

Introducing DDM™ Interface

VERSION 1.4.0

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About Dynamic Document Management system (DDM™)

DDM modules (Tasks, Appointments, etc.) communicate with the Server by sending and receiving XML-documents through HTTP. You can find detailed descriptions of XML-document formats in Appendices. Please note that these formats are of interest for you only when you want to develop your own server side for DDM.

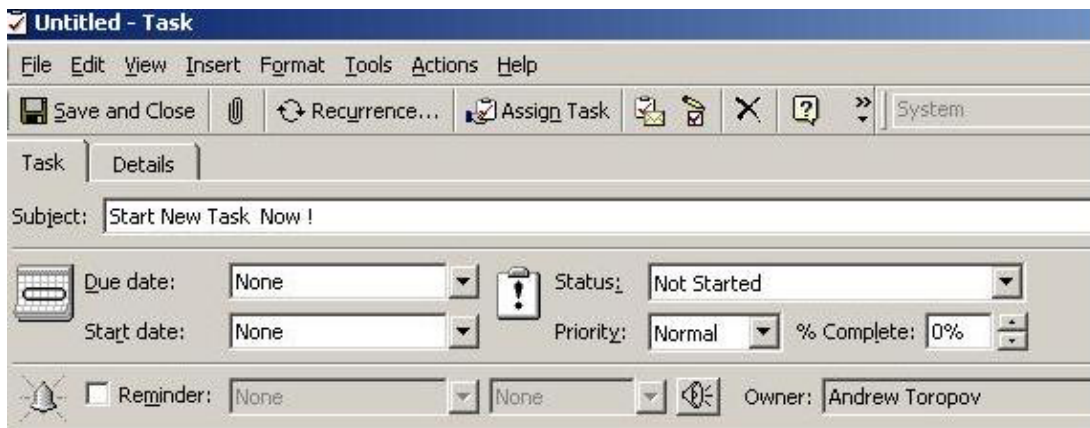
The communication is commonly bi-directional. Sending information from DDM Client to Server is called "upload", while receiving information from the Server is called "download". As an option, you can disable uploading; in this case, the communication becomes uni-directional, and your DDM Client works in read-only mode: you can obtain information from the Server, but you cannot change the information on the Server.

Here we describe upload and download processes using DDM Tasks module as an example; interfaces of other DDM modules are quite similar. Detailed information can be found in Appendices.

Uploading to Server

Upload process starts:

- (1) When you create a new Task and hit "Save and Close" button.



- (2) When you change the existing one and hit "Save and Close" button.

