended upgrade path for customers

Most Nortel customers are expected to be on the latest release - RP16.5 and Core 8.0.6.5 (at least). **Core 8.0.6.5 should have been installed before RP16.5. Here are the suggested upgrade paths for such customers.**

    RP16.5 (with Core 8.0.6.5) -> Core 8.0.6.6 -> RP16.6
    RP16.5 (with Core 8.0.6.5) ->Core 8.0.7 -> Core 8.0.7.3 -> RP16.6

For customers on older releases, the following upgrade paths are recommended. The customers can select one or the other based on whether they want to upgrade to the next core release or stay with the Core 8.0.6.

    RP16.3 or RP16.4 with Core 8.0.6 or later -> Core 8.0.6.5 or Core 8.0.6.6 -> RP16.6

RP16.3 or RP16.4 with Core 8.0.6 or later -> Core 8.0.7 -> Core 8.0.7.3 -> RP16.6

2.7   Prerequisites

The table below shows all the prerequisites at a glance.

It is highly recommended that customers either apply the Core 8.0.6.5 or Core8.0.6.6 or Core 8.0.7 upgrade + Core 8.0.7.3 before applying RP16.6. **(See Note 2 in Section 2.6 if you plan on this last upgrade path)**

For customers that use Pweb to access Prospect data, it is recommended that Pweb 2.2.6-PROSPECTWEB-IF0003 or PWeb 2.2.7 be applied before Core 8.0.6.5 is applied to Prospect server.

Table 4 - List of components compatible with RP16.6

Prospect Component	*Version Supported*
Prospect Vendor	RP16.5, RP16.4, RP16.3
Prospect Core	8.0.6.5, 8.0.6.6, Core 8.0.7, Core 8.0.7.1, Core 8.0.7.2, Core 8.0.7.3
Prospect Client	8.0.5.0.06, 8.0.5.8, 8.0.6.0.13, 8.0.6.5, 8.0.7.0.13, 8.0.7.3.2
Prospect Web	2.2.5, 2.2.6, 2.2.6.1, 2.2.6.2 , 2.2.6.3, **2.2.7.0.13**, 2.2.7.3.2
Oracle	Oracle 9i (9.2.0.8 on Solaris 9) and Oracle 10g (10.2.0.4 on Solaris 10)
Solaris	9 and 10
DAT	DA_7.1_Nortel_CDMA_RP16.5_Upgrade
Perl	5.6.1
JDK	1.5.0_13

3 Release Contents

This section describes new features and enhancements made in RP16.6.

3.1 New features

3.1.1 Support for EVDO 8.1

Provided below is the number of additional pegs to be added in this release for the affected OM (Template) Groups. New groups are indicated in **bold type**. Note: Each OM metric may map to multiple Prospect pegs due to the detail provided by the template indices. E.g. cNumRsrcRelFCACapLic is a new Nortel OM that generates 2 Prospect pegs cNumRsrcRelFCACapLic_Rev0 and cNumRsrcRelFCACapLic_RevA based on the value of the atDescriptor in the traffic data.

Table 5 - Newly Supported EVDO 8.1 Templates and fields.

Entity	Template	Field Name	Remediated
DO_RNC	CapacityLicensingPerf	loadC	N
		loadD	N
		numNonConformantCPCE	Y
		numNonConformantDPCE	Y
		numEnforcementInstances	N
	RNCPerfByRNC	numPageMsgsTxFromRNC	Y
		numA13RequestsRcvdRNC	Y
	RNCPerfExtnByRNC	cNumRsrcRelFCACapLic_Rev0	Y
		cNumRsrcRelFCACapLic_RevA	Y
DO_RNC_Card	RNCEgressThroughputBySlot	egressA10PacketCount	Y
	RNCIngressThroughputBySlot	ingressA10PacketCount	Y
	RNCPerfBySlot	numRouteUpdateTotalReceivedSlot	Y
		numPageMsgsTxFromRNCSlot	Y
	RNCPerfExtnBySlot	cNumRsrcRelFCACapLicSlot_Rev0	Y
		cNumRsrcRelFCACapLicSlot_RevA	Y
	MeasurableInstrumentation	NetBuffer_Utilization_128	N
		NetBuffer_Utilization_256	N
		NetBuffer_Utilization_512	N
		NetBuffer_Utilization_1024	N
		NetBuffer_Utilization_2048	N
		NetBuffer_Utilization_10240	N
		CPU_Utilization_DCPushTalk	N
		CPU_Utilization_DCTask_1	N
		CPU_Utilization_MSS	N
		CPU_Utilization_OMSyncAppDbMgr	N
		CPU_Utilization_TimerService	N
		CPU_Utilization_UATIMsgCs	N
		CPU_Utilization_UATIServer	N
		CPU_Utilization_NetTask	N
		CPU_Utilization_CallCtrl	N
		CPU_Utilization_HDRSlowPath	N
		CPU_Utilization_PwrRateCntrlManagerTask	N
		CPU_Utilization_PcfEntity	N
		CPU_Utilization_Abis	N
		CPU_Utilization_CallCtrl1	N
		CPU_Utilization_CallCtrl2	N
DO_RNC_CPU	CPUUtilizationATCA	ocMeasObjHistoryVal_CPU_Util	N
		ocMeasObjHistoryVal_Core0_Util	N
		ocMeasObjHistoryVal_Core1_Util	N
		ocMeasObjHistoryVal_Core2_Util	N
Entity	**Template**	**Field Name**	**Remediated**
		ocMeasObjHistoryVal_Core3_Util	N
		ocMeasObjHistoryVal_Core4_Util	N
		ocMeasObjHistoryVal_Core5_Util	N
		ocMeasObjHistoryVal_Core6_Util	N
		ocMeasObjHistoryVal_Core7_Util	N

