

Duet Operations Concept

**Duet 1.5 SP1 Preview
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1 Operations on the Duet Landscape

About this Document

The purpose of this guide is to provide a high level outline of the types of tasks required for the on-going operations of Duet. It outlines task descriptions, when they need to be performed, skills required and where to find more detailed procedures in the official Duet guides.

Some excellent information on specific topics can also be found in Duet related blogs on the Service Marketplace.

Use this guide in conjunction with the SAP and Microsoft Duet guides to create company operations procedures for Duet.



This guide does not replace the daily operations handbook that we recommend customer to create for their specific production operations.

This document is broken down into 2 sections:

- 1) Tasks required on the landscape
- 2) Tasks required on the individual clients.

Topics to be outlined are as follows:

- **Initial Tasks** which will be required during the Duet installation project but may need to be revisited during on-going operations
- **Regular Tasks** outlines tasks requirement to keep the Duet landscape running and prevent unplanned outages
- **Tasks on Demand** covers tasks that should be planned for in case of outages, issue fixes or Duet application configuration changes or additions.

Target Groups

The reader should have a general understanding of the Duet systems and architecture. It is very helpful if the reader is part of the actual Duet implementation of their company.

- System Administrators
- Support Specialists

2 Important SAP Notes

These notes are also helpful in operational considerations to ensure that all patch levels and SAP Notes are up to date. These SAP Notes contain the most recent information on the configuration and use of Duet, as well as corrections to the documentation.



Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at <https://service.sap.com/notes>.

SAP Note Number	Title	Comment
1149693	Duet 1.5 SP1 Release Information Note	Contains relevant information available after the release of Duet version 1.5 SP1

3 **Technical System Landscape**

For information on the Duet architecture, refer to the guide Duet for Microsoft Office and SAP: SAP Administration Guide on SAP Service Marketplace at:

<http://service.sap.com/instguides>

It is important to document how your Duet landscape was built to give an overview of what systems need to be considered for operational tasks as well as keep track of the software and operating systems.

A worksheet template to document Landscape and installation details is available with the Duet Implementation Kit available on the SAP Service Marketplace.

4 Related Documentation for Operations Procedures



Documentation related to Duet is available at the Duet Documentation Center on SAP Service Marketplace at <http://service.sap.com/swdc> unless otherwise specified in the table.

Structure of the Documentation	Explanation
Master Guide	This guide provides an introductory point of entry to the Microsoft and SAP documentation set as well as a roadmap for using all of the Duet documentation.
Installation Guide	<p>Deploy Duet components using the Duet for Microsoft and SAP: Installation Guide</p> <p>This is a single guide jointly produced by Microsoft and SAP. It provides information for installing all the Duet components from both Microsoft and SAP. We recommend that you use the appropriate section to install and deploy Duet components, accordingly.</p>
ERP Configuration Guide	<p>This guide documents configuration, maintenance, and administration of the following business applications in the SAP ERP system:</p> <ul style="list-style-type: none"> • Workflow Patterns for use with Travel Request and Travel Expense Approval business applications • Leave Management • Team management • Budget monitoring • Reporting Management • Time Management • E-Recruitment <p>Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP ERP</p>
CRM Configuration Guide	<p>The SAP CRM Configuration Guide describes document maintenance and administration of the Duet business applications for the SAP CRM system.</p> <p>Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP CRM system.</p>
SAP SCM Configuration Guide	<p>The SAP SCM Configuration Guide describes document maintenance and administration of the Duet business applications for SAP SCM system.</p> <p>Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP SCM system.</p>