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In both cases, MS Outlook DDM Client module will send http request "multipart/form-data" with XML-document as its body. The following is an example of such an XML-document:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <Tasks for="scott">
  - <Task GlobalID="432539" TimeStamp="2003.9.19 17:45:16"
    EntryID="00000009221A6F776949C46B770C9FE8A63D62864FC2300" Marked="0">
    <ActualWork>0</ActualWork>
    - <BillingInformation>
      - <![CDATA[ ]]>
    </BillingInformation>
    - <Body>
      - <![CDATA[ ]]>
    </Body>
    - <CardData>
      - <![CDATA[ ]]>
    </CardData>
    - <Categories>
      - <![CDATA[ ]]>
    </Categories>
    - <Companies>
      - <![CDATA[ ]]>
    </Companies>
    <Complete>0</Complete>
    - <ContactNames>
      - <![CDATA[ ]]>
    </ContactNames>
    - <Contacts>
      - <![CDATA[ ]]>
    </Contacts>
    <DateCompleted>4501.1.1 0:0:0</DateCompleted>
    <DueDate>2003.9.19 0:0:0</DueDate>
    <Importance>1</Importance>
    - <Mileage>
      - <![CDATA[ ]]>
    </Mileage>
    <NoAging>0</NoAging>
    <Ordinal>-1832000</Ordinal>
    <Owner>Andrew Toropov</Owner>
    <PercentComplete>0</PercentComplete>
    <ReminderSet>0</ReminderSet>
    <ReminderTime>2003.9.19 17:45:0</ReminderTime>
    <ReminderOverrideDefault>0</ReminderOverrideDefault>
    <ReminderPlaySound>0</ReminderPlaySound>
    - <ReminderSoundFile>
      - <![CDATA[ ]]>
    </ReminderSoundFile>
    - <Role>
      - <![CDATA[ ]]>
    </Role>
    <Sensitivity>0</Sensitivity>
    <StartDate>2003.9.19 0:0:0</StartDate>
    <Status>0</Status>
    - <StatusOnCompletionRecipients>
      - <![CDATA[ ]]>
    </StatusOnCompletionRecipients>
    - <StatusUpdateRecipients>
      - <![CDATA[ ]]>
    </StatusUpdateRecipients>
    - <Subject>
      - <![CDATA[ ]]>
    </Subject>
    <TeamTask>0</TeamTask>
    <TotalWork>0</TotalWork>
    <UnRead>0</UnRead>
  </Task>
</Tasks>
```

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After creation of a new Task using MS Outlook you can see a new record in the Server data. Check it using your browser with the following URL:

<http://scott:tiger@www.dynamicpsp.com/dpsp/forms/!go?In=MainFormsPage>

http://www.dynamicpsp.com/dpsp/forms/!go?

Welcome, Scott Tiger

Start New Task Now !

Start New Task Now ! (#432544) < Specifications

name Start New Task Now !

category DDM Tasks

DDM Tasks

Subject Start New Task Now !

Executor Andrew Toropov

StartDate January 01 4501 00 00 00

DueDate January 01 4501 00 00 00

Status Not Started

Importance Normal

PercentComplete 0

Body Start New Task Now !

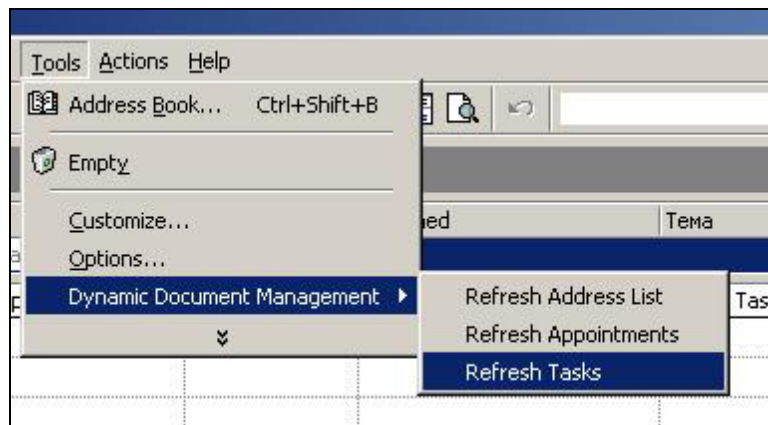
Main
Advanced S
Forums
My Folders

Exit

Downloading from Server

Downloading process starts:

1. when you hit menu item "Tools | Dynamic Document Manager | Refresh Tasks"



Dynamic Document Management system™ (DDM™)

2. when you enable Auto refresh option for DDM Tasks ("Tools | Options | DDM Tasks") by setting non-zero number of minutes. If this value is zero, then Auto refresh option is disabled.

The image shows a Windows-style dialog box titled "Options" with a tabbed interface. The "DDM Tasks" tab is selected. The "DDM Tasks" checkbox is checked. Below it are fields for "User name" (containing "scott") and "Password" (masked with asterisks). There is an unchecked checkbox for "always ask for password". The "Auto refresh" field is set to "5" minutes. The "Language" dropdown is set to "English". There are two URL fields: "URL:" containing "http://www.dynamicpsp.com/dsp/forms/ddm\$pub.pub?Dom_=DDMTasksDemo" and "Submit URL:" containing "http://www.dynamicpsp.com/dsp/forms/ddm\$pub.submit?Dom_=DDMTasksDe". At the bottom are "OK", "Cancel", and "Apply" buttons.

After Refresh data from Server

When data is refreshed, the Client is sending a request for information to the Server using URL like this:

[http://scott.tiger@www.dynamicpsp.com/dpsp/forms/ddm\\$pub.pub?Dom =DDMTasksDemo](http://scott.tiger@www.dynamicpsp.com/dpsp/forms/ddm$pub.pub?Dom =DDMTasksDemo)

and the Server will answer with an XML-document like this:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <!-- Generated by Dynamic Documents Manager at 24.09.2003 14:45 -->
- <Tasks for="scott" category="165">
  <Task GlobalID="432542" TimeStamp="2003.09.24 14:45:24"
    EntryID="000000009221A6F776949C46B770C9FE8A63D62844FD2300"
    Marked="1" />
  -<Task GlobalID="432540" TimeStamp="2003.09.24 14:45:24"
    EntryID="000000009221A6F776949C46B770C9FE8A63D62804FD2300">
    <Importance>1</Importance>
    <ReminderTime>2003.09.25 08:00:00</ReminderTime>
    <PercentComplete>0</PercentComplete>
    <StartDate>2003.09.25 00:00:00</StartDate>
    <Owner>Andrew Toropov</Owner>
    <ReminderSet>1</ReminderSet>
    <TotalWork>0</TotalWork>
    <Sensitivity>0</Sensitivity>
    <ActualWork>0</ActualWork>
    <DueDate>2003.09.25 00:00:00</DueDate>
  - <Subject>
    - <![CDATA[ Scott's Task ]]>
    </Subject>
    <Status>1</Status>
  </Task>
</Tasks>
```