		ocMeasObjHistoryVal_Core8_Util	N
		ocMeasObjHistoryVal_Core9_Util	N
		ocMeasObjHistoryVal_Core10_Util	N
		ocMeasObjHistoryVal_Core11_Util	N
		ocMeasObjHistoryVal_Core12_Util	N
		ocMeasObjHistoryVal_Core13_Util	N
		ocMeasObjHistoryVal_Core14_Util	N
		ocMeasObjHistoryVal_Core15_Util	N
		ocMeasObjHistoryVal_CPU_Util_FastPath	N
		ocMeasObjHistoryVal_CPU_Util_SlowPath	N
		ocMeasObjHistoryVal_CPU_Util_SimpleExec	N
		ocMeasObjHistoryVal_CPU_Util_DoASlowPath	N
		ocMeasObjHistoryVal_CPU_Util_DoAFastPath	N

The table below shows where the new templates are collected from and their frequency.

Table 6 - New templates with interval

Template	Network Element	Interval (secs)	Permitted ConfName values
CapacityLicensingPerf	RNC	1800	**CapacityLicensingPerf**
CPUUtilizationATCA	RNC	1800	**CPUUtilizationATCA**

3.1.2 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 8600/8500. 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 (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 properly EVDO data will not load properly and data will be discarded.**

- If RNC is "RNC8500 or 8600", set NEType to "RNC". The loader will use the **existing** Slot/Card Lookup table for RNC_Card_ID.

- If RNC is "RNC9000", set NEType to "RNC9000". The loader will use the **new** DO_RNC Slot/Card Lookup table for RNC_Card_ID.

Run the following command after you have edited msc_list.

[flexpm] $ addmsc.sh -remake

Note: There is no need to bounce the sentry.

Sample entries in $PROSPECT_HOME/msc_list:

NE_NAME	SYS_ID	NE_ID	BSS	Prefix	NEType	EMSIP	CONCAT	RNCIP
CRNC	**25**	**5**	**30**	**CRNC.**	**RNC**	**0.0.0.0**	**N**	**0.0.0.0**
SeattleRNC	**30**	**5**	**30**	**SeattleRNC.**	**RNC9000**	**0.0.0.0**	**N**	**0.0.0.0**

3.1.3 Change of product name to Nortel EVDO8.1 / CDMA MTX17

The change of the product name from Nortel AMPS/TDMA/CDMA MTX17 to Nortel EVDO8.1 / CDMA MTX17 has been made to reflect the technologies being used by customers. Also any occurrences of the word "Vallent" have been replaced by IBM both in the documentation and the Prospect and DA products.

3.1.4 Usage of new wminstall checks

The wminstall configuration file spec.xml has new checks that help prevent upgrade failures.
- assert_middleware_down.sh checks whether middleware is down and if its not, the script will abort the preview with an error.
- check_for_invalid_cons.ksh checks and fixes invalid database objects (constraints) that were introduced in Core 8.0.7.3.
- middleware_down_up shuts down middleware before the upgrade. It will wait for existing loaders and reports to finish. If the middleware is already down before doing the upgrade, you may see the following message in the wminstall.log
  wminstall.log:123:2010-03-15 16:29:56,440 - [main] **FATAL** middleware_down_up - Middleware is already stopped

3.1.5 Vendor Admin Addendum introduced

In this release, a new vendor specific administrator guide is being introduced. This is called "Vendor Admin Addendum". This document will contain the administrator commands that are used in a Nortel system such as addmsc.sh, set_evdo_option etc. The administrator guide will no longer contain such Nortel commands starting in Core 8.0.7. The users can access this addendum from the Help menu in the Prospect client. The corresponding VendorAdminGuideAddendum.pdf will also be released along with RP16.6.

