Smart Plug-in for Remedy Action Request System:Software Release Notes

HP OpenView

Version 4.01

March 2010

Legal Notices

1   Announcements

Smart Plug-in for Remedy Action Request System version 4.01 is now available. The Smart Plug-in for Remedy Action Request System (SPI for Remedy ARS) for the Remedy™ Action Request System® enables you to integrate HP Operations Manager for UNIX (HPOM) with the

Remedy Action Request (AR) System and includes all the features
summarized in this section:

- "Summary of Features in the SPI for Remedy ARS"

- "Available Documentation"

Summary of Features in the SPI for Remedy ARS

In combination with HP Operations Manager for UNIX (HPOM), the Smart Plug-in for Remedy Action Request System 4.01:

- adapts to fit an organization's individual needs

- creates new action requests by automatically sending a HPOM message to an AR System

- creates new action requests when a HPOM user decides to send one or more HPOM messages to an AR System

- uses external data and actions to add supplementary details to an action request

- updates action requests when the corresponding HPOM message changes

- updates action requests by adding further HPOM messages

- updates HPOM messages from the AR System. This includes:

  — changing ownership of the HPOM message
  — adding annotations to the HPOM message
  — escalating a HPOM message
  — acknowledging a HPOM message to reflect the status of the action request
  — starting an action in HPOM

The SPI for Remedy ARS also provides:

- complete integration with the HPOM GUI

- the capacity to monitor AR system availability with HPOM

- the capacity to monitor SPI for Remedy ARS availability with HPOM

Available Documentation

The following on-line documentation is provided for Smart Plug-in for Remedy Action Request System 4.01:

• On-line Documentation (PDF format)

On-line Documentation

The following manuals are supplied in portable document format (PDF):

• Smart Plug-in for Remedy Action Request System Administrator Guide

• Smart Plug-in for Remedy Action Request System Software Release Notes

2   What's in this Version?

This chapter gives a more detailed description of the main features provided with the Smart Plug-in for Remedy Action Request System version 4.01. The section also indicates where to find more information on SPI for Remedy ARS 4.01 and related products, and covers the following areas:

- General Features
- New Features in Version 04.01
- Related SPI for Remedy ARS Products
- Information on the HP OpenView Web Pages

General Features

HP OpenView Smart Plug-in for Remedy Action Request System version 4.01 includes the following features:

- Asynchronous, bi-directional data exchange between the HPOM server and the Remedy AR server

- Automatic submission via the trouble-ticket interface

- Manual submission of selected HPOM messages via HPOM application

- Attach additional HPOM messages to an existing Action Request

- Complement HPOM message information with external information before the submission of Action Requests

- Forward to ARS of HPOM message-change events (including the changed message attributes)

- Forward (as a message annotation) changes to the Action Request to the related HPOM message

- Set the message state to; escalate, own, and acknowledge based on changes to the Action Request

- Start HPOM operator-initiated actions from ARS via the active-filter mechanism

- Configurable mapping of HPOM message attributes to AR server database schema fields

- Multiple-HPOM-server to multiple-ARS-server to multiple schema forwarding functionality

- Support for defining additional AR servers as *backup* servers.

- Monitor both the availability and the health of the Remedy ARS server via logfile encapsulation of the AR Server logfiles and process monitoring of the AR server processes

- Self monitoring of the SPI for Remedy ARS via logfile encapsulation of the SPI for Remedy ARS process logfiles and process monitoring of the SPI for Remedy ARS processes

- Simplified traccing via an own configuration file. No need to modify system or application files.

- Automatic update of existing AR tickets may be switched off.
- Special handling for the OMU message on submittal (owning, acknowledging, modifcation of message text)
- Communication with the AR server through a firewall.
- Support of private queues on the AR server.
- Demo rules and AR configuration.

New Features in Version 04.01

This section gives you an overview of the changes which have been implemented in version 04.01

- Support for OMU for UNIX 9.0x on Linux
- Usage of Remedy API version 7.5 (API level 14).

New Features in Version 04.00

This section gives you an overview of the changes which have been implemented in version 04.00

- Support for OMU for UNIX 9.0x on HP-UX
- Support for OMU for UNIX 9.1x on Solaris
- Support for AR system servers running on RedHat Enterprise Linux 5.3.
- Support for AR system 7.5.
- Solaris installation switched from `swinstall` to `pkgadd`.
- New global `OPTION ANNO_SEPARATOR` "..." to separate multiple annotation texts.
- Ability to specify global and target specific timeouts for communication with the AR server. For details, look for `AR_SESS_TIMEOUT_xxx` in the documentation.
- Remedy SPI server now uses the AR session configuration flag `AR_SESS_OVERRIDE_PREV_IP` to allow using the same user credentials from a different SPI server (e.g. after switching to another cluster member system).

New Features in Version 03.01

This section gives you an overview of the changes which have been implemented in version 03.01

- Support for AR system servers running on RedHat Enterprise Linux 5.1 and 5.2.

- Usage of Remedy API version 7.1 (API level 13).

- Dropped support for AR system server version 5.1.2 and 6.0.

New Features in Version 03.00

This section gives you an overview of the changes which have been implemented in version 03.00

- Support for OMU for UNIX 8.2x/8.30

- Support for AR system 7.1

- Support for AR system servers running on Windows 64Bit (HTTPS agent).

- Support for AR system servers running on Linux SuSE Enterprise Server 10.

- Direct access to AR tickets using the command line tool remspi_arutil.

- Enhanced command line tool remspidbutil may be used to alter entries in the SPI DB.

- Priority based queuing of OMU requests (keyword BUFFER)

- Command line tool remspi_qutil to modify the request queues.

- Better support for Remedy staging forms. OMU messages may now be modified when AR tickets are moved between forms and/or AR servers (ON_MOVE_TO_ME, ON_MOVE_FROM_ME). In addition, fields of AR tickets may now be referenced in all ON_xxx actions.

- New keyword ON_ATTACH to modify OMU messages when they are attached to an existing AR ticket.

- Performance of the SPI DB was improved regarding the processing of AR ticket modifications. An additional SPI DB is maintained for this type of access. The new DB is created automatically based on the existing DB if needed. This may slow down the first start of the SPI

server after upgrading to the new version. Messages are shown in the SPI log and in the active message browser stating the begin and termination of the creation of the additional database files.

