e

**Sumatra
Development**
www.sumatra.com

Migrating
Oracle Calendar Server 10
To
Microsoft Exchange 2013
Including
Office 365

Table of Contents

Understanding Calendar Migrations

This guide explains how to take legacy scheduling data from Oracle Calendar Server and insert it into Exchange 2013 or Office 365.

The process of moving calendar data is an order of magnitude more complicated than moving email:

- Email is a static object requiring format changes and proper management to move, it is connected fundamentally to a single user.

- Calendars and schedules are cross-connected to multiple users. Its value results from exactly those cross-connections. They are true webs of information rather than static threads.

- Calendar migrations cannot be successfully accomplished overnight on a day's notice with no planning or testing. You have been warned.

Sumatra's technology moves these scheduling webs with precision, maintaining the state information on recurrence patterns, guest responses, meeting exceptions, etc. that ensure scheduling remain a crucial enterprise application.

Based upon user demand we have created mid-way options between static ICS imports and our full-state migration process for OCS. This guide goes over those options: Free, Flat, and Partial.

Overview – Train Hard, Fight Easy!

Regardless of the method, number of users, servers, or additional engineering requirements you have, we recommend three things.

1. ALWAYS run your conversion on a test system BEFORE moving it into your production environment.

2. ALWAYS run your conversion on a test system BEFORE moving it into your production environment.

3. ALWAYS run your conversion on a test system BEFORE moving it into your production environment.

We cannot state enough the importance of testing prior to deployment. The most successful migrations we have seen have been the ones with the most preliminary testing. Our motto comes from Marshall Zhukov via the Navy SEALS: *Train hard, fight easy*.

Free, Flat, and Partial migrations are specifically designed to be done with less testing and quicker deployments.

For any full-state migrations we recommend you start the testing and the user mapping a minimum of six- to eight-weeks prior to your cutover date. We take migration results very seriously. The earlier you start, the better and easier the process is.

Process Flow

All calendar migrations proceed in three broad phases:

1. Extraction: Extract the data from the Source system (e.g., Oracle Calendar Server) and convert the data into a neutral format; In the case of OCS free, flat, and partial migrations use an ICS export from UNIICAL.
2. Mapping: Map your Source system account IDs to your Target System IDs only when they differ. Most often, accounts/SMTP addresses are the same across for Oracle and Exchange systems. The mapping process is used whenever accounts differ, Mapping is relevant only for the Partial and Full-State OCS migrations, since we really need to have a valid email on the Target system to make live meetings
3. Insertion: Move the data from the neutral format into the Target system -- Microsoft Exchange.

Quick Guide for the Impatient

1. Export your USERs as ICS files, naming them *EXCHANGEID*.ICS.
2. Open oCalReader, set your Service Account and any other relevant options
3. Insert your data.

Sumatra Migration Tools

Sumatra's migration tool reads ICS files that contain your source system meetings and activities and inserts them into the Target system (e.g., Exchange 2013) users' calendars and inboxes. The Sumatra Insertion tool used varies by the Target system.

Source System	Tools on Oracle Side	Where run
Oracle Calendar Server 10.x	UNIICAL UNICPOUTU	Run UNIICAL (for calendars) or UNICPOUTU (for tasks) on your OCS server.
Oracle Beehive	N/A	

Target System	Sumatra Migration Tool	Where run
Exchange 2013 Office 365	oCalReader	Windows environment

Free, Flat, Partial, Full State

What is the Difference?

We offer a spectrum of options for an OCS to Exchange migration.

	FREE	Flat	Partial	Full
If you want your OCS calendar migration…	Inserts ICS export as-is	Generates Recurring meetings. Add guests to agendas	Generates Recurring meetings. Add guests to meetings & sends out proposals	Full state for all accounts
Free, fast, no frills no live meetings, no recurrence patterns, no support	✓			
Inexpensive, fast recurrence patterns and guests in agendas but no live meetings		✓		
Reasonably priced, fast recurrence patterns and current meetings re-proposed (but not responded to automatically)			✓	
Full support, full state-recreation for an enterprise				✓
Each of these typically best serves:	Small sites, the budget-constrained	Small-medium sites education, non-profits	Government and Business sites that want real live meetings but want to save time and money	Serious Time-Valuing Enterprises

Another way to visualize your options

Full
- Generates recurrence patterns. Creates live meetings. Processes meeting requests in guest's inboxes.
- Priced for businesses, governments who want to keep executives and employees fully productive.

Partial
- Generates recurrence patterns. Adds guests to meetings and sends out invites.
- Reasonably priced for businesses, governments, and nonprofits who want live meetings and save time and money.

Flat
- Generates recurrence patterns. Adds guests to agendas. No live meetings.
- Inexpensive solution for small/medium businesses and educational sites

Free
- Quick, easy; no-frills. No recurrence patterns, live meetings, guests, nor support.
- Great for budget-constrained groups.

Free

We insert 30 days of data, from "today," from your OCS ICS file into Exchange, including the legend "Inserted courtesy of Sumatra Development, the Exchange calendaring experts."

Flat

The Flat version extends the Free option by:

- It inserts all current data and up to 30 days' of history

- It re-creates recurrence patterns

- It adds meeting attendees and their responses to the agendas.

- It has a per-seat licensing cost.

- Meetings proposed by others, including those outside of the organization, appear on the calendar.

- See example to the right.