3.1.6 Resolved PMRs/APARs

Following is a list of problems present in the previous release that have been resolved.

Table 6: Release Details – Resolved Issues

ClearQuest ActivityID / APARName / PMR Number	Problem Description
valnt00100796/IZ68074/44420,005,000	SBSC DATA FILES ARE NOT SHOWING IN THE Data availability when data was loaded in MTX15/in directory. Other directories were ok.
valnt00097891/MR081309577/PMR 58957	ReverseRlpBytes and ForwardRlpBytes values are too huge after a reset. This issue was also fixed as part of RP16.3 Interim Fix. The huge values were causing the busy hour reports to be skewed because the reset of the element caused the huge value to be assigned to that period. Hence, this period was reported as the busiest hour. In RP16.6, the value of the period will be set to zero if such a reset happens.
valnt00099538 (Internal)	Porting of 2010 sentry fix into RP16.6 This issue would cause the 2010 files not to load and has been released as part of RP16 Hotfix already.

4 Media Content

Prospect® Nortel RP16.6 is composed of the following media:

1. Prospect software 17.0.16.6-TIV-PROSPECT-NORCDM-FP0000.tar

2. DA Software 7.1.16.6-TIV-PROSPECTDA-NORCDM-FP0000.tar

3. Release notes for Prospect and DA.

4. Documentation: DA_Tools.pdf , VendorAdminGuideAddendum.pdf

5 Software Requirements & Installation

5.1 Software Requirements

To view the software products required to upgrade to Prospect® Nortel RP16.6, refer to the Prospect Release note, which is included in the release media packaging (CD/DVD) or online download via web portal.

5.1.1 Supported Platforms

See Pre-requisites section for a table with all supported software.

5.2 Pre-Upgrade Checks

The following instructions are for install of Prospect® 8.0 for Nortel RP16.6. For further information consult the *Prospect Installation Guide*.

Important! Un-installation of this upgrade is not supported. A complete system back up is recommended before installing this upgrade.

5.2.1 Check Prerequisites

Please see the Section 2 Table 4 for the prerequisites. Note the Prospect Core version and make sure to use the preview option in wminstall if you have Core 8.0.7.3. **Note that these upgrades could take a while and ensure that there are no cron jobs or backup software/reports accessing the Prospect database for the duration of the upgrade.**

5.2.2   Baseline and Patches Requirements

The base environment that this patch will be applied against is RP16.5. See the various upgrade paths below.

1. Prospect 8.0 Nortel MTX13 RP11 Base Release (**FRESH INSTALL PATH**):
   - Prospect 8.0 Nortel MTX13 RP11Fresh Install
   - Prospect 8.0 Nortel MTX13 RP11 Patch10
   - Prospect 8.0 Nortel MTX13 RP11 HF11
   - Prospect 8.0 Nortel MTX14 RP12
   - Prospect 8.0 Nortel MTX14 RP13
   - Prospect 8.0 Nortel MTX14 RP14
   - Prospect 8.0 Nortel MTX14 RP14 Patch 10
   - Prospect 8.0 Nortel MTX15 RP15 (Core upgrade)
   - Prospect 8.0 Nortel MTX15 RP15.1
   - Prospect 8.0 Nortel MTX15 RP15.2
   - Prospect 8.0 Nortel MTX15 RP15.3
   - Prospect 8.0 Nortel MTX15 RP15.3 Patch10 (Optional)
   - Prospect 8.0 Nortel MTX15 RP16
   - Prospect 8.0 Nortel MTX16 RP16.1
   - Prospect 8.0 Nortel MTX16 RP16.2
   - Prospect 8.0 Nortel MTX16 RP16.3
   - Prospect 8.0 Nortel MTX16 RP16.4
   - Prospect 8.0 Nortel MTX16 RP16.5

2. Prospect 8.0 Nortel MTX15 RP15.3 Base Release (**FRESH INSTALL PATH**):
   - Prospect 8.0 Nortel MTX15 RP15.3 Fresh Install
   - Prospect 8.0 Nortel MTX15 RP15.3 Patch10 (Optional)
   - Prospect 8.0 Nortel MTX15 RP16
   - Prospect 8.0 Nortel MTX16 RP16.1
   - Prospect 8.0 Nortel MTX16 RP16.2
   - Prospect 8.0 Nortel MTX16 RP16.3
   - Prospect 8.0 Nortel MTX16 RP16.4
   - Prospect 8.0 Nortel MTX16 RP16.5