Structure of the Documentation	Explanation
SAP SRM Configuration Guide	The SAP SRM Configuration Guide describes document maintenance and administration of the Duet business applications for the SAP SRM system. Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP SRM system.
SAP Administration Guide	The Administration Guide describes document maintenance and administration of the environments in which you run Duet components from SAP. Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP system.
SAP Operations Guide	The Operations Guide is the starting point for configuration and maintenance tasks in the Duet landscape in which Duet components from SAP run. The guide refers users to the tools and documentation that are needed to carry out various tasks, such as, landscape implementation, monitoring, backup and restore, clustering and availability, and tests. It also refers users to more detailed documentation in the SAP Library. Target group: Solution consultants, project teams for implementations, system administrators, and the administrators of the SAP system.
Security Guide	The Security Guide provides security-relevant information that applies to user administration and authentication in Duet.
Upgrade Guide	This document describes how to perform patch installation of support and enhancement packages for Duet version 1.5 and how to upgrade Duet version 1.0 components to Duet version 1.5. This is a single guide jointly produced by Microsoft and SAP. It provides information for upgrading and performing patch installation of all the Duet components from both Microsoft and SAP. We recommend that you use the appropriate section to upgrade the Duet components accordingly
Microsoft Planning Guide	This document provides an architectural and conceptual overview of the Duet server and client components provided by Microsoft, and helps plan for their installation. (<i>Duet_MicrosoftPlanningGuide.doc</i>)
Microsoft Administration Guide	This document contains instructions for managing the Duet server and client components provided by Microsoft after the initial deployment. It also includes reference information for the command-line tools. (<i>Duet_MicrosoftAdminGuide.doc</i>) You can find the Duet Microsoft Administration Guide at https://connect.microsoft.com/default.aspx
Microsoft Readme File	This readme provides important information not contained in the documentation, as well as descriptions of known issues.

Structure of the Documentation	Explanation
Microsoft Glossary	<p>This glossary is an online version hosted on SharePoint site. It provides a glossary of technical terms.</p> <p>You can find the Duet Microsoft Glossary at https://connect.microsoft.com/default.aspx</p>
Duet How To Guides and Blogs	<p>How to Guides and Blogs for Duet can be found on the Service Marketplace:</p> <ul style="list-style-type: none"> ▪ Duet How To Guides https://www.sdn.sap.com/irj/sdn/advancedsearch?query=Duet+how+to&cat=sdn_all ▪ Duet Blogs https://www.sdn.sap.com/irj/sdn/advancedsearch?query=Duet+blog&cat=sdn_all

5 Operation Tasks and Documentation Recommendations

5.1 *Assigning Tasks to the Operations Team*

Task Description	Assign tasks for monitoring, troubleshooting, patching etc to operation team members along with back up personnel
When is task required	During the final preparation of the Duet Implementation Project
Where to find procedure	This guide can be used to help identify tasks required for operations and where operations can be integrated
Skills required	Netweaver ABAP, JAVA Security – SAP Systems, Windows etc. Duet Expert Business Expert
Additional Information: Operation Team Roles that should be covered. <ul style="list-style-type: none">▪ Duet Owner: Decision Makers and Facilitators of Duet upgrades, enhancements, functionality etc.▪ Duet Monitoring▪ Duet Backup and Recovery on SAP Systems, Duet Server, and Duet Clients▪ Responsible for Support Package, Patches and hotfix application on the Duet landscape.▪ Help Desk and Escalation▪ Landscape Security	

5.2 Initial Tasks on the Duet Landscape

This section covers tasks that are performed during the implementation of Duet and that may need to be revisited during Duet operations for troubleshooting or maintenance considerations.

5.2.1 Trusting Systems and enabling Single Sign On

Task Description	Trusting is required between the system hosting the Duet SAP components and the SAP Backend System(s) to allow communication.
When is task required	During the Duet landscape Preparation before Duet installation When a new SAP Backend System or SAP Backend client is added to the landscape
Where to find procedure	Duet Installation Guide You can configure trust by using the trust wizard in SAP Netweaver. Refer to <u>OSS Note 1083421 – SSO2 Wizard</u>
Skills required	Netweaver ABAP and JAVA

5.2.2 Requesting and Installing J2ee licenses

Task Description	Licensing of J2ee on the Duet Landscape
When is task required	During the Duet landscape Preparation before Duet installation or before the trial J2ee license expires.
Where to find procedure	For information to request a license key from SAP, refer to the SAP Service Marketplace at http://service.sap.com/licensekey and in SAP Note 94998. For information to installing, testing and deleting SAP licenses, refer to the following link http://help.sap.com/saphelp_nw04s/helpdata/en/a7/512c6e407a11d1893b0000e8323c4f/frameset.htm
Skills required	Netweaver JAVA
The Duet Server requires an SAP Netweaver J2EE Engine License. After the components have been installed, the system is equipped with a temporary license which is valid for 4 weeks. A valid license must be requested from SAP.	