ITS Dir.s' Mtg. re: COMMIT & new position descriptic

Jimi Hendrix

When: Tue 10/14/2014 3:00 PM-4:30 PM
Where:

✎ EDIT   ✕ DELETE

Event

Reminder: Show as:

None   ▼   Busy   ▼   ☐ Mark a:

Add an email reminder

Discuss:What's the Role & Membership of Web Advisor
Director of Commit?Who assigns new staff / reallocates
evaluates new staff / reallocated staff?What's the long-t
Multimeida Center and the Assistant Director of Learnir

Attendee(s) (Role-Response)

Janis.Joplin@test.sumatra.com (Req-TENT)
Jimi.Hendrix@test.sumatra.com (Req-YES)

Partial

The partial extends the Flat option by:

- It sends invitations to users for current meetings.

- Attendees will need to respond to meeting requests, post migration. (This is done for users in the Full State migration)

- Guest User IDs can be mapped from OCS to Exchange.

- Meetings proposed by others, including those outside of the organization, appear on the calendar as appointments.

- KEEP IN MIND: Meetings you ATTEND will all appear as tentatively accepted. If your users delete the invitation before responding to them, those items will be removed from the calendar. So the previous meeting will now look like this, with users mapped and the "Attendees" button active in OWA.

ITS Dir.s' Mtg. re: COMMIT & new position descriptio
(Migrated)

← REPLY

Jimi Hendrix
Thu 10/9/2014 12:06 PM

When: Tue 10/14/2014 3:00 PM-4:30 PM
Where:

✏ EDIT   ✕ CANCEL

Event Attendees

Reminder: Show as:

None   ▾   Busy   ▾   ☐ Mark as

Add an email reminder

Discuss:What's the Role & Membership of Web Advisor
Director of Commit?Who assigns new staff / reallocates
evaluates new staff / reallocated staff?What's the long-t
Multimeida Center and the Assistant Director of Learnin

Attendee(s) (Role-Response)

Janis.Joplin@sumatra.onmicrosoft.com (Req-TENT)
Jimi.Hendrix@sumatra.onmicrosoft.com (Req-YES)

Full State

If you are an enterprise-scale site placing a high value on your calendars, want your end users to see the calendars without having to recreate or respond to meeting request, we encourage you to [contact Sumatra Development](#) about our Full State option.

Set-up and Configuration

Requirements

Make sure that your environment meets the following software requirements.

MS Exchange 2013 or above

.NET Framework 4.5

The Microsoft Exchange Web Services Managed API V2.2

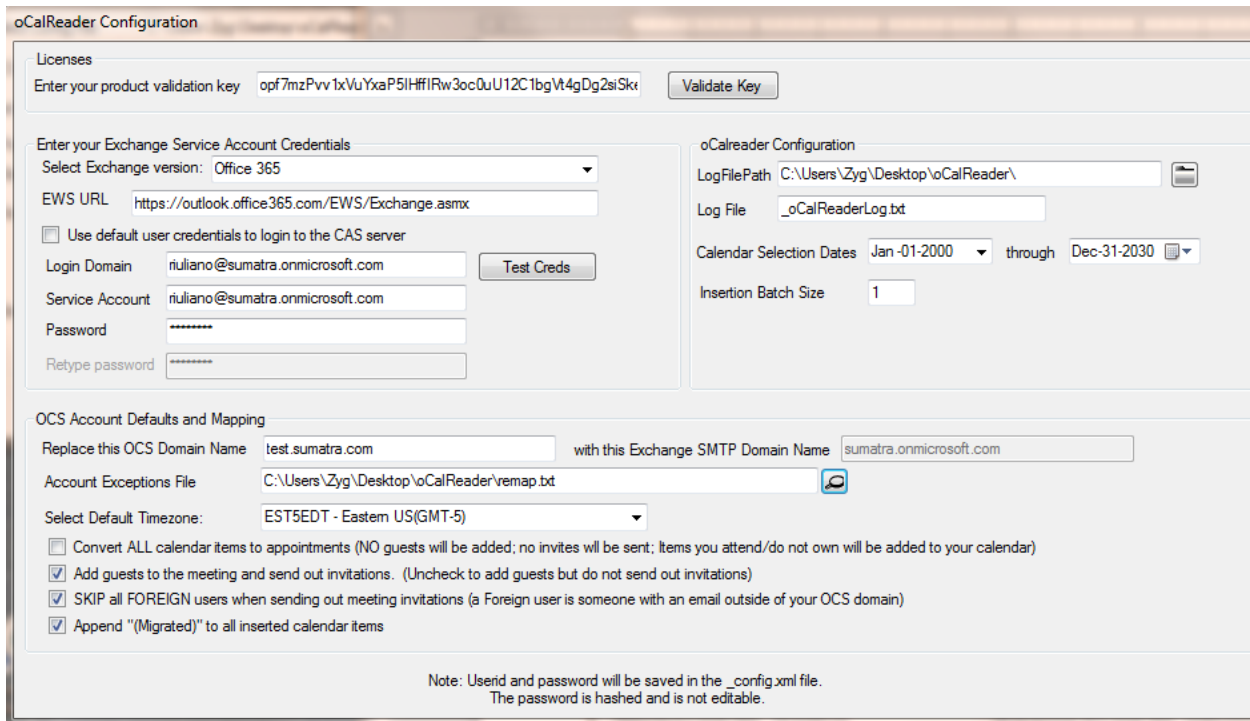To insert data into Exchange or Office 365 you will need a service account with Impersonate role.