- AR servers which are temporarily unreachable are retried in configurable time intervals without blocking each request arriving in the time until they become available again.

- Access to annotations of OMU messages is now possible with a finer control. The keyword MSG_ANNO_FIRST always selects the first annotation of a message, MSG_ANNO_LAST always selects the last and MSG_ANNO_ALL always selects all annotations of a message.

- An enhanced trace mode has been implemented. Using the new keywords SPI_ETRC_ENABLED, SPI_ETRC_PATHNAME, SPI_ETRC_MAXFILES, SPI_ETRC_MAXTTL and SPI_ETRC_MAXSIZE in the remspi.cfg configuration file, the pathname of the trace files, the maximum number of files used per SPI program and their maximum size and lifetime may be specified now.

New Features in Version 02.80

This sections gives you an overview of the changes which have been implemented in version 02.80

- Support for OMU management servers running on HP-UX 11.23 Itanium architecture in native (i.e. non ARIES) mode (A.02.62)

- Support for AR system 7.0

- Support for AR system servers running on Windows 2003

- Support for AR system servers running on Linux SuSE Enterprise Server 8/9 and RedHat RHEL 2.1/3.0 (A.02.61)

- Support for AR system servers running on Linux RedHat RHEL 4

- Support for AR system servers 7 running on HP-UX Itanium architecture in ARIES mode

- Usage of AR system API version 6.3

- New global option FORGET_ACKED_MSGS to clean up the internal SPI database in order to improve the performance of the SPI under heavy load.

- New global option FLEXIBLE_TICKET_UPDATES in conjunction with new condition terms MESSAGE_STATUS and CREATE_CONDITION to

allow updating AR tickets with conditions different from those which were used to create the ticket

- Ability for the SPI client `itoupdate` to buffer and retry requests in case the SPI server is not reachable.

- Integration of SPI server status messages in `ovstatus` display.

- Additional ways to update OVO messages if AR tickets were modified by using the new `ITO_UPDATE` section keywords `MSGTXT`, `CMA` and `SEVERITY`

- Adding or modifying OVO custom message attributes in the `ITO_UPDATE` and `ON_SUBMIT` section by using the new keyword `CMA`

- Accessing OVO message attributes in `ITO_UPDATE` section keywords `MSGTXT`, `CMA` and `ANNOTATE`

- Accessing OVO message attributes in `ON_SUBMIT` section keywords `MSGTXT_PREFIX`, `CMA`, `ANNO_IF_MANUAL` and `MSG_IF_MANUAL`

- Logging diagnostic information regarding the events and their processing along with timing information

- Ability for the SPI server to start even if one or more configured AR servers are not reachable (*Lazy Startup*)

- Configuration of global date and time formats in `remspi.cfg`

- New tool to list the version information of SPI components

New Features in Version A.02.60

This sections gives you an overview of the changes which have been implemented in version A.02.60

- Support for OMU A.08.20 HP-UX and Solaris management server.

- Support for AR system 6.3.

- Support for OMU management server on HP-UX 11.23 (PA-RISC and IA64 [ARIES mode]) and Solaris 10.

- Support for on-line backup of the SPI database via configuration of `REMSPI_SPIDB_ALTDIR` in `remspi.cfg`.

- Support for AR servers running as backup servers via keyword `BACKUP_SERVER` in `rules`.

- New action variables `$BACKUP_SERVER$`, `$TICKET_SERVER$`,

`$BACKUP_USED$`.

- Utility `remspifilter` now handles user supplied filter names and creates correct pathnames for HTTPS agents.

- Support for Self-Healing Info tools, collecting troubleshooting information per OVO application tool.

- Support for OVO agents running in non root environments.

- Support for AR servers running on AIX.

NOTE   The layout of the internal SPI database has been changed for this version. The target specific database files now not only contain the mapping from the OVO message ID to the ARS ticket id, but in addition contain the index of the ARS server on which the ticket was created. The index is the order numer of the ARS server as specified in the `rules` file (numbering is started with 0 for the primary ARS server for every target).

If user implemented programs are reading from the internal SPI database and are expecting and handling only zero terminated strings as the mapped value for an OVO message ID, then there is a high chance that they will continue to run without changes.

As an alternative to reading the internal SPI database with own programs, the SPI supplied tool `remspidbutil` with option `-all` might be considered.

New Features in Version A.02.50

This sections gives you an overview of the changes which have been implemented in version A.02.50

- Support for OMU A.08.10 HP-UX and Solaris management server.

- Support for AR system 6.0 and 6.0.1.

- Support for OMU HTTPS agents.

- New action variable `$MANAGEMENT_SERVER$` for cluster environments.

- Detailed internal messages if request buffering is effective. See variable `REMSPI_QUEUE_CHECK` in `remspi.cfg`.

- More flexible automated attachments: list of values for AR fields (i.e. "or" expression).

- Documentation for utility `remspidbutil` added.

- Fixed typos in manual.

- Name of AR server, AR form and ID of AR ticket is reported for ticket creation.

New Features in Version A.02.40

This sections gives you an overview of the changes which have been implemented in version A.02.40.

- Support for OMU A.08.00 HP-UX and Solaris management server.

- Support of private queues on the AR server using the `ARRPC` environment variable.

- Limit the number of messages submitted as one AR ticket due to database and operating system constraints.

New Features in Version A.02.35

This sections gives you an overview of the changes which have been implemented in version A.02.35.

- SPI internal messages regarding the start and stop of the buffering phase are not considered as errors anymore.

- The name of the first AR server which is not available is added to the SPI internal messages regarding start and stop of the buffering phase.

- For manual ticket submissions, the answer message "Request is buffered" is shown only if the global option `BUFFER_TT` is active.

New Features in Version A.02.30

This section gives you an overview of the changes and improvements which have been realized in version A.02.30.

- AR ticket creation and update requests may be buffered in case the AR server is not available (see the global `OPTION BUFFER_TT`).

- Support for attaching OVO messages to existing AR tickets

automatically (see the `ATTACH_TO` keyword).

- Support for suppressing redundant annotations and AR ticket updates by determining the originator of the request (see the `IF_MODIFIED` keyword).

- Support for ignoring the original OVO message in manual attachments (see the `ATTACHED` keyword).

