

[MS-WSSEUX]: Windows SharePoint Services: Content Database End-User Experience Communications Protocol Specification

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1 Introduction

This document specifies the Windows SharePoint Services: Content Database End-User Experience Communications Protocol. This protocol specifies communications between servers that support various end-user experiences such as online discussions, meeting arrangements, Web site navigation, and alerts about changed data.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

- access control list (ACL)**
- anonymous user**
- Coordinated Universal Time (UTC)**
- GUID**
- language code identifier (LCID)**
- unique identifier (UID)**
- XML**

The following terms are defined in [\[MS-OFCGLOS\]](#):

- 12-hour clock notation**
- 24-hour clock notation**
- alert**
- alert subscription**
- always notify alert**
- back-end database server**
- calendar type**
- CAML**
- Central Administration site**
- change log**
- checked out**
- Collaborative Application Markup Language (CAML)**
- collation order**
- column**
- content database**
- current user**
- datetime**
- default list view**
- deleted**
- directory name**
- display name**
- document**
- document library**
- document stream**
- e-mail alias**
- embedded image**
- event**
- field**
- file**

folder
front-end Web server
home page
HTML translate cache
iCalendar
inheritable navigation structure
item identifier
leaf name
link bar
list
list identifier
list item
list view page
locale
locked
login name
meeting instance
Meeting Workspace site
metadict
navigation node
navigation node element identifier
navigation structure
navigational parent site
permission
published
query
read-only mode
result set
return code
root folder
row
rule
scope identifier
security principal
security scope
sequence number
server-relative URL
site
site collection
site collection identifier
site definition
site identifier
site template
site-relative URL
SQL collation name
stored procedure
store-relative URL
subsite
system alert
Transact-Structured Query Language (T-SQL)
Uniform Resource Locator (URL)
user identifier
user name
Web discussion comment
Windows collation name

The following terms are specific to this document:

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[Iseminger] Microsoft Corporation, "SQL Server 2000 Architecture and XML/Internet Support", Volume 1 of Microsoft SQL Server 2000 Reference Library, Microsoft Press, 2001, ISBN 0-7356-1280-3, <http://www.microsoft.com/mspress/books/5001.aspx>

[MSDN-TSQL-Ref] Microsoft Corporation, "Transact-SQL Reference", [http://msdn.microsoft.com/en-us/library/ms189826\(SQL.90\).aspx](http://msdn.microsoft.com/en-us/library/ms189826(SQL.90).aspx)

[MS-TDS] Microsoft Corporation, "[Tabular Data Stream Protocol Specification](#)".

[MS-WSSFO] Microsoft Corporation, "[Windows SharePoint Services \(WSS\): File Operations Database Communications Protocol Specification](#)".

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.rfc-editor.org/rfc/rfc2119.txt>

[RFC2445] Dawson, F., and Stenerson, D., "Internet Calendaring and Scheduling Core Object Specification (iCalendar)", RFC 2445, November 1998, <http://www.rfc-editor.org/rfc/rfc2445.txt>

1.2.2 Informative References

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)".

[MS-OFGLGLOS] Microsoft Corporation, "[Microsoft Office Master Glossary](#)".

[MS-OUTSPS] Microsoft Corporation, "[Lists Client Sync Protocol Specification](#)".

[MS-WSSDLIM] Microsoft Corporation, "[Windows SharePoint Services: Content Database Document and List Item Management Communications Protocol Specification](#)".

1.3 Protocol Overview (Synopsis)

This protocol specifies the communication between the **front-end Web server** and the back-end **content database** used in user interaction with the server. The content database stores the data associated with the lists and sites. The user sends a request for a certain operation or data to the front-end Web server. The front-end Web server then communicates with the content database to

perform this action. This client-to-server protocol uses the [\[MS-TDS\]](#) as its transport between the front-end Web server, acting as a client, and the database, acting as a server.

1.3.1 Alerts

The user can request notifications for changes to the content in the server. When the requested **document** (or other SharePoint object) changes, the front-end Web server sends notifications to the user using the e-mail service. The request for notifications, called **alert** subscriptions, are stored in the server. The front-end Web server receives request to enumerate the alerts for a user, **site** or **list item** or modify the alerts. The front-end Web server uses the protocol to retrieve the data from the **back-end database server** and send it to the user. The front-end Web server tries to match alerts with documents (or other SharePoint objects) that have changes and sends notifications to users. The notifications can be sent immediately or batched together and sent at a particular interval as requested by the user.

1.3.2 Autocopy

The front-end Web server provides a mechanism for the user to copy documents contained in a particular **folder** or **list** to a different location. If the document is copied to the same location as the source, a duplicate copy with a different name is made. The destination folder or list could be in a different site from the source as well. Both the content of the document (stored in the **document stream**) and the metadata associated with the document are copied.

1.3.3 E-mail Integration

Users can associate a list with an **e-mail alias**. The protocol enables the front-end Web server to enumerate all the e-mail aliases associated with a site or all the e-mail aliases stored in the content database.

1.3.4 HTML Translate Cache

The **HTML translate cache** is used to store Web-viewable versions of files in the back-end database server. For example, it could be used to store an HTML version of a binary **file**.

1.3.5 Meetings

Users can create calendar events and meetings in a site. They are created as list items in an events list. Users can enumerate and update these items with new information. They can associate a **Meeting Workspace site** with each meeting. A meeting workspace is a convenient and centralized place for project collaboration and meeting proceedings. For example, after a meeting, results are published on the meeting workspace site. The front-end Web server updates the associated meeting workspace whenever the user updates the meeting. Recurring meetings are meetings that occur periodically over a period of time. There can be exceptions to these meetings. For example, a meeting can occur every week on Monday at 10 A.M. except on the 15th of each month when it occurs at 11 A.M.

1.3.6 Navigation Structure

The **navigation structure** is a hierarchical representation of related URLs. Every site MUST have one associated navigation structure. The purpose of the navigation structure is to define and render links to related **URLs**. Each element in the hierarchy is a **navigation node**. A navigation node can be based either on the files and folders in the **site collection** or on literal URL strings. The user can create, enumerate, modify, delete, and organize these navigation nodes in the navigation structure.

1.3.7 Tree View

A site can contain a number of subsites, lists, and folders. A tree view is a graphical user interface that provides a hierarchical view of the information. A tree view provides a top-down enumeration of the content in the site. Each node can have several subitems. They can be expanded to reveal the subitems and collapsed to hide the subitems. The user can navigate to the containing **subsites**, lists, and folders within a node.

1.3.8 Web Discussions

An important part of collaboration is discussing and reviewing the contents of a document. To enable discussions, the front-end Web server provides the ability for the user to comment on documents. Users can view the comments, modify them, or delete them. The comments are stored in the back-end database server; the front-end Web server uses the protocol to create and manipulate the comments as requested by the user.

1.4 Relationship to Other Protocols

The following diagram shows the transport stack that the protocol uses:

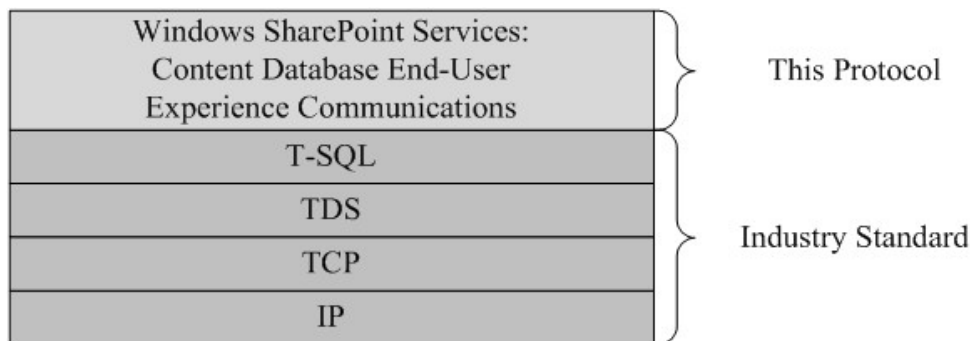


Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

The operations described by the protocol operate between a client and a back-end database server on which the databases are stored. The client is expected to know the location and connection information for the databases.

This protocol requires that the protocol client has appropriate permissions to call the **stored procedures** stored on the back-end database server.

1.6 Applicability Statement

This protocol is intended for use by protocol clients and protocol servers that are both connected by high-bandwidth, low-latency network connections.

1.7 Versioning and Capability Negotiation

- **Security and Authentication Methods:** This protocol supports the SSPI and SQL Authentication with the Protocol Server role specified in [\[MS-TDS\]](#).

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

[\[MS-TDS\]](#) is the transport protocol used to call the stored procedures, query SQL tables, return result codes, and return **result sets**.

2.2 Common Data Types

This section contains common definitions used by this protocol.

2.2.1 Simple Data Types and Enumerations

2.2.2 Simple Data Types

2.2.2.1 Alert Status

An integer value that specifies the status of the **alert subscription**. It MUST be one of the following:

Value	Description
0	On
1	Off
2	Error

2.2.2.2 Alert

An integer value that specifies the type of alert subscription. It MUST be one of the following:

Value	Description
0	List alert
1	Item alert
2	Custom alert

2.2.2.3 Meetings Event

An integer value that describes the type of event or meeting. Its value MUST be one of the following:

Value	Description
0	A single nonrecurring event.
1	A recurring event
2	An exception from the recurrence series.
3	An exception that has been deleted.

Value	Description
4	An exception from the recurrence series<1>.
5	A single instance of a meetings workspace.

2.2.2.4 Navigation Node

An integer value that defines whether the navigation node in the navigation structure is based on the document identifier of a **document** within the site collection or on a literal URL. It MUST be one of the following values:

Value	Description
0	The navigation node is based on a document identifier.
1	The navigation node is based on a URL.

2.2.2.5 Notification Frequency

This specifies the frequency of the alert notifications. It is an integer value and MUST be listed in the following table.

Value	Description
0	Immediate alert: Notification is fired immediately after a change.
1	Daily alert: Notification is fired once per day.
2	Weekly alert: Notification is fired once per week.

2.2.2.6 RecurrenceId

This element contains an identifier specifying a particular instance of a recurring meeting.

2.2.2.7 Sequence

This element contains a sequence or revision number of a **meeting instance**. This is defined in [\[RFC2445\]](#).

2.2.2.8 UID

This element contains a unique identifier specifying a meeting. This MUST be a valid **unique identifier (UID)** string as used by calendaring objects and defined in [\[RFC2445\]](#). For a recurring meeting, each meeting instance shares a common UID. To distinguish between these meeting instances, each recurring meeting instance is also assigned a recurrence identifier. This is typically the date on which that meeting instance occurs in the series that was calculated with the time zone of the meeting organizer.

2.2.3 Bit Fields and Flag Structures

2.2.3.1 Alert Event Type

The integer mask for the types of **events** on which to fire the alert notification. It MUST be one of the following:

Value	Description
-1	All event types
1	Items are added
2	Items are modified
4	Items are deleted
9	Items are restored
4080	Discussion related

2.2.3.2 Special Alert Flags

This flag specifies whether the alert subscription is an **always notify alert** or a **system alert**.

Value	Description
0x40000000	Indicates that the alert is an always notify alert.
0x20000000	Indicates that the alert is a system alert.

2.2.4 Enumerations

None.

2.2.5 Binary Structures

None.

2.2.6 Result Sets

2.2.6.1 EmailAliases Result Set

EmailAliases result set MUST contain e-mail aliases and associated **list identifier**, **site identifier**, and **site collection identifier**. All e-mail aliases returned MUST NOT be NULL. The **T-SQL** syntax for the result set is as follows:

```
tp_EmailAlias      nvarchar(128),
SiteId             uniqueidentifier,
tp_WebId           uniqueidentifier,
tp_ID              uniqueidentifier;
```

tp_EmailAlias: The string name of the e-mail alias.

SiteId: The identifier of the **site collection** to which the e-mail alias belongs.

tp_WebId: The identifier of the site to which the e-mail alias belongs.

tp_ID: The identifier of the list to which the e-mail alias belongs.

2.2.6.2 Nav ACLs Result Set

Returns the ACLs of all the unique security scopes of documents in the navigation structure of the site. This result set **MUST** be returned. The number of rows in this result set depends on the values of *@NavParentWebId* and *@Inherited*.

Value of <i>@NavParentWebId</i>	Value of <i>@Inherited</i>	Number of rows returned
NULL	0	One row for each distinct security scope for the navigation nodes of the site that are other than the security scope of the site. If there are no distinct security scopes for the navigation nodes of the site other than the security scope, then this result set MUST return 0 rows.
NULL	1	One row for each distinct security scope for the navigation nodes of the site.
NOT NULL	0/1	One row for each distinct security scope for the navigation nodes of the site, one row for each distinct security scope for the navigation nodes of the navigational parent site , and one row for the security scope of the navigational parent site.

The T-SQL syntax for the result set is as follows:

```
ScopeId          uniqueidentifier,  
Acl              image,  
AnonymousPermMask  bigint;
```

ScopeId: The identifier of the security scope.

Acl: The binary serialization of the ACL for this security scope.

AnonymousPermMask: The WSS Rights Mask, as described in [\[MS-WSSFO\]](#) section 2.2.2.13, that indicates the rights granted to an **anonymous user**, or a user who has no specific rights for this security scope.

2.2.6.3 Nav Data Result Set

Returns information about the specified navigation node. This result set **MUST** always be returned. If the navigation node specified by *@Eid* exists for the site, this **MUST** return one row; otherwise it **MUST** return no rows. The T-SQL syntax for the result set is as follows:

```
Eid              int,  
EidParent        int,  
ElementType      tinyint,  
{Url}            nvarchar(260),  
Name             nvarchar(256),  
NodeMetainfo     image,  
NonNavPage       bit,
```

```
NavSequence          bit,  
DateLastModified    datetime;
```

Eid: The **navigation node element identifier** of the navigation node.

EidParent: The identifier of the parent navigation node.

ElementType: This represents the Navigation Node Type (Section [2.2.2.4](#)) of the navigation node.

{Url}: The URL to which the navigation node points. This value MUST NOT be NULL if the Eid value is not 0.

Name: The **display name** of the navigation node.

NodeMetainfo: A binary serialization of the navigation node **metadata**.

NonNavPage: A bit representing whether the navigation node will be filtered out when rendering the navigation structure. If the bit is set to 1, then the navigation node SHOULD be filtered out [<2>](#). If it is set to 0, it MUST NOT be filtered out.

NavSequence: A bit representing whether the navigation node represents a **link bar**. If this navigation node represents a link bar, this bit MUST be set to 1; otherwise it MUST be set to 0.

ChildOfSequence: A bit representing whether the navigation node is a child navigation node of a link bar. If it does, this bit MUST be set to 1; otherwise it MUST be set to 0

DateLastModified: The time in **Coordinated Universal Time (UTC)** when the navigation node information was last modified.

2.2.6.4 Nav Children Result Set

Returns the navigation node element identifier of all the subnodes of the navigation node. This result set MUST be returned, and it MUST contain one row for each navigation node that is a child of the specified navigation node. If the navigation node has no subnodes, this MUST return no rows. The T-SQL syntax for the result set is as follows:

```
Eid          int;
```

Eid: The navigation node element identifier of the child navigation node.

2.2.7 Tables and Views

2.2.7.1 AllUserData Table

Specified in [\[MS-WSSFO\]](#) section 2.2.6.3.

2.2.7.2 UserInfo Table

Specified in [\[MS-WSSFO\]](#) section 2.2.7.10.

2.2.8 XML Structures

None.

2.2.8.1 Namespaces

None.

2.2.8.2 Simple Types

None.

2.2.8.3 Complex Types

None.

2.2.8.4 Elements

None.

2.2.8.5 Attributes

None.

2.2.8.6 Groups

None.

2.2.8.7 Attribute Groups

None.

3 Protocol Details

3.1 Back-end Database Server Details

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The descriptions, in sections 3.1.4.x, of the parameters for stored procedures and the fields of result sets imply the kinds and types of data that **MUST** be stored by the front-end Web servers and back-end database servers. In particular, note the following:

- The back-end database server **MUST** store, for each site, an integer that expresses the number of days to extend or reduce the current month in Hijri calendars.

3.1.1.1 Alerts

An alert subscription is a persistent request on the server for notifications (alerts) that a particular document or list has been modified. The user can also request notifications only for certain kinds of modifications. For example, an alert can be requested if the value of a specific field changes to a particular value, or if the modifier of the item is a specific user. The alert subscription contains the information that determines when to generate a notification, and how to deliver the notification. When a document or a list item changes, the server checks whether an alert subscription is present for this change. If the server finds a matching subscription, then it sends an e-mail notification to the user.

Each alert subscription has a **GUID** and a user associated with it. In addition, it has the site, Web, list, and item information required to identify the object for whose changes the user has requested notification. The protocol allows for enumeration of alert subscriptions associated with a user or Web. When the front-end Web server receives a request to modify or delete the subscription, it uses the protocol to perform the action on the back-end database server. There are two kinds of subscriptions: immediate and scheduled. The server sends alert notifications for immediate subscriptions as soon as the changes occur; notifications for scheduled subscriptions are sent at the requested time as specified by the Notification Frequency in the alert subscription.

The changes to the objects are stored as events in the event cache table. (For information about event cache table, see [\[MS-WSSDLIM\]](#).) The server matches the events in the event cache with the list of immediate and scheduled subscriptions and sends notifications for events that match subscriptions.

3.1.1.2 HTML Translate Cache

The HTML translate cache is used to store Web-viewable versions of files. Because many files have the ability to contain other files, such as a binary file containing images, the HTML version of a single original file often is a collection of multiple files. The core file for a set of translated files is called the main file. The other files, such as an **embedded image** file, are supporting files.

Files are retrieved from the HTML translate cache by specifying the **directory name** and **leaf name** of the original file as well as the name of the translated file. The name of the translation of the main file can be retrieved using `proc_HTGidFromOrig` (Section [3.1.4.36](#)). The names of the translated

versions of the supporting files cannot be retrieved from the HTML translate cache and so they MUST either be recorded or they MUST be derivable from the requesting URL.

Here is an example of a system where a translated name for a supporting file can be derived from the URL. The URL to the main file is

<Any Unique Path>/~/<Main File TransName>

Because the name of the translated main file can be retrieved using `proc_HTGuidFromOrig` (Section [3.1.4.36](#)), the knowledge of the path to the original file is sufficient to render that URL. The name for the translated main file is <GUID>/HtmlView.htm.

The GUID is generated when the translated files are placed into the HTML translate cache, but is not recorded by the user of the cache. The name for the translated supporting file is

<GUID>/<Subfolder Name>/<Supporting File Leaf Name>

Subfolder Name is a subfolder name supplied by the component which performed the translation to HTML, and all links to supporting files within the main file are relative links of the form <Subfolder Name>/<Supporting File Leaf Name>.

The browser, when it sees a link to a supporting file while parsing the main file, will use the relative link within the main file to construct a request to the server with the URL

<Any Unique Path>/~/<Main File TransName>/<Subfolder Name>/Supporting File Leaf Name>

Looking at the previous example, one can see that the name for the translated supporting file is the part of the path after the tilde. Thus, all the files can be retrieved using `proc_HTGuidFromOrig` (Section [3.1.4.36](#)) and `proc_HTGetFile` (Section [3.1.4.35](#)) without need for the front-end Web server recording the name of any of the translated files.

3.1.1.3 Meetings

Users can create calendar events and meetings in a site. They are stored as list items inside a list which is of base type Events. The meeting time, location, the title of the meeting, attendees and other information pertaining to the meeting are stored in the list item in the back-end database server. Each meeting is uniquely identified by a [UID](#). Meetings can also be created as recurring meetings. The recurrence series is specified by the recurrence data which is expressed in **XML** format ([\[MS-OUTSPS\]](#) section 2.2.4.2 and section 2.2.4.5). The recurring meeting is stored as a single item in the containing list, and it contains the recurrence data. Each instance of a recurring meeting is identified by the [RecurrenceId](#). Exceptions can be created for recurring meetings. An exception is a single appointment that overrides one instance of a recurring appointment. The beginning date-time of the overridden instance is the replacement date-time of the exception. Any property of a recurrence that is missing from an exception is assumed to have the same value as other instances of the recurrence. This means an exception with no location to a recurrence with location="xyz" has a location "xyz". All properties of an exception override properties of a recurrence. Exceptions are in the time zone of the recurrence they belong to. Each exception is stored separately in the back-end database server. A meeting workspace site can be associated with each meeting. A meeting workspace can be associated with multiple single instance meetings or one recurring meeting.

3.1.1.4 Navigation Structure

The navigation structure is a hierarchical representation of related URLs. Each element in the hierarchy is a navigation node. A navigation node can be based on either the files and folders in the site collection or the literal URL strings. Each navigation node MUST have a unique navigation node

element identifier for itself, a navigation node element identifier pointing to its parent in the hierarchy, a display name, a bit representing whether it is a link bar, and a bit representing whether it SHOULD be hidden when rendering. A navigation node MAY also have metadata associated with it.

When adding navigation nodes, temporary navigation node element identifiers MAY be used. navigation node element identifiers from 1 to 999 MUST be considered temporary by the back-end database server. All calls to add, move, or update navigation nodes using temporary navigation node element identifiers MUST contain a base value. This MUST be obtained by a call to `proc_NavStructAllocateEidBlockWebId` (Section [3.1.4.44](#)). The base value MUST be used to generate valid navigation node element identifiers from the temporary navigation node element identifiers.

Calls from the front-end Web server to the back-end database server to add, move, update, and delete navigation nodes can be batched together into a single transaction. In that case, a single call to `proc_NavStructAllocateEidBlockWebId` (Section [3.1.4.44](#)) MUST be made first, and the `@@EidBase` output parameter MUST be used as the base value for all subsequent calls in the batch.