oCalReader

Meet oCalReader, your best friend for moving calendars from Oracle Calendar Server into Exchange. This will read through all your exports in the "OCS iCal Data File Path" and insert them into the corresponding users in your Exchange domain.
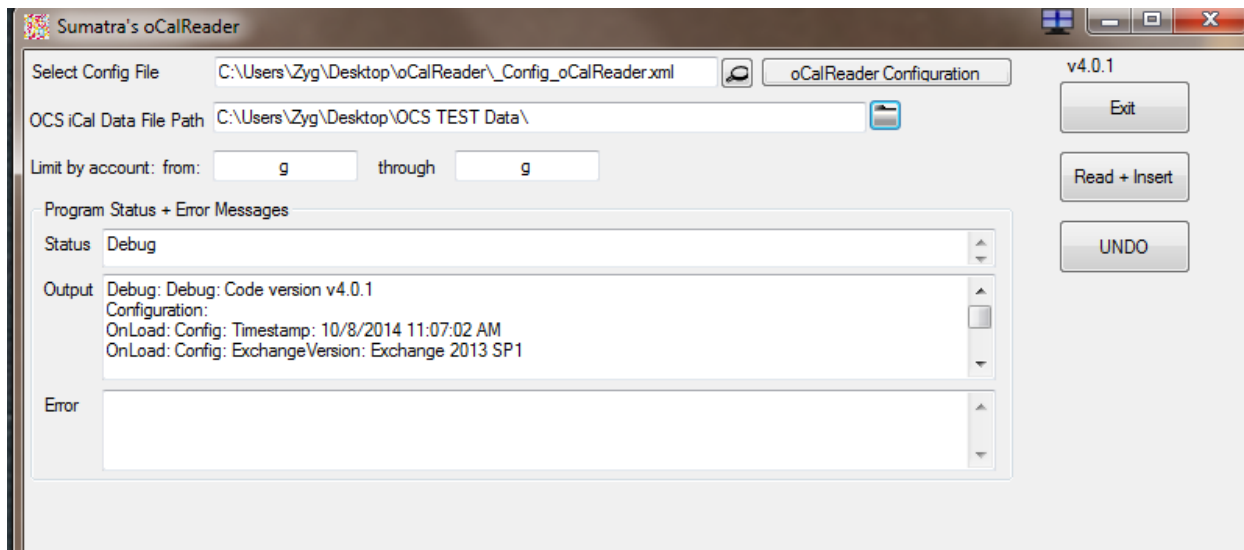
Configuration

Most of these options are fairly straight-forward and are dealt with below in this document.

1. <u>All</u> email addresses can be reassigned to a new domain, i.e., changed from USER@"Replace the OCS Domain Name" to USER@"Exchange SMTP Domain Name." If your domain doesn't change, then keep the OCS and the Exchange domain names the same.

   a. The Exchange SMTP Domain name will be appended to the file name for the calendar owner (e.g., the data in the jimi.hendrix.ics file will be inserted into jimi.hendrix@sumatra.onmicrosoft.com's calendar.)

   b. All guest email addresses in the partial version will change domains, E.g., jimi.hendrix@test.sumatra.com will change to jimi.hendrix@sumatra.onmicrosoft.com

   c. What happens when a meeting organizer or attendee's email address is not from your OCS domain?

      i. If it's a meeting organizer, that item is added to the calendar as an appointment.

      ii. If it's an attendee, for the Partial product, and the "Skip All Foreign Users" is checked, that address not be added to the attendee list, although it will be included in the agenda.) If unchecked, the account will be added to the attendee list. CAUTION: this will send out email to that user. If you run this multiple times, particularly in a test environment, you will flood that user with multiple requests from your test domain!

2. You will need CAS Login credentials (and this user must have Impersonate role to all users set via ManagementRoleAssignment)

3. We recommend you use "Test Creds" button to insert a "test" appointment into one calendar to confirm you have access to a user's mailbox on Exchange.

4. Set a Default Time Zone OCS exports calendar data without a default time zone. To ensure your user's items are inserted on the correct day and time, you must set a default time zone. NOTE: IF your OCS server is used by users in multiple time zones, run users from each time zone separately.

5. The Account Exceptions File. This allows you to change guests' email addresses from the OCS address to the Exchange Address. It is relevant only for Partial and Full-State migrations. It also applies only to uses within the domain, and not for "foreign" accounts. How this works: you add your OCS users (either by ID or full email addresses) from your OCS domain to your Exchange domain in a text file. E.g., if "Janis Joplin" is "jjoplin" on ocs.yourdomain.com but she is provisioned as "Janis.joplin" in Exchange, you can use either of these two mappings:

Jjoplin,Janis.jopln

Or

Jjoplin@ocs.yourdomain.com,Janis.jopln@yourdomain.onmicrosoft.com

If you want to have invitations properly sent and you are modifying any user IDs between your legacy and your target system, PLAY ATTENTION TO MAPPING!!!! This is often true for resources! We strip domain names from accounts in the file, and apply the OCS and Exchange domain names defined in the oCalReader configuration.

6. The Product Validation key is sent to you by Sumatra. The Free version of the application does not require a key. After entering the key and before inserting data, press "Validate Key" to ensure the key is valid. Otherwise, oCalReader overwrites the configuration with "free" version settings.

UNDO

One of the great benefits of our technology is the selective UNDO capability.