- Notifying the user of successful ticket creations via OVO message or OVO annotation (see the `ON_SUBMIT MSG_IF_MANUAL` and `ON_SUBMIT ANNO_IF_MANUAL` keywords).

- Instruction text is available for ticket creation in case of automatic submittals. For instructions generated by an instruction text interface, the option "`When forwarding message to Trouble Ticket or Notification Service`" has to be set to "`Resolve Instruction Text`".

- Negation of condition checks in the rules file (see the keyword `NOT`).

- Extended regular expressions for checking strings in the *rules* file conditions (see the `LIKE` keyword).

- Access to more attributes in condition checks (sub conditions) and generated AR tickets (action variables):

  — the number of OVO message duplicates (see keywords `DUPLICATES, $DUPLICATES$`). For this type of sub condition, new relational operators `==, !=, >=, <=, >, <` have been introduced.

  — the service name attached to an OVO message (see keywords `SERVICE_NAME, $SERVICE_NAME$`)

  — the status of operator initiated and automatic actions attached to the OVO message (see keywords `AA_STATUS/OA_STATUS, $AA_STATUS$/$OA_STATUS$`)

  — the node group of the message node (see keyword `NODE_GROUP`; only the check for the node group is supported, there is no associated action variable)

  — the OVO user owning the OVO message (see keywords `OWN_USER, $OWN_USER$`)

- Submitting OVO user passed as special variable in manual submits (see the `ITO_SUBMITTER` keyword).

- Support for OVO 7.1 on HP-UX 11.0/11.11 and Solaris 7/8.

- Support for AR server 5.1.0.

- One installation package for all supported VPO/OVO versions per platform. The appropriate OVO specific binaries are activated during the post-installation step automatically.

- Specification of the language used by the Remedy SPI server (see the REMSPI_LANG keyword in remspi.cfg).

- Increased limit of text size for external keys and values (see the EXTERNAL keyword).

- Enhanced warning if the OVO user configured for the SPI has unsufficient responsibilities (see REMSPI_ITO_USER).

- Decreased number of messages generated due to self monitoring.

- Online documentation only available in PDF format (no PS files).

- Dropped support for ITO 5.30.

- Documentation on how to connect to an AR server through a firewall (see the REMSPI_ARTCPPORT keyword in remspi.cfg).

- Enhanced documentation about troubleshooting.

- Documentation on using the SPI on cluster nodes.

- Documentation on how to handle a DSO transfer (AR ticket moved between AR servers; see the DSO_TARGET keyword).

- Several undocumented files have been removed from the bundle.

New Features in Version A.02.20

This section gives you an overview of the changes and improvements which have been realized in version A.02.20.

- More keywords for the ITO_UPDATE section.

  If an AR ticket is modified, the OVO messages can be updated with the new information. The following keywords are new:

  — UNACKNOWLEDGE to unacknowledge the OVO message

  — DISOWN to disown the OVO message

  — FORCE OWN to transfer the ownership of the OVO message

- More keywords for the ON_SUBMIT section.

  If an AR ticket is submitted, several actions may be started on the OVO message. New are

  — FORCE OWN to transfer the ownership of the OVO message

  — DISOWN to disown the OVO message

- It is now possible to include the Ticket ID of the AR ticket in the OVO message text (use the string "ARS_ID" in the ON_SUBMIT MSGTXT_PREFIX section.

- In the SET and CONDITION clauses of the rules file, access to the new OVO Custom Message Attributes is possible with 'CMA "NAME" "Value" 'and '$CMA Name$'

- For automatically submitted OVO messages, it is now possible to reference the Instruction Text of the OVO message, even if it's generated via an Instruction Text Interface.

- A condition in the rules file may now check if the message node is listed in an external file. Use 'NODE IN "File"' as the new condition clause.

- Support for OVO 7.0 on HP-UX 11.0/11.11 and Solaris 7/8.

Related SPI for Remedy ARS Products

The HP OpenView Smart Plug-in for Remedy Action Request System product includes support for the following HP OpenView products:

- HP Operations Manager for UNIX 7.1 for Unix

- HP Operations Manager for UNIX 8.1/8.2/8.3 for Unix

Information on the HP OpenView Web Pages

For more information on HP OpenView products check out the HP OpenView web site found at:

`http://www.hp.com/openview`

For patch information access the following HP OpenView website:

`http://ovweb.external.hp.com/cpe/patches`

What's in this Version?

3 Problems and Solutions

This section describes all problems with the Smart Plug-in for Remedy Action Request System software that are already known and that could not be fixed before release, and where necessary, provides recommended workarounds.

Furthermore it gives you information on the problems which were fixed in this version.

Known Problems and Workarounds

1. **Symptom**

   The error messages of the Remedy SPI are not discussed in detail in the documentation.

   Solution

   We regularly revise and update our documentation with each new version. We will try to provide as much information as possible concerning troubleshooting when error messages appear.

2. **Symptom**

   If the global OPTION BUFFER_TT is enabled in order to buffer AR requests in case the AR server is not available, changes to existing AR tickets due to modified OVO messages are not buffered.

   Solution

   There is no workaround for this problem. There will be a future patch addressing this issue..

3. **Symptom**

   On OVO 8.x, remote actions from managed nodes of DCE communication type are not enabled per default. This may result in automatic actions and operator initiated actions not being available upon generation of a message.

   Solution

   Besides installing and using an HTTPS agent on the managed node, one way to allow these actions from DCE agents is:

   • Create a node group DCE

   • Assign the managed nodes of DCE communication type to this node group (you may restrict this step to the nodes which are relevant to the SPI for Remedy ARS).

   • On the OVO management server, edit the file /etc/opt/OV/share/conf/OpC/mgmt_sv/remactconf.xml and add a new rule:

   ```
   <rule>
   ```

```
 <doc>Target node MgmtSv ok if sender in DCE group and
uncertified</doc>
 <if>
  <target><mgmtsrv/></target>
  <source>
   <nodegroup>DCE</nodegroup>
  </source>
  <certified>false</certified>
 </if>
 <allow/>
</rule>
```

4. **Symptom**

   The command line tool `remspifilter` is not able to create the
   correct path to the `itoupdate` tool for Windows HTTPS agents
   deployed from HPOM for Windows 8.1 or for HTTPS agents
   deployed from OMU 9.