The navigation node with navigation node element identifier 1000 MUST NOT be a child of a link bar and MUST point to the **home page** of the site. If a new navigation node pointing to the home page of the site and of navigation node Type 0 is being added NOT as a child of a link bar, its navigation node element identifier MUST be changed to 1000. If this add is being done as part of a batch, the navigation node element identifier that would have been generated for this Node MUST be returned as the `@@EidHome` output parameter for `proc_NavStructAddNewNodeByDocId` (Section [3.1.4.42](#)) and `proc_NavStructAddNewNodeByUrl` (Section [3.1.4.43](#)). This parameter MUST be used by all following SQL queries in the batch, as the `@EidHome` parameter for `proc_NavStructMoveNode` (Section [3.1.4.48](#)) and `proc_PutWebNavStructNode` (Section [3.1.4.51](#)) and as the `@@EidHome` parameter for `proc_NavStructAddNewNodeByDocId` (Section [3.1.4.42](#)) and `proc_NavStructAddNewNodeByUrl` (Section [3.1.4.43](#)).

A part of the navigation structure of a site can be inherited by its subsites. This part is referred to as the **inheritable navigation structure**. Particular parts of the navigation structure and the inheritable navigation structure MAY be cached for faster access.

3.1.1.5 TreeView

Data in the site is stored in a hierarchical manner. A site can contain subsites, lists, and **document libraries**. Lists and document libraries can contain folders. A folder can contain other folders inside it. The Tree View tries to present a graphical representation of this structure. The protocol enables the front-end Web server to retrieve data according to the hierarchy.

3.1.1.6 Web Discussions

The protocol enables the user to comment and discuss documents stored on the server. The comments are stored in the back-end database server. They are not part of the document. Each of the comments has an identifier and is associated with a document. Other information stored in the server include the author of the comment, the date of last modification, and a client specified bookmark that enables the client to place the comment in the right position in the document. In the case of threaded discussions, comments have a parent comment associated with them. The parent comment is identified through its identifier that is stored in the reply.

3.1.2 Timers

An execution timeout timer on the protocol server governs the execution time for any requests. The amount of time is specified by a timeout value that is configured on the protocol server for all connections.

3.1.3 Initialization

A connection that uses the underlying protocol layers that are specified in Section [1.4](#) MUST be established before using this protocol as specified in [\[MS-TDS\]](#).

3.1.4 Message Processing Events and Sequencing Rules

The T-SQL syntax for each stored procedure and result set, and the variables they are composed of, is defined in the [\[MSDN-TSQL-Ref\]](#) protocol. In the T-SQL syntax, the variable name is followed by the type of the variable which can optionally have a length value in brackets and can optionally have a default value indicated by an equals sign followed by the default value. Unless otherwise specified, all stored procedures defined in this section are located in the content database.

For definitional clarity, a name has been assigned to any **column** in the result sets that do not have a defined name in their current implementation. This does not affect the operation of the result set, as the ordinal position of any column with no defined name is expected by the front-end Web server. Such names are designated in the text using curly braces in the form `{name}`.

3.1.4.1 `proc_AddDocComment`

The **`proc_AddDocComment` stored procedure** is called to add a **Web discussion comment** to a document. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_AddDocComment (
    @SiteId          uniqueidentifier,
    @DocFullUrl      nvarchar(260),
    @ParentId        int,
    @CommentId       nvarchar(255),
    @Bookmark        nvarchar(127),
    @Author          nvarchar(255),
    @Subject         nvarchar(255),
    @Status          smallint,
    @Comment         ntext,
    @Size            int,
    @UserId          int,
    @UserTitle       nvarchar(255),
    @Created         datetime
);
```

@SiteId: The identifier of the site collection containing the specified document.

@DocFullUrl: The **store-relative URL** to the document.

@ParentId: The identifier of the Web discussion comment being replied to. If this Web discussion comment is not a reply, this SHOULD be `0<3>`.

@CommentId: A protocol client specified identifier for the Web discussion comment.

@Bookmark: A protocol client specified reference to the place in the document to which this Web discussion comment refers.

@Author: A protocol client specified name for the user that is adding this Web discussion comment.

@Subject: The subject of this Web discussion comment. This parameter MUST NOT be NULL.

@Status: A flag value that indicates the status of a Web discussion comment.

@Comment: The body text of the Web discussion comment. This parameter MUST NOT be NULL.

@Size: The size in bytes of this Web discussion comment that is available for use in quota management. This parameter MUST NOT be NULL.

@UserId: A **user identifier** for the user adding the Web discussion comment.

@UserTitle: The display name of the user that is adding this Web discussion comment.

@Created: The time in UTC when this Web discussion comment was created. If this is NULL, the database server MUST use the current time in UTC.

Return Values: **proc_AddDocComment** returns an integer **return code** which MUST be listed in the following table:

Value	Description
0	Successful completion.
3	The document was not found in the specified site collection or <i>@SiteId</i> was NULL.
212	The specified site collection has been locked and writes are disallowed.
1816	The quota for the specified site collection has been exceeded.

Result Sets: The stored procedure MUST return 0 or 1 result sets as follows:

3.1.4.1.1 AddDocComment Result Set

Returns information about the Web discussion comment that was added. If the return code is 0, the Add Doc Comment result set MUST be returned and MUST contain one row. If the return code is nonzero, the protocol server SHOULD NOT return this result set but if returned the protocol client MUST ignore it<4>. The result set is defined using T-SQL syntax, as follows:

```
{Created}          datetime,  
{Id}              int;
```

Created: The time in UTC when this Web discussion comment was added.

Id: The identifier of the newly added Web discussion comment.

3.1.4.2 proc_AddSubscription

The **proc_AddSubscription** stored procedure is called to add an alert. A list level alert is an alert which gets triggered for changes to all the list items in a list or when new list items are added to the list. An item level alert is an alert that is triggered for changes to a single list item. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_AddSubscription(  
    @SiteId          uniqueidentifier,  
    @NotifyFreq      int,  
    @NotifyTime      datetime,  
    @NotifyTimeUTC   datetime,  
    @Status          tinyint,  
    @WebId           uniqueidentifier,  
    @ListId          uniqueidentifier,
```



```

@ItemId                int,
@EventType             int,
@UserId               int,
@SiteUrl              nvarchar(136),
@WebUrl               nvarchar(256),
@WebTitle             nvarchar(255),
@WebLanguage          int,
@WebLocale            int,
@WebTimeZone          smallint,
@WebTime24            bit,
@WebCalendarType      smallint,
@WebAdjustHijriDays  smallint,
@ListUrl              nvarchar(256),
@ListTitle            nvarchar(255),
@ListBaseType        int,
@ListServerTemplate  int,
@AlertTitle           nvarchar(1000),
@AlertType           int,
@AlertTemplateName  nvarchar(256),
@Filter               nvarchar(4000),
@BinaryFilter        varbinary(1024),
@Properties           ntext,
@ItemDocUrl          nvarchar(260),
@ItemDocId           uniqueidentifier,
@Max                 int,
@NewSubId            uniqueidentifier = NULL OUTPUT,
@UserEmail           nvarchar(255) = NULL OUTPUT,
@ItemName            nvarchar(255) = NULL OUTPUT
);

```

@SiteId: The identifier of the site collection in which the list or item exists. *@SiteId* MUST be a GUID and MUST NOT be NULL.

@NotifyFreq: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification.

@NotifyTime: The time at which the alert is supposed to fire. This MUST NOT be NULL.

@NotifyTimeUTC: The time in UTC at which the alert is supposed to fire. This MUST NOT be NULL.

@Status: An Alert Status Type (Section [2.2.2.1](#)) that specifies an integer indicating the status of the alert subscription.

@WebId: The GUID of the site in which the list or item exist. This MUST NOT be NULL.

@ListId: The GUID of the list for a list level alert or the list containing the list item for an item level alert. This MUST NOT be NULL.

@ItemId: The identifier of the list item for an item level alert. This MUST NOT be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is item and MUST be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is list.

@EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification.

@UserId: The identifier of the user as described in userInfo table for whom the alert will be created. This MUST NOT be NULL.

@SiteUrl: The URL of the site collection in which the list exists.

@WebUrl: The URL of the site in which the list exists.

@WebTitle: The title of the site in which the list or item exists.

@WebLanguage: The **language code identifier (LCID)** of the display language of the site containing the list. This MUST NOT be NULL.

@WebLocale: An integer representing the LCID of the site **locale**. This MUST NOT be NULL.

@WebTimeZone: An integer representing the Time Zone of the site. This MUST NOT be NULL.

@WebTime24: A Boolean indicating if the Time is in a **24-hour clock notation** format or a **12-hour clock notation** format. This MUST NOT be NULL.

@WebCalendarType: The calendar format for the site. This MUST NOT be NULL.

@WebAdjustHijriDays: The number of days to extend or reduce the current month in Hijri calendars on the site with which this subscription is associated. This value MUST NOT be NULL.

@ListUrl: The URL of the list.

@ListTitle: The title of the list.

@ListBaseType: The base type of the list with which this subscription is associated. See [\[MS-WSSFO\]](#) section 2.2.2.13.

@ListServerTemplate: The server template of the list. See [\[MS-WSSFO\]](#) section 2.2.3.10 for details.

@AlertTitle: The title of the alert for display in UI.

@AlertType: An integer whose lower 8 bits specifies the type of the alert as specified in Alert Type (Section [2.2.2.2](#)). This MUST also contain the Special Alert Flags (Section [2.2.3.2](#)) for an always notify alert or a system alert. This MUST NOT be NULL.

@AlertTemplateName: The name of the alert template which will be used for formatting the notification.

@Filter: The XML **query** filter used to further filter out results from the matching events for the list and list item.

@BinaryFilter: An implementation-specific binary format of the XML Query filter specified by the *@Filter* parameter.

@Properties: An XML blob representing the properties of the alert.

@ItemDocUrl: The store-relative URL of the list item for which the alert is being added.

@ItemDocId: The identifier of the list item in the Docs View.

@Max: The maximum number of alerts allowed in a content database.

@NewSubId: The GUID of the alert that was added returned as an output parameter.

@UserEmail: The e-mail address of the user who will receive notifications returned as an output parameter.

@ItemName: The name of the item for item level alerts returned as an output parameter.

Return Values: The stored procedure returns an integer return code which MUST be in the following table:

Value	Description
0	Successful completion.
31	General Error
68	Subscription quota is being exceeded

Result Sets: MUST NOT return any result sets.

3.1.4.3 proc_CheckMeetingInstance

The **proc_CheckMeetingInstance** stored procedure is called to determine whether a given meeting instance exists in the meeting workspace and is instantiated. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_CheckMeetingInstance(  
    @WebId                uniqueidentifier,  
    @ReturnSeriesItem     bit,  
    @InstanceID           int,  
    @IsInstantiated       bit OUTPUT,  
    @DTStartUTC           datetime OUTPUT  
);
```

@WebId: The identifier of an instance of a meeting workspace. *@WebId* MUST NOT be NULL.

@ReturnSeriesItem: Specifies whether or not to return the meeting series item as a result set. 0 means that no result set will be returned.

@InstanceID: Specifies the identifier of the meeting instance to be checked. This MUST NOT be NULL.

@IsInstantiated: Specifies if the meeting is valid and instantiated. 0 means that the meeting is not instantiated; 1 means that the meeting is instantiated. This value is filled and returned to the caller.

@DTStartUTC: Specifies the beginning date of the meeting, in UTC. This value is filled and returned to the caller.

Return Values: An integer which MUST be in the following table:

Value	Description
0	Successful completion. For an instance of a recurring meeting that has not been instantiated, output parameters <i>@IsInstantiated</i> and <i>@DTStartUTC</i> will be NULL
2	Three possible failure conditions: <ul style="list-style-type: none">▪ Meeting instance found, but not instantiated.▪ Meeting Instance is a valid instance of the recurring meeting but not instantiated and

Value	Description
	ReturnSeriesItem = 0. <ul style="list-style-type: none"> No valid meeting event data found.
13	Unable to retrieve the meeting list. Output parameters <i>@IsInstantiated</i> and <i>@DTStartUTC</i> will be NULL.

Result Sets: MUST return a single result set on success when all of the following is true:

- The *ReturnSeriesItem* parameter is set to 1.
- The meeting instance is a recurring event.
- The meeting instance is not already instantiated.

3.1.4.3.1 Meeting Event Result Set

proc_CheckMeetingInstance returns a result set which MUST contain one item which is the meeting item that represents a series.

```

bit3                bit,
tp_InstanceID      int,
int1                int,
uniqueidentifier1   uniqueidentifier,
datetime3           datetime,
datetime1           datetime,
datetime2           datetime,
int2                int,
ntext1              ntext,
ntext2              ntext,
ntext3              ntext,
datetime5           datetime,
int3                int;

```

For more details on the columns, see [\[MS-WSSFO\]](#).

bit3: Specifies whether this is a standalone or recurring meeting. 0 = standalone meeting, 1 = recurring meeting. Because this stored procedure is for a recurring meeting, this **field** MUST be 1 for the **row** returned.

tp_InstanceID: The identifier for this meeting instance. For a recurring meeting instance this is the beginning date of the meeting in UTC. For the default instance of a recurring meeting this field will be 0. Because the result set returned is always for the default instance associated with the specified meeting workspace, this MUST return a 0.

int1: Specifies the event type for this meeting as defined by Meetings Event Type (Section [2.2.2.3](#)). By definition this field will be 1 in the row returned, indicating a recurring event.

uniqueidentifier1: Specifies the unique identifier for this meeting series.

datetime3: Specifies the recurrence identifier of the meeting instance. For a recurring meeting instance this is the beginning date of the meeting series. For a meeting instance exception, this is the original starting **datetime** of the meeting instance. For the default meeting instance or standalone meetings, this field is NULL. Because the result set returned by this stored procedure is

always for the default instance associated with specified meeting workspace, this field MUST return a NULL.

datetime1: The beginning date for this meeting instance.

datetime2: The end date for this meeting instance. For the default instance which is returned by this stored procedure, this field is set to the maximum SQL datetime.

int2: Specifies the duration of a meeting instance, in the recurring meeting series, in seconds.

ntext1: For the default meeting instance, this is the XML fragment describing the recurrence **rule** for the recurring meeting series.

ntext2: This returns any recurrence rule specified for the recurring meeting.

ntext3: This property returns a rule or repeating pattern defined for an exception to the specified recurring meeting.

datetime5: If the series has been suppressed, this is the date it has been suppressed until. When this field is NULL it indicates that the series has not been suppressed.

int3: The enumeration value representing the time zone used when creating this meeting. See [MS-WSSFO], section Time Zone Identifier for more detail.

3.1.4.4 **proc_CheckNavStructContainsPage**

The **proc_CheckNavStructContainsPage** stored procedure is called to determine if a document in a site exists in the navigation structure of the site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_CheckNavStructContainsPage (
    @SiteId          uniqueidentifier,
    @DirName         nvarchar(256),
    @LeafName        nvarchar(128)
);
```

@SiteId: The site collection identifier for a site collection that contains the specified document.

@DirName: The store-relative form directory name of the requested document. If no slash is in the store-relative form URL, the value MUST be an empty string.

@LeafName: The store-relative form leaf name of the requested document.

Return Values: The stored procedure returns an integer return code which MUST be in the following table:

Value	Description
0	The document does not exist in the navigation structure.
1	The document exists in the navigation structure.

Result Sets: MUST NOT return any result sets.

3.1.4.5 `proc_DeleteAllCommentsOfAllDocs`

The **`proc_DeleteAllCommentsOfAllDocs`** stored procedure is called to delete all Web discussion comments from a folder or site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_DeleteAllCommentsOfAllDocs (  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier,  
    @DocDir          nvarchar (256)  
);
```

@SiteId: The identifier of the site collection containing the comments to be **deleted**.

@WebId: The identifier of the site containing the comments to be deleted.

@DocDir: The store-relative URL to the folder whose Web discussion comments are to be deleted. If the parameter is NULL, all Web discussion comments in the site MUST be deleted.

Return Values: **`proc_DeleteAllCommentsOfAllDocs`** returns an integer return code which MUST be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.6 `proc_DeleteDocComment`

The **`proc_DeleteDocComment`** stored procedure is called to delete a Web discussion comment from a document. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_DeleteDocComment (  
    @SiteId          uniqueidentifier,  
    @DocFullUrl      nvarchar (260),  
    @Id              int,  
    @UserTitle       nvarchar (255)  
);
```

@SiteId: The identifier of the site collection containing the specified document.

@DocFullUrl: The store-relative URL to the document.

@Id: The identifier of the Web discussion comment to be deleted.

@UserTitle: The display name of the user that is deleting this Web discussion comment.

Return Values: **`proc_DeleteDocComment`** returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
3	Either the document does not exist in the specified site collection, or the Web discussion comment was not found with the specified document.

Result Sets: MUST NOT return any result sets.

3.1.4.7 proc_DeleteSubscription

The **proc_DeleteSubscription** stored procedure is called to delete an alert. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_DeleteSubscription(  
    @SiteId          uniqueidentifier,  
    @SubId           uniqueidentifier,  
    @UserId          int  
);
```

@SiteId: Specifies the identifier of the site collection. This MUST NOT be NULL.

@SubId: Specifies the identifier of the subscription. This MUST NOT be NULL.

@UserId: The identifier as described in UserInfo table of the user for whom the alert has been created.

Return Values: **proc_DeleteSubscription** returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
31	General Error

Result Sets: MUST NOT return any result sets.

3.1.4.8 proc_DeleteSubscriptionJunctionEntries

The **proc_DeleteSubscriptionJunctionEntries** stored procedure is called to clean up junction entries for up to 256 subscription identifiers after the relevant alerts, either immediate or scheduled, have been reported via e-mail. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_DeleteSubscriptionJunctionEntries(  
    @f001          uniqueidentifier = NULL,  
    @f002          uniqueidentifier = NULL,  
    @f003          uniqueidentifier = NULL,  
    @f004          uniqueidentifier = NULL,  
    @f005          uniqueidentifier = NULL,  
    @f006          uniqueidentifier = NULL,  
    @f007          uniqueidentifier = NULL,  
    @f008          uniqueidentifier = NULL,  
    @f009          uniqueidentifier = NULL,  
    @f010          uniqueidentifier = NULL,  
    @f011          uniqueidentifier = NULL,  
    @f012          uniqueidentifier = NULL,  
    @f013          uniqueidentifier = NULL,  
    @f014          uniqueidentifier = NULL,  
    @f015          uniqueidentifier = NULL,  
    @f016          uniqueidentifier = NULL,  
    @f017          uniqueidentifier = NULL,  
    @f018          uniqueidentifier = NULL,  
    @f019          uniqueidentifier = NULL,  
    @f020          uniqueidentifier = NULL,
```

@f021 uniqueidentifier = NULL,
@f022 uniqueidentifier = NULL,
@f023 uniqueidentifier = NULL,
@f024 uniqueidentifier = NULL,
@f025 uniqueidentifier = NULL,
@f026 uniqueidentifier = NULL,
@f027 uniqueidentifier = NULL,
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@f245 uniqueidentifier = NULL,
@f246 uniqueidentifier = NULL,
@f247 uniqueidentifier = NULL,
@f248 uniqueidentifier = NULL,
@f249 uniqueidentifier = NULL,
@f250 uniqueidentifier = NULL,
@f251 uniqueidentifier = NULL,
@f252 uniqueidentifier = NULL,
@f253 uniqueidentifier = NULL,
@f254 uniqueidentifier = NULL,
@f255 uniqueidentifier = NULL,
@f256 uniqueidentifier = NULL

```
);
```

@fnnn: The subscription identifier for which the subscription data is to be deleted.

Return Values: The stored procedure MUST return an integer return code that MUST be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.9 **proc_EnumDoclibsFileDlg**

The **proc_EnumDoclibsFileDlg** stored procedure is called to enumerate certain properties of document library items in a given site.

The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_EnumDoclibsFileDlg(  
    @WebId                uniqueidentifier,  
    @Collation            nvarchar(32),  
    @GetTemplate          bit,  
    @OnlyLibsWithTemplates bit,  
    @IncludeSubWebs      bit,  
    @Scopes               image = NULL  
);
```

@WebId: The identifier of the site containing the requested document libraries.

@Collation: A Windows collation name string identifier which follows the format for the T-SQL COLLATE clause. This MUST be the collation name of one of the valid **collation order** values, with the case-insensitive and accent-sensitive flags set. For example, the default collation order is 25, Latin1_General, which has a SQL collation name string of "Latin1_General_CI_AS" with the case-insensitive and accent-sensitive flags set.

The results in the result set are ordered on the 'Title' column using this collation.

@GetTemplate: A bit flag (0 or 1) that specifies whether the result set should include document templates associated with the library. A value of 1 specifies that Templates MUST be included.

@OnlyLibsWithTemplates: A bit flag (0 or 1) that specifies whether the result set should include only document libraries that have an associated template. A value of 1 specifies the result set MUST include only libraries that have an associated template.

@IncludeSubWebs: A bit flag (0 or 1) that indicates whether the result set should return properties of document libraries or properties of subsites within the site specified by *@WebId*. A value of 1 indicates that only the properties of subsites are included in the result set. A value of 0 indicates only properties of document libraries are included in the result set.

@Scopes: A binary image containing a concatenation of one or more GUIDs, represented as 16-byte binary strings with no delimiters. These 16-byte fragments MUST be convertible to uniqueidentifiers. There MAY be any number of 16-byte fragments in the image. The results in the result set are restricted to document libraries matching these GUID values.

Return Values: The stored procedure MUST return an integer error code that MUST be 0.

Result Sets: MUST return one of the result sets as follows.

- If *@GetTemplate* is set to 1, then the EnumerationWithTemplates result set MUST be returned.
- If *@GetTemplate* is set to 0, then the EnumerationWithoutTemplates result set MUST be returned.

3.1.4.9.1 EnumerationWithTemplates Result Set

EnumerationWithTemplates contains certain properties of document libraries in a given site.

This result set MUST contain one or more rows if there are matches for the specified parameters, and MUST contain 0 rows if there were no matches for the specified parameters.

The T-SQL syntax for the result set is as follows:

```
tp_RootFolder          nvarchar(386),
Docs#Template#FullUrl  nvarchar(386),
tp_Title               nvarchar(255),
tp_Description         ntext,
tp_ImageUrl            nvarchar(255);
```

tp_RootFolder: The store-relative URL of the root folder of the document library. This value MUST not be NULL.

Docs#Template#FullUrl: The full store-relative URL for the Template if applicable. If *@IncludeSubWebs* is set to 1, this value MUST be NULL.

tp_Title: The title of the document library.

tp_Description: The description of the document library.

tp_ImageUrl: The store-relative URL of an image used to represent the document library.

3.1.4.9.2 EnumerationWithoutTemplates Result Set

EnumerationWithoutTemplates contains certain properties of document libraries in a given site.

This result set MUST contain one or more rows if there are matches for the specified parameters, and MUST contain 0 rows if there were no matches for the specified parameters.

The T-SQL syntax for the result set is as follows:

```
tp_RootFolder          nvarchar(386),
tp_Title               nvarchar(255),
tp_Description         ntext,
tp_ImageUrl            nvarchar(255);
```

tp_RootFolder: The store-relative URL of the root folder of the document library. This value MUST not be NULL.

tp_Title: The title of the document library.

tp_Description: The description of the document library.

tp_ImageUrl: The store-relative URL of an image used to represent the document library.

3.1.4.10 **proc_EnumEmailAliases**

The **proc_EnumEmailAliases** stored procedure is invoked to retrieve the collection of all e-mail aliases. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_EnumEmailAliases();
```

Return Values: The stored procedure returns an integer return code which MUST be 0.