If something goes wrong with your migration (like inserting data into the wrong user, not that that has ever happened in the real world or anything….) you can remove the data Sumatra's application inserted, leaving all other data in place. We urge you to test this feature. It's fun to watch items in a fully-populated calendar suddenly disappear.
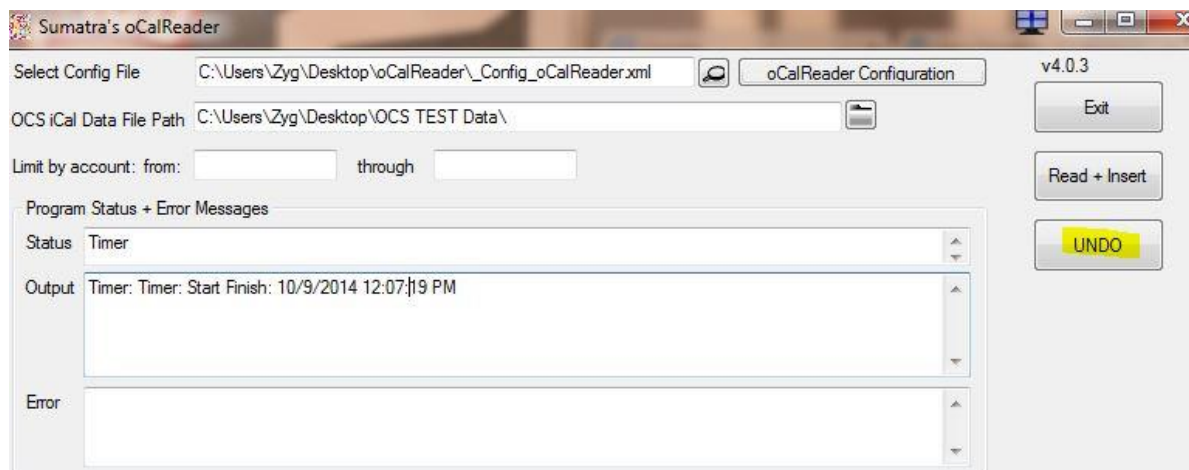
Determining Your EWS URL

In Office 365 your EWS URL is

https://outlook.office365.com/EWS/Exchange.asmx

You MAY be able to go to the Exchange Control Panel (ECP) and use these more specific URLs for speed, but Microsoft is rapidly removing this capability:

- Click on "Options" (upper right of the screen). This switches to ECP and the domain in the URL changes (in our case it's chNprdNNNN.outlook.com) - or -

- Sign in to Office 365. Click on Outlook. Look at the domain in the URL, in our case it is snNprdNNNNoutlook.com where N = a number.

For on-premises Exchange, the EWS URL formula is something like: HTTPS://CAS_server/EWS/Exchange.asmx

In ON-PREMISES you will usually have your IIS set for Windows Authentication (see http://technet.microsoft.com/en-us/library/gg247612.aspx for more details). This is also the default in hosted Exchange. Should you need to change this you may do so in the oCalReader's configuration file (_Config_XML) file by changing the **HTTPAuthType** parameter (options are Basic, Negotiate, ntlm, and Kerberos)

NB: You hear us talking about Exchange being a moving target in a migration. That's true here. The default is **Negotiate** in Exchange 2013, and **Basic** in Exchange 2007 and 2010. And any rollup, service pack, or bug fix could change the way Exchange permissions are managed or default. Use the "Test Creds" button in setup to ensure your permissions are set correctly.

Setting O365 Permissions (Quick Guide)

GLOBAL ADMINISTRATOR rights give you administration rights over Exchange / Active Directory, but they do not give you the rights to access mailboxes – which is what you will need to move in data and re-create state.

We're going to take setting permissions in stages. We'll do this assuming your domain is hosted in Office 365. The process is similar for Exchange 2013 On-premises.

1.) Your ADMINISTRATOR account needs to be able to:

   a. Use REMOTE POWERSHELL to Log into Office 365

   b. Create a separate service account (this keeps your ADMIN function separate from your MIGRATION function)

i. We call the Service Account EXSU. When you create it, make sure it is mailbox-enabled (you will be sending email on behalf of this account)

ii. In Office365 you want to make sure that your administrative account is assigned to the built-in Role Group "Organization Management." On Role Groups see: http://technet.microsoft.com/en-us/library/dd638105.aspx#Builtin

iii. Grant EXSU three rights:

1. Impersonation

2. No throttling. This is relevant (i.e., in your control) only for on-premises Exchange. For Office 365 you will need to contact your Microsoft rep and explain what you are doing and ask throttling turned off for the duration of your migration.

3. If you grant the service account FULL ACCESS to mailboxes, it will be easier for you to use OWA to check the results for individual users in testing and migration.

2.) To do this – use the various Exchange PowerShell cmdlets which execute the appropriate actions.

a. Start POWERSHELL.

b. REMOTE to your OFFICE365 account

c. IMPERSONATION: You're creating a ROLE called "_suImp8" that allows Impersonation and then assigning it to EXSU

```
new-ManagementRoleAssignment     -Name:_suImp8     -Role:ApplicationImpersonation

 -User:exsu
```

d. THROTTLING: You're creating a policy called SuThrottling Policy and then assigning it to EXSU. (Otherwise Office 365 might shut you off mid-migration)

```
New    -ThrottlingPolicy SuThrottlingPolicy

    -EWSMaxConcurrency $null

    -EWSMaxSubscriptions $null

Set-ThrottlingPolicyAssociation
```

```
-Identity exsu

-ThrottlingPolicy SuThrottlingPolicy
```

e. FULL ACCESS: this grants access to ALL MAILBOXES in your domain to EXSU.

```
Get-Mailbox -resultsize unlimited | add-mailboxpermission

        -user exsu -accessrights: fullaccess

        -InheritanceType: All
```