   Solution

   Don't use the path which is proposed by `remspifilter`, but
   instead provide the correct path manually.

5. **Symptom**

   The command line tool `remspifilter` does not use the TARGET
   specific AR session timeouts and communication ports specified in
   the `rules` file. Instead, the tool only applies the global defaults
   defined in the `remspi.cfg` file.

   Solution

   This will be fixed in a future version of the SPI. If you need
   different communication ports, then temporarily define these as
   global defaults in the `remspi.cfg` for the duration of the
   execution of `remspifilter`.

6. **Symptom**

   The sample rules file `rules.PR` contains the wrong keyword for
   setting the TARGET specific TCP communication port for the AR
   server. However, because this line is commented out, it's not
   active.

   Solution

   If you need to set a TARGET specific TCP communication port for

the AR server, use the keyword as described in the SPI documentation, i.e. `ARTCPPORT` (and <u>not</u> the faulty `ARRPCPORT` as contained in the sample `rules.PR`).

7. **Symptom**

Do not use multiple `ON_SUBMIT` sections for a `TARGET` in the `rules` file. Although syntactically correct, the SPI will only use the statements found in the last `ON_SUBMIT` section.

Solution

It's always possible to define all needed `ON_SUBMIT` statements in one section per `TARGET` in the `rules` file. All `ON_SUBMIT` statements will be executed in a predefined sequence which is not related to the appearance of the statements in the `rules` file.

Fixed Problems in 04.00

1. **QXCM1000983068**

   Remedy SPIserver cannot connect to AR server after cluster switch

   The Remedy SPI now sets the AR session configuration variable
   AR_SESS_OVERRIDE_PREV_IP to ensure that a connection with the
   same user credentials is possible from a different SPI server system.

2. **QCCR1A93604**

   OMU customer needs support for Remedy ARS 7.5

   Remedy ARS 7.5 is now supported.

3. **QCCR1A94083**

   Need configurable timeout for ARCreateEntry() call

   The SPI now allows to configure global (remspi.cfg) and TARGET
   specific (rules) communication timeouts. For details on how to
   configure these timeout values, look for AR_SESS_TIMEOUT_xxx in the
   documentation.

4. **QCCR1A41139**

   remspiproxy -mce runs even if option NO_AR_UPDATE is set

   The Remedy SPI proxy remspiproxy -mce is always started, but
   does not forward message change events to the SPI server in case the
   OPTION NO_AR_UPDATE is set in the rules file.

5. **QCCR1A99419**

   Remedy SPI server aborts when acknowledged message is updated

   This problem occurred if the SPI server had to retrieve error message
   texts from the OMU management server.

6. **QCCR1A40890**

   Remedy SPI multiple annotations

   The new global OPTION ANNO_SEPARATOR nows allows to define a
   string used to separate multiple annotation texts.

7. **QCCR1A59871**

   Wrong shared library libspi.so loaded

The shared library `libspi.so` was removed and the only existing shared library `libremspi.so` is now loaded from a SPI specific directory and not placed in the OM directory tree anymore.

Fixed Problems in 03.01

1. **QXCR1000864119/QCCR1A40893**

   Remedy SPI should use API from Remedy 7.1

   The Remedy SPI now uses the API from Remedy ARS 7.1, i.e. API level 13. Due to the new library, support for AR server versions 6.0 and older was dropped.

2. *Support needed for RedHat Enterprise Linux 5.*

   The SPI was now verified for RHEL 5.1 and 5.2.

Fixed Problems in 03.00

1. **QXCR100038252**

   ATTACH_TO does not work with empty AR fields

   The ATTACH_TO keywords nows works as expected for empty AR fields.

2. **QXCR1000425792**

   Discard automatic submittals in case of message storm

   The SPI does not detect a message storm on its own, but relies on external resources. As long as the file /etc/opt/OV/share/conf/remspi/no_auto_tickets exists, messages are not submitted automatically as AR ticket.

3. *Deletion of entries from SPI DB in case of message acknowledgment*

   The SPI does now correctly remove the entries from the SPI DB in case a message is acknowledged. Note that deletion is only performed if the global option FORGET_ACKED_MSGS is set.

4. *Startup time of SPI serverwsa greatly reduced*

   The SPI server now caches information regarding AR form fields which previously was fetched multiple time from the AR servers. This greatly reduces the time needed for starting the SPI in environment where large AR forms which many fields are involved.

5. *Warning if external value file is missing or empty*

   The SPI now generates a warning message if an external value file is specified but is not readable or empty.

6. *ITO_UPDATE actions tolerate non existing HPOM messages*

   The SPI now executes all ITO_UPDATE actions for all HPOM messages associated with a modified AR ticket, even if some of the messages do not exist anymore.

7. **QXCR1000774068**

   Support virtual nodes with NODE_GROUP condition

   The SPI now supports virtual nodes which are contained in a node group with the NODE_GROUP condition term.

8. **QXCR1000776137**

   Execute ITO_UPDATE conditions and actions of an AR ticket is moved between forms and/or AR servers (DSO-TRANSFER)

   The SPI now evaluates the conditions defined in the ITO_UDPATE section of a target if a ticket is moved (DSO-TRANSFER).

9. *Check whether the rules file condition descriptions are unique.*

   The descriptions of conditions in the rules file serve as a key identifier. Thus, all conditions must contain unique descriptions. This is now checked and an error is thrown in case.

10. **QXCR1000821503**

    Implement ON_ATTACH similar to ON_SUBMIT

    The SPI now supports an ON_ATTACH section in the rules file similar to the ON_SUBMIT section. ON_ATTACH actions are executed if a message is attached to an existing AR ticket.

11. **QXCR1000835921**

    remspiproxy uses 100% CPU

    Under certain circumstances the SPI proxy process remspiproxy could consume up to 100% cpu time after the SPI was stopped using remspi.sh stop. This has now been fixed. (HP-IA only)

12. **QXCR1000823869**

    Need Remedy SPI UP event

    Monitor policies for the SPI server have been added to generate an UP event in case the SPI server was down and is available again.