5.2.3 Set Up RFC Connections and Logical Ports

Task Description	Required for connection and enabling communications between systems
When is task required	<p>During initial configuration of the Duet Business Applications in the SAP Backend System and in the Duet Administration Tool</p> <p>For the reporting scenario, when a new reporting system or system client is added to the landscape</p> <p>May also be required when adding a new scenario that requires a different SAP backend system as a source</p>
Where to find procedure	Specific Duet Scenario Configuration guides
Skills required	Netweaver ABAP
<p>Two types of RFC connections are used:</p> <ol style="list-style-type: none">1) ABAP connections (RFC type = 3): They will be used to point to SAP backend systems / clients used within a landscape.2) HTTP connections to external systems (RFC type = G): Will be referenced in logical ports that enable communication required for web services between SAP Backend systems and the Duet Server	

5.2.4 Setup Pre-calculation server for Reporting Scenario BI workbooks

Task Description	This task allows for the pre-calculation of BI workbooks before they are sent through Duet.
When is task required	<p>Only required for the Duet reporting scenario where SAP BI workbooks will be scheduled. The pre-calculation server is not mandatory for BI queries or web templates.</p> <p>This step needs to be done before allowing BI workbooks to be scheduled using Duet.</p>
Where to find procedure	<p>For the latest pre-calculation server, navigate to the service marketplace:</p> <p>http://service.sap.com/swdc -> Download -> Support Packages and Patches -> Entry by Application Group -> SAP Frontend Components -> BI Add-on for SAPGUI -> BI 7.0 ADDON FOR SAP GUI 7.10 -> win32</p> <p>Download the latest patch with naming convention <i>xPreCa/ServerXX</i> where <i>XX</i> is the patch number. Click on the info link next to the patch name for related OSS note(s) that will give instructions on prerequisites and installation of the pre-calculation service.</p>
Skills required	Netweaver ABAP and possibly Desktop Software Deployment expert to install the MS pre-requisites

5.2.5 Authentication (Kerberos or X.509)

Task Description	Authentication
When is task required	Before Duet installation
Where to find procedure	<p>Refer to the section Configuring Authentication for Use in Duet in the guide Duet for Microsoft Office and SAP: Duet Installation Guide</p> <p>An installation wizard is available for Kerberos authentication.</p>
Skills required	Exchange/ADS for creation of Kerberos User and Netweaver J2ee for configuration

5.2.6 Set Time Synchronization in the Duet Landscape

Task Description	Recommended when using Kerberos
When is task required	Set up before testing authentication
Where to find procedure	<p>One of the methods of synchronizing time directly on a server or client is the Net Time command. For more details please see the following link: http://support.microsoft.com/kb/120944</p> <p>The other method to sync clocks is using the W32tm.exe command. For more information on this please see the following link: http://support.microsoft.com/kb/307897/EN-US</p> <p>There are several services on the internet, for example NTP Servers (Network Time Protocol), that also offer methods of getting actual time. Refer to the following link for details: http://support.microsoft.com/kb/314054</p>
Additional Information	
<p>If you have chosen the Kerberos method of authentication for the Duet landscape, it is crucial to have accurately set clocks on the Duet landscape. Kerberos tickets have a short lifetime therefore preventing security breaches. If the times are not synchronized within the Duet landscape, Kerberos will report fatal errors and refuse to allow access.</p> <p>Therefore, time should be synchronized within the domain, servers and Duet Clients.</p>	

5.2.7 Configure User Management Engine to connect to ADS

Task Description	User Store determination
When is task required	Before configuring the Duet SAP Components
Where to find procedure	<u>Duet Installation Guide</u> <i>Also navigate to Configuring the UME to Use an LDAP Directory as Data Source on the SAP Help portal at:</i> http://help.sap.com/saphelp_nw70/helpdata/en/12/7678123c96814bada2c8632d825443/frameset.htm
Skills required	Netweaver J2ee

5.2.8 Configure User Mapping if Required

Task Description	To ensure consistent user ids in the communication within the Duet landscape
When is task required	If the Active Directory service has different user ids for the Duet end-users than the SAP Backend Systems, user mapping is required
Where to find procedure	SAP Security Guide
Skills required	Netweaver J2ee