Appendix 1 – DDM Tasks Interface

XML-document syntax

```
<?xml version="1.0" encoding="UTF-8" ?>
<Tasks for="scott">
  <Task GlobalID="106"
    TimeStamp="2003.9.8 12:16:57"
    EntryID="0000000088114D5004EC024D9FA5C3E83D1CAACE84E22200"
    Marked="0">
    <ActualWork>0</ActualWork>
    <BillingInformation><![CDATA[]]></BillingInformation>
    <Body><![CDATA[go away]]></Body>
    <CardData><![CDATA[]]></CardData>
    <Categories><![CDATA[]]></Categories>
    <Companies><![CDATA[]]></Companies>
    <Complete>0</Complete>
    <ContactNames><![CDATA[]]></ContactNames>
    <Contacts><![CDATA[]]></Contacts>
    <DateCompleted>4501.1.1 0:0:0</DateCompleted>
    <DueDate>2003.9.3 0:0:0</DueDate>
    <Importance>1</Importance>
    <Mileage><![CDATA[99 miles from L.A.]]></Mileage>
    <NoAging>0</NoAging>
    <Ordinal>-45000</Ordinal>
    <Owner>S.Ageshin</Owner>
    <PercentComplete>25</PercentComplete>
    <ReminderSet>0</ReminderSet>
    <ReminderTime>4501.1.1 0:0:0</ReminderTime>
    <ReminderOverrideDefault>0</ReminderOverrideDefault>
    <ReminderPlaySound>0</ReminderPlaySound>
    <ReminderSoundFile><![CDATA[]]></ReminderSoundFile>
    <Role><![CDATA[]]></Role>
    <Sensitivity>0</Sensitivity>
    <StartDate>2003.8.14 0:0:0</StartDate>
    <Status>1</Status>
    <StatusOnCompletionRecipients><![CDATA[]]></StatusOnCompletionRecipients>
    <StatusUpdateRecipients><![CDATA[]]></StatusUpdateRecipients>
    <Subject><![CDATA[go!]]></Subject>
    <TeamTask>0</TeamTask>
    <TotalWork>0</TotalWork>
    <UnRead>0</UnRead>
    <Attachments>
      <Attachment>
        <Source>Task_106_1.jpg</Source>
        <DisplayName>Army Downsizing</DisplayName>
        <Position>1</Position>
        <Type>1</Type>
      </Attachment>
    </Attachments>
  </Task>
</Tasks>
```

The same XML-document format is used for both uploading and downloading information. The only difference is that in downloaded XML-document tag <Source> under <Attachment> contains URL by which it is possible to obtain Attachment body.