13. **QXCR1000826312**

    Setting of ARTCPPORT and ARRPC not reliable via remspi.cfg

    Especially on HPOM management servers, the setting of the AR communication port and RPC queue was not reliable. The rules file syntax has been extended to specify these value in this file now. In addition, a dedicated AR API call is now made to use these values.

14. **QXCR1000854269**

    Need OBJECT IN <file> condition term in rules file

    New condition terms have been implemented to allow checking of more HPOM message attributes in separately maintained text files.

With OBJECT IN, APPLICATION IN and CMA … IN the object, application and named custom message attributes may now be checked for existence in a text file.

15. **QXCR1000855054**

Referencing the real ticket ID

The SPI nows supports references to AR fields in all ON_*xxx* actions, i.e. ON_SUBMIT, ON_ATTACH, ON_MOVE_FROM_ME, ON_MOVE_TO_ME. In previous versions, only references to ARS_ID and other known SPI maintained fields were supported. This allows to embed the contents of an arbitrary form field, e.g. a custom ticket identifier, in the corresponding HPOM message.

Fixed Problems in 02.80

1. **QXCR1000306569**

   SPI internal database is filled up and slows down processing

   The global option FORGET_ACKED_MSGS allows to remove entries from the SPI internal database which are not necessary anymore. This speeds up overall processing in case of heavy load.

2. **QXCR1000113953**

   Ability for itoupdate to buffer

   The options `-retries` and `-timeout` for the SPI client `itupdate` allows to buffer requests and retry them later for a specified number of times.

3. **QXCR1000113042 / QXCR1000289747**

   Update the CMA attributes of the OVO messages / Provide the Remedy Troubleticket number in a CMA of the OVO message

   The creation and update of Custom Message Attributes is now possible in the `ITO_UPDATE` and `ON_SUBMIT` section by using the new `CMA` keyword.

4. **QXCR1000237528 / QXCR1000308433**

   Allow for inactive AR servers while starting the SPI server / ER: remspisrv should start even if one of several ARS servers is not available

   Using the *lazy startup*, the SPI server now tolerates that one or more configured AR servers are not reachable during the startup phase. The necessary validation of the missing AR servers is scheduled for later retry at regular intervals. If the global option `BUFFER_TT` is used, then requests issued during the period of non-reachabilty are queued and retried later, too.

5. **QXCR1000112828 / QXCR1000338690**

   Issue with Remedy SPI and ARS API version / Request to use different API version

   The SPI nows uses the AR system API 6.3.

6. **QXCR1000211996**

Remedy Date/Time field is formatted as HH:MM:SS in OVO (no date part)

The date and time formats may now be specified in the `remspi.cfg` file by using the keywords `REMSPI_DATE_FORMAT` and `REMSPI_TIME_FORMAT`.

7. **QXCR1000378691**

   Remedy SPI Doc, Setting up the Trouble-Ticket Interface, incorrect

   The documentation has been corrected.

8. **QXCR1000341081 (A.02.62)**

   A.02.60 fails during swinstall

   The installation scripts were changed to allow the installation with OVO/Unix 7.x patched with new LCore libraries.

9. **QXCR1000346007 (A.02.62)**

   Deinstalling A.02.60 from HP-UX IA64 removes /opt/OV/lib/.*

   HP-UX IA64 is now supported, even for deinstallation.

10. **QXCR1000349870 (A.02.62)**

    RemSPI server dumps core for empty (NULL) AR fields.

    This problem has been fixed.

11. **QXCR1000352336 (A.02.62)**

    NODE_GROUP rules condition executed as REMSPI_ITO_USER fails

    This problem has been fixed. If the `NODE_GROUP` condition is used, the `REMSPI_ITO_ADMIN_PASSWD` has to be specified in the `remspi.cfg` file.

12. **QXCR1000352356 (A.02.62)**

    Discard OVOU MCE after creating ANNO_IF_MANUAL annotation

    This problem has been fixed

13. **QXCR1000354241 (A.02.62)**

    Support for OVOU on HP-UX IA64 in native mode requested

    Support for OVOU running on HP-UX IA64 in native mode is now implemented.

14. **QXCR1000285289 (A.02.61)**

Support for ARS server on Linux required

The SPI is now support ARS on Linux SuSE 8/9 ES and RedHat RHEL 2.1/3.0.

15. **QXCR1000324175 (A.02.61)**

SPI server aborted with error "No buffer space available" .

The cause of this issue was an error code from the system routine `accept()` which should be ignored.

16. **QXCM1000312727 (A.02.61)**

SPI server aborted if no ARS backup server is configured and ARS filter does send name of ARS server as configured in "rules" .

This problem has been fixed.

Fixed Problems in A.02.60

1. **QXCR1000229374**

   Installation fails on OVO 8.1 with OVO patches installed

   The SPI is now installable on OVO 8.x patched environments.

2. **QXCR1000293110**

   SPI server aborted in ticket creation during message storm .

   The cause of this issue was actually a long instruction text (>20kB) added to the ticket. This problem has now been corrected.

3. **QXCR1000297115**

   Support for ARS 6.3 neeeded .

   The SPI now supports Remedy ARS 6.3.

4. *SPI server aborted during tracing of long message texts (>20kB) .*

   This problem has now been corrected.

Fixed Problems in A.02.50

1. **SR 3207703113**

    Obtaining the Remedy ID after a manual submission

    The ID of the Remedy ticket is now made available after manual submissions. The information regarding the AR server, the AR form and the AR ID is shown on the standard output.

2. **SNSCCP**

    Remedy SPI running in MC/SG environment

    The action variable $HOST\_NAME$ is replaced by the name of the physical system on which the Remedy SPI is running. In cluster environments, the name of the virtual OVO package is needed too. The package name is now available in the new action variable $MANAGEMENT\_SERVER$.

3. **QXCR1000200888**

    Documentation for utilities

    The utility remspidbutil is now documented in the Administrators Guide.

4. **QXCR1000201452**

    More detailed error reporting when buffering

    If the SPI server buffers requests, more detailed internal messages are now generated if the new configuration variable REMSPI_QUEUE_CHECK is set to a non zero value in remspi.cfg. These messages contain the number of buffered requests.

5. **QXCR1000197980**

    Remedy SPI server should add 'Appended Text' from ARS server to error message

    In some situations, the ARS server returns more specific error information in a field 'Appended Text' to the SPI server. This appended text is now added to the Remedy SPI server error message.