3. TEST

Can you put the EWS URL in a BROWSER and when prompted for credentials get this?
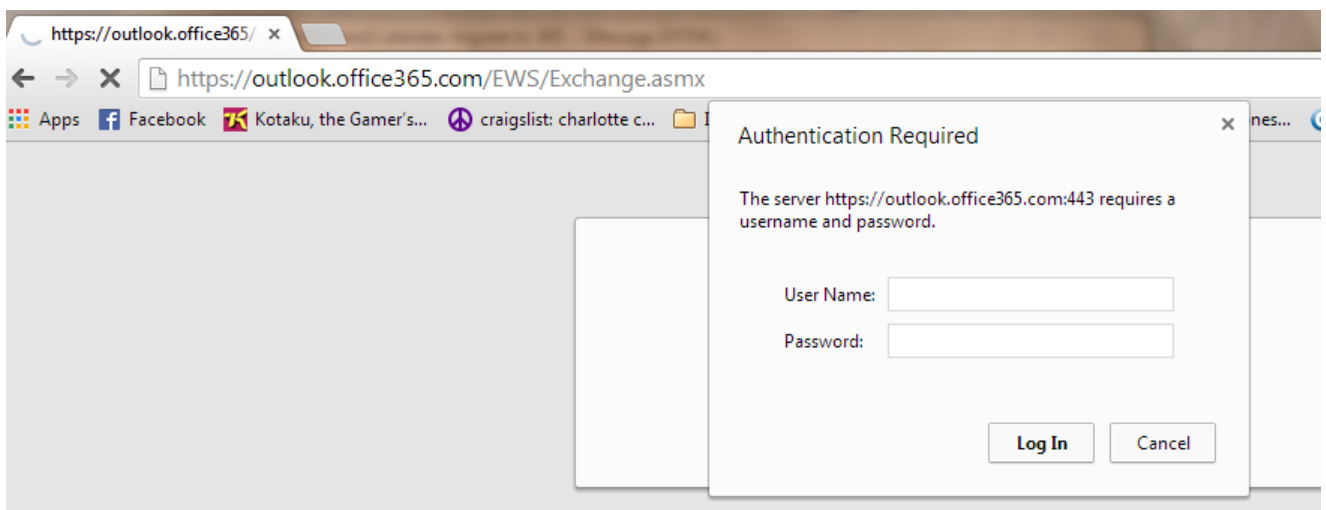
LOG IN with your EXSU credentials, and see the Exchange Web Service page:

This example shows access to Office 365. Obviously if you are going into your on-premises or your own hosted domain, your URL and service name will be different.

Now to test FULLACCESS go to the URL box and modify it as I have with a user on your domain:
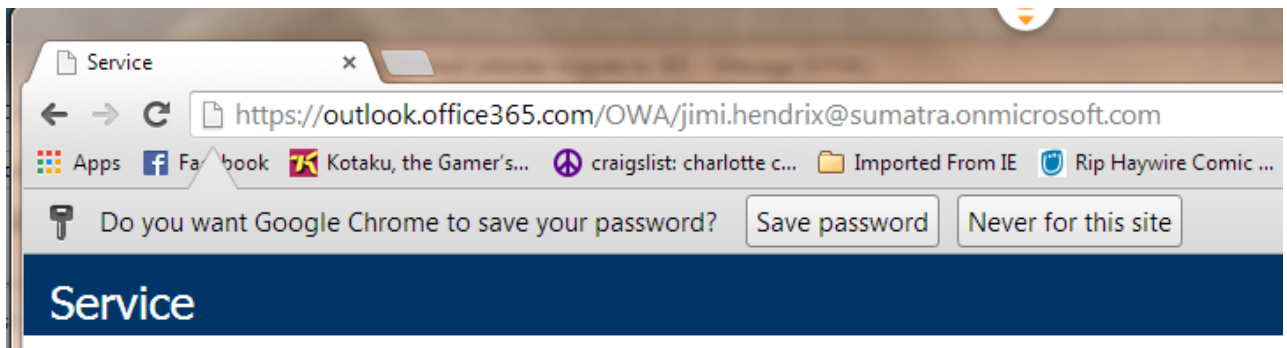
Hit ENTER

Now you will be prompted for your end user mailbox credentials.   Use the service account (EXSU) and the password to access to the mailbox. This is where FullAccess comes in – you don't have to crack all of your end users' passwords!

NOW it should display your test users' mailboxes in OWA

If all of these are successful, now you can do a test insertion.

Exchange Categories: Do NOT Clear Them

The Sumatra insertion process uses hidden categories to re-create the state of your calendar items and to cleanly remove our inserted data for testing and in the event of disaster.

During a migration make sure your Exchange server is NOT clearing categories from email. Post migration you can change it if you wish.

This cmdlet takes care of the issue.

```
Set-TransportConfig -ClearCategories: $false
```

Note on Permissions: Impersonate vs. Delegate

When do you use which permissions?

- Impersonate is typically used for ENABLED user accounts. Note, Impersonate fails when it tries to access a disabled account

- Delegate is used when dealing with DISABLED accounts, such as ROOMS disabled end user mailbox accounts, or in environments with a Resource Forest Trust. Note: the actual mailbox permission is "FullAccess" (Full access is set via add-mailboxpermission command shell)

- We refer to Room and Equipment accounts as "Resource" accounts (because it is more general). Room / resource accounts are provisioned as DISABLED accounts (by default).

An excellent Microsoft summary of the differences in permission is here:

Exchange Impersonation vs. Delegate Access:
http://blogs.msdn.com/exchangedev/archive/2009/06/15/exchange-impersonation-vs-delegate-access.aspx

Exchange Web Services Throttling

It seems that every SP and Roll-up of Exchange makes throttling more and more.