Result Sets: The stored procedure MUST return a single EmailAliases result set as defined in the EmailAliases Result Set (Section [2.2.6.1](#)).

3.1.4.11 **proc_EnumEmailAliasesBySite**

The **proc_EnumEmailAliasesBySite** stored procedure is called to retrieve the collection of all e-mail aliases from the specified site collection. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_EnumEmailAliasesBySite(  
    @SiteId          uniqueidentifier  
);
```

@SiteId: The GUID of the site collection

Return Values: The stored procedure returns an integer return code which MUST be 0.

Result Sets: The stored procedure MUST return a single EmailAliases result set as defined in the EmailAliases Result Set (Section [2.2.6.1](#)).

3.1.4.12 **proc_EnumSubscribedSites**

The **proc_EnumSubscribedSites** stored procedure is called to enumerate the sites that have been subscribed for alerts. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_EnumSubscribedSites(  
    @NotifyFreq      int,  
    @bAlwaysNotify   bit  
);
```

@NotifyFreq: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification.

@bAlwaysNotify: A bit that indicates that the alert is always a notify alert.

Return Values: The stored procedure MUST return an integer return code that MUST be 0.

Result Sets: The stored procedure MUST return one result set as follows:

3.1.4.12.1 **SubscribedSites Result Set**

The SubscribedSites result set returns list of site identifiers that have been subscribed. The SubscribedSites result set will contain zero or more rows. The T-SQL syntax for the result set is as follows:

```
SiteId                uniqueidentifier;
```

SiteId: The unique identifier for the site.

3.1.4.13 **proc_GetAlertsSqmData**

The **proc_GetAlertsSqmData** stored procedure is called to retrieve the number of alerts. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetAlertsSqmData();
```

Return Values: **proc_GetAlertsSqmData** returns an integer return code. The protocol client MUST ignore the return code returned by the **proc_GetAlertsSqmData** stored procedure.

Result Sets: MUST return a single row result set.

3.1.4.13.1 **AlertsSqmData Result Set**

AlertsSqmData contains the number of alerts that exist. The AlertsSqmData result set MUST contain one row of five columns. The AlertsSqmData result set is defined using T-SQL syntax, as follows:

```
{NumImmedAlerts}      int,  
{NumSchedAlerts}     int,  
{NumAlertsItem}      int,  
{NumAlertsList}      int,  
{NumAlertsCustom}    int;
```

{NumImmedAlerts}: The number of immediate alerts. This value MUST NOT be NULL.

{NumSchedAlerts}: The number of scheduled alerts. This value MUST NOT be NULL.

{NumAlertsItem}: The number of alerts of type SPAlertType.Item. This value MUST NOT be NULL.

{NumAlertsList}: The number of alerts of type SPAlertType.List. This value MUST NOT be NULL.

{NumAlertsCustom}: The number of alerts of type SPAlertType.Custom. This value MUST NOT be NULL.

3.1.4.14 **proc_GetDefaultMtgInstance**

The **proc_GetDefaultMtgInstance** stored procedure is called to return a result set of all meeting instances tied to the supplied meeting workspace. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetDefaultMtgInstance(  
    @WebId                uniqueidentifier  
);
```

@WebId: The identifier of an instance of a meeting workspace.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion. result set MUST have one or more records.
13	No meetings list was found on the workspace specified by <i>@WebId</i> . The result set does NOT have any records and MUST be empty.

Result Sets: The stored procedure MUST return a single result set on successful completion.

3.1.4.14.1 Default Meeting Instance Result Set

The default meeting instance result set contains the properties of the meeting instance.

The T-SQL syntax for the result set is as follows:

```

bit3                bit,
tp_InstanceID      int,
int1                int,
uniqueidentifier1   uniqueidentifier,
datetime3           datetime,
datetime1           datetime,
datetime2           datetime,
int2                int,
ntext1              ntext,
ntext2              ntext,
ntext3              ntext,
datetime5           datetime,
int3                int;

```

For more details on the columns, see [\[MS-WSSFO\]](#).

bit3: Specifies whether this is a standalone or recurring meeting. 0 = standalone meeting, 1 = recurring meeting.

tp_InstanceID: Specifies the identifier for this meeting instance in the meeting workspace. For a recurring meeting instance this is the beginning date of the meeting in UTC. For the default instance of a recurring meeting this field will be 0. For standalone meetings, this field is 1 for the first instance and is incremented by 1 for every additional standalone meeting associated with the same meeting workspace.

int1: Specifies the event type for this meeting as defined by Meetings Event Type (Section [2.2.2.3](#)).

uniqueidentifier1: Specifies the unique identifier for this meeting series.

datetime3: Specifies the recurrence identifier of the meeting instance. For a recurring meeting instance this is the beginning date of the meeting series. For a meeting instance exception, this is the original starting date and time of the meeting instance. For the default meeting instance or standalone meetings, this field MUST be NULL.

datetime1: Specifies the beginning date for this meeting instance.

datetime2: The end datetime for this meeting instance. For the default instance of a recurring meeting tied to a meeting workspace, this is set to the maximum sql datetime.

int2: Specifies the duration of a meeting instance, in seconds. For recurring meetings tied to workspaces, only the default instance has the duration field set to the duration of an instance in the

series. This field is NULL for all other instances in the series. For standalone meetings tied to workspaces, this field is set to NULL.

ntext1: For the default meeting instance, this is the XML fragment describing the recurrence rule for the recurring meeting series. For individual meeting instances this field MUST be NULL.

ntext2: This returns any recurrence rule specified for the recurring meeting. When specified, this field is set for the default instance and for other instances, this is NULL.

ntext3: This property returns a rule or repeating pattern defined for an exception to the specified recurring meeting.

datetime5: If the series has been suppressed, this is the date it has been suppressed until. When this field is NULL it indicates that the series has not been suppressed.

int3: The enumeration value representing the time zone used when creating this meeting. See [MS-WSSFO], Time Zone Identifier, for more detail.

3.1.4.15 proc_GetDocComments

The **proc_GetDocComments stored procedure** is called to return the set of Web discussion comments associated with a document. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetDocComments (
    @DocSiteId      uniqueidentifier,
    @DocFullUrl     nvarchar(260)
);
```

@DocSiteId: The identifier of the site collection containing the specified document.

@DocFullUrl: The store-relative URL to the document.

Return Values: An integer which MUST be 0.

Result Sets: MUST return one GetDocComments result set.

3.1.4.15.1 GetDocComments Result Set

Returns the set of Web discussion comments associated with this document. This result set contains one row for each associated Web discussion comment. The T-SQL syntax for the result set is as follows:

```
Id                int,
Parent            int,
CommentId        nvarchar(255),
Bookmark         nvarchar(127),
Author           nvarchar(255),
tp_Login         nvarchar(255),
Subject          nvarchar(255),
Created          datetime,
Status           smallint,
Comment          ntext;
```

Id: The identifier of the Web discussion comment.

Parent: The identifier of the parent Web discussion comment. If the parent Web discussion comment does not exist, this MUST be 0.

CommentId: The identifier, specified by the protocol client, of the Web discussion comment.

Bookmark: A protocol client specified reference to the place in the document to which the Web discussion comment refers.

Author: A protocol client specified name for the user that added the Web discussion comment.

tp_Login: The **login name** of the user that added the Web discussion comment.

Subject: The subject of the Web discussion comment.

Created: The time in UTC when this Web discussion comment was created.

Status: A flag value that indicates the status of a Web discussion comment.

Comment: The body text of the Web discussion comment.

3.1.4.16 **proc_GetEventDataAndSubscriptionFilters**

The **proc_GetEventDataAndSubscriptionFilters** stored procedure is called to return events and subscriptions. The T-SQL syntax, as follows:

```
PROCEDURE proc_GetEventDataAndSubscriptionFilters ();
```

Return Values: The stored procedure MUST return an integer error code that MUST be 0.

Result Sets: **proc_GetEventDataAndSubscriptionFilters** MUST return 3 result sets as follows.

3.1.4.16.1 **Events Result Set**

The Events result set MUST be returned. The T-SQL syntax for the result set is follows:

ListId	uniqueidentifier
Id	bigint,
EventData	image,
EventType	int,
ItemId	int,
ItemName	nvarchar(255),
ItemFullUrl	nvarchar(260),
ModifiedBy	nvarchar(255),
TimeLastModified	datetime,
ACL	image,
SiteId	uniqueidentifier;

ListId: The identifier of the list to which the event is related to.

Id: The identifier of the event.

EventData: Contains implementation-specific event data significant to the front-end Web server but otherwise opaque to the back-end database server.

EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

ItemId: The identifier of the list item from the list specified by **ListId** that is associated with the event. This MUST NOT be NULL.

ItemName: A string that represents the name of the list item chosen by the application. This parameter MUST be set to NULL if the application does not use this information.

ItemFullUrl: The URL to the list item which is associated with the event, or the URL to the site, or NULL if the application already specifies the list item using *@ItemId*.

ModifiedBy: A string which specifies the login name of a **security principal(2)** who added this event.

TimeLastModified: A time stamp in UTC that specifies the time when this event happened. This value MUST NOT be NULL.

Acl: A byte array in the **access control list (ACL)** format. If this parameter is NULL, the **ACL** will be inferred from the security scope specified by the *@ScopeId* parameter. If the *ScopeId* parameter is also NULL, the ACL will be inferred from the *@ItemFullUrl*.

SiteId: The GUID for the site collection under which the event has occurred. This value MUST NOT be NULL.

3.1.4.16.2 Subscriptions Result Set

Subscriptions returns the subscriptions for the site and list of the events returned by the Events result set. The Subscriptions result set MUST be returned. The T-SQL syntax is as follows:

```
Id                uniqueidentifier,
BinaryFilter      varbinary(1024),
ListId            uniqueidentifier,
ItemId            int,
AlertType         int,
EventType         int,
{NotifyFreq}     int,
WebTimeZone       smallint,
WebId             uniqueidentifier,
UserId            int,
SiteId            uniqueidentifier,
SiteUrl           nvarchar(136),
WebUrl            nvarchar(256),
Properties        ntext;
```

Id: The identifier of this subscription. The value MUST NOT be NULL.

BinaryFilter: The compiled binary syntax query in **Collaborative Application Markup Language (CAML)** for a filter to apply to the event data of the event associated with this subscription.

ListId: The list identifier with which with which this subscription is associated. The value MUST NOT be NULL.

ItemId: The **item identifier** of the item with which this subscription is associated. This MUST NOT be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is item and MUST be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is list.

AlertType: An integer whose lower eight bits specifies the type of the alert as specified in Alert Type (Section [2.2.2.2](#)). This MUST also contain the Special Alert Flags (Section [2.2.3.2](#)) for an always notify alert or a system alert.

EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

{NotifyFreq}: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification. This value MUST NOT be NULL.

WebTimeZone: The time zone of the site with which with which this subscription is associated. The value MUST NOT be NULL.

WebId: The site identifier with which with which this subscription is associated. The value MUST NOT be NULL.

UserId: The user identifier with which this subscription is associated. The value MUST NOT be NULL.

SiteId: The site identifier with which this subscription is associated. The value MUST NOT be NULL.

SiteUrl: The URL of the site collection with which this subscription is associated. The value MUST NOT be NULL.

WebUrl: The URL of the site with which this subscription is associated. The value MUST NOT be NULL.

Properties: The properties associated with this subscription.

3.1.4.16.3 UTCTime Result Set

UTCTime returns the current time in UTC. The UTCTime result set will always return and MUST have one row. The T-SQL syntax is as follows:

```
{CurrentDateTime}    datetime;
```

{CurrentDateTime}: Contains current date and time in UTC.

3.1.4.17 proc_GetExceptionIDs

The **proc_GetExceptionIDs** stored procedure retrieves the instances of a recurring meeting series that are exceptions. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetExceptionIDs(
    @ListID                uniqueidentifier,
    @ViewStart             datetime,
    @ViewEnd               datetime,
    @EventTypeColName     nvarchar(64),
    @EventTypeRowOrdinal  int = 0,
    @UIDColName           nvarchar(64),
    @UIDRowOrdinal        int = 0,
    @RecurrenceIDColName nvarchar(64),
    @RecurrenceIDRowOrdinal int = 0,
    @StartDateColName     nvarchar(64),
    @StartDateRowOrdinal  int = 0,
    @EndDateColName       nvarchar(64),
    @EndDateRowOrdinal    int = 0
);
```

@ListId: A GUID of a recurrence list (1).

@ViewStart: A datetime field corresponding to the beginning date of the recurring meeting.

@ViewEnd: A datetime field corresponding to the End Date of the recurring meeting.

@EventTypeColName: The name of the column in the UserData View that corresponds to the event type. For more information about UserData View, see [\[MS-WSSFO\]](#).

@EventTypeRowOrdinal: The ordinal of a list (1) item that MUST contain the event type information specified inside the column identified by the parameter *@EventTypeColName*.

@UIDColName: The name of the column in the UserData View that corresponds to the unique identifier of the recurring meeting series.

@UIDRowOrdinal: The name of the row ordinal in the UserData View that MUST contain the unique identifier of the recurring meeting series in the column specified by the *@UIDColName* parameter.

@RecurrenceIDColName: The name of the column in the UserData View that corresponds to the recurrence identifier of the recurring meeting series.

@RecurrenceIDRowOrdinal: The ordinal of list (1) item that MUST contain the recurrence identifier specified inside the column identified by the parameter *@RecurrenceIDColName*.

@StartDateColName: The name of the column in the UserData View that corresponds to the beginning date of the recurring meeting series. For more information about UserData, see [\[MS-WSSFO\]](#).

@StartDateRowOrdinal: The ordinal of list (1) item that MUST contain the beginning date information specified inside the column identified by the parameter *@StartDateColName*.

@EndDateColName: The name of the column in the UserData View that corresponds to the End Date of the recurring meeting series.

@EndDateRowOrdinal: The ordinal of list (1) item that MUST contain the End Date information specified inside the column identified by the parameter *@EndDateColName*.

Return Values: An integer which MUST be 0.

Result Sets: MUST return one result set when the column names and row ordinals specified for the input parameters exist in the UserData View and map to a valid entity in the UserData View.

3.1.4.17.1 Exceptions Result Set

Exceptions result set returns the identifier information for a recurring meeting and a recurrence identifier to specifically identify a meeting instance. The Exceptions result set contains one or more rows if the specified input parameters map to valid meeting series exceptions in the UserData View. For more information about UserData View, see [\[MS-WSSFO\]](#).

The Exceptions result set is empty if the column names and ordinals specified as input parameters exist in the UserData View but do not map to any valid meeting series exceptions.

The T-SQL syntax for the result set is as follows:

```
{UID}                uniqueidentifier,
```

```
{RecurrenceID}          datetime;
```

{UID}: The name of the column is specified the **@ UIDColName** parameter. The identifier of the recurring meeting.

{RecurrenceID}: The name of the column is specified the **@RecurrenceIDColName** parameter. The datetime information that makes up the recurrence identifier.

3.1.4.18 **proc_GetFutureExceptionIDsForUID**

The **proc_GetFutureExceptionIDsForUID** stored procedure returns all the future instances in a recurring meeting series that are exceptions. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetFutureExceptionIDsForUID(  
    @ListID                uniqueidentifier,  
    @DTStamp               datetime,  
    @UID                   uniqueidentifier,  
    @EventTypeColName     nvarchar(64),  
    @EventTypeRowOrdinal  int = 0,  
    @UIDColName           nvarchar(64),  
    @UIDRowOrdinal        int = 0,  
    @RecurrenceIDColName  nvarchar(64),  
    @RecurrenceIDRowOrdinal int = 0,  
    @StartDateColName     nvarchar(64),  
    @StartDateRowOrdinal  int = 0  
);
```

@ListId: A GUID of a recurrence list (1).

@DTStamp: The procedure will return all the instance exceptions occurring after the datetime specified in this parameter.

@UID: This is the unique identifier of the recurring meeting series.

@EventTypeColName: The name of the column in the UserData View that corresponds to the event type. For more information about UserData, see [\[MS-WSSFO\]](#).

@EventTypeRowOrdinal: The ordinal of list (1) item that MUST contain the event type information specified inside the column identified by the parameter *@EventTypeColName*.

@UIDColName: The name of the column in the UserData View that corresponds to the unique identifier of the recurring meeting series.

@UIDRowOrdinal: The name of the row ordinal in the UserData View that MUST contain the unique identifier of the recurrence instance in the column specified by the *@UIDColName* parameter.

@RecurrenceIDColName: The name of the column in the UserData View that corresponds to the recurrence identifier of the recurring meeting series.

@RecurrenceIDRowOrdinal: The ordinal of list (1) item that MUST contain the recurrence identifier specified inside the column identified by the parameter *@RecurrenceIDColName*.

@StartDateColName: The name of the column in the UserData View that corresponds to the beginning date of the recurring meeting series.

@StartDateRowOrdinal: The ordinal of list (1) item that MUST contain the beginning date information specified inside the column identified by the parameter *@StartDateColName*.

Return Values: An integer which MUST be 0.

Result Sets: MUST return one result set when the column names and row ordinals specified for the input parameters exist in the UserData View and map to a valid entity in the UserData View.

3.1.4.18.1 Exceptions Result Set

Exceptions returns the list item identifier for a meeting instance and the recurrence identifier that identifies the specific meeting instance. The Exceptions result set contains one or more rows if the specified input parameters map to valid meeting series exceptions in the UserData View. The Exceptions result set is empty if the column names and ordinals specified as input parameters, exist in the UserData View but do not map to any valid meeting series exceptions. (For more information about UserData View, see [\[MS-WSSFO\]](#).) The T-SQL syntax for the result set is as follows:

```
tp_ID          int
{RecurrenceID} datetime;
```

tp_ID: The list item identifier of the meeting instance.

{RecurrenceID}: The datetime information that makes up the recurrence identifier. The name of the column is specified the **@RecurrenceIDColName** parameter.

3.1.4.19 proc_GetItemCountPerInstance

The **proc_GetItemCountPerInstance** stored procedure is called to retrieve the number of items within a given list associated with the given instance identifier. Items in the given list with a NULL instance identifier are also included in the count. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetItemCountPerInstance (
    @ListID          uniqueidentifier,
    @InstanceID      int,
    @ItemCount       int = OUTPUT
);
```

@ListId: Specifies the identifier of the list in which the items exist.

@InstanceID: Specifies the identifier of the instance for which the caller is requesting the item count.

@ItemCount: The number of items in the specified list with the specified instance identifier or NULL. This value is filled and returned to the caller.