3. Prospect 8.0 Nortel MTX15 RP16.0 Base Release (**Fresh Install PATH**)

- Prospect 8.0 Nortel MTX15 RP16 Fresh Install
- Prospect 8.0 Nortel MTX16 RP16.1
- Prospect 8.0 Nortel MTX16 RP16.2
- Prospect 8.0 Nortel MTX16 RP16.3
- Prospect 8.0 Nortel MTX16 RP16.4
- Prospect 8.0 Nortel MTX16 RP16.5

Important! It is critical that you apply this patch to an environment at the correct patch level. Please verify the environment carefully. For more information, please contact IBM customer support.

5.2.3 Disk space and Tablespace Requirement

The installation of the patch requires additional 500 MB disk space under /u01 file system. The install script also requires that at least 10% of total tablespace size is available for each tablespace. Please contact IBM customer support if there is less than 10% of total tablespace available for any of the tablespaces.

The additional Oracle table space is required to support the changes in tables introduced in this release. The following lists the disk requirement for each table space during install only. More will be required depending on data volume:

- TRAFFIC_JUMBO: 1GB

- TRAFFIC_LARGE: 500MB

- TRAFFIC_MEDIUM: 300MB

- TRAFFIC_SMALL:100MB

- WM_FLEXPM: 50MB

- CONFIG: 50 MB

Note: It is recommended to always keep 10% of total table space size available for each table space in the Prospect system other wise the wminstall with preview option will fail. However if you have a few Gigs free in ALL the tablespaces, and if the wminstall **with preview** fails, then consult the product support to see if the 10% requirement can be reduced.

5.2.4 Third-party software usage - `gtar`

gtar is being used for the file extraction of the upgrade package. Make sure gtar is available at the below location.

$ ls -la /usr/sfw/bin/gtar

-r-xr-xr-x 1 root bin 195400 Jan 23 2005 /usr/sfw/bin/gtar

Also make sure you are accessing gtar from the above location. Run the following command and check that the result is same as shown below. Remove other occurrences of gtar or change the PATH environment variable to use the location mentioned above.

$ which gtar

/usr/sfw/bin/gtar

5.2.5 Oracle version

It is **highly** recommended that the Oracle version on the Prospect server is either 9.2.0.8 or 10.2.0.4. Other versions are not supported. The wminstall preview command will check for these specific versions and will throw out warnings if this check fails.

5.2.6 Perl Version

Make sure that /usr/bin/perl is version 5.6.1. Type the following command to verify:

$ /usr/bin/env perl -v
The first line of the output should show:

This is perl, v5.6.1 built …

Note: If the Perl version is incorrect, the installation will not proceed.

5.3 Installation Privileges Required

Privilege	*Required*
Oracle flexpm user DBA role	No
UNIX flexpm user in DBA group	**Yes**
Root privilege for non-split server setup	No
Root privilege for split server setup	**Yes**
Oracle sys user password set to default (change_on_install)	**Yes**

Important! *Please do not proceed with installation if the required privileges are not present.*

Split Server setup means the Oracle database and the Prospect application reside on separate servers.

5.3.1 Oracle Sys Account Access

Prospect 8.0 requires that all logins using the sys account must be qualified *as* sysdba. The following Oracle changes are required.

1. Verify that the change is needed. From a remote system (that is, not the Prospect server), try to log in using sqlplus:

    $ sqlplus /nolog

    SQL> connect sys/change_on_install@flexpm as sysdba

    Note: If you can log in, you can skip the rest of this procedure.

2. If you get an error concerning privileges, then you need to continue with the following steps.

3. Set the remote_login_passwordfile parameter in the init<sid>.ora file. On most Prospect systems the sid is flexpm. Log in as the oracle user, and then enter the following command.

    $ cd $ORACLE_BASE/admin/flexpm/pfile

4. Edit the init<sid>.ora file (for example, initflexpm.ora) and add the following line.

    remote_login_passwordfile=EXCLUSIVE

5. Create the Oracle password file to allow remote sys access. While still logged in as the oracle user verify that $ORACLE_HOME and $ORACLE_SID are correct, then enter the following command.

    $ orapwd file=${ORACLE_HOME}/dbs/orapw${ORACLE_SID} \
    password=change_on_install entries=10

6. Bounce the database so that the parameter and password file take effect. If you get an error concerning the password file, verify that it is in the dbs directory and that the filename is orapwflexpm.