6. **QXCR1000113954**

    Admin Guide contains numerous spelling errors

The Administrators Guide has been reviewed and error have been corrected.

7. **QXCR1000113507**

ATTACH_TO field search with multiple strings under one condition requested.

For automated attachments, the syntax for the search fields has been enhanced and now supports multiple strings which are used like an OR expression in location the ARS tickets.

Fixed Problems in A.02.40

1. **SR 8606360943**

   Communicate to the Remedy Server via dedicated private queue

   The number of the private queue can be specified in the `remspi.cfg` file. Use the new variable `REMSPI_ARRPC` to specify the rpc number of the queue.

2. *Number of messages submitted as one AR ticket is limited by operating system and OMU database constraints.*

   The number of messages which are submitted as one AR ticket or are attached to one AR ticket is limited by operating system and OMU database constraints. The new version of the SPI now checks the number of passed messages and shows an error if more than 50 messages are submitted.

Fixed Problems in A.02.35

1. **SR 1201631204**

   Remedy SPI seems to query ITO-DB even though msg is set to suppress

   A suppress condition in the `rules` file was treated as an error from the following code. This has been corrected.

Fixed Problems in A.02.30

1. **SR 8606276571**

   Remedy SPI logs an extra entry in OVO for annotations & status changes

   The problem of duplicated annotations or AR entries has been solved by introducing a new keyword IF_MODIFIED. With this keyword and the appropriate configuration on the AR server, the SPI for Remedy ARS is able to determine the originator of a request. Using this information and the new keyword, it's now possible to modify the OVO message only if the AR ticket was not changed by the SPI itself and to react on *modified* fields only.

2. **SR 8606145402**

   Remedy SPI should include documentation about troubleshooting.

   The troubleshooting section of the documentation was updated and enhanced

3. **SR B555014379**

   Remedy SPI server aborts with core dump on Solaris if the name of the AR server sent by AR filters is not exactly as configured in the rules file.

   The problem occurred if the SPI server had to resolve the host name which was sent by the itoupdate client program as the name of the originating AR server. This name resolution is needed every time the SPI servers receives an AR change request (via itoupdate) and the name of the AR server is not spelled exactly as in the target section of the rules file.

4. **SR 8606268856**

   Attached messages should not copy the entries for already submitted messages again.

   The problem occurred if OVO messages were manually attached to an existing AR ticket. This case is handled as an update to an existing AR ticket with multiple input messages, i.e. the original OVO message and the new messages.

   With multiple messages, the SPI orders the selected OVO messages

and then evaluates the new values for the AR fields according to the update policy. This policy may be ALL, which means that the attributes from all selected OVO messages are processed.

With the new keyword UPDATE ATTACHED, the original OVO message is ignored while evaluatinf the new value for the AR field. This way, the original data is not processed and not copied to the AR ticket again.

5. **SR 8606244645**

   OVO message for manual submission of a trouble ticket.

   With the new submit rule ON_SUBMIT MSG_IF_MANUAL "message text", an OVO message with the specified text is generated if an AR ticket was successfully created as the result of a manual message submission.

6. **SR 8606292964**

   Annotation should be made to message when Remedy ticket is opened.

   With the new submit rule ON_SUBMIT ANNO_IF_MANUAL "message text", an annotation is added to the submitted OVO message with the specified text. The annotation is added only for successfully manually submitted messages.

7. **SR B555005084**

   Failed OVO message updates should be noted in annotations.

   With the new global option OPTION ANNO_FAILED_MSG_UPDATE, an annotation will be attached to the corresponding OVO message if the message could not be successfully updated . This is supported for all OVO message updates as a result of a changed AR ticket or a failed submit rule.

   This annotation does not trigger an update of the AR ticket.

8. **SR 8606247397**

   Increase text limit size of external values.

   The size limit for external values has been increased.

   The maximum length of an external key has now been set to 2048 characters, the maximum length of an external value has been set to 4096 characters. This holds for the entries in the external value file.

   Note that if external *values* are used in as sub conditions in the

`rules` file, the maximum size for this *token* is 2048 characters (limitation in the rules file parser). This limitation can be circumvented by using regular expressions for the external value.

9. **SR 8606147235**

   Too much messages from remspisrv.log

   This change request is actually dedicated to changing the pathname of the log file for the SPI client program `itoupdate`.

    The log file of the SPI client program itoupdate is now located in

   - Unix: `/var/opt/OV/log/remspi/itoupdate.log`

   - Windows: `\usr\OV\log\remspi\itoupdate.log`

   If the AR server is not an OVO managed node (and thus the OV directories do not exist), the log file is created in the directory from where the SPI client program is started.

10. **SR 8606147236**

    Message storms from remspisrv due to MCE (message change events)

    The self monitoring templates have been modified to suppress similar messages based on time. Similar messages are now forwarded to the OVO server only if the time gap between subsequent messages is more than 5 minutes. If the messages are still generated after one hour, a new message is forwarded to the OVO server.

    In addition, several internal messages have been suppressed and substituted by a general message. Note that the entries are still all logged into the SPI log file `remspi.log`, but not all of them are forwarded to the OVO server.

11. **SR 8606280993**

    Integration with Trouble Ticket Interface - auto attach

    This enhancement request is dedicated to automatically attaching OVO messages to an existing AR ticket.

    With the new keyword `ATTACH_TO`, it's now possible to define a list of search fields in a condition. If the condition matches, all targets of this conditions are searched for existing tickets satisfying the list of search fields. If such tickets are found, the submitted OVO messages are attached to the oldest ticket. If no existing tickets are found, a new ticket is created.

Note that auto attachments are only supported if the transaction was started as a message *submit*, regardless if automatic or manual.

12. **SR 8606271789**

    ARS delayed responses

    This enhancement request is dedicated to buffering AR update and creation requests if the AR server is busy or down. Note that buffering is not necessary if the AR server signals that the request has been processed, but that not all internal operations have been finished.

    With the new global `OPTION BUFFER_TT`, it's now possible to buffer AR ticket update and creation requests if the AR server is down or not responding.

    The start and the end of the buffering phase are notified by internal OVO messages. The queued requests are retried evry 60 seconds.

    Note that change events for OVO messages for which the AR ticket creation has been buffered are not buffered. These change events are lost.