Return Values: An integer which MUST be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.20 proc_GetListAndChildrenNSInfo

The **proc_GetListAndChildrenNSInfo** stored procedure is called to retrieve subfolders of a **root folder** for a list, or subfolders of a folder. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_GetListAndChildrenNSInfo (
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @ListId          uniqueidentifier,
    @FolderId       uniqueidentifier,
    @GetList         bit = 0,
    @GetSubFolders  bit = 0
);

```

@SiteId: Specifies the identifier of the site collection in which the list exists.

@WebId: Specifies the identifier of the site in which the list exists.

@ListId: Specifies the identifier of the list in which the list containing the root folder and subfolders exist.

@FolderId: Specifies the identifier of the folder in which the subfolders exist. If *@GetList* is set to 1, this input parameter **MUST** be ignored.

@GetList: If this parameter is 1, a ListRootFolderNSInfo result set **MUST** be returned. The default value is 0.

@GetSubFolders: If this parameter is 1, a ChildFoldersNSInfo result set **MUST** be returned. The default value is 0

Return Values: *proc_GetListAndChildrenNSInfo* returns an integer return code which **MUST** be 0

Result Sets: *proc_GetListAndChildrenNSInfo* **MUST** return zero, one, or two result sets based on the values of the input parameters *@GetList* and *@GetSubFolders*.

Returned Result Set	Input Parameter
1 ListRootFolderNSInfo result set	<i>@GetList=1</i>
1 ChildFoldersNSInfo result set	<i>@GetSubFolders=1</i>

3.1.4.20.1 ListRootFolderNSInfo Result Set

The ListRootFolderNSInfo result set contains a row set containing the information about the list, its root folder and the permissions on its root folder. The ListRootFolderNSInfo result set **MUST** be returned when *@GetList* is set to 1 and it **MUST** contain one row if the list can be found. It **MUST** contain no rows if the specified list doesn't exist. The T-SQL syntax for the result set is as follows:

```

tp_Title          nvarchar(255),
tp_Id             uniqueidentifier,
FullUrl          nvarchar(260),
tp_RootFolder    uniqueidentifier,
tp_ImageUrl      nvarchar(255),
tp_BaseType      int,
tp_ServerTemplate int,
FolderChildCount int,
Acl              image,
AnonymousPermMask bigint;

```


tp_Title: The title of the list whose subfolders will be returned.

tp_Id: The list identifier of the list.

FullUrl: The complete store-relative URL for the root folder for the list.

tp_RootFolder: The identifier of the root folder for the list.

tp_ImageUrl: The URL of the image used to represent the list.

tp_BaseType: The base type of the list as defined in [\[MS-WSSFO\]](#), section List Base Type.

tp_ServerTemplate: The List Server Template enumeration value of the list template that defines the base structure of the list. See [\[MS-WSSFO\]](#), section List Server Template for more detail.

FolderChildCount: The number of subfolders of the root folder.

Acl: The binary serialization of the ACL for the root folder. The format is specified in [\[MS-WSSFO\]](#) section 2.2.3.3.

AnonymousPermMask: The permissions mask that applies to an anonymous user of the root folder. The format is specified in [\[MS-WSSFO\]](#) section 2.2.2.27.

3.1.4.20.2 ChildFoldersNSInfoResult Set

ChildFoldersNSInfo returns a rowset containing the subfolders of the root folder for the specified list if *@GetList* is set to 1 or the folder specified by *@FolderId* if *@GetList* is set to 0. The *ChildFoldersNSInfo* result set MUST be returned when the input parameter *@GetSubFolders* is set to 1. The *ChildFoldersNSInfo* result set MUST contain 0 or more rows. The T-SQL syntax for the result set is as follows:

```
LeafName          nvarchar(128),
Id                uniqueidentifier,
{FullUrl}         nvarchar(260),
FolderChildCount  int,
ListId           uniqueidentifier,
Acl              image,
AnonymousPermMask bigint;
```

LeafName: The store-relative form leaf name of the subfolder.

Id: The identifier of the subfolder.

{FullUrl}: The complete store-relative form URL for the root folder for the subfolder.

FolderChildCount: The number of subfolders of the subfolder.

ListId: The list identifier of the list containing the folder.

Acl: The binary serialization of the ACL for the folder. The format is specified in [\[MS-WSSFO\]](#) section 2.2.3.3.

AnonymousPermMask: The permissions mask that applies to an anonymous user of the subfolder. The format is specified in [\[MS-WSSFO\]](#) section 2.2.2.27.

3.1.4.21 proc_GetMatchingSubscriptionsData

The **proc_GetMatchingSubscriptionsData** stored procedure is called to return subscriptions.

The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetMatchingSubscriptionsData (  
    @f001    uniqueidentifier = NULL,  
    @f002    uniqueidentifier = NULL,  
    @f003    uniqueidentifier = NULL,  
    @f004    uniqueidentifier = NULL,  
    @f005    uniqueidentifier = NULL,  
    @f006    uniqueidentifier = NULL,  
    @f007    uniqueidentifier = NULL,  
    @f008    uniqueidentifier = NULL,  
    @f009    uniqueidentifier = NULL,  
    @f010    uniqueidentifier = NULL,  
    @f011    uniqueidentifier = NULL,  
    @f012    uniqueidentifier = NULL,  
    @f013    uniqueidentifier = NULL,  
    @f014    uniqueidentifier = NULL,  
    @f015    uniqueidentifier = NULL,  
    @f016    uniqueidentifier = NULL,  
    @f017    uniqueidentifier = NULL,  
    @f018    uniqueidentifier = NULL,  
    @f019    uniqueidentifier = NULL,  
    @f020    uniqueidentifier = NULL,  
    @f021    uniqueidentifier = NULL,  
    @f022    uniqueidentifier = NULL,  
    @f023    uniqueidentifier = NULL,  
    @f024    uniqueidentifier = NULL,  
    @f025    uniqueidentifier = NULL,  
    @f026    uniqueidentifier = NULL,  
    @f027    uniqueidentifier = NULL,  
    @f028    uniqueidentifier = NULL,  
    @f029    uniqueidentifier = NULL,  
    @f030    uniqueidentifier = NULL,  
    @f031    uniqueidentifier = NULL,  
    @f032    uniqueidentifier = NULL,  
    @f033    uniqueidentifier = NULL,  
    @f034    uniqueidentifier = NULL,  
    @f035    uniqueidentifier = NULL,  
    @f036    uniqueidentifier = NULL,  
    @f037    uniqueidentifier = NULL,  
    @f038    uniqueidentifier = NULL,  
    @f039    uniqueidentifier = NULL,  
    @f040    uniqueidentifier = NULL,  
    @f041    uniqueidentifier = NULL,  
    @f042    uniqueidentifier = NULL,  
    @f043    uniqueidentifier = NULL,  
    @f044    uniqueidentifier = NULL,  
    @f045    uniqueidentifier = NULL,  
    @f046    uniqueidentifier = NULL,  
    @f047    uniqueidentifier = NULL,  
    @f048    uniqueidentifier = NULL,  
    @f049    uniqueidentifier = NULL,  
    @f050    uniqueidentifier = NULL,  
    @f051    uniqueidentifier = NULL,  
    @f052    uniqueidentifier = NULL,
```

@f053 uniqueidentifier = NULL,
@f054 uniqueidentifier = NULL,
@f055 uniqueidentifier = NULL,
@f056 uniqueidentifier = NULL,
@f057 uniqueidentifier = NULL,
@f058 uniqueidentifier = NULL,
@f059 uniqueidentifier = NULL,
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@f107 uniqueidentifier = NULL,
@f108 uniqueidentifier = NULL,
@f109 uniqueidentifier = NULL,
@f110 uniqueidentifier = NULL,
@f111 uniqueidentifier = NULL,

@f112 uniqueidentifier = NULL,
@f113 uniqueidentifier = NULL,
@f114 uniqueidentifier = NULL,
@f115 uniqueidentifier = NULL,
@f116 uniqueidentifier = NULL,
@f117 uniqueidentifier = NULL,
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@f119 uniqueidentifier = NULL,
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@f151 uniqueidentifier = NULL,
@f152 uniqueidentifier = NULL,
@f153 uniqueidentifier = NULL,
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@f206 uniqueidentifier = NULL,
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@f208 uniqueidentifier = NULL,
@f209 uniqueidentifier = NULL,
@f210 uniqueidentifier = NULL,
@f211 uniqueidentifier = NULL,
@f212 uniqueidentifier = NULL,
@f213 uniqueidentifier = NULL,
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@f217 uniqueidentifier = NULL,
@f218 uniqueidentifier = NULL,
@f219 uniqueidentifier = NULL,
@f220 uniqueidentifier = NULL,
@f221 uniqueidentifier = NULL,
@f222 uniqueidentifier = NULL,
@f223 uniqueidentifier = NULL,
@f224 uniqueidentifier = NULL,
@f225 uniqueidentifier = NULL,
@f226 uniqueidentifier = NULL,
@f227 uniqueidentifier = NULL,
@f228 uniqueidentifier = NULL,
@f229 uniqueidentifier = NULL,

```

@f230      uniqueidentifier = NULL,
@f231      uniqueidentifier = NULL,
@f232      uniqueidentifier = NULL,
@f233      uniqueidentifier = NULL,
@f234      uniqueidentifier = NULL,
@f235      uniqueidentifier = NULL,
@f236      uniqueidentifier = NULL,
@f237      uniqueidentifier = NULL,
@f238      uniqueidentifier = NULL,
@f239      uniqueidentifier = NULL,
@f240      uniqueidentifier = NULL,
@f241      uniqueidentifier = NULL,
@f242      uniqueidentifier = NULL,
@f243      uniqueidentifier = NULL,
@f244      uniqueidentifier = NULL,
@f245      uniqueidentifier = NULL,
@f246      uniqueidentifier = NULL,
@f247      uniqueidentifier = NULL,
@f248      uniqueidentifier = NULL,
@f249      uniqueidentifier = NULL,
@f250      uniqueidentifier = NULL,
@f251      uniqueidentifier = NULL,
@f252      uniqueidentifier = NULL,
@f253      uniqueidentifier = NULL,
@f254      uniqueidentifier = NULL,
@f255      uniqueidentifier = NULL,
@f256      uniqueidentifier = NULL
);

```

@fnnn: The subscription identifier for which subscription data is to be returned.

Return Values: MUST be 0.

Result Sets: MUST return a single result set as follows:

3.1.4.21.1 MatchingSubscriptionsData Result Set

MatchingSubscriptionsData contains the subscriptions for any of the identifiers defined by the **@fnnn** arguments. The MatchingSubscriptionsData result set MUST be returned. The T-SQL syntax for the result set is as follows:

WebId	uniqueidentifier,
UserEmail	nvarchar(255),
UserId	int,
SiteUrl	nvarchar(136),
WebUrl	nvarchar(256),
ListUrl	nvarchar(256),
WebTitle	nvarchar(255),
WebLanguage	int,
WebLocale	int,
WebTimeZone	smallint,
WebTime24	bit,
WebCalendarType	smallint,
WebAdjustHijriDays	smallint,
ListId	uniqueidentifier,
ListTitle	nvarchar(255),
ListBaseType	int,

ListServerTemplate	int,
Id	uniqueidentifier,
ItemId	int,
EventType	int,
Binaryfilter	varbinary(1024),
Properties	ntext,
AlertTitle	nvarchar(1000),
AlertType	int,
AlertTemplateName	nvarchar(255);

WebId: The site identifier with which this subscription is associated. The value MUST NOT be NULL.

UserEmail: The e-mail address of the user with which this subscription is associated. The value MUST NOT be NULL.

UserId: The user identifier with which this subscription is associated. The value MUST NOT be NULL.

SiteUrl: The URL of the site with which this subscription is associated. The value MUST NOT be NULL.

WebUrl: The URL of the site with which this subscription is associated. The value MUST NOT be NULL.

ListUrl: The URL of the list with which this subscription is associated. The value MUST NOT be NULL.

WebTitle: The title of the site with which this subscription is associated.

WebLanguage: The language of the site with which this subscription is associated. The value MUST NOT be NULL.

WebLocale: The locale of the site with which this subscription is associated. The value MUST NOT be NULL.

WebTimeZone: The time zone of the site with which this subscription is associated. The value MUST NOT be NULL.

WebTime24: The time format which specifies whether the time displayed for the site with which this subscription is associated is in 12-hour or 24-hour format. The value MUST NOT be NULL.

WebCalendarType: Contains calendar type (for non-Gregorian calendars) of the site with which this subscription is associated. The value MUST NOT be NULL.

WebAdjustHijriDays: The number of days to extend or reduce the current month in Hijri calendars on the site with which this subscription is associated. For more information, see Abstract Data Model (Section [3.2.1](#)). The value MUST NOT be NULL.

ListId: The list identifier with which this subscription is associated. The value MUST NOT be NULL.

ListTitle: The title of the list with which this subscription is associated. The value MUST NOT be NULL.

ListBaseType: The base type of the list with which this subscription is associated. The value MUST NOT be NULL.

ListServerTemplate: The server template of the list with which this subscription is associated. The value MUST NOT be NULL.

Id: The identifier of this subscription. The value MUST NOT be NULL.

ItemId: The item identifier with which this subscription is associated. This MUST NOT be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is item and MUST be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is list.

EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

Binaryfilter: Contains compiled binary syntax query in **CAML** for a filter to apply to the alert associated with this subscription.

Properties: The properties associated with this subscription.

AlertTitle: The title of the alert of the subscription.

AlertType: An integer whose lower eight bits specifies the type of the alert as specified in Alert Type (Section [2.2.2.2](#)). This MUST also contain the Special Alert Flags (Section [2.2.3.2](#)) for an always notify alert or a system alert.

AlertTemplateName: The name of the alert template of the subscription.

3.1.4.22 **proc_GetMeetingInstanceDataForICal**

The **proc_GetMeetingInstanceDataForICal** stored procedure is called to retrieve the data needed to construct **iCalendar** information from a specified meeting instance in a specified meeting workspace.

The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetMeetingInstanceDataForICal (
    @WebId                uniqueidentifier,
    @InstanceID           int,
    @OrganizerID          int OUTPUT,
    @UID                  nvarchar(255) OUTPUT,
    @DTStartUTC           datetime OUTPUT,
    @DTEndUTC             datetime OUTPUT,
    @DTStampUTC           datetime OUTPUT,
    @Sequence             int OUTPUT
);
```

@WebId: Specifies the identifier of the site in which the meeting series exists. *@WebId* MUST NOT be NULL.

@InstanceID: Specifies the identifier of the meeting instance for which data is being requested. This MUST NOT be NULL.

@OrganizerID: Specifies the identifier of the meeting organizer of this meeting instance. This parameter is returned to the caller.

@UID: The unique identifier for this meeting instance. This parameter is returned to the caller.

@DTStartUTC: The starting datetime for the meeting instance, in UTC. This parameter is returned to the caller.

@DTEndUTC: The ending datetime the for the meeting instance, in UTC. This parameter is returned to the caller.

@DTStampUTC: The timestamp datetime for the creation of the meeting instance, in UTC. This parameter is returned to the caller.

@Sequence: The revision **sequence number (1)** of the meeting instance. This property defines the revision sequence number (1) of the meeting instance within a sequence of revisions. This parameter is returned to the caller.

Return Values: An integer which MUST be in the following table:

Value	Description
0	Successful completion.
2	No meeting instances found for the given <i>@WebId</i> and <i>@InstanceID</i> .
13	Two possible failure conditions: <ul style="list-style-type: none">▪ No meetings list found on the meeting workspace specified by <i>@WebId</i>.▪ <i>@OrganizerID</i> or <i>@UID</i> for the meeting instance is set to NULL

Result Sets: MUST NOT return any result sets.

3.1.4.23 **proc_GetRecurrenceSeriesData**

The **proc_GetRecurrenceSeriesData** stored procedure is called to get Series UID, beginning date, and Master Series identifier for the given meeting series list, meeting series item, and meeting event type.

The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetRecurrenceSeriesData (
    @ListID                uniqueidentifier,
    @ItemID                int,
    @EventType             int,
    @EventTypeColName      nvarchar(64),
    @EventTypeRowOrd       int = 0,
    @UIDColName            nvarchar(64),
    @UIDRowOrd             int = 0,
    @StartDateColName      nvarchar(64),
    @StartDateRowOrd       int = 0,
    @MasterIDColName       nvarchar(64),
    @MasterIDRowOrd        int = 0,
    @SeriesUID             uniqueidentifier OUTPUT,
    @StartDate             datetime OUTPUT,
    @MasterSeriesID        int OUTPUT
);
```

@ListId: Specifies the identifier of a recurrence list.

@ItemID: Specifies the identifier of the meeting series item.

@EventType: Specifies the event type to retrieve as defined by Meetings Event Type (Section [2.2.2.3](#)).

@EventTypeColName: Specifies the name of the column in the UserData View of the content database that corresponds to the event type. For more information about UserData View, see [\[MS-WSSFO\]](#).

@EventTypeRowOrd: The ordinal of list item that MUST contain the event type information specified inside the column identified by the parameter *@EventTypeColName*.

@UIDColName: The name of the column in the UserData View of the content database that corresponds to the unique identifier of the Instance.

@UIDRowOrd: The name of the row ordinal in the UserData View of the content database that MUST contain the unique identifier of the Instance in the column specified by the *@UIDColName* parameter.

@StartDateColName: The name of the column in the UserData View of the content database that corresponds to the beginning date of the recurring instance.

@StartDateRowOrd: The ordinal of list item that MUST contain the beginning date information specified inside the column identified by the parameter *@StartDateColName*.

@MasterIDColName: The name of the column in the UserData View of the content database that corresponds to the master item identifier of the recurring instance.

@MasterIDRowOrd: The ordinal of list item that MUST contain the master item identifier specified inside the column identified by the parameter *@MasterIDColName*.

@SeriesUID: Specifies the meeting series identifier. This value is filled and returned to the caller.

@StartDate: Specifies the starting datetime for the series data. This value is filled and returned to the caller.

@MasterSeriesID: Specifies the master series identifier. This value is filled and returned to the caller. This value MAY be NULL if the specified meeting series item is not associated with a master item identifier in the UserData View.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion. <i>@SeriesUID</i> and <i>@StartDate</i> MUST NOT be NULL.
4005	No records found that match the input parameters. All output parameters will be NULL.

Result Sets: MUST NOT return any result sets.

3.1.4.24 **proc_GetVersionIndependentMetaInfo**

The **proc_GetVersionIndependentMetaInfo** stored procedure is invoked to get the version-independent metadata of a document. **proc_GetVersionIndependentMetaInfo** is defined using T-SQL syntax, as follows:

```
PROCEDURE proc_GetVersionIndependentMetaInfo (  
    @SiteId          uniqueidentifier,  
    @DirName         nvarchar(256),
```

```

        @LeafName          nvarchar(128)
    );

```

@SiteId: The site collection identifier of the site collection containing the requested document.

@DirName: The directory name of the requested document.

@LeafName: The leaf name of the requested document.

Return Values: The client MUST ignore the return code returned by the stored procedure.

Result Sets: The stored procedure MUST return one result set as follows:

3.1.4.24.1 VersionMetaInfo Result Set

VersionMetaInfo returns the metadata and the metadata version of a document. The VersionMetaInfo result set MUST contain one row. The VersionMetaInfo result set is defined using T-SQL syntax, as follows:

```

UnVersionedMetaInfo          image,
UnVersionedMetaInfoVersion  int;

```

UnVersionedMetaInfo: A **metadict** holding all version-independent metadata for the document.

UnVersionedMetaInfoVersion: An integer value that tracks the version of the UnVersionedMetaInfo metadata.

3.1.4.25 proc_GetWebAndChildrenNSInfo

The **proc_GetWebAndChildrenNSInfo** stored procedure is called to retrieve a set of properties related to a site, its subsites, its document libraries and its lists. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_GetWebAndChildrenNSInfo(
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @GetThisWeb      bit,
    @GetSubwebs      bit,
    @GetDocLibs      bit,
    @GetLists        bit
);

```

@SiteId: The identifier of the site collection containing the site to retrieve.

@WebId: The identifier of the site to retrieve.

@GetThisWeb: If this parameter is 1, a SiteNSInfo result set of the site specified by *@WebId* is returned. The default value is 0

@GetSubwebs: If this parameter is 1, a SiteNSInfo result set of the subsites under the site specified by *@WebId* is returned. The default value is 0.

@GetDocLibs: If this parameter is 1, a ListNSInfo result set of document library of the site specified by @WebId is returned. If @GetLists is set to 1, the rows in this result set are merged with the rows in the result set of lists. The default value is 0.

@GetLists: If this parameter is 1, a ListNSInfo result set that contains the lists except document libraries under the site specified by @SiteId and @WebId is returned. If @GetDocLibs is set to 1, the rows in this result set are merged with the rows in the result set of document library. The default value is 0.

Return Values: `proc_GetWebAndChildrenNSInfo` returns an integer return code which MUST be 0:

Result Sets: `proc_GetWebAndChildrenNSInfo` MUST return 0 to 3 result sets based on the values of the four bit flag input parameters: @GetThisWeb, @GetSubWeb, @GetDocLibs and @GetLists.

Returned Result Set	Input Parameter
1 SiteNSInfo result set	@GetThisWeb=1
1 SiteNSInfo result set	@GetSubWeb=1
1 ListNSInfo result set	@GetDocLibs=1 OR @GetLists=1

3.1.4.25.1 SiteNSInfo Result Set

SiteNSInfo result set returns a set of properties related to a specific site. The SiteNSInfo result set specified by @GetThisWeb MUST return one row if the site specified by @SiteId and @WebId can be found. It MUST return no rows if the site cannot be found. The SiteNSInfo result set specified by @GetSubWebs MUST return zero or multiple rows. The T-SQL syntax for the stored procedure is as follows:

```
Title          nvarchar(255),
Id             uniqueidentifier,
FullUrl        nvarchar(256),
WebTemplate    int,
ProvisionConfig smallint,
MeetingCount   smallint,
Acl            image,
AnonymousPermMask bigint;
```

Title: The title of the site.

Id: The identifier of the site.

FullUrl: The store-relative URL of the site.

WebTemplate: The identifier for the template used in the **Site definition** to define the base structure of this subsite. The values are the same as defined by ProvisionConfig. See [\[MS-WSSFO\]](#), section Site Metadata Result Set for additional details.

ProvisionConfig: An identifier of the **site template** used to provision this site. The following reserved values are defined:

Value	Description
-1	This site has not had any template provisioned.
0	This site has the implementation-specific default template applied.
1	This site has the Team Collaboration site template applied.
2	This site has the meeting workspace site template applied.
3	This site has the Central Administration site template applied.
4	This site has the Wiki site template applied.
9	This site has the Blog site template applied.

MeetingCount: If this subsite is a meeting workspace this value indicates the number of meetings that are configured. A value of -1 indicates that the workspace contains a recurring meeting.

Acl: The binary serialization of the ACL for the site. The format is specified in [\[MS-WSSFO\]](#) section 2.2.3.3.

AnonymousPermMask: A permission mask indicating the rights granted to a user that is anonymous, or has no specific rights, to this site. The format is specified in [\[MS-WSSFO\]](#) section 2.2.2.27.

3.1.4.25.2 ListNSInfo Result Set

ListNSInfo result set returns a set of properties related to all lists if `@GetLists=1` or document libraries if `@GetDocLibs =1` under the specified site. The ListNSInfo result set MUST contain 0 to many rows. The T-SQL syntax for the stored procedure is as follows:

```

tp_Title          nvarchar(255),
tp_Id             uniqueidentifier,
{FullUrl}        nvarchar(260),
tp_RootFolder    uniqueidentifier,
tp_ImageUrl      nvarchar(255),
tp_BaseType      int,
tp_ServerTemplate int,
FolderChildCount int,
Acl              image,
AnonymousPermMask bigint;

```

tp_Title: The title of the list or document library

tp_Id: The list identifier of the list or document library.

{FullUrl}: The store-relative URL of the list or document library.

tp_RootFolder: The identifier of the root folder for the list or document library

tp_ImageUrl: The URL of the image used to represent the list or document library

tp_BaseType: This specifies the base type of the list or document library as defined in [\[MS-WSSFO\]](#), section List Base Type.

tp_ServerTemplate: The List Server Template enumeration value of the list template that defines the base structure of the list or document library. See [MS-WSSFO], section List Server Template, for more detail.

FolderChildCount: The number of subfolders of the root folder of the list or document library.

Acl: The binary serialization of the ACL for the list or document library. The format is specified in [MS-WSSFO] section 2.2.3.3.

AnonymousPermMask: The permissions mask that applies to an anonymous user of the list or document library. The format is specified in [MS-WSSFO] section 2.2.2.27.

3.1.4.26 proc_GetWebComments

The **proc_GetWebComments stored procedure** is called to retrieve all Web discussion comments for a site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetWebComments (  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier  
);
```

@SiteId: The identifier of the site collection containing the specified site.