5.2.9 Set the Size for Messages in the Application Server Java

Task Description	Set the size of message to ensure processing of larger messages based on company policies.
When is task required	Configure the size for message during the installation of SAP NetWeaver 7.0 Web Application Server
Where to find procedure	SAP Installation Guide
Skills required	Netweaver JAVA

5.2.10 Set up Monitoring Tools for Duet Landscape

Task Description	Set up monitoring tools to deliver alerts etc required to allow monitoring procedures.
When is task required	During final preparation of Duet implementation before go-live
Where to find setup procedure	Section <i>Monitoring Duet Environment</i> in the <u>SAP Administration Guide</u> For setup requirements for Wily Introscope refer to <i>OSS Note 797147 - Wily Introscope Installation for SAP Customers</i>
Skills required	Netweaver J2ee and ABAP
<p>Additional Information</p> <p>To monitor the Duet landscape, the recommended tools for monitoring are:</p> <ol style="list-style-type: none"> 1) Duet Administration Tool which is delivered with the Duet installation on the Duet Server – no extra setup is required 2) Central Client Diagnostics Tool which requires setup to enable an administrator to centrally monitor and troubleshoot client without having to log on to the individual client machine. A client component does need to be deployed as well. 3) Solution Management Diagnostics – can be used to set up alerts on failures in a Duet landscape 4) Computing Center Management System (CCMS) in SAP Netweaver (Standard SAP) 	

5.2.11 Assign Authorizations to Monitoring Team

Task Description	Ensure monitoring team has the correct authorizations to perform monitoring tasks
When is task required	During final pre-preparation of Duet implementation before go-live
Where to find setup procedure	Section <i>Monitoring Duet Environment</i> in the SAP Administration Guide
Skills required	Netweaver J2ee & ABAP
Additional Information	
<p>The Duet Administration Tool requires that a user has J2ee Administration rights.</p> <p>See documentation on the Solution Management Diagnostics and the Computing Center Management System (CCMS) for authorization requirements</p>	

5.2.12 Create/Integrate Duet Help Desk and Escalation Procedures

Task Description	Create or integrate the Duet help desk and escalation procedures for Duet issues for the company.
When is task required	During preparation phase and final pre-preparation of Duet implementation before go-live
Where to find setup procedure	This is a customer activity based on their current procedures.
Skills required	<p>Example of skill sets</p> <ul style="list-style-type: none"> ▪ Company assigned Duet Expert ▪ Business Expert ▪ Netweaver Expert (JAVA or ABAP) ▪ Exchange/ADS expert, Security Expert, Software Deployment Expert etc.
Additional information	
<p>Duet will be jointly supported by SAP and Microsoft.</p> <p>If a customer logs a ticket with either SAP or Microsoft, the team that receives the message will recruit the required support groups centrally to resolve the issue.</p> <p>To expedite resolution of an issue, the following information should be provided when logging a message with Microsoft or SAP.</p> <ul style="list-style-type: none"> ○ Contact Information including Name and telephone of person at your site ○ Is situation in a development, test or production system? ○ Duet version and related scenarios where issue occurred ○ If applicable, users and passwords to access the system(s) including j2ee admin users etc. ○ Detailed description and exact steps to reproduce the issue. ○ Troubleshooting Results to identify the source of the error (backend, Duet SAP components, Duet Microsoft Components, Duet Client) – include j2ee logs if possible and/or screenshots of steps or logs ○ Include any information related to recent updates or changes on the landscape ○ A priority rating of the issue, depending on the impact on your business. <p>Documentation Recommendation: Document Help Desk and Escalation Procedures for your company. 1) Guidelines on assigning levels to an issue such as very high, high, low etc. 2) Service Level Agreements for the different types of escalation such as Scenario issues, security issues etc.</p>	

5.2.13 Set up OSS connections for SAP Support

Task Description	Creation of OSS connection assists in the SAP Support process
When is task required	During the Preparation phase of a Duet implementation
Where to find setup procedure	For more information about service connections, see SAP OSS Notes <ul style="list-style-type: none">○ 35010 Service Connections: Composite note (overview)○ 31515 Service Connections
Skills required	Netweaver ABAP and JAVA
Additional Information OSS connection should be available to SAP Backend System, Duet Server(s) and any test clients for testing	

5.2.14 Train Operations Team

Task Description	Knowledge Transfer of Duet functionality, troubleshooting and set up to Operations team.
When is task required	During Duet installation and/or final preparation phase
Where to find setup procedure	Operations Team should review available Duet documentation and can also receive Knowledge transfer from an internal or external Duet Expert.
Skills required	Various

5.3 Regular Tasks on the Duet Landscape

The following section describes regular administrative tasks that must be performed periodically on the Duet landscape.