Now EWS is included in Exchange throttling. You can read about it at *More throttling changes for Exchange Online*.

Often after you apply a patch or roll-up you will find your throttling defaults re-set or that the behavior has changed (yet another reason we are maniacs about constant testing). You might need to delete and recreate your applicable policies for this process.

Into an <u>on-premises</u> installation turn this <u>off</u> during migration.

Our recommendations going forward for Hosted Migrations:
During validation, if you can, point to different CAS servers to reduce CAS-server throttling.

During an insertion, use MULTIPLE service accounts which means using parallel insertion processes and point these to different CAS servers. We're set up for this already, but we now recommend it in smaller migrations than we used to.

During migration, set the batch input to at least 50 calendar objects.

Exchange Accounts

There are four kinds of accounts in Exchange:

- Users

- Resources

- Contacts

- Shared[1]

Your migration will definitely make use of the first two (and on occasion the third)

Within Resources there are two types:

- Rooms

- Equipment

Within rooms, there are two basic types

- AutoAccept (think of this as "First-Come-First-Served")

- Managed (think of this as "Janet approves booking this room")

---

[1] See our blog posting at http://calendarservermigration.blogspot.com/2008/08/shared-calendars-in-exchange-2007-sp1.html for more information on what you can or should do with making legacy group calendars into Shared calendars post-migration.

User accounts are fairly obvious and straight-forward. Every user you migrate needs to have an account, and this account needs to be enabled on Exchange.

Contacts (or mail-enabled contacts) are important if you are planning on migrating in stages, or domain by domain. We'll deal with this case later since it is not common, but it is useful in very large migrations.

There is NO capability in bCalReader to change account types during a migration. If you have a Resource account in Beehive, it will migrate into a Resource in Exchange, not a User.

Shared accounts: Migrate shared accounts as user mailboxes. Change them to shared post-migration using this cmdlet for the shared calendar IT_Vacation:

```
Set-Mailbox -Identity IT_Vacation -Type Shared
```

Resources: Before and After

For a Free or Flat migration this section is mostly provided for your information.

For a Partial migration, set your resources as you wish. Since invitations will be sent to them from the meeting organizer you may have them set to automatically book or be managed by specific individuals, the choice is yours but so is the necessity and responsibility to communicate this to your organization.

For a Full State migration continue to read the following.

Resources in a migration require special handling. To re-create state from a previous calendar system we need to be able to take direct control during the migration – but post-migration you obviously want to start using the capability Exchange is built for.

Resource Accounts in Exchange 2010/2013 are **DISABLED** upon account creation.

For the migration process the Sumatra process for Exchange **requires that Resource accounts be temporarily ENABLED with AutomateProcessing set to NONE and that resource accounts have a password** (or you cannot ENABLE the accounts which is necessary for Sumatra insertion). This is because without the Resource accounts ENABLED we cannot re-create the state that existed in Meeting Maker / OCS and we must do this based on source system data, not on the AutoAccept rules Exchange employs.

Automatic Booking:

To use the Exchange Management Shell to **Disable** automatic booking on a resource mailbox:

```
# In Exchange 2007
Set-MailboxCalendarSettings <Identity> -AutomateProcessing: None
```

```
# In Exchange 2010, Exhange 2013, Office 365
Set-CalendarProcessing <Identity> –AutomateProcessing: None
```

To **Enable** (post migration):

```
# Exchange 2007
Set-MailboxCalendarSettings <Identity> -AutomateProcessing: AutoAccept
# Office365 et al
```

```
Set-CalendarProcessing <Identity> –AutomateProcessing: AutoAccept
```

The Microsoft documentation can be helpful :

http://technet.microsoft.com/en-us/library/dd335046(v=exchg.150).aspx

An excellent summary of creating resource mailboxes can be found here:

http://help.outlook.com/en-us/140/dd569933.aspx

Your actions:

Put all resources in one (or more) Organization Units (OUs) for ease of administration

Just prior to the migration:

1. ENABLE all of the resource accounts via Active Directory Users and Computers

2. Hide the accounts from the GAL

3. Configure resources not to AutomateProcessing: AutoAccept meetings

After the migration: disable the accounts, add them to the GAL and configure to:

- AutomateProcessing: AutoAccept (this will result in a "first-come-first-served" room) or

- Use group-policy settings for managed rooms

In Exchange Management Shell the commands for setting will look like this

```
Get-Mailbox -resultsize unlimited  -filter {isResource
        -eq $true} | Set-MailboxCalendarSettings[2]
        -AutomateProcessing: None -deletesubject:$False
        -AllowConflicts: $true -EnforceSchedulingHorizon: $False
```

Note that after executing this re-start the Exchange Information Store Service (otherwise there is a default of 2 hours on the refresh for these properties).

We have found this table of settings to work well:

Setting	"Default" Value	Pre-Insertion Value	Post-Insertion Value
AutomateProcessing	AutoUpdate	NONE	AutoAccept
AllowConflicts	False	TRUE	FALSE
BookingWindowInDays	180		YOU DECIDE
EnforceSchedulingHorizon	True	FALSE	TRUE
ForwardRequestsToDelegates	True	FALSE	FALSE
DeleteSubject	True		YOU DECIDE
AddNewRequestsTentatively	True		YOU DECIDE
RemoveForwardedMeetingNotifications	False	TRUE	TRUE
MailboxOwnerId	xxx		YOU DECIDE

If you decide to set the booking windows in days (to, say, 180 days), remember that "ongoing" meetings will extend beyond the 180 days. Caveat: Many migrated meetings are ongoing or have an end date outside of your booking window. Once your end users

---

[2] In Office 365 this is now Set-CalendarProcessing –AutomateProcessing

change those meetings, the booked resource will decline those previously booked meetings because they fall outside of the booking window.