@WebId: The identifier of the site containing the requested Web discussion comments.

Return Values: The stored procedure returns an integer return code which **MUST** be in the following table:

Value	Description
0	Successful completion.
3	Either @SiteId or @WebId is NULL.

Result Sets: The stored procedure **MUST** return the GetWebComments result set.

3.1.4.26.1 GetWebComments Result Set

Returns all Web discussion comments for the specified site. This result set **MUST** be returned, and contains one row for each Web discussion comment. The T-SQL syntax for the result set is as follows:

```
{DocFullUrl}      nvarchar(260),  
Id                int,  
Parent           int,  
CommentId        nvarchar(255),  
Bookmark         nvarchar(127),  
Author           nvarchar(255),  
UserId           int,  
Subject          nvarchar(255),  
Created          datetime,  
Status           smallint,  
Comment          ntext;
```

DocFullUrl: The store-relative URL of the document that this Web discussion comment is associated with.

Id: The identifier of the Web discussion comment.

Parent: The identifier of the parent Web discussion comment, if present. If the parent Web discussion comment does not exist, this MUST be 0.

CommentId: A protocol client specified identifier for the Web discussion comment.

Bookmark: A protocol client specified reference to the place in the document that the Web discussion comment refers to.

Author: A protocol client specified name for the user that added the Web discussion comment.

UserId: The user identifier for the user that added the Web discussion comment.

Subject: The subject of the Web discussion comment.

Created: The time in UTC when the Web discussion comment was created.

Status: A flag value that indicates the status of a Web discussion comment.

Comment: The body text of the Web discussion comment.

3.1.4.27 **proc_GetWebNavAcls**

The **proc_GetWebNavAcls** stored procedure is called to fetch ACLs for all the unique security scopes of documents in the navigation structure. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetWebNavAcls(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier,  
    @NavParentWebId uniqueidentifier,  
    @Inherited       bit  
);
```

@SiteId: The site collection identifier of the site collection that MUST contain the sites specified by *@WebId* and *@NavParentWebId*.

@WebId: The site identifier of the site for which ACLs are requested.

@NavParentWebId: The site identifier of the navigational parent site of the site specified by *@WebId*. This field MAY be NULL. If it is not NULL, additional rows MUST be included in the Nav Acls result set.

@Inherited: A bit specifying whether navigation structure from the site is inherited by its subsites.

Return Values: The stored procedure returns an integer return code which MUST be ignored.

Result Sets: The stored procedure MUST return 1 result set as defined in the Nav ACLs Result Set (Section [2.2.6.2](#)).

3.1.4.28 proc_GetWebNavStruct

The **proc_GetWebNavStruct** stored procedure is called to return navigation structure for a given site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetWebNavStruct(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier,  
    @Inherited       bit  
);
```

@SiteId: The site collection identifier for the site collection which contains the site specified by *@WebId*.

@WebId: The identifier of the site whose navigation structure has been requested.

@Inherited: A bit specifying whether the navigation structure from the site is inherited by its subsites. If this parameter is set to 1, the site scope and *CachedDataVersion* result set **MUST** be returned.

Return Values: The stored procedure returns an integer return code which **MUST** be ignored.

Result Sets: The stored procedure **MUST** return two or three result sets as follows.

3.1.4.28.1 Site Scope and CachedDataVersion Result Set

Returns the security scope and *CachedDataVersion* of the site. If *@Inherited* is equal to 1, then this result set **MUST** be returned, otherwise this result set **MUST NOT** be returned. If the result set returns, it **MUST** return one row. The T-SQL syntax for the result set is as follows:

```
CachedDataVersion    int,  
ScopeId              uniqueidentifier;
```

CachedDataVersion: An integer specifying the version of the site's cached information.

ScopeId: The unique identifier for the security scope of the site.

3.1.4.28.2 Nav ACLs Result Set

Returns the ACLs of the documents represented by navigation nodes in the navigation structure of the site. This result set **MUST** return zero or more rows as defined in the Nav ACLs Result Set (Section [2.2.6.2](#)), where the *@NavParentWebId* is NULL and the *@Inherited* value is the value of the *@Inherited* parameter.

3.1.4.28.3 Nav Data Result Set

Returns the information about the navigation structure of the site. It **MUST** return one or more rows. The T-SQL syntax for the result set is as follows:

```
Eid                  int,  
EidParent            int,  
ElementType          tinyint,  
{Url}                nvarchar(260),  
Name                 nvarchar(256),
```



```

NodeMetainfo      image,
NonNavPage        bit,
NavSequence       bit,
ChildOfSequence  bit,
DateLastModified  datetime,
{ScopeId}         uniqueidentifier,
{SecurityType}    int;

```

Eid: The navigation node element identifier of the navigation node.

EidParent: The navigation node element identifier of the parent navigation node.

ElementType: This represents the Navigation Node Type (Section [2.2.2.4](#)) of the navigation node.

{Url}: The URL to which the navigation node points. This value MUST NOT be NULL if the Eid value is not 0.

Name: The display name of the navigation node.

NodeMetainfo: A binary serialization of the navigation node metadata.

NonNavPage: A bit representing whether the navigation node will be filtered out when rendering the navigation structure. If the bit is set to 1, then the navigation node SHOULD be filtered out [<5>](#). If it is set to 0, it MUST NOT be filtered out.

NavSequence: A bit representing whether the navigation node represents a link bar. If this navigation node represents a link bar, this bit MUST be set to 1, else it MUST be set to 0.

ChildOfSequence: A bit representing whether the navigation node is a child of a navigation node which represents a link bar. If it does, this bit MUST be set to 1, else it MUST be set to 0.

DateLastModified: The time in UTC when the navigation node information was last modified.

{ScopeId}: The **scope identifier** of the document that the navigation node points to. If the navigation node does not point to a document, this MUST be 0x00 (and can be cast as uniqueidentifier, value 00000000-0000-0000-0000-000000000000).

{SecurityType}: This defines what kind of permissions are required on the user to be able to see this navigation node. The following are all possible valid values:

Value	Description
0	This navigation node is always visible to the user.
1	This navigation node requires the user to have permissions to view Web pages in the site that are not in a list or document library.
2	This navigation node requires the user to have permissions to view Web pages in the site that are form or list view pages of a list or document library.
3	This navigation node requires the user to have permissions to view Web pages in the site that are items in a document library.

3.1.4.29 proc_GetWebNavStructNodeByIds

The **proc_GetWebNavStructNodeByIds** stored procedure is called to fetch information about a single navigation node in a site. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_GetWebNavStructNodeByIds (
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @Eid            int
);

```

@SiteId: The site collection identifier for the site collection which contains the site specified by *@WebId*.

@WebId: The identifier of the site which contains the navigation node.

@Eid: An integer that specifies the navigation node element identifier of the navigation node for which information is requested.

Return Values: The stored procedure returns an integer return code which MUST be 0.

Result Sets: The stored procedure MUST return two result sets as follows: Nav Data Result Set (Section [2.2.6.3](#)) and Nav Children Result Set (Section [2.2.6.4](#)), respectively.

3.1.4.30 proc_GetWebSubscriptions

The **proc_GetWebSubscriptions** stored procedure is called to return subscriptions for a given site collection, site and user identifier. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_GetWebSubscriptions (
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @UserId          int
);

```

@SiteId: The site collection identifier of the site collection for which the subscriptions are requested to be returned.

@WebId: The identifier of the site for which the subscriptions are requested to be returned.

@UserId: The user identifier for the user for which the subscriptions are requested to be returned.

Return Values: MUST be 0.

Result Sets: MUST return a single result set as follows:

3.1.4.30.1 WebSubscriptions Result Set

WebSubscriptions contains the subscriptions for the site collection specified by *@SiteId*, site specified by *@WebId* and user identifier specified by *@UserId*. If *@UserId* is NULL, subscriptions are not filtered by the *UserId* and the result set contains all subscriptions for all users. The WebSubscriptions result set will always return and MUST contain no rows if no matching subscriptions are found; otherwise, the WebSubscriptions result set MUST contain the number of rows equal to the number of matching subscriptions. The T-SQL syntax for the result set is as follows:

```

Id          uniqueidentifier,
ListId      uniqueidentifier,
ItemId      int,
EventType   int,

```

NotifyFrequency	int,
NotifyTime	datetime,
Status	tinyint,
UserId	int,
ListUrl	nvarchar(256),
ListTitle	nvarchar(255),
ItemName	nvarchar(255),
AlertTitle	nvarchar(1000),
AlertType	int,
AlertTemplateName	nvarchar(255),
Filter	nvarchar(4000),
BinaryFilter	varbinary(1024),
Properties	ntext;

Id: The identifier of this subscription. The value MUST NOT be NULL.

ListId: The list identifier with which this subscription is associated. The value MUST NOT be NULL.

ItemId: The item identifier with which this subscription is associated. This MUST NOT be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is item and MUST be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is list.

EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

NotifyFrequency: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification. This value MUST NOT be NULL.

NotifyTime: The time for which the alert is scheduled. This value MUST NOT be NULL for scheduled subscriptions for a given site collection, site and user. It MUST be NULL for immediate subscriptions.

Status: An Alert Status Type (Section [2.2.2.1](#)) that specifies an integer indicating the status of the alert subscription. This value MUST NOT be NULL.

UserId: The user identifier for whom the alert will be created. This value MUST NOT be NULL.

ListUrl: The URL of the list with which this subscription is associated. The value MUST NOT be NULL.

ListTitle: The title of the list with which this subscription is associated.

ItemName: The name of the list item associated with the subscription. This value MUST be NULL if ItemId is NULL or the subscription is for an item in a links list or if the base type of the list is Issue ([\[MS-WSSFO\]](#)).

AlertTitle: The title of the alert of the subscription.

AlertType: An integer whose lower eight bits specifies the type of the alert as specified in Alert Type (Section [2.2.2.2](#)). This MUST also contain the Special Alert Flags (Section [2.2.3.2](#)) for an always notify alert or a system alert.

AlertTemplateName: The name of the alert template of the subscription.

Filter: The syntax query in CAML for a filter to apply to the alert associated with this subscription.

BinaryFilter: The compiled binary syntax query in CAML for a filter to apply to the alert associated with this subscription.

Properties: The properties associated with this subscription.

3.1.4.31 `proc_GetWebSubscriptionsForBackup`

The `proc_GetWebSubscriptionsForBackup` stored procedure is called to return subscriptions associated with a site collection and a site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetWebSubscriptionsForBackup(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier  
);
```

@SiteId: The site collection identifier for the site collection for which the subscriptions are requested to be returned.

@WebId: The identifier of the site for which the subscriptions are requested to be returned.

Return Values: MUST be 0.

Result Sets: MUST return a single result set as follows:

3.1.4.31.1 `WebSubscriptionsForBackupResult Set`

`WebSubscriptionsForBackup` contains the subscriptions, and their associated document information, for the site collection specified in the `@SiteId` parameter and the site specified in the `@WebId` parameter. The `WebSubscriptionsForBackup` result set will always return and MUST contain zero rows if there are no current subscriptions for the site collection specified in the `@SiteId` parameter and the site specified in the `@WebId` parameter; otherwise, if there are current subscriptions, the `WebSubscriptionsForBackup` result set MUST contain the number of rows equal to the number of current subscriptions. The T-SQL syntax for the result set is as follows:

```
Id                uniqueidentifier,  
ListId            uniqueidentifier,  
ItemId            int,  
EventType         int,  
NotifyFrequency  int,  
UserId            int,  
UserEmail         nvarchar(255),  
DirName           nvarchar(256),  
LeafName          nvarchar(128);
```

Id: The identifier of the subscription. The value MUST NOT be NULL.

ListId: The list identifier of the item referenced by the subscription. The value MUST NOT be NULL.

ItemId: The item identifier of the item referenced by the subscription. This MUST NOT be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is item and MUST be NULL if the Alert Type (Section [2.2.2.2](#)) of the subscription is list.

EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

NotifyFrequency: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification. This value MUST NOT be NULL.

UserId: The identifier of the user. The value MUST NOT be NULL.

UserEmail: The e-mail of the user. The value MUST NOT be NULL.

DirName: The directory of the document referred to by the subscription. The value MAY be NULL if the subscription does not refer to a document.

LeafName: The leaf name (file name) of the document referred to by the subscription. The value MAY be NULL if the subscription does not refer to a document.

3.1.4.32 **proc_GetWebSubscriptionsUniqueUsers**

The **proc_GetWebSubscriptionsUniqueUsers** stored procedure is called to return the login name of all users with active subscriptions. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_GetWebSubscriptionsUniqueUsers(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier  
);
```

@SiteId: The site collection identifier of the site collection .

@WebId: The site identifier of the site.

Return Values: Must be 0.

Result Sets: MUST return a single result set as follows:

3.1.4.32.1 **WebSubscriptionsUniqueUsers Result Set**

WebSubscriptionsUniqueUsers contains a list of login name for all users who have nondeleted subscriptions for the site collection specified in the *@SiteId* parameter and the site specified in the *@WebId* parameter.

The WebSubscriptionsUniqueUsers result set will always return and MUST contain zero rows if there are no nondeleted subscriptions for the site collection specified in the *@SiteId* parameter and the site specified in the *@WebId* parameter: otherwise, if there are nondeleted subscriptions, the WebSubscriptionsUniqueUsers result set MUST contain the number of distinct users for whom there are subscriptions. The WebSubscriptionsUniqueUsers result set MUST be sorted by **tp_Login**.

The T-SQL syntax for the result set is as follows:

```
tp_Login          nvarchar(255);
```

tp_Login: The login name of a user with a nondeleted subscription. This value MUST NOT be empty.

3.1.4.33 **proc_HandleMtgRecurPatternChange**

The **proc_HandleMtgRecurPatternChange** stored procedure is called to update the events in a meeting series when the overall recurrence pattern has changed. Specifically, three updates are made to the existing meeting events:

1. Any delete exceptions in the range [*@InstanceIDStart*, *@InstanceIDEndDel*] specified are removed

2. Any modify exceptions in the range [*@InstanceIDStart*, *@InstanceIDEndSplit*] are split from the series and become standalone events
3. Any future modify exceptions after *@InstanceIDEndSplit* are orphaned

The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_HandleMtgRecurPatternChange(
    @SiteId                uniqueidentifier,
    @WebId                 uniqueidentifier,
    @MtgListID             uniqueidentifier,
    @InstanceIDStart       int,
    @InstanceIDEndDel      int,
    @InstanceIDEndSplit    int,
    @DTStamp               datetime,
    @UserId                int,
    @UserTitle             nvarchar(255),
    @InstanceIDSplitMax    int = NULL OUTPUT
);

```

@SiteId: Specifies the site collection identifier for the site collection in which the meeting series exists. *@SiteId* MUST NOT be NULL.

@WebId: The identifier of the site in which the meeting series exists. *@WebId* MUST NOT be NULL.

@MtgListID: Specifies the identifier of the list representing the meeting series data.

@InstanceIDStart: Specifies the starting instance to modify.

@InstanceIDEndDel: Specifies the ending instance for removing delete exceptions.

@InstanceIDEndSplit: Specifies the ending instance for splitting modify exceptions, all modify exceptions after this one will be orphaned.

@DTStamp: Specifies the datetime stamp for the meeting series. Modify exceptions before this date are split off from the series and made standalone events. Modify exceptions after this date are orphaned.

@UserId: Specifies the user identifier of the meeting organizer.

@UserTitle: Specifies the **user name** of the meeting organizer.

@InstanceIDSplitMax: Returns the highest instance identifier that is now split off from the series. This value is filled and returned to the caller.

Return Values: An integer which MUST be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.34 proc_HTCreatRow

The **proc_HTCreatRow stored procedure** is called to put a file into the HTML translate cache<6>. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_HTCreatRow(
    @DocSiteId            uniqueidentifier,
    @DocDirName           nvarchar(256),

```

```

        @DocLeafName          nvarchar(128),
        @TransName           nvarchar(128),
        @JobType             tinyint,
        @File                image,
        @MainFile            bit,
        @maxCacheSize        int
    );

```

@DocSiteId: The site collection identifier of the site collection containing the original document.

@DocDirName: Directory name for the original document.

@DocLeafName: Leaf name for the original document.

@TransName: The name of the translated file being put into the HTML translate cache.

@JobType: A value specifying the browser type that this HTML translate cache file was created for. This value **MUST** be one of the following values:

Value	Description
0	The raw user agent string of the client browser starts with "Mozilla/1", "Mozilla/3" or "Mozilla/4"
1	All other values of the raw user agent string of the client browser
2	HTML Transform of document failed or was not allowed.

@File: The content of the file being stored in the HTML translate cache.

@MainFile: Specifies whether or not this is the main file for the set of translated files associated with the original document. This value **MUST NOT** be NULL.

@maxCacheSize: The maximum total size allowed for all HTML transformed files associated with the original document for this *@JobType*. This value is specified in megabytes.

Return Values: The stored procedure **MUST** return an integer return code which **MUST** be in the following table:

Value	Description
0	Successful completion.
-4	Cache entry already exists with the same <i>@DocSiteId</i> , <i>@DocDirName</i> , <i>@DocLeafName</i> and <i>@TransName</i> .

Result Sets: **MUST NOT** return any result sets.

3.1.4.35 `proc_HTGetFile`

The `proc_HTGetFile` stored procedure is called to get the contents of a single file from the HTML translate cache. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_HTGetFile(
    @DocSiteId          uniqueidentifier,
    @DocDirName         nvarchar(256),
    @DocLeafName        nvarchar(128),

```

```

        @TransName          nvarchar(128),
        @JobType            tinyint
    );

```

@DocSiteId: The site collection identifier of the site collection containing the original document.

@DocDirName: Directory name for the original document.

@DocLeafName: Leaf name for the original document.

@TransName: The name of the translated file being retrieved from the HTML translate cache.

@JobType: A value specifying the browser type that this HTML translate cache file was created for. This value **MUST** be one of the following values:

Value	Description
0	The raw user agent string of the client browser starts with "Mozilla/1", "Mozilla/3" or "Mozilla/4".
1	All other values of the raw user agent string of the client browser.
2	HTML Transform of document failed or was not allowed.

Return Values: The stored procedure **MUST** return an integer return code of 0.

Result Sets: The stored procedure **MUST** return the File result set.

3.1.4.35.1 File Result Set

Returns the file that uniquely matches the input parameters. This result set **MUST** return a single row containing the file, if a match for the file is found. Otherwise, it **MUST** return zero rows. The T-SQL syntax for the result set is as follows:

```
{File}          image;
```

{File}: The file's content.

3.1.4.36 proc_HTGuidFromOrig

The **proc_HTGuidFromOrig** stored procedure is called to get the name of the main file for the set of translated files in the HTML translate cache associated with the original document. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_HTGuidFromOrig(
    @DocSiteId          uniqueidentifier,
    @DocDirName         nvarchar(256),
    @DocLeafName        nvarchar(128),
    @JobType            tinyint
);

```

@DocSiteId: The site collection identifier of the site collection containing the original document.

@DocDirName: Directory name for the original document.

@DocLeafName: Leaf name for the original document.

@JobType: A value specifying the browser type that this HTML translate cache file was created for. This value MUST be one of the following values:

Value	Description
0	The raw user agent string of the client browser starts with "Mozilla/1", "Mozilla/3" or "Mozilla/4".
1	All other values of the raw user agent string of the client browser.
2	HTML Transform of document failed or was not allowed.

Return Values: An integer which MUST be 0.

Result Sets: The stored procedure MUST return Translation Name result set.

3.1.4.36.1 Translation Name Result Set

Returns the name of the main file for the set translated files in the HTML translate cache associated with the original document. This result set SHOULD contain one row if a corresponding row exists. The client MUST use the data in the first row and ignore the rest<7>. If none exist, it MUST return zero rows. The T-SQL syntax for the result set is as follows:

```
TransName          nvarchar(128);
```

TransName: The name of the main file for the set of translated files in the HTML translate cache associated with the original document.