5.3.1 Stopping and Starting Duet

Task Description	Stop and Start Duet components on the Duet Server
When is task required	After installation, upgrade, patches of Duet components on the Duet Server
Where to find procedure	Section <i>Starting and Stopping Duet Components</i> in the <u>SAP Operations Guide</u>
Skills required	Netweaver JAVA

5.3.2 Schedule Clean Up tasks

Task Description	To prevent overflow of spools and messages in various parts of the landscape
When is task required	Recommended during the final preparation phase.
Where to find setup procedure	See additional information for recommendations
Skills required	Exchange/ADS for cleanup of designated user account Netweaver ABAP for spool cleanup
Additional information Clean-up considerations: 1) On the Exchange Server: a cleanup task should be scheduled for the designated user account for the Request Handler. Items older than a given time period should be deleted. 2) In the SAP Backend System(s): Since Duet uses background job schedules to process tasks, job schedule spools could potentially get full quick quickly. Therefore it is recommended to setup a clean up task in all SAP Backend Systems. 3) In the j2ee engine, schedule clean up of logs	

5.3.3 Monitoring Procedures for the Duet Landscape

Task Description	Monitoring of the Duet Landscape by System Administrators will allow proactive identification & resolution of issues
When is task required	Daily
Where to find procedure	Section <i>Monitoring Duet Environment</i> in the <u>SAP Administration Guide</u> Guide outlines what can be monitored with the different tools
Skills required	Netweaver JAVA
<p>Additional Information Monitoring can be done daily by:</p> <ul style="list-style-type: none"> ▪ Receiving Alerts from SMD and CCMS or monitoring logs and schedules ▪ By viewing available Duet tools (Duet Administration Tool or Central Client Diagnostics tool) for error or warning flags <p>Documentation Recommendation: Document what should be monitored, how frequently and procedures on how issues will need to be escalated if monitoring shows errors or warnings</p>	

5.3.4 Backup and Restore Procedures

Task Description	Backup Components in the event of System Failure
When is task required	<p>All Systems should be backed up prior to go-live</p> <p>Specific components should be backed up if patched or upgraded</p> <p>Company to determine backup frequency based on requirements</p>
Where to find procedure	<p>For Backup and Restore procedures for SAP components on the Duet Landscape, refer to the <u>SAP Operations Guide</u> and the <u>SAP Administration Guide</u></p> <p>For Duet Microsoft Components (Metadata Service and Duet Request Handler) refer to the <u>Microsoft Administration Guide</u></p>
Skills required	Netweaver ABAP and JAVA
<p>Additional Information</p> <p>Most maintenance procedures can be integrated into current backup and recovery procedures for SAP systems, j2ee system and client system.</p> <p>Important Data for backup</p> <p>Duet Server</p> <ul style="list-style-type: none"> ▪ WebAS Database (SAP J2EE & Applications Database) ▪ J2EE Engine Cluster ▪ Metadata ▪ Software Deployment Manager (SDM) – backup after software deployment and implementation of patches. ▪ In case of disk damage: Operating Security <p>SAP Backend</p> <ul style="list-style-type: none"> ▪ Duet specific configuration for the Duet IMG - transaction SIMGH - you can find more info in the SAP ERP configuration guide ▪ Duet Book Keeping tables start with /OSP/* ▪ RFCs, logical ports and number range configuration required for Duet specific scenarios ▪ Workflow pattern configuration ▪ Job schedules in SM37 ▪ Application logs ▪ Any configuration related to Applications that Duet uses for their scenarios <p>Other components</p> <ul style="list-style-type: none"> ▪ Global Group policies ▪ User groups in the Active Directory Service - this should be included in general ADS backup 	

Documentation Recommendation:

Document Backup and Recovery Procedures for the Duet Server and the SAP Backend Systems even if some of the backed up components are part of general backup and recovery within the company.