Field names and Types

Name in Outlook API	Name in XML-document	Type
(.EntryID)	EntryID = "..."	String(48)
(.LastModificationTime)	TimeStamp = "..."	Date/Time
-	Marked = "..."	0: Normal 1: Deleted
.ActualWork	<ActualWork>	Long integer
.BillingInformation	<BillingInformation>	String
.Body	<Body>	String
.CardData	<CardData>	String
.Categories	<Categories>	String
.Companies	<Companies>	String
.Complete	<Complete>	Boolean
.ContactNames	<ContactNames>	String
.Contacts	<Contacts>	String
.DateCompleted	<DateCompleted>	Date/Time
.DueDate	<DueDate>	Date/Time
.Importance	<Importance>	0: Low 1: Normal 2: High
.Mileage	<Mileage>	String
.NoAging	<NoAging>	Boolean
.Ordinal	<Ordinal>	String
.Owner	<Owner>	String
.PercentComplete	<PercentComplete>	Long integer
.ReminderSet	<ReminderSet>	Boolean
.ReminderTime	<ReminderTime>	Date/Time
.ReminderOverrideDefault	<ReminderOverrideDefault>	Boolean
.ReminderPlaySound	<ReminderPlaySound>	Boolean
.ReminderSoundFile	<ReminderSoundFile>	String
.Role	<Role>	String
.Sensitivity	<Sensitivity>	0: Normal 1: Personal 2: Private 3: Conditional
.StartDate	<StartDate>	Date/Time
.Status	<Status>	0: Not Started 1: Task In Progress 2: Task Complete 3: TaskWaiting 4: Task Deferred
.StatusOnCompletionRecipients	<StatusOnCompletionRecipients>	String
.StatusUpdateRecipients	<StatusUpdateRecipients>	String
.Subject	<Subject>	String
.TeamTask	<TeamTask>	Boolean
.TotalWork	<TotalWork>	Long integer
.UnRead	<UnRead>	Boolean

Appendix 2 – DDM Appointments interface

XML-document syntax

```
<?xml version="1.0" encoding="UTF-8" ?>
<Appointments for="scott">
  <Appointment GlobalID="106"
    TimeStamp="2003.9.11 12:16:57"
    EntryID="0088114D5004EC024D9FA5C3E83D1CAACE84E22200"
    Marked="0">
    <AllDayEvent> 0 </AllDayEvent>
    <BillingInformation><![CDATA[]]></BillingInformation>
    <Body><![CDATA[]]></Body>
    <BusyStatus> 2 </BusyStatus>
    <Categories><![CDATA[]]></Categories>
    <Companies><![CDATA[]]></Companies>
    <ConferenceServerAllowExternal>0</ConferenceServerAllowExternal>
    <ConferenceServerPassword> qqq </ConferenceServerPassword>
    <Duration> 200 </Duration>
    <Start> 2003.9.11 09:00:00 </Start>
    <End> 2003.9.12 18:00:00 </End>
    <Importance> 1 </Importance>
    <IsOnlineMeeting> 0 </IsOnlineMeeting>
    <Location> 99 miles from l.A. </Location>
    <MeetingStatus> 0 </MeetingStatus>
    <Mileage><![CDATA[99]]></Mileage>
    <NetMeetingAutoStart> 0 </NetMeetingAutoStart>
    <NetMeetingDocPathName> </NetMeetingDocPathName>
    <NetMeetingOrganizerAlias> </NetMeetingOrganizerAlias>
    <NetMeetingServer> </NetMeetingServer>
    <NetMeetingType> 0 </NetMeetingType>
    <NetShowURL> </NetShowURL>
    <NoAging> 1 </NoAging>
    <OptionalAttendees> </OptionalAttendees>
    <ReminderMinutesBeforeStart> 30 </ReminderMinutesBeforeStart>
    <ReminderSet> 0 </ReminderSet>
    <ReminderOverrideDefault> 0 </ReminderOverrideDefault>
    <ReminderPlaySound> 0 </ReminderPlaySound>
    <ReminderSoundFile><![CDATA[]]></ReminderSoundFile>
    <ReplyTime> 2003.9.12 12:00:00 </ReplyTime>
    <RequiredAttendees> </RequiredAttendees>
    <Resources> </Resources>
    <ResponseRequested> 0 </ResponseRequested>
    <Sensitivity> 0 </Sensitivity>
    <Subject><![CDATA[ go! ]]></Subject>
    <UnRead> 0 </UnRead>
    <Attachments>
      <Attachment>
        <Source>Appointment_106_1.jpg</Source>
        <DisplayName> Army Downsizing </DisplayName>
        <Position> 1 </Position>
        <Type> 1 </Type>
      </Attachment>
    </Attachments>
  </Appointment>
</Appointments>
```