3.1.4.37 proc_InstantiateMtgSeriesOccurrence

The **proc_InstantiateMtgSeriesOccurrence** is called to instantiate an occurrence of a recurring meeting series. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_InstantiateMtgSeriesOccurrence(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier,  
    @InstanceID     int,  
    @DTStartUTC     datetime,  
    @CreateOrphaned bit = 0,  
    @ForAttendees   bit = NULL,  
    @AlreadyInstantiated bit = NULL OUTPUT  
);
```

@SiteId: Specifies the site collection identifier for the site collection in which the meeting series exists. *@SiteId* MUST NOT be NULL.

@WebId: The identifier of the site in which the meeting series exists. *@WebId* MUST NOT be NULL.

@InstanceID: Specifies the identifier of the meeting instance containing the occurrence to instantiate. *@InstanceID* MUST NOT be NULL.

@DTStartUTC: Specifies the beginning date of the meeting series in UTC.

@CreateOrphaned: Specifies whether the occurrence should be orphaned from the meeting series. 0 = do not orphan the occurrence (default), 1 = orphan the occurrence.

@ForAttendees: Specifies whether to copy over attendee series data as well to the new occurrence. 1 = copy only attendees, 0 = copy all except attendees, NULL = copy all (default).

@AlreadyInstantiated: Specifies the output parameter which will be set to 1 if the meeting was already instantiated. Otherwise it will be set to 0.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion. The meeting series occurrence was successfully instantiated.
3	The target meeting series item corresponding to the specified <i>@SiteId</i> and <i>@WebId</i> could not be created.
87	Invalid parameter encountered when creating the meeting series item. <i>@SiteId</i> or <i>@WebId</i> contains invalid data.
13	Two possible failure conditions: <ul style="list-style-type: none">▪ No meeting series found for the given <i>@WebId</i>▪ List name not specified in default instance
80	The meeting occurrence was already instantiated.
160	Bad argument used to create the meeting series item. <i>@SiteId</i> or <i>@WebId</i> contains invalid data.
183	An instance for this meeting already exists where the event type is not equal to 2
212	Site collection locked. The operation could not be performed because the site collection containing the meeting series item is in read-only mode .
1150	Unable to create the new occurrence; a newer version of Windows is required
1816	Disk quota error. The quota for site collection has reached the maximum allowable limit.

Result Sets: MUST NOT return any result sets.

3.1.4.38 **proc_ListDocsHavingComments**

The **proc_ListDocsHavingComments stored procedure** is called to get the collection of documents in a given folder that have at least one Web discussion comment. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_ListDocsHavingComments(  
    @SiteId          uniqueidentifier,  
    @WebUrl          nvarchar(256),  
    @DocDir          nvarchar(256),  
    @Collation       nvarchar(32)  
);
```

@SiteId: The identifier of the site collection containing the documents whose Web discussion comments are to be retrieved.

@WebUrl: The store-relative URL to the site containing the documents whose Web discussion comments are to be retrieved.

@DocDir: The store-relative URL to the folder containing the documents whose Web discussion comments are to be retrieved. If this parameter is NULL, all documents with at least one Web discussion comment in the site MUST be returned.

@Collation: A **Windows collation name** string identifier which follows the format for the T-SQL COLLATE clause. This MUST be the collation name of one of the valid collation order values, with the case-insensitive and accent-sensitive flags set. For example, the default collation order is 25, Latin1_General, which with the case-insensitive and accent-sensitive flags set has a **SQL collation name** string of "Latin1_General_CI_AS". This MUST NOT be NULL.

Return Values: The stored procedure returns an integer **return code** which MUST be in the following table:

Value	Description
0	Successful completion.
3	The site identified by @SiteId and @WebUrl could not be found.

Result Sets: The stored procedure MUST return the ListDocsHavingComments result set when the return code is 0.

3.1.4.38.1 ListDocsHavingComments Result Set

Returns the set of documents in the specified location containing Web discussion comments, along with the count of Web discussion comments on each document. This result set contains one row per document with at least one Web discussion comment. The T-SQL syntax for the result set is as follows:

```
Id                uniqueidentifier,  
DirName           nvarchar(256),  
LeafName          nvarchar(128),  
{Count}          int;
```

Id: The identifier of the document.

DirName: The directory name of the document.

LeafName: The leaf name of the document.

{Count}: The count of Web discussion comments associated with the document.

3.1.4.39 proc_MatchSchedSubscriptions

The **proc_MatchSchedSubscriptions** stored procedure is called to return scheduled subscriptions that are due and for which alert notifications haven't been sent out, for a given site collection and notification frequency. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_MatchSchedSubscriptions(  
    @SiteId         uniqueidentifier,  
    @NotifyFreq     int,  
    @bAlwaysNotify  bit,
```

```

        @@EventTime          datetime OUTPUT
    );

```

@SiteId: The site collection identifier of the site collection for which the subscriptions are requested to be returned.

@NotifyFreq: A Notification Frequency Type (section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification.

@bAlwaysNotify: A bit indicating whether the event information is returned along with the subscriptions that are requested to be returned. The value MUST be listed in the following table.

Value	Description
0	Return event information.
1	Return only subscription information.

@@EventTime: A datetime indicating the current time in UTC.

Return Values: `proc_MatchSchedSubscriptions` MUST return an integer that MUST be 0.

Result Sets: `proc_MatchSchedSubscriptions` MUST return a single result set as follows:

3.1.4.39.1 SchedSubscriptions Result Set

SchedSubscriptions contains the subscriptions for the site collection specified by `@SiteId` and notify frequency specified by `@NotifyFreq`. The notify frequency is the interval at which alert notifications are sent to the user. The SchedSubscriptions result set MUST be returned. The T-SQL syntax for the result set is as follows:

```

WebId                uniqueidentifier,
ListId               uniqueidentifier,
UserId               int,
UserEmail            nvarchar(255),
SiteUrl              nvarchar(136),
WebUrl              nvarchar(256),
ListUrl              nvarchar(256),
WebTitle             nvarchar(255),
WebLanguage          int,
WebLocale            int,
WebTimeZone         smallint,
WebTime24            bit,
WebCalendarType     smallint,
WebAdjustHijriDays  smallint,
ListTitle            nvarchar(255),
ListBaseType         int,
ListServerTemplate  int,
{ItemName}           nvarchar(255),
{ItemFullUrl}        nvarchar(260),
{ModifiedBy}         nvarchar(255),
{TimeLastModified}  datetime,
Id                   uniqueidentifier,
{Id}                 bigint,
EventType            int,
{EventType}          int,

```

```

{ItemId} int,
NotifyTime datetime,
NotifyFreq int,
Properties ntext,
AlertTitle nvarchar(1000),
AlertType int,
AlertTemplateName nvarchar(255),
{EventData} image,
{LookupFieldPermissionResults} image;

```

WebId: The site identifier with which this subscription is associated. The value MUST NOT be NULL.

ListId: The list identifier with which this subscription is associated. The value MUST NOT be NULL.

UserId: The user identifier with which this subscription is associated. The value MUST NOT be NULL.

UserEmail: The e-mail of the user with which this subscription is associated. The value MUST NOT be NULL.

SiteUrl: The URL of the site collection with which this subscription is associated. The value MUST NOT be NULL.

WebUrl: The URL of the site with which this subscription is associated. The value MUST NOT be NULL.

ListUrl: The URL of the list with which this subscription is associated. The value MUST NOT be NULL.

WebTitle: The title of the site with which this subscription is associated.

WebLanguage: The language of the site with which this subscription is associated. The value MUST NOT be NULL.

WebLocale: The locale of the site with which this subscription is associated. The value MUST NOT be NULL.

WebTimeZone: The time zone of the site with which this subscription is associated. The value MUST NOT be NULL.

WebTime24: The Time format which specifies whether the time displayed for the site with which this subscription is associated is in 12-hour or 24-hour format. The value MUST NOT be NULL.

WebCalendarType: Contains **calendar type** (for non-Gregorian calendars) of the site with which this subscription is associated. The value MUST NOT be NULL.

WebAdjustHijriDays: The number of days to extend or reduce the current month in Hijri calendars on the site with which this subscription is associated. For more information, see **Abstract Data Model** (section [3.2.1](#)). The value MUST NOT be NULL.

ListTitle: The title of the list with which this subscription is associated. The value MUST NOT be NULL.

ListBaseType: The base type of the list with which this subscription is associated. The value MUST NOT be NULL.

ListServerTemplate: The server template of the list with which this subscription is associated. The value MUST NOT be NULL.

{ItemName}: A string that specifies the name of the object under which this event has occurred. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

{ItemFullUrl}: A string that specifies the **server-relative URL** of the object under which this event has occurred. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

{ModifiedBy}: A string which specifies the login name of a security principal who added this event. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

{TimeLastModified}: A Time Stamp in **UTC** that specifies the time when this event was last modified. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

Id: The identifier of this subscription. The value MUST NOT be NULL.

{Id}: The identifier of this event in the **change log**. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

EventType: This is specified in **Alert Event Type** (section [2.2.3.1](#)).

{EventType}: A 4-byte unsigned integer bit mask that specifies the type of an event. If the value is NOT NULL, it MUST have one or more of the flags that are specified in [\[MS-WSSDLIM\]](#) section 2.2.2.2, Event Type Flags. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

{ItemId}: The integer identifier of a list item on which the event has occurred. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

NotifyTime: The time the alert is scheduled for.

NotifyFreq: A **Notification Frequency Type** (section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification. This value MUST NOT be NULL.

Properties: The properties associated with this subscription.

AlertTitle: The title of the alert of the subscription.

AlertType: An integer whose lower eight bits specifies the type of the alert as specified in **Alert Type** (section [2.2.2.2](#)). This MUST also contain the **Special Alert Flags** (section [2.2.3.2](#)) for an always notify alert or a system alert.

AlertTemplateName: The name of the alert template of the subscription.

{EventData}: Contains implementation-specific event data significant to the front-end Web server but otherwise opaque to the back-end database server. This data will be stored in the change log in the back-end database server along with this event. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

{LookupFieldPermissionResults}: Contains implementation-specific data over the permissions the user has for lookup fields. The value MUST be NULL when *@bAlwaysNotify* is not set to 0.

3.1.4.40 **proc_ModifySubscription**

The **proc_ModifySubscription** stored procedure is called to modify an existing subscription. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_ModifySubscription(
    @SiteId                uniqueidentifier,
    @SubId                 uniqueidentifier,
    @NotifyFreq            int,
    @NotifyTime            datetime,
    @NotifyTimeUTC        datetime,
    @Status                tinyint,
    @WebId                 uniqueidentifier,
    @EventType             int,
    @UserId                int,
    @SiteUrl               nvarchar(136),
    @WebUrl                nvarchar(256),
    @WebTitle              nvarchar(255),
    @WebLanguage           int,
    @WebLocale             int,
    @WebTimeZone           smallint,
    @WebTime24             bit,
    @WebCalendarType       smallint,
    @WebAdjustHijriDays    smallint,
    @AlertTitle            nvarchar(1000),
    @AlertType             int,
    @AlertTemplateName    nvarchar(256),
    @Filter                nvarchar(4000),
    @BinaryFilter          varbinary(1024),
    @Properties            ntext,
    @UserEmail             nvarchar(255) = NULL OUTPUT,
    @ItemName              nvarchar(255) = NULL OUTPUT,
    @ItemId                int OUTPUT
);

```

@SiteId: The site collection identifier of the site collection in which the list or item exists. This value MUST NOT be NULL.

@SubId: The GUID of the subscription that is being modified. This value MUST NOT be NULL.

@NotifyFreq: A Notification Frequency Type (Section [2.2.2.5](#)) that specifies an integer indicating the frequency of the alert notification.

@NotifyTime: The time the alert is scheduled for. This value MUST NOT be NULL.

@NotifyTimeUTC: The time in UTC when the alert is supposed to be sent. This value MUST NOT be NULL.

@Status: An Alert Status Type (Section [2.2.2.1](#)) that specifies an integer indicating the status of the alert subscription. This value MUST NOT be NULL.

@WebId: The GUID of the site in which the list or item exist. This value MUST NOT be NULL.

@EventType: An Alert Event Type (Section [2.2.3.1](#)) that specifies an integer mask for the types of events on which to fire the notification. This value MUST NOT be NULL.

@UserId: The user identifier of the user for whom the alert will be created. This value MUST NOT be NULL.

@SiteUrl: The URL of the site collection in which the list or item exists. This value MUST NOT be NULL.

@WebUrl: The URL of the site in which the list or item exists. This value MUST NOT be NULL.

@WebTitle: The title of the site in which the list or item exists.

@WebLanguage: The LCID of the display language of the site containing the list or item. This value MUST NOT be NULL.

@WebLocale: An Integer representing the LCID of the site locale. This value MUST NOT be NULL.

@WebTimeZone: An Integer representing the Time Zone of the site. This value MUST NOT be NULL.

@WebTime24: A Boolean indicating if the Time is in a 24 hour format or a 12 hour format. This value MUST NOT be NULL.

@WebCalendarType: The calendar format for the site. This value MUST NOT be NULL.

@WebAdjustHijriDays: The number of days to extend or reduce the current month in Hijri calendars on the site with which this subscription is associated. For more information, see Abstract Data Model (Section [3.2.1](#)). This value MUST NOT be NULL.

@AlertTitle: The title of the alert of the subscription.

@AlertType: An integer whose lower eight bits specifies the type of the alert as specified in Alert Type (Section [2.2.2.2](#)). This MUST also contain the Special Alert Flags (Section [2.2.3.2](#)) for an always notify alert or a system alert. This value MUST NOT be NULL.

@AlertTemplateName: The name of the alert template of the subscription.

@Filter: The syntax query in CAML for a filter to apply to the alert associated with this subscription.

@BinaryFilter: The compiled binary syntax query in CAML for a filter to apply to the alert associated with this subscription.

@Properties: The properties associated with this subscription.

@UserEmail: The e-mail address of the user.

@ItemName: The name of the item associated with the subscription.

@ItemId: The item identifier associated with the subscription. This MUST NOT be NULL if the AlertType of the subscription is Item (Section [2.2.2.2](#)) and MUST be NULL if the AlertType of the subscription is List (Section [2.2.2.2](#)).

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion.
31	Error finding or modifying the subscription.

Result Sets: MUST NOT return any result sets.

3.1.4.41 **proc_MoveDataToOccurrence**

The **proc_MoveDataToOccurrence** stored procedure is called to move meeting instance data to the specified occurrence. This may be used to fix up orphaned instances. An occurrence can be orphaned when a series is instantiated and then the recurrence pattern is changed, making the

RecurrenceID (instance identifier) invalid. The user may use this stored procedure to preserve the data in the instance by transferring it to a valid occurrence. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_MoveDataToOccurrence(
    @UserId          int,
    @UserTitle       nvarchar(255),
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @FromInstanceID int,
    @ToInstanceID   int,
    @CheckFromInstanceID bit,
    @OverwriteToInstance bit,
    @CreateMeetingEntry bit,
    @ToDTStartUTC   datetime,
    @CreateOrphaned bit
);

```

@UserId: An identifier for the user that is requesting the operation. This value MUST refer to an existing user identifier for the specified site.

@UserTitle: A string containing the title of the user who wishes to perform the operation.

@SiteId: The site collection identifier of the site collection containing the meeting series.

@WebId: The site identifier of the site containing the meeting series.

@FromInstanceID: The identifier of the instance to be moved.

@ToInstanceID: The identifier of the instance to which to be moved. If this parameter is set to -3, the instance data will not be copied to any target occurrence, but will be removed from the source occurrence.

@CheckFromInstanceID: A bit parameter that specifies whether validation on the From Instance is performed or not. If set to 1, validation on the From Instance is performed.

@OverwriteToInstance: A bit parameter that specifies whether the instance should be overwritten.

@CreateMeetingEntry: A bit parameter that specifies whether a new meeting entry should be created in the table. The value MUST be the opposite of *@OverwriteToInstance*.

@ToDTStartUTC: Start date of the meeting series of the target instance.

@CreateOrphaned: A bit parameter that specifies whether the target instance should be orphaned from the new series.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion.
2	Source Instance was not found, was not orphaned, or contained invalid event type data.
3	The list item corresponding to the From Instance does not exist.

Value	Description
5	Access denied. The current user specified by <i>@UserId</i> parameter is not same as the author of the list item of the From Instance when the instance restriction level is 1.
13	Data was NOT moved to the target occurrence because source and target instances were the same AND CheckFromInstanceId, OverwriteToInstance, OR CreateMeetingEntry is 1. Also, if OverwriteToInstance AND CreateMeetingEntry are both 1 OR OverwriteToInstance is 1 when ToInstanceId is -3. Also when the target instance was not found.
33	Attempt to delete directories that contain checked out files in the From Instance. It is returned by proc_DropListRecord. See [MS-WSSDLIM] .
87	Invalid parameter encountered when creating the meeting series item. <i>@SiteId</i> or <i>@WebId</i> contains invalid data. Returned by proc_InstantiateMtgSeriesOccurrence (Section 3.1.4.37).
1150	Concurrency violation during proc_DropListRecord. See [MS-WSSDLIM] .

Result Sets: MUST NOT return any result sets.

3.1.4.42 proc_NavStructAddNewNodeByDocId

The **proc_NavStructAddNewNodeByDocId** stored procedure is called to add a new navigation node that points to an existing document in the site to the site's navigation structure. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_NavStructAddNewNodeByDocId(
    @SiteId          uniqueidentifier,
    @WebId           uniqueidentifier,
    @Eid             int,
    @EidParent       int,
    @EidPrevSib      int,
    @ElementType     tinyint,
    @DocId           uniqueidentifier,
    @Name            nvarchar(256),
    @NodeMetaInfo    image,
    @NonNavPage      bit,
    @NavSequence     bit,
    @EidBase         int,
    @@EidHome        int OUTPUT
);

```

@SiteId: The site collection identifier of the site collection which contains the site.

@WebId: The site identifier of the site to which the navigation node is to be added.

@Eid: The navigation node element identifier of the new navigation node. This MUST NOT be NULL

@EidParent: The navigation node element identifier of the navigation node under which the new navigation node is being added.

@EidPrevSib: This MUST be either the navigation node element identifier of the navigation node which MUST precede the new navigation node or a value in the following table:

Value	Description
-1	The new navigation node MUST be added as the first child.
-2	The new navigation node MUST be added as the last child.

@ElementType: This represents the Navigation Node Type (Section [2.2.2.4](#)) of the navigation node. This value MUST be 0. This MUST NOT be NULL.

@DocId: The identifier of the document to which the new navigation node points.

@Name: The display name of the navigation node. This MUST NOT be NULL

@NodeMetainfo: A binary serialization of the navigation node metadata.

@NonNavPage: A bit specifying whether the navigation node will be filtered out when rendering the navigation structure. If this is set to 1, the navigation node SHOULD be filtered out [<8>](#). This MUST NOT be NULL.

@NavSequence: A bit specifying whether the node represents a link bar. This value MUST be 0. This MUST NOT be NULL.

@EidBase: The base value to use if the *@Eid* value is a temporary value. This MUST be the value returned by **proc_NavStructAllocateEidBlockWebId**. (specified in section [3.1.4.44](#).) before this stored procedure is called.

@@EidHome: If the new navigation node points to the home page of the site and the navigation node represented by *@EidParent* does not point to a link bar, this MUST return the navigation node element identifier of the new navigation node, else it MUST return NULL.

Return Values: **proc_NavStructAddNewNodeByDocId** returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
10001	Either <i>@SiteId</i> or <i>@WebId</i> is NULL
10002	Navigation node specified by <i>@EidParent</i> does not exist.
10006	The new navigation node was not added.
10007	The document specified by <i>@DocId</i> does not exist.
10008	The document specified by <i>@DocId</i> has no published version.

Result Sets: **proc_NavStructAddNewNodeByDocId** MUST return zero or two result sets. If the return code is 0, two result sets MUST be returned; otherwise no result set MUST be returned.

3.1.4.42.1 Nav Data Result Set

Returns information about the new added navigation node. If returned, this result set MUST return one row as defined in the Nav Data Result Set (Section [2.2.6.3](#)).

3.1.4.42.2 Nav Children Result Set

Returns the navigation node element identifier information of all the subnodes of the new navigation node. If returned, this result set MUST contain no rows as defined in the Nav Children Result Set (Section [2.2.6.4](#)).

3.1.4.43 proc_NavStructAddNewNodeByUrl

The **proc_NavStructAddNewNodeByUrl** stored procedure is called to add a new navigation node that points to a specified URL to the site's navigation structure. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructAddNewNodeByUrl (
    @SiteId                uniqueidentifier,
    @WebId                 uniqueidentifier,
    @Eid                   int,
    @EidParent             int,
    @EidPrevSib           int,
    @ElementType           tinyint,
    @Url                   nvarchar(260),
    @Name                  nvarchar(256),
    @NodeMetainfo          image,
    @IgnoreIfExists       bit,
    @NonNavPage            bit,
    @NavSequence           bit,
    @DateLastModified     datetime,
    @EidBase               int,
    @@EidHome              int OUTPUT
);
```

@SiteId: The site collection identifier of the site collection which contains the site.

@WebId: The site identifier of the site to which the navigation node is to be added.

@Eid: The navigation node element identifier of the new navigation node. This MUST NOT be NULL.

@EidParent: The navigation node element identifier of the navigation node under which the new navigation node is being added.

@EidPrevSib: This MUST be either the navigation node element identifier of the navigation node which MUST precede the new navigation node or a value in the following table:

Value	Description
-1	The new navigation node MUST be added as the first child.
-2	The new navigation node MUST be added as the last child.

@ElementType: This represents the Navigation Node Type (Section [2.2.2.4](#)) of the navigation node. This MUST NOT be NULL.

@Url: The URL of the navigation node being added. If the navigation node is based on the identifier of a document in the site collection, this MUST be in store-relative form.

@Name: The display name of the navigation node. This MUST NOT be NULL.

@NodeMetaInfo: A binary serialization of the navigation node metadata.

@IgnoreIfExists: A bit specifying whether to ignore adding the new navigation node if one specified by *@Eid* already exists. If this is set to 1, it MUST ensure that a navigation node with the specified *@Eid* exists and add it only if one does not exist.

@NonNavPage: A bit specifying whether the navigation node will be filtered out when rendering the navigation structure. If this is set to 1, the navigation node SHOULD be filtered out [<9>](#). This MUST NOT be NULL.

@NavSequence: A bit specifying whether the node represents a link bar. If this is set to 1, the navigation node MUST represent a link bar. This MUST NOT be NULL.

@DateLastModified: A datetime value specifying the time when this navigation node got added.

@EidBase: The base value to use if the *@Eid* value is a temporary value. This MUST be the value returned by `proc_NavStructAllocateEidBlockWebId` (Section [3.1.4.44](#)) before this stored procedure is called.

@@EidHome: If the new navigation node points to the home page of the site and the navigation node represented by *@EidParent* does not point to a link bar, this MUST return the navigation node element identifier of the new navigation node, else it MUST return NULL.

Return Values: `proc_NavStructAddNewNodeByUrl` returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
10001	Either <i>@SiteId</i> or <i>@WebId</i> is NULL
10002	Navigation node specified by <i>@EidParent</i> does not exist.
10006	The new navigation node was not added.
10007	The document specified by <i>@Url</i> does not exist.
10008	The document specified by <i>@Url</i> does not have a published version.

Return Values: `proc_NavStructAddNewNodeByUrl` MUST return 0 or 2.

Result Sets: If the return code is 0, two result sets MUST be returned; otherwise no result set MUST be returned.

3.1.4.43.1 Nav Data Result Set

Returns information about the new added navigation node. If returned, this result set MUST return one row as defined in the Nav Data Result Set (Section [2.2.6.3](#)).

3.1.4.43.2 Nav Children Result Set

Returns the navigation node element identifier information of all the subnodes of the new navigation node. If returned, this result set MUST contain no rows as defined in the Nav Children Result Set (Section [2.2.6.4](#)).

3.1.4.44 **proc_NavStructAllocateEidBlockWebId**

The **proc_NavStructAllocateEidBlockWebId** stored procedure is invoked to reserve a set of navigation node element identifiers for new navigation nodes or navigation nodes that will be moved under a different navigation node. This stored procedure MUST update the site's next available navigation node element identifier. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructAllocateEidBlockWebId(  
    @WebId            uniqueidentifier,  
    @TempEidCount    int,  
    @EidMaxNew       int,  
    @@EidBase        int OUTPUT  
);
```

@WebId: The site collection identifier of the site for which navigation node element identifiers are being reserved.