5.3.5 Change scheduling frequency in Duet processes

Task Description	Customize scheduling requirements based on customer requirements
When is task required	On Request
Where to find procedure	<u>SAP Operations Guide</u>
Skills required	Netweaver JAVA / Duet Expert
Additional Information	
<p>Schedules on the Duet System are found in 2 areas:</p> <p>Schedules on the Duet Server can be displayed and changed in the Duet Administration Tool on the Duet Server. They are scheduled as part of the Duet Installation.</p> <p>Schedules created in the SAP Backend system can be displayed using transactions SM37. The schedules that can be changed by administrators are those pertaining to schedules set up during the Duet Configuration for specific scenarios.</p> <p>Documentation Recommendation:</p> <ol style="list-style-type: none"> 1) Document or take a screenshot of the schedules shown in the Duet Administration Tool. 2) Also document schedule frequencies on the SAP Backend related to scenarios you have installed. For example, system timepoints for the reporting scenario, leave management schedules etc. 	

5.3.6 Applying New Support Packages, Patches and Hotfixes

Task Description	Apply fixes and updates to the Duet software
When is task required	When issues are encountered In the case of Support Packages, follow the recommended schedule for applications
Where to find procedure	Procedure is based individually on the required Support Package, Patches or Hotfixes
Skills required	Netweaver ABAP and JAVA
<p>Additional Information</p> <p>Applying support packages, patches and hotfixes in the Duet environment may apply to multiple systems and components on the landscape for one fix.</p> <p>Thorough review of the documentation of the Service pack, patch or hotfix must be done to understand how to apply the fix(es) and to which components.</p> <p>Other patches not directly related to Duet applications can also influence Duet functionality. It is recommended that these components should first be tested through the landscape to check for any adverse effects of Duet functionality.</p> <ul style="list-style-type: none"> ○ Windows Server 2003 updates or support packages ○ SAP Netweaver Web AS Java support packages ○ SAP application components, Basis and ABAP support packages ○ Microsoft IIS patches ○ Sun Java patches and upgrades ○ Microsoft Exchange Server patches ○ Microsoft Office client patches ○ Microsoft .Net versions ○ SAP BI Pre-calculation Servers 	

5.4 Tasks on Demand on the Duet Landscape

5.4.1 Troubleshooting

Task Description	To determine root cause analysis of failed Duet flows
When is task required	Task can be triggered by: <ul style="list-style-type: none">▪ Administrators notified of issues through monitoring tool alerts and warning or error flags▪ By Duet End-Users who notify an administrator of the error through a help desk or company specific procedures.
Where to find procedure	For troubleshooting tips, refer to the <i>Troubleshooting</i> section in the <u>Duet Installation Guide</u> View the SAP Marketplace Forum for Duet to find similar issues by other customers as well as Duet blogs for tips and tricks.
Skills required	Netweaver ABAP and JAVA
Additional Information General troubleshooting guidelines: <ol style="list-style-type: none">1. Determine if the issue reported by a Duet user or found by an administrator in monitoring seem to be specific to a user or is an overall landscape issue. You can use the Duet Administration tool to view the extent of error/warning messages.2. For user specific issues, verify the correctness of user settings in the Duet Administration Tool as well as authorizations in the SAP Backend systems.3. If it is a general issue, identify recent changes to the landscape and configuration. All configuration changes (system and business) should be audited4. Enable simple tracing of every Duet flow as all the steps of a specific. This can include event viewer logging on the Duet client, j2ee traces on the Duet server and viewing short dumps or schedule logs in the SAP Backend systems.5. Identify user, user action or scheduled jobs created.6. Follow the flow of the process that failed and capture the error messages and logs through screenshots or saving logs just in case escalation is required. If required, ask a Duet end-user to retry the process to be able to view up to date error messages in the landscape. Every step of a Duet process will have information on the user that initiated it and the business entity that triggered it. Documentation Recommendation: Document where issues encountered by End Users and by monitoring teams will be logged. Within these logs also indicate how the issue was resolved, if it was escalated and if Duet patches were required.	