7. To verify that the changes have taken effect, repeat step 1.

5.4 Pre-Installation Instructions

5.4.1 System Backup

This upgrade cannot be uninstalled. This upgrade involves updates to the database and the metadata, therefore recovery from backup is the only way to reverse the changes made by this upgrade. You must perform a full system backup before installing this upgrade. If needed, please refer to the "Backing up the Database" section of the Prospect Administration Guide. Please contact IBM customer support if you require further support.

5.4.2 Recommend Export of Prospect documents

As mentioned in the above paragraph the upgrade cannot be reversed and if for some reason the upgrade fails, restoration from backup is the only option and if there is no good backup then customer will have to do a fresh install. Hence it is **highly recommended** that users do "*export_docs.sh -h*". This will show the parameters necessary to invoke the script. Once the script is invoked with appropriate parameters, it can export all user documents such as templates/reports/UDCs etc. Then on a fresh install system user can import the user documents. For more details please refer to the Admin Guide.

5.4.3   Prospect Web

<u>Important!</u> Disable server access in Prospect Web and any backup software that could be accessing the database objects at this time.
If Prospect Web is accessing this Prospect installation, then use the admin tool to disable the corresponding data source. Failure to do this step may results in errors in the upgrade. Consult IBM customer support if you have questions. Also do consult your system administrator to ensure that there are no oracle backup jobs running at this time. It is important that the database objects are not accessed in anyway during the upgrade.

5.4.4 Information Check and Pre-Installation Setup

The following instructions must be executed on the Prospect server before the upgrade:

1. Log in as user `flexpm`.

2. Source the profile. This can be done by
   [flexpm] $ `. ./.profile`

3. Stop the middleware.

   [flexpm] $ `ps-mgr stop all`

   Wait until you see: `Command complete: stop all.`
   [flexpm] $ `ps-mgr halt`

4. Backup current retention period for past_part_maint.sh:

   [flexpm] $ past_part_maint.sh > $FLEXPM_BASE/past_part_maint.bak

5. Place the downloaded tarball at /var/tmp or wherever you have enough space and go to the location of the installer and un-tar the file.
   [flexpm] *$ cd /var/tmp*

   [flexpm] *$ mkdir INSTALL_NORTEL*

   [flexpm] *$ cd INSTALL_NORTEL*

   [flexpm] *$ tar -xvf 17.0.16.6-TIV-PROSPECT-NORCDM-FP0000.tar*

   [flexpm] *$ cd /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall*

6. Read the license agreement in *license.txt* and edit *responseFile.txt*
   In prior releases, the user had to type in "yes" to accept the license agreement. In this release, the user can read the *license.txt* (present in /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall directory or wherever you extracted the tarball).
   If user agrees with the license text, then they should edit the *responseFile.txt* (present in /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall directory or wherever you extracted the tarball) and set LICENSE_AGREEMENT to "true" like shown below. The default value for this parameter is false. It needs to be set to true for the upgrade to proceed.
   LICENSE_ACCEPTANCE = true

7. Check the FLEXPM_HOME
   [flexpm] $ env |grep FLEXPM_HOME

   The output would look like either

   a) `FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NorCDMA`

Or
b) FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NortelMTX
Note: The last part of the FLEXPM_HOME variable needs to be used in the "-i" option below.

If the **FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NorCDMA** then use the following command to do the install preview. (**The entire command should be typed as one continuous line**)

```
[flexpm] $ ./wminstall -r responseFile.txt -b
/u01/apps/WatchMark/FlexPM -i NorCDMA -spec spec.xml -d $DB_CONNECT
-portbase $PORT_GROUP -preview
```

If the **FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NortelMTX** then use the following command to do the install preview**. (The entire command should be typed as one continuous line)**

```
[flexpm] $ ./wminstall -r responseFile.txt -b
/u01/apps/WatchMark/FlexPM -i NortelMTX -spec spec.xml -d
$DB_CONNECT -portbase $PORT_GROUP -preview
```

Note: If you are on Oracle 9i environment, replace spec.xml with spec9i.xml in the commands above

Notes about wminstall return codes

- **Note1**: If you get an error about the check_UDC_match.sh that means there is a UDC in your system with the same name as a new Pcalc being introduced in the upgrade. You can determine which UDCs are matching using the check_UDC_match.sh. The script will output UDCs with same name as Prospect PCALC to be introduced in this release. If there is an output like the one below which means there is/are one or more matching UDC(s) that has the same name as Prospect PCALC. In this case, **DO NOT PROCEED** with the upgrade. Instead, run the following steps to fix this issue first.