Oracle Calendar Migrations

Oracle Calendar / Exchange Correspondences

Terminology

In deciding which terminology to use we opt for the terminology of the target system: Microsoft Exchange.

The following table may be useful for OCS users.

Oracle Calendar Server Term	Microsoft Outlook / Exchange Term
Repeating meeting	Recurring meeting
Designate	Delegate
Daily Note	All-Day Event
Day Event	All-Day Event
Description	Agenda

The following table outlines what is migrated and any limitations to the migration.

Meetings – Schedules

Item	OCS	Exch	Comments
Meeting agenda	✔	✔	Agenda inserted in the body of the Exchange meeting invitation.
Recurring Meetings	✔	✔	In the Flat, Partial, and Full migration methods we re-create recurrence patterns for appointments and meetings with at least 5 instances, with at least 80% non-exceptions. NOTE: OCS supports recurrence patterns which Outlook / Exchange does NOT. Take for example a meeting every First and Third Friday of the month. Outlook will only let you have a meeting on the First Friday of the month or the Third Friday of the month. This sometimes can be converted to an "every other Friday" appointment with no loss of data. In the worst

			case fi we cannot make a match to a recurrence pattern we will insert as individual instances.
Moved recurring meeting instances that fall on weekends/ holidays	✔	✔	Migrated either as recurring with exceptions or as single instances.
Exceptions (changes) to Recurring Meetings	✔	✔	Migrated as individual instances.
Access levels	✔	✔	Oracle: Personal, Confidential, Normal, Public Outlook: Personal and Confidential map to PRIVATE in Outlook. See later section on Private events in OCS 10.x.
Importance Levels	✔		There is no similar functionality in Outlook Exchange (well, there is if you look at email priority, but since our migration responds to meeting invitations, this is not applicable)
Roles (e.g. cc / bcc)	✔	✔	OCS Role Exchange Role Required Required Participant No equivalent Optional Participant Created by Acting as Delegate Designate
Responses	✔	✔	OCS Response Exchange Response Yes Accept No Decline Later No user response- keeps invitation in inbox unless it's an historical meeting No response Defaults to Tentative in Exchange Prefer another time Tentative
Track Invitation response – accepted or declines	✔	✔	Full state migration accepts/declines invite. Deletes invitations from inbox Partial migration send invitation for current meetings for Guest to respond to.
Track Invitation response – later, none	✔	✔	Keeps invitations in inbox *UNLESS* the meeting is historical (then Sumatra inserts as an archive)
Store Expired Meetings Activities/ Appointments	✔	✔	Meetings which occur before the migration date are inserted as "archived" (individual appointments with agendas and guest list) and not included made "live"
Time zones of meetings / activities	✔	✔	Oracle Time Zones map to Microsoft Time Zones
Meeting reminders	✔	✔	Oracle ICS does not export individual reminders. Migrated appointments and meetings will default to the Microsoft default (which is 15 minutes and non-configurable in a migration). For more detail [see this article]().
User defaults/options	✔	✔	We can read them from OCS – if you have interest in scripting moving them over contact Sumatra
Holidays	✔	✔	Sumatra insertion technology allows for insertion in Exchange 2013/ Office365 across all servers of company-standard holidays from a defined list. Can

			be customized with other tools for specific localities.
Attachments			While both OCS and Outlook/Exchange support attachments, they are not extracted using Oracle tools – so cannot be transferred to Exchange.
Meeting / Appointment colors			Not transferred – Outlook has a very different palette
Public and Private Groups			Not transferred. (Exchange groups may be more current.) They can be exported using other tools in OCS and inserted into Exchange via scripts.
Colors in user defaults			Can't match colors in Outlook / Exchange.
Tasks	✔	✔	Transferred (only with UNICPOUTU exports). Priorities 1-9, A-Z in Oracle map to 1-5 in Outlook. Anything above "5" will map to "5" Oracle access levels: Personal, Confidential, Normal, Public. Personal and Confidential map to PRIVATE in Outlook Attachments are not extracted using Oracle tools so they cannot be transferred to Exchange.
Daily Events / Daily Notes	✔	✔	Converted to their equivalent in Exchange: Add day events/ Tasks.
Designates (Delegates)			Can be moved via scripting.

What does NOT migrate from OCS into Exchange

The following table outlines explicitly what is not migrated from Oracle Calendar Server to Exchange

Data we do not migrate at all:
- Colors on meetings and activities
- Contacts (see our blog postings at http://calendarservermigration.blogspot.com/2008/10/oracle-connector-for-outlook-dude.html and http://calendarservermigration.blogspot.com/2008/10/dude-heres-my-contacts.html)
- OCS user defaults (including work hours) – though this could be scriptable.

Getting Data out of Oracle Calendar

Your general goal prior to migration is a stable, predictable legacy system.

Therefore, please do not introduce new data-centric behaviors without planning or testing before migration. Main issue would be pruning the data using the OCS UNIRMOLD utility (but there are others). These are not necessarily contra-indicated, but if you have not been using them in your installation thus far, testing well in advance of cut-over avoids surprises.