Field names and Types

Outlook API	XML-document	Type
-	GlobalID = "..."	Long integer
(.EntryID)	EntryID = "..."	String(48)
(.LastModificationTime)	TimeStamp = "..."	Date/Time
-	Marked = "..."	0: Normal 1: Deleted
.AllDayEvent	<AllDayEvent>	Boolean
.BillingInformation	<BillingInformation>	String
.Body	<Body>	String
.BusyStatus	<BusyStatus>	0: Free 1: Tentative 2: Busy 3: Out Of Office
.Categories	<Categories>	String
.Companies	<Companies>	String
.ConferenceServerAllowExternal	<ConferenceServerAllowExternal>	Boolean
.ConferenceServerPassword	<ConferenceServerPassword>	String
.Duration	<Duration>	Long integer
.Start	<Start>	Date/Time
.End	<End>	Date/Time
.Importance	<Importance>	0: Low 1: Normal 2: High
.IsOnlineMeeting	<IsOnlineMeeting>	Boolean
.Location	<Location>	String
.MeetingStatus	<MeetingStatus>	0: Non Meeting 1: Meeting 3: Received 5: Canceled
.Mileage	<Mileage>	String
.NetMeetingAutoStart	<NetMeetingAutoStart>	Boolean
.NetMeetingDocPathName	<NetMeetingDocPathName>	String
.NetMeetingOrganizerAlias	<NetMeetingOrganizerAlias>	String
.NetMeetingServer	<NetMeetingServer>	String
.NetMeetingType	<NetMeetingType>	0: Net Meeting 1: Net Show 2: Chat
.NetShowURL	<NetShowURL>	String
.NoAging	<NoAging>	Boolean
.OptionalAttendees	<OptionalAttendees>	String
.ReminderMinutesBeforeStart	<ReminderMinutesBeforeStart>	Long integer
.ReminderSet	<ReminderSet>	Boolean
.ReminderOverrideDefault	<ReminderOverrideDefault>	Boolean
.ReminderPlaySound	<ReminderPlaySound>	Boolean
.ReminderSoundFile	<ReminderSoundFile>	String
.ReplyTime	<ReplyTime>	Date/Time
.RequiredAttendees	<RequiredAttendees>	String
.Resources	<Resources>	String
.ResponseRequested	<ResponseRequested>	Boolean
.Sensitivity	<Sensitivity>	0: Normal 1: Personal 2: Private 3: Conditional
.Subject	<Subject>	String
.UnRead	<UnRead>	Boolean

Appendix 3 – DDM AddrList interface

XML-document syntax

```
<AddrList for="Username">
  <AddrEntry EntryID="..." GlobalID="..." TimeStamp="..." Marked= "..." >
    <Address> e-mail address </Address>
    <Name> full username </Name>
  </AddrEntry>
  .
  .
  .
</AddrList>
```

Field names and Types

Outlook API	XML-document	Type
.Email1Address	<Address>	String
.FullName	<Name>	String

Types

Boolean

values may be presented as follows:

True: 1 or Y

False: 0 or N

Date/Time

values are presented as strings of the following format: "YYYY.MM.DD HH24:MI:SS"

String

values may be presented as both Text-nodes or CDataSection-nodes.