If the script does not output anything, then it is ok to proceed with the upgrade. The script needs a parameter 2.
Execute the script below to ensure there is no UDC with the same name as PCALC.

```
[flexpm] $ cd /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall/scripts

[flexpm] $ ./check_UDC_match.ksh 2
```

Important Note A:
Sample script output with one UDC match.
```
UDC_NAME                       UDC_FIELD_ID      ENTITY_NAME
----------------------------   ----------------  -----------
perSectorRUPercent000          16443             DOM_Sector
```

Steps to fix:
e.g To fix the UDC above, we will change the UDC to have a "_IBM" by executing the command below. It can also be changed to any other name that will help other users locate this UDC easily.
```
        [flexpm] $ sqlplus $DB_CONNECT
SQL> update wmd_dict_name set name='perSectorRUPercent000_IBM'
where name='perSectorRUPercent000';
SQL> commit;
SQL> exit;
```

Important Note B:
If there are more than one matching UDCs, please run the above SQL update statement for EACH UDC that is output by the `check_UDC_match.ksh` (**If you have any doubt, call IBM customer support to confirm BEFORE proceeding with the upgrade**). Once satisfied that all UDCs were renamed, run the `check_UDC_match.ksh` one more time to make sure the script does not output any UDCs.
This step has to be repeated until no rows displayed (no UDC that has the same name as the Prospect PCALC).

Note: All templates that use `perSectorRUPercent000` will use the new PCALC and not the UDC unless a manual change is made to the template.

- **Note 2**: If you get an error about the check_db_lock.sql, then you need to run the following script to determine which objects are locked. The DBA should be able to remove these locks. **Locks on database objects could potentially cause the upgrade to fail and should be removed before the upgrade is started.**

   Check for existing processes locking Oracle objects for flexpm user using the following SQL script.

   [flexpm] $ cd /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall/scripts
   [flexpm] $ check_db_lock.sh 2
   Important Note: The script should return no rows before you proceed with the upgrade.

- **Note 3: Both the above scripts should be run right before the actual upgrade. That means, if these commands are run hours / days before the upgrade, then they still need to be re-run right before the upgrade to prevent failures.**

- **Note 4:** If you get a warning about the space in /var/tmp even though df -k shows that /var/tmp has enough space then use the -t /home/xyz option in wminstall (/home/xyz is any valid directory that can be used as a temp directory and has 400MB free.)
   Example warning message below:
   Warning scripts/check_space.class -s 400 -i /var/tmp Return Code: 1

5.5 Installation Instructions

Follow the steps below for upgrade of Nortel RP16.6

Important Steps for Split Server Configuration: A split server configuration for Prospect has the database and the application software residing on separate physical servers. If your server is NOT configured this way, you can proceed with install step 1. If you have a split Server configuration, please follow instructions below to mount the `/u01/apps/WatchMark/FlexPM/NorCDMA` or `NortelMTX` directory to the database server. **(Otherwise the upgrade will fail) These instructions will need the root password of the database server and Prospect server both.**
   a. On the Prospect middleware server, make sure the proper NFS daemons are started.
      [root] $ /etc/init.d/nfs.server start
      [root] $ share -F nfs -o rw=<IP Address of DB Server> /u01/apps/WatchMark/FlexPM/NorCDMA

   b. On the Oracle database server create the required mount point
      [root] $ mkdir -p /u01/apps/WatchMark/FlexPM/NorCDMA

   c. Mount the Prospect file system on the Database Server

[root] $ mount -f nfs <IP Address Of ProspectServer>:/u01/apps/WatchMark/FlexPM/NorCDMA /u01/apps/WatchMark/FlexPM/NorCDMA

d. Make sure that the /u01/apps/WatchMark/FlexPM/NorCDMA file system and its sub-directories are accessible on the database server. Log off the database server. You can proceed with the upgrade

(Please contact customer support in case you have questions before proceeding with the upgrade)

5.5.1 Installation Steps

1. Log in as user *flexpm*

2. Source the profile. This can be done by

[flexpm] $ . ./.profile

3. Stop the middleware.

[flexpm] $ ps-mgr stop all

Wait until you see: Command complete: stop all.