Let's say you run a single Oracle Calendar Server node (number 1) with administrative password "jimmorrison" and have users John Lennon, Jerry Garcia, Jimmy Page, Puffy Amiumi, and Walter Liberace, as well as the Mozart Conference Room and Shea Stadium. The following command lines will pull all data Sumatra requires:

```
uniical -export -u "S=Liberace/G=Walter" -f walter.liberace.ics -n 1 -p jimmorrison
uniical -export -u "S=Garcia/G=Jerry" -f jerry.garcia.ics -n 1 -p jimmorrison
uniical -export -u "S=Lennon/G=John" -f john.lennon.ics -n 1 -p jimmorrison
uniical -export -u "S=Amiumi/G=Puffy" -f puffy.amiumi.ics -n 1 -p jimmorrison
uniical -export -u "S=Page/G=Jimmy" -f jimmy.page.ics -n 1 -p jimmorrison
uniical -export -u "S=Hendrix/G=Jimi" -f jimi.hendrix.ics -n 1 -p jimmorrison

# Resources are a case for special handling.  If they are booked exclusively by meeting invitations you
# do NOT need to export them.  If they have activities in them, you can insert them but see later on
# permissions issues

uniical -export -u "R=CR Mozart" -f "cr mozart.ics" -n 1 -p jimmorrison
uniical -export -u "R=Shea Stadium" -f "shea stadium.ics" -n 1 -p jimmorrison
uniical -export -u "R=Room222" -f room222.ics -n 1 -p jimmorrison
```

Execute this batch file to extract these data files, and place them in a convenient directory.

The UNIICAL in OCS 10.x works very well in migrating to Exchange 2013.

The UNIICAL in OCS 9.x does NOT include ATTENDEES, so it will work only for a FLAT insertion. We DO have a full migration that will re-create the full meeting state.

How this is organized, and what we do.

Each line extracts the ICS file for the user's calendar. We can use this to recreate the state of the calendar in Exchange.

Users for a node

In case you need to make sure you have all of your users, the following command will export all of the <u>users</u> on Oracle Calendar Server node 1:

```
UNIUSER –user –ls "S=*" –n 1
```

Version 10.1.2

Version 10.1.2 removed the –p command line option for the Sysop Password.

You can however send the password if it is stored in a file:

```
unicmd < pass.txt
```

Naming exports is crucial when using ICS!

Everything to the LEFT of .ICS should be the **root of the primary SMTP address of the user or resource on your Exchange domain**.

Repeat: Use the form LOGIN.ICS.

Additional notes on using ICS

IF oCalReader finds a problem with an ICS file it creates a backup according to the following pattern:
Filename.ics -> filename_.bakupIcal

Resources should have email addresses if you want them functional immediately post-migration in a Partial or Full State migration.

Mapping Users (only for Partial migrations)

Do this via The Account Exceptions File. This is relevant only for Partial and Full-State migrations. How this works: It is a text file where you map your OCS users (either by ID or full email addresses) from your OCS domain to your Exchange domain. So if "Janis Joplin" is "jjoplin" on ocs.yourdomain.com but you want her to be "Janis.joplin" on yourdomain.onmicrosoft.com, you can use either of these two mappings:

```
Jjoplin,Janis.jopln
Liberace, walter.liberace
```
Or
```
Jjoplin@ocs.yourdomain.com,Janis.jopln@yourdomain.onmicrosoft.com
liberace@ocs.yourdomain.com,walter.liberace@yourdomain.onmicrosoft.com
```

If you include the domain name(s), oCalReader will remove them and replace them with the domain names defined in its configuration section.

Tasks

UNIICAL does not export TASKS from Oracle Calendar Server. If you wish to migrate Tasks you must use UNICPOUTU. Sumatra is working on a simpler separate tool for this.

Version 10.1 and Private Appointments

Versions 10.1.x ICS exports are typically defaulting to making ALL appointments Private. We believe we have successfully reverse-engineered the correct handling for these on migration into Exchange. But please check us on this in the field! There are many dependencies on specific OCS release levels that we cannot check. COMMUNICATE to your user community that this is going to happen and they should be aware of the need to make their sensitive calendar entries PRIVATE as soon as possible post-migration.

Oracle Calendar Contacts Migration

Contacts data in OCS is maintained client-side rather than server-side, so you need to convert this on an individual basis. Please see the following blog entries:

http://calendarservermigration.blogspot.com/2008/10/oracle-connector-for-outlook-dude.html

http://calendarservermigration.blogspot.com/2008/10/dude-heres-my-contacts.html

Oracle Calendar Email Migration into Exchange Office 365

Use imapsync

We have found imapsync to be an excellent product for email migrations. It is inexpensive, efficient, and effective.

Please see our blog postings MDaemon Mail to Exchange via imapsync and imapsync vs PST: Tonnage and Speed as well as any other recent email migration postings on our blog.

Other aspects of the complete migration process

User provisioning

This can be scripted.

For Office 365 check out this posting.

Designate Rights

Can be scripted. See our blog posts on Migrating Oracle calendar Permissions to Exchange and DIY Part 2.

Local Oracle Calendar Outlook Connector to Outlook for Exchange cut-over

Most mechanisms we've found on-line are semi-functional at best. So we wrote an application that works. Licensed users of our technology may contact us for info.

Contact Sumatra Development

We never learned anything listening to ourselves talk.

We only learn it when you folks tell us what you want.

If it involves calendaring technology, feel free to contact us!

The Managing Partners of Sumatra can be reached at:

zyg@sumatra.com

riuliano@sumatra.com

Check us out at www.sumatra.com as well as

Our blog:

> http://calendarservermigration.blogspot.com/

And Twitter:

> http://twitter.com/sumatra_dev