13. **SR 8606286396**

    Buffer TT messages until ARS server back online

    This enhancement request is dedicated to buffering AR update and creation requests if the AR server is busy or down.

    With the new global `OPTION BUFFER_TT`, it's now possible to buffer AR ticket update and creation requests if the AR server is down or not responding.

    The start and the end of the buffering phase are notified by internal OVO messages. The queued requests are retried evry 60 seconds.

    Note that change events for OVO messages for which the AR ticket creation has been buffered are not buffered. These change events are lost.

14. **SR 8606258945, SR 8606280020**

    Remedy SPI support on Remedy 5.x

    The version A.02.30 of the SPI for Remedy ARS support AR servers 5.0.1 and 5.1.0 (see "Agent Platforms and OS Supported by the SPI for Remedy ARS" on page 56) .

Fixed Problems in A.02.20

1. **SR 8606158126**

   - Documentation errors regarding the trace mode

   Solution

   - The documentation was corrected.

2. **SR B555009321**

   - Initially entered as *Documentation required on tracing,* this defect
     addressed the improper handling of AR Diary fields (no data
     entered into the field, data destroyed)

   Solution

   - The handling of AR Diary fields was corrected. The improper
     behaviour was seen especially in situations where the AR data
     definition was converted using the *Remedy Migrator Tool*

3. **SR 8606197952**

   - Enhancement request for *disowning* messages from the AR User
     Tool.

   Solution

   - The ITO_UPDATE section was enhanced. It's now possible to
     DISOWN the OVO message or to transfer ownership with FORCE
     OWN if an AR ticket is modified.

4. **SR 8606205393**

   - Enhancement request for *unacknowledging* OVO message from
     the AR User Tool.

   Solution

   - The ITO_UPDATE sections enhanced. It's now possible to
     UNACKNOWLEDGE the OVO message if an AR ticket is
     modified.

5. **SR B555005083**

   - Enhancement request for *owning* OVO message if on ticket

submission.

Solution

- An ON_SUBMIT section was introduced . This section specifies actions taken if an OVO message is submitted as an AR ticket. Using the new syntax "ON_SUBMIT OWN", the OVO message is owned on submission.

6. **SR B555010960**

- If MSGTXT_PREFIX is used in the ON_SUBMIT section of the *rules* file, then the OVO message is owned, even if the OWN keyword is *not* used.

Solution

- The OVO message is automatically *owned* by the core OVO system if the message text is modified. To *disown* the OVO message after this modification, use the new DISOWN keyword in the ON_SUBMIT section. Even if the MSGTXT_PREFIX clause is used, the DISOWN is executed after the modification and hence the automatic owning of the message. This way, the message is effectively *disowned* after the submission.

7. **SR B555009322**

- Mapping OVO values to AR enumerated data types ignores the mapping table specified in the *rules* file if the OVO data value is a member of the AR enumerated data type list.

Solution

- The mapping table is now used even if the OVO data value is on the AR enumerated data type list.

8. **SR B555011515**

- If an update occurs on the AR ticket, only the AR fields listed in the annotation text are fetched from the AR server. The fields used to check whether an annotation should be created or are not fetched from the server.

Solution

- Now all fields used in the ITO_UPDATE section are fetched from the AR server if a ticket has been modified.

9. **SR 8606217794**

- The *remspisrv* process is not able to fetch the resolved instruction text for a message if the *Instruction Text Interface* is used.

Solution

- For *automatically* submitted messages, the instruction text is resolved and available in the SET clause using the string 'HLP_TEXT'. Note that for manually submitted messages, or attached messages or modified messages, this attribute is not available due to restrictions in the code OVO system.

10. **SR 8606226490**

- Confusing documentation for the keyword EXTERNAL in the *rules* file.

Solution

- The documentation was corrected.

11. **Empty tickets**

- If the user configured as the REMSPI_ITO_USER in the *remspi.cfg* file is not responsible for the message beeing submitted, the *remspisrv* tries to create an empty ticket on the AR server. This results in a misleading error message.

Solution

- These *empty* OVO messages are now ignored during the submission process. The error message is more appropriate now.

12. **Support for Windows 2000 as the AR server**

- If the client program *itoupdat.exe* was executed on a Windows 2000 system, the *remspisrv* aborted after a tickets has been modified.

Solution

- Now the communication to the *remspisrv* is handled properly on a Windows 2000 client system using *itoupdat.exe*

13. **Failed OVO message acknowledgement started from the AR User Tool.**

- If a OVO message acknowledgment started from the AR User Tool fails on the OVO server (e.g. access problmes due to *foreign* ownership), then the association between AR ticket and OVO

message is deleted in the SPI database. Later acknowledgment is impossible then.

Solution

- The result of the acknowledgment is now checked. The association in the SPI database is only released if this operation succeeded.

14. **Checking the OVO *Message Node* for inclusion in a list.**

- If there is a need to differentiate between multiple targets regarding the OVO message node, the only way was to create a separate condition per node containing the condition clause 'NODE "*MyNodeName*". This not only leads to a *rules* files which is nearly unsupportable, but imposes very long startup times of the *remspisrv* (during this time, the SPI is not functional and will not process any submissions).

Solution

- It's now possible to use text files containing a list of node names and then to check the current OVO message node name for inclusion in this list. If the current node is included in the list, the conditional term is satisfied. This feature is specified using the new 'NODE IN "*MyFileOfNodeNames*"' clause in a condition in the *rules* file. The file is read when the check is performed for the first time and then only if it is modified. The file is an ordinary text file containing the node names on separate lines. Note that the names must be listed exactly as seen in the OVO message.

Problems and Solutions
Fixed Problems in A.02.20

4 Compatibility and Installation Requirements

This chapter describes:

- "Supported Operating System and Management Server Platforms"
- "Agent Platforms and OS Supported by the SPI for Remedy ARS"

Supported Operating System and Management Server Platforms

Table on page 55 indicates which versions of the operating system and which versions of the HPOM management server software are supported by the Smart Plug-in for Remedy Action Request System 4.01.