[flexpm] $ ps-mgr halt

4. Go to the directory that contains the Prospect software.

[flexpm] $ cd /var/tmp/INSTALL_NORTEL/sun-server-1/WMInstall/
Run the installation tool by typing the following command. This command installs the upgrade (Make sure the -i option is entered correctly as explained below). It is possible to run the command in the background with No Hangup (nohup) if you are using Solaris 9 or Solaris 10. Please note that the nohup option is NOT SUPPORTED for Solaris 8.
Note: If you are on Oracle 9i environment, replace spec.xml with spec9i.xml in the commands below

If the **FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NorCDMA** then use the following command to start the install
[flexpm] $ nohup ./wminstall -r responseFile.txt -b
/u01/apps/WatchMark/FlexPM -i NorCDMA -spec spec.xml -d $DB_CONNECT
-portbase $PORT_GROUP

If the **FLEXPM_HOME=/u01/apps/WatchMark/FlexPM/NortelMTX** then use the following command to start the install
[flexpm] $ nohup ./wminstall -r responseFile.txt -b
/u01/apps/WatchMark/FlexPM -i NortelMTX -spec spec.xml -d
$DB_CONNECT -portbase $PORT_GROUP

Note: that all parameters should be in the same line
Note: The output of the wminstall command will go to *nohup.out* as well as the usual install log in the /var/tmp/yyyy_mm_dd*.
[flexpm] $ cd /var/tmp
[flexpm] $ ls -ltr

General Notes:

• If there is not enough disk space on the destination file system, the program stops and reports an error without installing any files.
• The installation of the upgrade might take a while to complete. The main terminal where the install command was executed, may seem to hang from time-to-time at the INSTALL section for each

module. The log file (with filename like <YYYY>__<MM>__<DD>__<HH>__<MM>__<SS>) under /var/tmp can be viewed from another console during the installation for the installation progress. **DO NOT terminate the upgrade at any time without consulting a product support person first.**

After wminstall is completed, please examine the detail.log or summary.log under the directory of $FLEXPM_HOME/audit/<YYYY>__<MM>__<DD>__<HH>__<MM>__<SS>_<runningnumber>

for any error messages.

The following command can be used to search through the log file.

```
$  cd $PM_HOME/audit/<YYYY>__<MM>__<DD>__<HH>__<MM>__<SS>_<runningnumber>
$  egrep -i 'warning|error|fail|ora-|sp2-|pls-' detail.log > check_detail.log
```

Open the detail.log and search for "call_procs.sh" to make sure there are no serious errors. If you see "ERROR: call_procs.sh", call the product support for further instructions.

The following messages are harmless and can be ignored:

```
: create table tmp_table (field_name varchar2(200))
: ERROR at line 1:
: ORA-00955: name is already used by an existing object

: alter table NOR_DORNC_ST_TAB add instance_id NUMBER
: ERROR at line 1:
: ORA-01430: column being added already exists in table

: drop view NOR_TF_UAS_RES_VBH
: ERROR at line 1:
: ORA-00942: table or view does not exist

: drop view NOR_TF_UAS_VBH
: ERROR at line 1:
: ORA-00942: table or view does not exist
```

5. Check the installation on the system after upgrade is complete. The output should look like shown below.
    [flexpm] $ show_installed

```
COMPONENT                                  INSTALL_TY INSTALL_DATE
------------------------------------------ ---------- ------------------
CORE Prospect rev 8.0.6.5 b4               PATCH      09-OCT-14 17:18:22
VENDOR NortelMTX17 rev 17.0.16.6.0 b3      UPGRADE    10-MAR-10 11:47:38
```

The version numbers (rev) should be the same as shown above. The build numbers (e.g. b0, b1, b2 or b3, etc) might be different. The install type (INSTALL, PATCH or UPGRADE) is not important. The install dates and times will be different from those shown.

6. Start the middleware by running the following command.

    [flexpm] $ ps-mgr init

7. Log off as *flexpm*.

5.6 Post-Installation Instructions

5.6.1 Setting up NEType and cleanup

1. Login as flexpm, if not already logged in.

2. Source the .profile in FLEXPM_HOME
   [flexpm] $ . ./.profile

3. Update the NEtype in $PROSPECT_HOME/msc_list file. Customers should look at the existing msc_list entries to determine if there are RNCs that need to be defined as RNC9000. **It is very important for you to get the NEType correctly from the EMS Administrator for each RNC before loading the data, especially if you are loading EVDO 8.0 or 8.1 or later versions of data. The possible options are RNC and RNC9000. If NEType is defined incorrectly, EVDO data will not load due to config data mismatches.** Once the NEType is determined, edit the msc_list and update the NEType to RNC or RNC9000 for specific entries, save and exit the editor. There is no need to bounce the sentry. Run the following command:
   [flexpm] $ addmsc.sh -remake

   (Refer to Section 3.1.2 for more details)

4. Remove the scratch directory where you un-tar'd the software. (.e.g /var/tmp/INSTALL_NORTEL)

5.6.2 Configure Retention Period Settings

During the upgrade, the retention periods for some tables were reset back to 'Unlimited'. This needs to be **reconfigured manually** as shown below so that these tables can be managed by the nightly jobs.