@TempEidCount: The number of new navigation node element identifiers that need to be reserved. This value MUST be greater than or equal to 0.

@EidMaxNew: The maximum value of the navigation node element identifier for the navigation nodes which are being added or moved along with this call.

@@EidBase: An output parameter containing the base value of navigation node element identifier to be used by the subsequent calls to update the navigation structure.

Return Values: **proc_NavStructAllocateEidBlockWebId** returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
10001	The site specified by <i>@WebId</i> does not exist and <i>@EidBase</i> is NULL
10004	The next available navigation node element identifier value for this site could not be updated.

Result Sets: MUST NOT return any result sets.

3.1.4.45 **proc_NavStructClear**

The **proc_NavStructClear** stored procedure is called to delete the navigation structure of a site and any references to these navigation nodes. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructClear(  
    @SiteId            uniqueidentifier,  
    @WebId            uniqueidentifier  
);
```

@SiteId: The site collection identifier of the site collection which contains the site.

@WebId: The site identifier of the site for which the navigation structure needs to be deleted.

Return Values: **proc_NavStructClear** returns an integer return code which MUST be ignored.

Result Sets: MUST NOT return any result sets.

3.1.4.46 **proc_NavStructDeleteNodeByIds**

The **proc_NavStructDeleteNodeByIds** stored procedure is called to delete a navigation node and all its child navigation nodes. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructDeleteNodeByIds (  
    @SiteId                uniqueidentifier,  
    @WebId                 uniqueidentifier,  
    @Eid                   int,  
    @DateModified          datetime,  
    @DateModifiedReally    datetime OUTPUT  
);
```

@SiteId: The site collection identifier for the site collection which contains the site **specified by @WebId**.

@WebId: The site identifier of the site which contains the navigation node.

@Eid: The navigation node element identifier of the navigation node to be deleted.

@DateModified: A datetime value specifying the last known time when this navigation node was changed.

@DateModifiedReally: An output parameter containing a datetime value specifying the time when the navigation node was last changed. For a successful completion, this represents the time when the navigation node got deleted. If the return value is 10004, this represents the time when the navigation node was last changed.

Return Values: **proc_NavStructDeleteNodeByIds** returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion or the navigation node does not exist.
10004	The navigation node has been changed since the time specified by <i>@DateModified</i> .

Result Sets: MUST NOT return any result sets.

3.1.4.47 **proc_NavStructLogChangesAndUpdateSiteChangedTime**

The **proc_NavStructLogChangesAndUpdateSiteChangedTime** stored procedure is called to update the change log with the site navigation changes at the specified time. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructLogChangesAndUpdateSiteChangedTime (  
    @SiteId                uniqueidentifier,  
    @WebId                 uniqueidentifier,  
    @TimeLastModifiedIncoming    datetime  
);
```

@SiteId: The site collection identifier of the site collection containing the change log.

@WebId: The site identifier of the site containing the change log.

@TimeLastModifiedIncoming: The date and time of the last update. If this parameter is NULL, then the current date and time MUST be set.

Return Values: The client MUST ignore the return code returned by the stored procedure.

Result Sets: MUST NOT return any result sets.

3.1.4.48 `proc_NavStructMoveNode`

The **`proc_NavStructMoveNode`** stored procedure is called to move a navigation node and all of its subnodes from under one parent navigation node to another. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_NavStructMoveNode (
    @SiteId                uniqueidentifier,
    @WebId                  uniqueidentifier,
    @Eid                    int,
    @EidParentNew           int,
    @EidPrevSib             int,
    @DateModified           datetime,
    @EidBase                 int,
    @EidHome                 int,
    @@DateModifiedReally    datetime OUTPUT
);
```

@SiteId: The site collection identifier of the site collection which contains the site specified by `@WebId`.

@WebId: The site identifier of the site which contains the navigation node.

@Eid: The navigation node element identifier of the navigation node to move.

@EidParentNew: The navigation node element identifier of the navigation node which will be the new parent of the navigation node being moved.

@EidPrevSib: The navigation node element identifier of the navigation node which MUST precede the navigation node or a value in the following table:

Value	Description
-1	The new navigation node MUST be added as the first child.
-2	The new navigation node MUST be added as the last child.

@DateModified: A datetime value specifying the last known time when this navigation node was changed.

@EidBase: The base value to use if the `@Eid` value is a temporary value. This MUST be the value returned by `proc_NavStructAllocateEidBlockWebId` (Section [3.1.4.44](#)) before this stored procedure is called.

@EidHome: The navigation node element identifier of the navigation node that points to the home page of the site.

@@DateModifiedReally: An output parameter containing a datetime value specifying the time when the navigation node was last changed. For a successful completion, this represents the time when the navigation node got moved. If the return code is 10004, this represents the time when the navigation node was last changed.

Return Values: `proc_NavStructMoveNode` returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
10004	Navigation node has been changed since the time specified by <code>@DateModified</code> .
10005	Navigation node specified by <code>@Eid</code> does not exist for the site specified by <code>@WebId</code> and <code>@SiteId</code> .
10002	Navigation node specified by <code>@EidParentNew</code> does not exist.
10006	Navigation node could not be moved.

Result Sets: `proc_NavStructMoveNode` MUST return zero or two result sets. If the return code is 0, then two result sets MUST be returned; otherwise no result set MUST be returned.

3.1.4.48.1 Nav Data Result Set

Returns information about the new added navigation node. If returned, this result set MUST return one row as defined in the Nav Data Result Set (Section [2.2.6.3](#)).

3.1.4.48.2 Nav Children Result Set

Returns the navigation node element identifier information of all the subnodes of the new navigation node. If returned, this result set MUST contain no rows as defined in the Nav Children Result Set (Section [2.2.6.4](#)).

3.1.4.49 `proc_OrphanRecurringEventExceptions`

The `proc_OrphanRecurringEventExceptions` stored procedure is called to orphan the meeting instances in the database that correspond to exceptions.

The T-SQL of the stored procedure is as follows:

```

PROCEDURE proc_OrphanRecurringEventExceptions(
    @SiteID                uniqueidentifier,
    @ListID                 uniqueidentifier,
    @WebID                  uniqueidentifier,
    @UID                     uniqueidentifier,
    @ServerTemplate         int,
    @SeriesItemID           int,
    @UserID                  int,
    @RecurrenceColName      nvarchar(64),
    @RecurrenceRowOrd       int = 0,
    @EventTypeColName       nvarchar(64),
    @EventTypeRowOrd        int = 0,
    @RecDataColName         nvarchar(64),
    @RecDataRowOrd          int = 0,
    @UIDColName             nvarchar(64),
    @UIDRowOrd              int = 0
)

```

);

@SiteId: The site collection identifier for the site collection containing the list that the specified item is being added to.

@ListID: The list identifier of the list that the specified item is being added to.

@WebId: The site identifier for the site containing the list that the specified item is being added to.

@UID: A GUID identifying a particular meeting series.

@ServerTemplate: The meetings list.

@SeriesItemID: The identifier of the meeting instance list item corresponding to the master instance of the meeting series.

@UserID: The integer identifier of the current user.

@RecurrenceColName: The name of the column in the UserData View that corresponds to the recurrence identifier of the recurring meeting series.

@RecurrenceRowOrd: The ordinal of the list (1) item that SHOULD contain the recurrence identifier specified inside the column identified by the parameter *@RecurrenceColName*.

@EventTypeColName: The name of the column in the UserData View that corresponds to the event type. For more information about UserData View, see [\[MS-WSSFO\]](#).

@EventTypeRowOrd: The ordinal of the list (1) item that SHOULD contain the event type information specified inside the column identified by the parameter *@EventTypeColName*.

@RecDataColName: The name of the column in the UserData View that corresponds to the recurrence data of the recurring meeting series.

@ RecDataRowOrd: The ordinal of the list (1) item that SHOULD contain the recurrence data specified inside the column identified by the parameter *@RecDataColName*.

@UIDColName: The name of the column in the UserData View that corresponds to the unique identifier of the recurring meeting series.

@UIDRowOrd: The name of the row ordinal in the UserData View that contains the unique identifier of the recurring meeting series in the column specified by the *@UIDColName* parameter.

Return Values: An integer which MUST be 0<[10](#)>.

Result Sets: MUST NOT return any result set.

3.1.4.50 `proc_ProcessDelMtgAttendeeListItem`

The `proc_ProcessDelMtgAttendeeListItem` stored procedure is called to remove a meeting attendee list item from a meetings list. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_ProcessDelMtgAttendeeListItem(  
    @SiteId          uniqueidentifier,  
    @WebId           uniqueidentifier,  
    @ListId         uniqueidentifier,  
    @ItemId          int
```

);

@SiteId: The site collection identifier of a site collection.

@WebId: The site identifier of a site within the site collection.

@ListId: The list identifier of an attendees list in the site.

@ItemId: The identifier of the list item corresponding to the item for an attendee.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion.
13	Attendee was not found in list.

Result Sets: MAY return one result set as follows.

3.1.4.50.1 Site Audit Mask Result Set

The Site Audit Mask result set returns the information about the Audit Flags associated with the specified site. The Site Audit Mask result set is returned if and only if a single attendee match is found, and there exists a site defining the roles on the specified site. The Site Audit Mask result set MUST return a single row.

The T-SQL syntax for the result set is defined as follows:

```
{Id}                uniqueidentifier,  
{AuditFlags}       int,  
{InheritAuditFlags} int,  
{GlobalAuditMask} int;
```

{Id}: The identifier of the specified site. This MUST be the same as *@WebId*.

{AuditFlags}: An Audit Flags value determining the operations to be tracked on this site. This value MUST be NULL if the site cannot be found within the site collection.

{InheritAuditFlags}: An Audit Flags value determining the operations to be tracked on one of this site's subsites. This value MUST be NULL if the site cannot be found within the site collection.

{GlobalAuditMask}: An Audit Flags value determining the operations to be tracked across the site collection that contains this site. This value MUST be NULL if the site collection cannot be found.

3.1.4.51 proc_PutWebNavStructNode

The **proc_PutWebNavStructNode** stored procedure is called to update the properties of a navigation node. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_PutWebNavStructNode (  
    @SiteId                uniqueidentifier,  
    @WebId                 uniqueidentifier,  
    @Eid                   int,
```

```

    @EidBase          int,
    @EidHome          int,
    @DateModified    datetime = NULL,
    @DirName          nvarchar(256) = NULL,
    @LeafName         nvarchar(128) = NULL,
    @UrlExternal      nvarchar(260) = NULL,
    @Name             nvarchar(256) = NULL,
    @SetMetaInfo      bit = 0,
    @NodeMetaInfo     image = NULL,
    @NonNavPage       bit = NULL,
    @NavSequence      bit = NULL,
    @WantOldName      bit = 0,
    @@DateModifiedReally datetime = OUTPUT
);

```

@SiteId: The site collection identifier of the site collection which contains the site specified by *@WebId*.

@WebId: The site identifier of the site to which the navigation node belongs.

@Eid: The navigation node element identifier of the navigation node to be updated.

@EidBase: The base value to use if the *@Eid* value is a temporary value. This MUST be the value returned by `proc_NavStructAllocateEidBlockWebId` (Section [3.1.4.44](#)) before this stored procedure is called.

@EidHome: The navigation node element identifier of the navigation node that points to the home page of the site.

@DateModified: A datetime value specifying the last known time when this navigation node was changed.

@DirName: The store-relative form directory name of the document that this navigation node represents. This MUST be ignored if *@LeafName* is NULL or the navigation node is of navigation node type 1.

@LeafName: The store-relative form leaf name of the document this navigation node represents. This MUST be ignored if *@DirName* is NULL or the navigation node is of navigation node type 1.

@UrlExternal: The URL that this navigation node represents. This MUST be ignored if the navigation node is of navigation node type 0.

@Name: The display name of the navigation node. If this is NULL, then the display name MUST NOT be changed.

@SetMetaInfo: A bit specifying whether to update the navigation node metadata. If this is set to 1, the navigation node metadata MUST be set to the value specified by **@NodeMetaInfo**, else the navigation node metadata MUST not be changed.

@NodeMetaInfo: A binary serialization of the navigation node metadata.

@NonNavPage: A bit specifying whether the navigation node will be filtered out when rendering the navigation structure. If this is set to 1, the navigation node SHOULD be filtered out [<11>](#). If this is NULL, then the corresponding setting for the navigation node MUST NOT be changed.

@NavSequence: A bit representing whether the node represents a link bar. If this navigation node represents a link bar, this bit MUST be set to 1, else it MUST be set to 0. If the navigation node represented by @Eid is of Navigation Node Type 0, then this value MUST NOT be 1.

@WantOldName: A bit specifying whether the caller needs the old display name of the navigation node. If this is set to 1, the Old Name result set MUST be returned.

@@DateModifiedReally: An output parameter containing a datetime value that specifies the time when the navigation node was last changed. For a successful completion, this represents the time when the navigation node was updated. If the return code is 10004, this represents the time when the navigation node was last changed.

Return Values: `proc_PutWebNavStructNode` returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
10005	Navigation node specified by @Eid does not exist for the site specified by @WebId and @SiteId.
10004	Navigation node has been changed since the time specified by @DateModified.
10007	The document specified by @DirName and @LeafName does not exist.
10006	The navigation node was not updated.

Result Sets: `proc_PutWebNavStructNode` MUST return zero, two, or three result sets. If the return code is anything other than 0, no result set MUST be returned. If the return code is 0, then either two or three result sets MUST be returned.

3.1.4.51.1 Old Name Result Set

Returns the old name of the navigation node. If the @WantOldName bit is set to 1 and the return code is 0, then this result set MUST be returned; otherwise this result set MUST NOT be returned. If the result set is returned, it MUST return one row. The T-SQL syntax for the result set is as follows:

```
{OldName}          nvarchar(256);
```

{OldName}: The display name of the navigation node before it was changed by this stored procedure.

3.1.4.51.2 Nav Data Result Set

Returns information about the updated navigation node. If returned, this result set MUST return one row as defined in the Nav Data Result Set (Section [2.2.6.3](#)).

3.1.4.51.3 Nav Children Result Set

Returns the navigation node element identifier information of all the subnodes of the new navigation node. If returned, this result set MUST contain zero or more rows as defined in the Nav Children Result Set (Section [2.2.6.4](#)).

3.1.4.52 proc_RelinkMeeting

The **proc_RelinkMeeting** stored procedure is called to relink a meeting instance with a meeting series. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_RelinkMeeting(  
    @MeetingsListID      uniqueidentifier,  
    @InstanceID          int,  
    @UserId              int  
);
```

@MeetingsListId: A GUID referring to the meetings list.

@InstanceID: The identifier of the instance of the meeting that will be re-linked.

@UserId: An integer value referring to the user performing the action.

Return Values: An integer that MUST be listed in the following table:

Value	Description
0	Successful completion.
2	No meeting instances were updated.

Result Sets: MUST NOT return any result sets.

3.1.4.53 proc_SetCommentAttribs

The **proc_SetCommentAttribs stored procedure** is called to update properties on a specified Web discussion comment. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_SetCommentAttribs(  
    @SiteId              uniqueidentifier,  
    @DocFullUrl          nvarchar(260),  
    @Id                  int,  
    @Subject             nvarchar(255),  
    @Status              smallint,  
    @Comment             ntext,  
    @Size                int,  
    @UserTitle           nvarchar(255)  
);
```

@SiteId: The identifier of the site collection containing the specified document.

@DocFullUrl: The store-relative URL to the document.

@Id: The identifier of the Web discussion comment to be updated.

@Subject: The subject of this Web discussion comment. If NULL, the subject MUST NOT be changed.

@Status: A flag value that indicates the status of a Web discussion comment. If NULL, the status MUST NOT be changed.

@Comment: The new body text of the Web discussion comment. If NULL, the body text MUST NOT be changed.

@Size: The new size in bytes of this Web discussion comment that is available for use in quota management. If NULL, the size MUST NOT be changed.

@UserTitle: The display name of the user that is adding the Web discussion comment.

Return Values: The stored procedure returns an integer return code which MUST be in the following table:

Value	Description
0	Successful completion.
3	The specified Web discussion comment or document does not exist.
212	The specified site collection has been locked, and writes are disallowed.
1816	The quota for the specified site collection has been exceeded.

Result Sets: MUST NOT return any result sets.

3.1.4.54 **proc_SetVersionIndependentMetaInfo**

The **proc_SetVersionIndependentMetaInfo stored procedure** is invoked to set the version-independent metadata of a document. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_SetVersionIndependentMetaInfo (  
    @SiteId          uniqueidentifier,  
    @DirName         nvarchar(256),  
    @LeafName        nvarchar(128),  
    @MetaInfo        image,  
    @MetaInfoSize    int,  
    @UpdateHCD       int,  
    @HCD             int,  
    @UpdatedVersion  int = OUTPUT  
);
```

@SiteId: The site collection identifier of a site collection containing the document whose version-independent metadata is set.

@DirName: The directory name of the document whose version-independent metadata is set.

@LeafName: The leaf name of the document whose version-independent metadata is set.

@MetaInfo: A metadict holding all version-independent metadata for the document.

@MetaInfoSize: The size in bytes of the *@MetaInfo* parameter.

@UpdateHCD: If this parameter is NULL or equal to 0, *@HCD*, Has Copy Destination, parameter MUST be ignored.

@HCD: If this parameter is equal to 0, *tp_HasCopyDestinations* of the corresponding *AllUserData* is set to 0. Otherwise, it is set to 1.

@UpdatedVersion: The new version of the metadata.

Return Values: `proc_SetVersionIndependentMetaInfo` returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
1816	The site collection is over quota.
212	The site collection is locked.
33	The metadata has been concurrently updated while the stored procedure is executing.

Result Sets: MUST NOT return any result sets.

3.1.4.55 `proc_SetWebNavStructInheritance`

`proc_SetWebNavStructInheritance` is invoked to update a site's inheritable navigation structure to be inherited or unique. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_SetWebNavStructInheritance (
    @WebId          uniqueidentifier,
    @Inherits       bit,
    @@NavParentWebId uniqueidentifier OUTPUT
);

```

@WebId: The site identifier whose inheritable navigation structure is to be updated.

@Inherits: a bit value indicating whether the site inherits navigation structure from parent site or not. When set to 1, the site specified by `@WebId` MUST inherit its inheritable navigation structure from its parent site. When set to 0, the site specified by `@WebId` MUST have a unique inheritable navigation structure.

@@NavParentWebId: Returns the GUID of new navigation parent site. When `@Inherits` is 1, SHOULD return `NavParentWebId` of the parent site, unless the `NavParentWebId` of the parent site is NULL. In that case, return the GUID of the parent site. When `@Inherits` is 0, MUST return NULL.

Return Values: `proc_SetWebNavStructInheritance` returns an integer return code which MUST be listed in the following table:

Value	Description
0	Successful completion.
1	The Web does not exist

Result Sets: MUST NOT return any result sets.