Table 4-1   **Supported OMU Servers**

Product Version	Operating System			
	HP-UX	**Sun Solaris**		**Linux**
	11i	**9**	**10**	**RHEL**
HPOM 9.0x	X	-	-	X
HPOM 9.1x	-	X	X	-

Agent Platforms and OS Supported by the SPI for Remedy ARS

Table 4-2 provides information about the HPOM agent platforms, the operating systems, and the ARS server versions now supported by the Smart Plug-in for Remedy Action Request System 4.01.

Table 4-2   **Prerequisites for the AR Server**

Hardware Platform	Operating System	AR System Version			
		6.3	7.0	7.1	7.5
HP	HP-UX 11i [a]	X	X	X	X
Intel	Windows 2k,2k3,2k8 [b]	X	X	X	X
Sun SPARC	Solaris 8,9,10	X	X	X	X
IBM RS6000	AIX 5L 5.1,5.2,5.3	X	X	X	X
Intel	SuSE SLES 9, 10 [c]	X	X	X	X
	RedHat RHEL 5.1,5.2,5.3 [d]	X	X	X	X

a. PA-RISC and IA64
b. 32/64 Bit, on 64 Bit HTTPS only
c. 32/64 Bit, on 64 Bit HTTPS only
d. 32/64 Bit, on 64 Bit HTTPS only

NOTE   To take full advantage of the SPI for Remedy ARS, your AR servers should be HPOM managed nodes.

The prerequisites listed above do not invalidate the prerequisites for the AR server mentioned by the manufacturer (BMC/Remedy Corp.).

NOTE   On Windows managed nodes, the WINOSSPI has to be installed and
               configured or else the process monitoring of the SPI for Remedy ARS will
               not work.

5 Product/Release Matrix

This section provides information about inter-product relationships, the contents of product bundles. The section covers the following areas:

- "Product Version Information"
- "Software Availability"

Product Version Information

HP OpenView Smart Plug-in for Remedy Action Request System 4.00 is the latest release for the HP-UX 11i and Sun Solaris platforms. HP OpenView Smart Plug-in for Remedy Action Request System 4.01 is the latest release for the Linux platforms. Table 5-1 explains which software depot bundles are available with the SPI for Remedy ARS.

Table 5-1   **The SPI for Remedy ARS Packages**

Platform	Product Name	Description
HP-UX	`SPI-Remedy`	SD bundle containing all product files.
Solaris	`SPI-Remedy`	Solaris native package containing all product files.

For more information about product bundles and installation pre-requisites, see the sections on product bundles and filesets in the *HP Operations Smart Plug-In for Remedy Action Request System Integration: Administrator's Reference*.

Software Availability

A localized version of Smart Plug-in for Remedy Action Request System is not currently available for this release.

The Smart Plug-in for Remedy Action Request System is available on the *HP OpenView Operations for Unix SPI DVD-ROM*.

6   Upgrading to Version 4.00

Upgrading to Version 4.00

This chapter provides information on upgrading your system to SPI for Remedy ARS version 4.00.

Upgrading

Upgrading from A.02.* to 4.00

This upgrade procedure keeps the current Remedy SPI databases intact.

- Stop the Remedy SPI server using "ovstop RemedySPI"

- Save the "rules" and the "remspi.cfg" file

- Do a swremove SPI-Remedy on HP-UX and pkgrm SPI-Remedy on Solaris.

- Start the OVO Admin GUI

- Remove all SPI for Remedy ARS GUI elements (node groups, message group, operators, application groups and templates)

- Deploy the OVO configuration to the OVO management server and the AR servers

- Stop the OVO Admin GUI

- Do a "swinstall -s <Depot for Version 4.00> SPI-Remedy"

- Start the OVO Admin GUI

- Copy the OVO management server to the appropriate Remedy SPI node group, and copy the AR servers to the appropriate Remedy SPI node groups

- Activate your saved "rules" and "remspi.cfg" file by copying it to the directory /etc/opt/OV/share/conf/remspi.

- Compute the passwords for the AR users configured in the "rules" file, and the one for the OVO user configured in the "remspi.cfg". You have to use the "remspipasswd" of version A.02.20 (or higher) for this step.

   This step is mandatory only if you upgrade from A.02.00!

- Start the Remedy SPI server using "**/opt/OV/bin/remspi/remspi.sh start**"

- Deploy the OVO configuration to the OVO management server and the AR servers.

NOTE   If the new SPI configuration uses the concept of backup ARS servers, then it's essential that the previous single ARS server of a target is configured as the primary server of this target. If this is not true, then modifications to AR tickets or OVO messages after the update are not applied to the according OVO messages or AR tickets.

This is because the index of the AR server on which a ticket has been created is now stored in the SPI internal database. For entries in the SPI database which have been created with earlier SPI versions, an index of 0, i.e. the primary AR server is assumed.

7   Version Information and File Placement Plan

This section lists the directories in which the product files are placed during installation. The section covers the following areas:

- "Version Strings"
- "File Placement Plan"

Version Strings

The following is an example of the output generated by the `what(1)` string on a system where the Smart Plug-in for Remedy Action Request System is installed:

```
HP OpenView Smart Plug-In for Remedy 04.01 2010-03-22
```

File Placement Plan

List of directory locations for product specific files on the HPOM management server:

/opt/OV/bin/remspi

/opt/OV/doc/C/remspi

/etc/opt/OV/share/conf/remspi

/var/opt/OV/share/tmp/remspi

/var/opt/OV/log/remspi

/var/opt/OV/tmp/remspi

/var/opt/OV/share/tmp/OpC_appl/remspi

List of locations for product specific files in standard directories on the HPOM management server:

/opt/OV/lib/nls/C/remspi.cat

List of directory locations for product specific files on the managed nodes (AR servers):

UNIX (DCE)   /var/opt/OV/bin/OpC/**cmds** & .../**monitor**

/var/opt/OV/log/remspi

UNIX (HTTPS)   /var/opt/OV/bin/instrumentation

/var/opt/OV/log/remspi

AIX (DCE)   /var/lpp/OV/bin/OpC/cmds .../monitor

/var/lpp/OV/log/remspi

AIX (HTTPS)   /var/lpp/OV/bin/instrumentation

/var/lpp/OV/log/remspi

Windows (DCE) \usr\OV\bin\OpC\cmds ...\monitor

\usr\OV\log\remspi

Windows (HTTPS) %OVOAGT_INSTRUMENTDIR%

\usr\OV\log\remspi