1. Use the past_part_maint.bak file to set the retention period back for the following datatypes (Refer to the section on Pre-Installation Setup where this file was created**.) Use the values for each of these types shown in that file for the commands below.**

2. **[flexpm]** $ past_part_maint.sh traffic <traffic original value>

   [flexpm] $ past_part_maint.sh sBHDaily <sBHDaily original value>

   [flexpm] $ past_part_maint.sh sSUMWeekly <sSUMWeekly original value>

   [flexpm] $ past_part_maint.sh sSUMMonthly <sSUMMonthly original value>

   Example:
   [flexpm] $ past_part_maint.sh traffic 10
   (This command will set the retention period of "traffic" to 10 days)

3. Repeat step 2 above for other class types that has been reset to unlimited by the upgrade.

5.6.3 Enable server access in Prospect Web

If you disable access to the Prospect server from Prospect Web in step 5.4.3, then use the admin tool to re-enable access to the corresponding data source in Prospect Web.

5.6.4 Un-installation Procedure

This release/patch cannot be uninstalled. This patch involves updates to the database or the metadata, therefore recovery from backup is the only way to reverse the changes made by this release/patch. You must perform a full system backup before installing this patch. If needed, please refer to the "Backing up the Database" section of the *Prospect Administration Guide*. Please contact IBM customer support if you require further support.

Detail any specific installation instructions that you want to highlight as part of the release notes in this section. (This should include any specific pre-installation or post installation instructions, which are not already captured in the Prospect Installation Guide)

5.7 Release Restrictions

This release is for General availability.

5.8 Known Issues

None

5.9 Dependent Known Issues in the core product

Core 8.0.7.3 has an issue with incorrect constraints. See the link below to obtain the fix. RP16.6 wminstall in preview mode also checks and fixes this issue.

http://www-01.ibm.com/support/docview.wss?rs=0&q1=Core+8.0.7.3&uid=swg21423683&loc=en_US&cs=utf-8&cc=us&lang=en.

5.10 Useful Hints

5.10.1 Procedure to "jumpstart" the Prospect queues.

If the schedule does not start after the upgrade you can use SQL script to "jumpstart" the Prospect queues. It will update next_time for jobs other than immediate and scheduled jobs.
So after the upgrade is completed and the middleware is up, run schedule_maint
and if the NEXT RUN is not populated for all jobs then the following sql script need to be executed. (Use either one based on what reports need to be started.)

[flexpm] $ sqlplus $DB_CONNECT
-- Fix non-report schedules (also fixes timezone issue).
     UPDATE schedule
     SET next_time = start_time, needs_msg_update = 'Y'
     WHERE period **NOT IN** ('I', 'O')
     AND NVL(end_time, sysdate) >= sysdate
     AND job_type **NOT IN** (1, 10);

-- Only change scheduled reports that will run in the future.
    UPDATE schedule
    SET next_time = start_time, needs_msg_update = 'Y'
    WHERE period **NOT IN** ('I', 'O')
    AND NVL(end_time, sysdate) >= sysdate
  AND job_type = 10
  AND next_time > sysdate;

SQL> commit;

5.10.2 Preparsing error explained

This section explains the reasons for the following error in the callPreparse.sh output from cron.
"Number of pegs in header doesn't match number of pegs in data (<number>)
If you get this error in the DA log file, it is possible that there is a "space" instead of a "tab" in the RNCpm data file before the date field. To fix this, you may have to change this in the data file using a global replace 'sed' Unix command. E.g.

$ sed -e 's/ 01\/19\/2007/01\/19\/2007/'
RNC_ISSHO_PerfBySecondarySectorCarrier_R4.0_RNC_ISSHO_PerfBySecondarySectorCarrier_
R4.0.dat > NewFile.out

$ cp NewFile.out
RNC_ISSHO_PerfBySecondarySectorCarrier_R4.0_RNC_ISSHO_PerfBySecondarySectorCarrier_
R4.0.dat

It is also possible to get this error when the variables in the header do not match the values in the rows below. This can typically happen during an EVDO RNC cutover from one release to next. The data generated during this interval could have this problem. It is also possible that an EVDO file has incomplete record for the last template in the file. This could happen if the EVDO file is collected too soon from the EMS while it is being written into.

6 IBM Support

6.1 Contacting IBM Support

Please use the IBM Tivoli Support website:
http://www-306.ibm.com/software/sysmgmt/products/support/assistance.html

7 Documentation Addendums

None.

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