3.1.4.56 `proc_UnOrphanMtgOccurrence`

The `proc_UnOrphanMtgOccurrence` stored procedure is called to re-associate a meeting instance within a meeting series. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_UnOrphanMtgOccurrence (
    @WebId          uniqueidentifier,

```



```

        @InstanceID      int,
        @UserId          int
    );

```

@WebId: Specifies a site identifier for an instance of a meeting workspace. The value MUST be a GUID.

@InstanceID: Specifies the identifier of the instance of the meeting that will be re-associated to the meeting series.

@UserID: Specifies the identifier of the user performing the action.

Return Values: An integer which MUST be listed in the following table:

Value	Description
0	Successful completion.
2	Either a meeting instance with <i>@InstanceId</i> was not found, or the InstanceId is mapped to more than one row in the UserData View. For more information about UserData View, see [MS-WSSFO] .
13	No meetings list was found on the workspace specified by <i>@WebId</i> .

Result Sets: MUST NOT return any result sets.

3.1.4.57 **proc_UpdateCachedNav**

The **proc_UpdateCachedNav** stored procedure is called to update the navigation structure cache. The T-SQL syntax for the stored procedure is as follows:

```

PROCEDURE proc_UpdateCachedNav(
    @WebId                uniqueidentifier,
    @NavParentWebId      uniqueidentifier,
    @CachedNavData        image,
    @CachedInheritedNavData image,
    @CachedNavScopeData  ntext,
    @NavParentCachedNavData image,
    @NavParentCachedScopeData ntext,
    @CachedNavDirty       int,
    @CachedDataVersion    int,
    @NavParentCachedDataVersion int
);

```

@WebId: The site identifier for which the navigation cache is updated.

@NavParentWebId: The site identifier of the navigational parent site.

@CachedNavData: The node structure in binary data format from the cached navigation. This binary format is specified as follows:

Navigation Node Element Identifier
NULL

Navigation Node Element Identifier
<i>Navigation Node Element Identifier of the parent Navigation Node</i>
NULL
<i>Navigation Node Element of the URL of the Navigation Node</i>
NULL
<i>Scope Identifier</i>
NULL
<i>Security Type</i>
NULL

Each of these elements is followed by a NULL inside the binary data. All the elements in the structure are represented as strings. The identifiers are converted into strings, whereas GUID values are already strings by definition. Security type is an integer value that is also converted into a string at concatenation time.

Security Type is a value that defines the **permissions** required to see this navigation node. (See [\[MS-WSSFO\]](#) for a list of permissions and their descriptions.) The following are all possible valid values:

Value	Description
0	This navigation node is always visible to the user.
1	This navigation node requires the user to have permissions to view Web pages in the site that are not in a list or document library.
2	This navigation node requires the user to have permissions to view Web pages in the site that are form or list view pages of a list or document library.
3	This navigation node requires the user to have permissions to view Web pages in the site that are items in a document library.

@CachedInheritedNavData: The node structure in binary data format from the navigational parent site. For the format, please refer to the description of parameter *@CachedNavData*.

@CachedNavScopeData: The string that contains all the distinct scope identifier of all the navigation nodes of the site. Every element is included between quotes and is separated by commas from the rest. The general format is specified as follows:

```
('Security Scope Identifier' , 'Security Scope Identifier',...)
```

@NavParentCachedNavData: The node structure in binary data format of the cached navigation of the parent. For the format, please refer to the description of parameter *@CachedNavData*.

@NavParentCachedScopeData: The string that contains all the distinct scope identifier of all the navigation nodes of the navigational parent site. The format of the string is specified in the description of parameter *@CachedNavScopeData*.

@CachedNavDirty: This MUST be 0.

@CachedDataVersion: The integer that defines the version of the cached data.

@NavParentCachedDataVersion: The integer that defines the version of the cached data of the navigational parent site.

Return Values: The stored procedure returns an integer return code which MUST be in the following table:

Value	Description
0	Successful completion.
1150	The cached data could not be updated. This MAY be caused by a concurrency violation.

Result Sets: MUST NOT return any result sets.

3.1.4.58 **proc_UpdateItemJunctionsCurrentVersion**

The **proc_UpdateItemJunctionsCurrentVersion** stored procedure is called to update the UIVersion of a subscribed event for a specific site collection, directory name, leaf name and level. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_UpdateItemJunctionsCurrentVersion(  
    @SiteId          uniqueidentifier,  
    @DirName         nvarchar(256),  
    @LeafName        nvarchar(128),  
    @NewUIVersion    int,  
    @Level           tinyint = 1  
);
```

@SiteId: Specifies the site collection identifier of the site collection in which the subscribed-to event exists.

@DirName: Specifies the directory name of the subscribed event.

@LeafName: Specifies the leaf name (file name) of the subscribed event.

@NewUIVersion: Specifies the integer to which the UI versions of item junctions specified by *@SiteId*, *@DirName*, *@LeafName* and *@Level* MUST be updated.

@Level: Specifies the status of the document for the subscribed event. The value MUST be listed in the following table:

Value	Description
255	Checked out
2	Draft.
1	Publish.
0	Unused.

Return Values: **proc_UpdateItemJunctionsCurrentVersion** returns an integer which MUST be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.59 `proc_UpdateListNavNode`

The **`proc_UpdateListNavNode`** stored procedure is called to update the navigation node that represents a list in the navigation structure of a site. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_UpdateListNavNode (
    @WebId                uniqueidentifier,
    @ListId               uniqueidentifier,
    @ViewId              uniqueidentifier,
    @Name                 nvarchar(256),
    @NaVBArEid           int,
    @AddIfNotThere        bit,
    @UseRootFolderForNav bit
);
```

@WebId: The site identifier of the site which contains the list specified by `@ListId`.

@ListId: The list identifier of the list whose navigation node is to be updated.

@ViewId: The identifier of the **default list view** of the list.

@Name: The display name of the navigation node.

@NaVBArEid: The navigation node element identifier of the parent navigation node.

@AddIfNotThere: A bit representing whether to add a new navigation node if no corresponding navigation node exists. This value **MUST** be 0.

@UseRootFolderForNav: A bit representing whether to point the navigation node to the default list view of the list or to the lists's root folder. This value **MUST** be 0.

Return Values: `proc_UpdateListNavNode` returns an integer return code which **MUST** be 0.

Result Sets: MUST NOT return any result sets.

3.1.4.60 `proc_UpdateSchedSubscriptionTimes`

The **`proc_UpdateSchedSubscriptionTimes`** stored procedure is called to update the next notification times of Scheduled Subscriptions that have already passed a specific date. The T-SQL syntax for the stored procedure is as follows:

```
PROCEDURE proc_UpdateSchedSubscriptionTimes (
    @EventTime            datetime
);
```

@EventTime: The UTC date time of the event relative to which the subscriptions are updated.

Return Values: `Proc_UpdateSchedSubscriptionTimes` returns an integer which **MUST** be 0.

Result Sets: MUST NOT return any result sets.

3.1.5 Timer Events

If the connection timeout event is triggered, the stored procedure is terminated and the call fails.

3.1.6 Other Local Events

No other local events impact the operation of this protocol.

3.2 WSSEUX Client Details

The front-end Web server acts as a client when it calls the back-end database server requesting execution of stored procedures.

3.2.1 Abstract Data Model

3.2.2 Timers

A connection timeout timer is set up on the front-end Web server to govern the total connection time for any requests to the back-end database server. The amount of time is governed by a timeout value configured on the front-end Web server for all back-end database server connections.

3.2.3 Initialization

The front-end Web server **MUST** validate the user making the request before calling the stored procedures. The site collection identifier and the user identifier for the user making the request are looked up by the front-end Web server before calling additional stored procedures.

3.2.4 Message Processing Events and Sequencing Rules

The front-end Web server handles each stored procedure with the same processing method of calling the stored procedure and waiting for the Result Code and any result sets that will be returned.

The front-end Web server can execute dynamically generated SQL queries against the stored procedures, or the tables and views used within the database. However, unless otherwise specified, any data addition, removal, or modification **MUST** occur only by calling the listed stored procedures. SQL queries **MUST NOT** attempt to add, remove, or update data in any table or view in the Content or Configuration databases, unless explicitly described in this section.

3.2.4.1 Fetch HTML Translate Cache Item

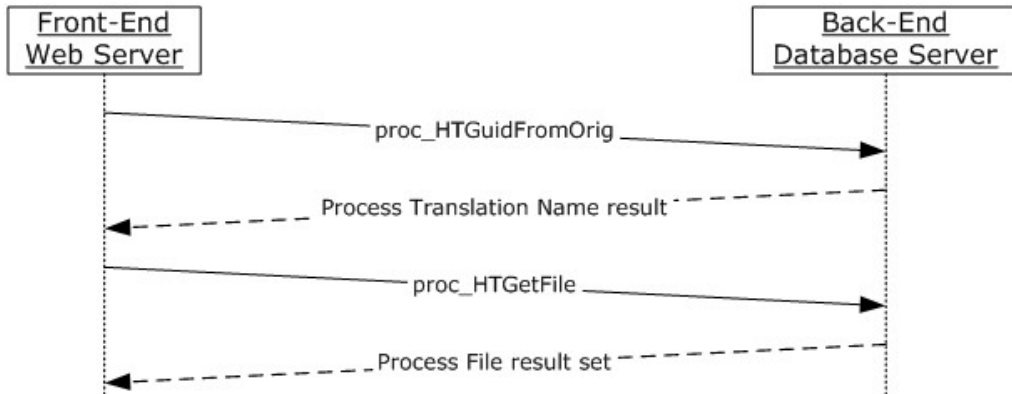


Figure 2: Retrieve the HTML translate cache item

This sequence gets invoked to fetch the item from the HTML translate cache for a document. Fetch HTML Translate Cache Item Sequence executes the following sequence of sprocs:

1. Call `proc_HTGuidFromOrig`.
2. Process the Translation Name result set and get the translation name for the document.
3. Call `proc_HTGetFile` with the translation name obtained from step 2.

3.2.4.2 CreateNavigationNodeByDocId

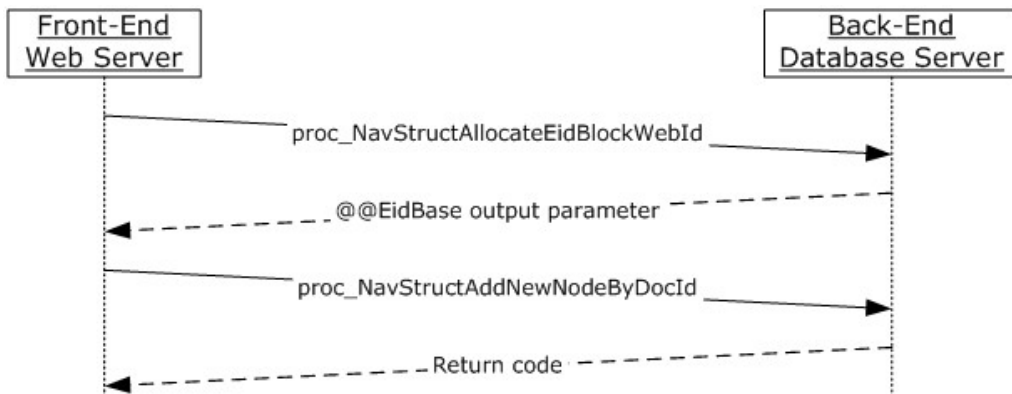


Figure 3: CreateNavigationNodeByDocId operation

`CreateNavigationNodeByDocId` gets invoked for creating a navigation node that points to a SharePoint object inside the site. `CreateNavigationNodeByDocId` executes the following sequence of sprocs:

1. Call `proc_NavStructAllocateEidBlockWebId`.
2. Process the output parameter `@@EidBase`.

3. Call `proc_NavStructAddNewNodeByDocId` passing in the identifier of the document and `@@EidBase` obtained in step 2.

3.2.4.3 CreateNavigationNodeByUrl

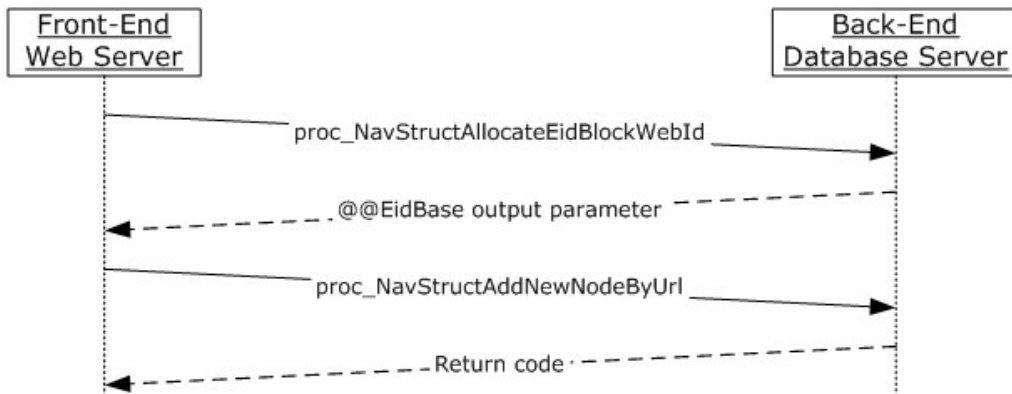


Figure 4: CreateNavigationNodeByUrl operation

`CreateNavigationNodeByUrl` gets invoked for creating a navigation node that points to a URL. `CreateNavigationNodeByUrl` executes the following sequence of sprocs:

1. Call `proc_NavStructAllocateEidBlockWebId`.
2. Process the output parameter `@@EidBase`.
3. Call `proc_NavStructAddNewNodeByUrl` passing in the URL and `@@EidBase` obtained in step 2.

3.2.4.4 AddAndUpdate NavigationNode

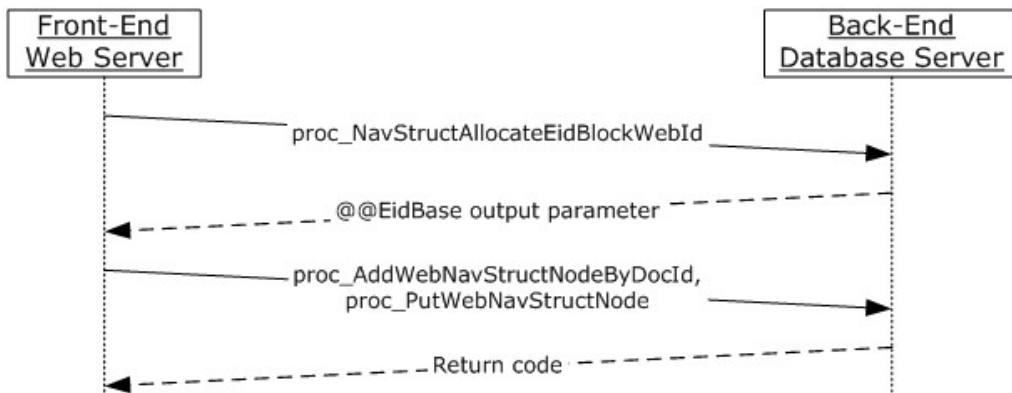


Figure 5: AddAndUpdateNavigationNode operation

`AddAndUpdateNavigationNode` gets invoked for creating and updating a navigation node in one transaction. `AddAndUpdateNavigationNode` executes the following sequence of sprocs:

1. Call `proc_NavStructAllocateEidBlockWebId`
2. Process the output parameter `@@EidBase`

3. Call `proc_AddWebNavStructNodeByUrl` or `proc_AddWebNavStructNodeByDocID` and `proc_PutWebNavStructNode` using `@@EidBase` obtained in step 2.

3.2.4.5 MoveNavigationNode

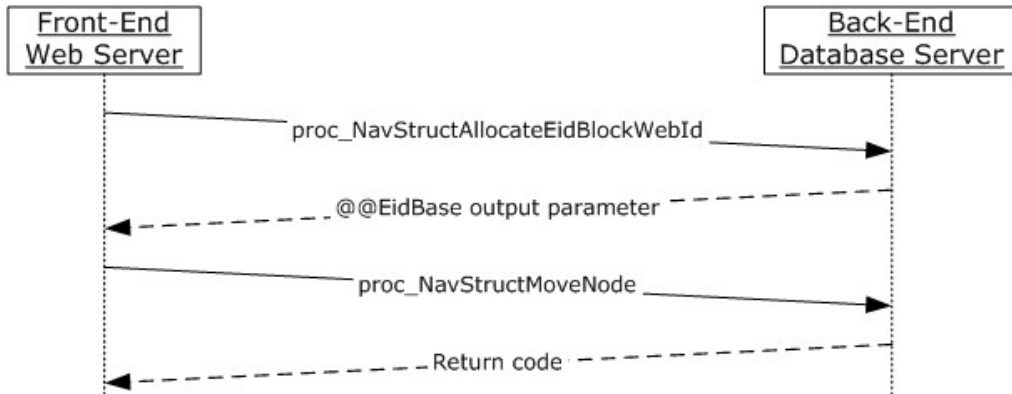


Figure 6: MoveNavigationNode operation

MoveNavigationNode gets invoked for moving a navigation node. `MoveNavigationNode` executes the following sequence of sprocs:

1. Call `proc_NavStructAllocateEidBlockWebId`
2. Process the output parameter `@@EidBase`
3. Call `proc_NavStructMoveNode` passing in the identifier of the document and `@@EidBase` obtained in step 2.

3.2.5 Timer Events

If the connection timeout event is triggered, the connection and the stored procedure call fails.

3.2.6 Other Local Events

No other local events impact the operation of this protocol.

4 Protocol Examples

4.1 TreeView Operations

This example describes the requests made and responses returned between front-end Web server and back-end database server when an end user expands tree nodes on the TreeView (Section [3.1.1.5](#)) of a site.

In this scenario, the site contains a SubSite and a document library containing folders.

1. When the client requests the information for the site, the front-end Web server gets the information of the SubSites and the lists in the site by calling `proc_GetWebAndChildrenNSInfo` (Section [3.1.4.25](#)) to the back-end database server.
2. Back-end database server returns one `SiteNSInfo` result set containing the SubSites of the expanded site node and one `ListNSInfoResultSet` containing document libraries and lists under the expanded site node.
3. When the client requests information about the document library Node under the expanded site node, the front-end Web server gets the information of the document library and its subfolders by calling `proc_GetWebAndChildrenNSInfo` (Section [3.1.4.25](#)) to the back-end database server.
4. The back-end database server returns one `ChildFoldersNsInfo` result set containing the subfolders under the document library.

4.2 HTML Translate Cache

The front-end Web server inserts an item into the HTML translate cache by calling `proc_HTCreateRow`.

For fetching an item from the HTML translate cache for a document:

1. The front-end Web server first gets the name of the translated file by calling `proc_HTGuidFromOrig`.
2. It uses the translation name from the Translation Name result set of the previous call in the call to `proc_HTGetFile` to get the item.

4.3 Web Discussions Operations

4.3.1 Add a Comment

The front-end Web server adds a comment to a document by calling `proc_AddDocComment`.

4.3.2 Reply to a Comment

When the user replies to the previous comment, the front-end Web server calls `proc_AddDocComment` with the comment id that was returned in the `AddDocComment` result set as the `ParentId` parameter.

4.3.3 Edit a Comment

When the user edits a comment, the front-end Web server calls `proc_SetCommentAttribs`.

4.3.4 Delete a Comment

Deleting a comment is accomplished by calling **proc_DeleteDocComment**.

4.3.5 Enumerate All Comments in a Document

When the client requests all the comments of a document, the front-end Web server calls **proc_GetDocComments** passing the **site-relative URL** of the document.

4.4 Navigation Structure

4.4.1 Create a Navigation Node to a URL

To create a navigation node, the front-end Web server calls **proc_NavStructAllocateEidBlockWebId**.

The *@EidBase* that is returned is then passed to **proc_NavStructAddNewNodeByUrl** to create the new navigation node.

4.4.2 Move a Navigation Node

To move a navigation node, the front-end Web server calls **proc_NavStructAllocateEidBlockWebId**.

The *@EidBase* that is returned is then passed to **proc_NavStructMoveNode** to move the navigation node.

4.4.3 Enumerate Navigation Nodes in a Site

A front-end Web server enumerates the navigation nodes in a site by calling **proc_GetWebNavStruct**.

5 Security

5.1 Security Considerations for Implementers

The database access account used by the front-end Web server must have access to the appropriate content database on the back-end database server. If the account does not have the correct user rights, access will be denied when attempting to set up the [\[MS-TDS\]](#) connection to the content database, or when calling the stored procedures.

5.2 Index of Security Parameters

This protocol uses the security parameters that are specified in the [\[MS-WSSFO\]](#) protocol document.

6 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® SQL Server® 2005
- Microsoft® SQL Server® 2008
- Microsoft® SQL Server® 2008 R2
- Windows® SharePoint® Services 3.0

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

[<1> Section 2.2.2.3:](#) Windows SharePoint Services 3.0 treats the values of 2 and 4 in the same manner

[<2> Section 2.2.6.3:](#) Windows SharePoint Services 3.0 does not honor this return value. It hides the Navigation Nodes based on the permissions of the user

[<3> Section 3.1.4.1:](#) If the Web discussion comment corresponding to the @ParentId does not exist, then the server in Windows SharePoint Services v2.0 and v3.0 sets this parameter to 0.

[<4> Section 3.1.4.1.1:](#) Windows SharePoint Services v2.0 and v3.0 tries to add the Web discussion comment 10 times with a different value for Id each time. If it was successful it returns 0 and the result set contains the successfully inserted values. If the server fails to add the comment, then the server returns a nonzero error code and the result set contains the values that it tried to insert in the final attempt.

[<5> Section 3.1.4.28.3:](#) Windows SharePoint Services 3.0 does not honor this return value. It hides the Navigation Nodes based on the permissions of the user

[<6> Section 3.1.4.34:](#) The client in Windows SharePoint Services 3.0 creates a unique Translation Name for each file. Thus there is only one row corresponding to a SiteID, DirName, LeafName in the table.

[<7> Section 3.1.4.36.1:](#) The client in Windows SharePoint Services 3.0 uses only the first row that is returned in the result set.

[<8> Section 3.1.4.42:](#) Windows SharePoint Services 3.0 does not honor this parameter. It hides the Navigation Nodes based on the permissions of the user.

[<9> Section 3.1.4.43:](#) If the Web discussion comment corresponding to the @ParentId does not exist, then the server in Windows SharePoint Services v2.0 and v3.0 sets this parameter to 0.

[<10> Section 3.1.4.49:](#) Windows SharePoint Services 3.0 SP1 always returns an error token [\[MS-TDS\]](#), indicating a syntax error.

<11> [Section 3.1.4.51](#): If the Web discussion comment corresponding to the @ParentId does not exist, then the server in Windows SharePoint Services v2.0 and v3.0 sets this parameter to 0.

7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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