Setting Log levels for the J2ee related to Duet

The following are examples of log levels that can be increased to help in troubleshooting with Duet.

Component	Log level
Duet specific processes	com.sap.xapps.osp
JCO	com.sap.mw.jco
Kerberos	com.sap.security.core.security.server.jaas
Web Services – be specific in which web service you would like to troubleshoot as the log can get quite large if you increase logging at a high level.	com.sap.engineservices.webservices

Logs in SAP Backend Systems

This is a general list of where to find logs in an SAP Backend system.

SAP Backend Log	Transaction
Short Dumps	ST22
System Dumps	SM21
Application Logs	SLG0, SLG1, SLG2
Job Schedules	SM37
Pre-calculation Server	RSRD_LOG

5.4.2 Operation Tasks for the Duet Metadata Service

Task Description	See documentation as there are various tasks
When is task required	See documentation
Where to find procedure	<u>Microsoft Administration Guide</u>
Skills required	Netweaver JAVA
Documentation Recommendation: The Duet Implementation Kit Template has a section where the Duet Metadata Service settings should be captured	



5.4.3 Operation Tasks for the Duet Request Handler

Task Description	See documentation as there are various tasks
When is task required	See documentation
Where to find procedure	<u>Microsoft Administration Guide</u>
Skills required	Netweaver JAVA , Exchange/ADS expert
Documentation Recommendation: The Duet Implementation Kit Template has a section where the Duet Request Handler settings should be captured	




5.4.4 Transporting Duet configuration to production

Task Description	Moving Duet configuration throughout the landscape for test phases and eventually to production.
When is task required	<ul style="list-style-type: none">▪ Initial Duet implementation▪ Changes to Duet configuration
Where to find procedure	See the section <i>Moving Duet Applications to a Production Environment</i> in the <u>SAP Administration Guide</u>
Skills required	Netweaver ABAP (SAP Backend Transports) Duet Expert (Duet config in the Duet landscape)
Documentation Recommendation: Outline procedures for transports of SAP Backend configuration as well as imports and exports from Duet Administration Tool	

5.4.5 Add New Duet Scenarios

Task Description	Increase Business functionality for Duet by adding further Duet scenarios
When is task required	Generally requested by the Business community or other groups
Where to find procedure	See section <i>Adding a Duet Business Application</i> and the section <i>Maintaining Access to Business Applications</i> in the SAP Administration Guide Also refer to the related Duet scenario configuration guides
Skills required	Business Expert – required to design business process using Duet, ensuring SAP application associated to the Duet scenario is configured correctly. This team member should also be part of the testing of the new scenario functionality for Duet once installed Netweaver(Java) – deployment of the new Business application and any activities related to adding a new SAP Backend System if required Netweaver(ABAP) – configuration on the Duet Scenario in the SAP Backend as well as assigning authorizations associated to the scenario Duet Expert
Additional Information	
<p>Pre-requisites: As with any Duet application, the following should be in place as pre-requisites before the Duet application is added:</p> <ul style="list-style-type: none">  The SAP Application associated to the Duet scenario should already be configured and functioning independent of Duet  End users should have the correct authorizations to run the required application functions in the backend independent of Duet. <p>Documentation Recommendation: Use the Duet implementation kit Template to capture Duet scenarios and their related SAP Backend Scenarios</p>	

5.4.6 Add a new backend system or client to the Duet Landscape

Task Description	Add a new backend to the Duet landscape
When is task required	<p>When adding a new Duet scenario</p> <p>When adding a new system to an existing scenario. For example, adding a BI System to the reporting scenario</p> <p>When replacing a Duet backend system with different hardware</p>
Where to find procedure	<p><u>Duet Installation Guide</u></p> <p>The related scenario Duet configuration guide for configuration of scenario in the SAP backend and authorizations.</p> <p>The <u>Duet Security guide</u> for required authorizations</p>
Skills required	Netweaver ABAP and JAVA
Additional Information	
<p>Pre-requisites: The following should be in place as pre-requisites before the Duet Backend is added:</p> <ul style="list-style-type: none">  Hardware pre-requisites should be in place  Software pre-requisites should be in place – The SAP Backend system must have the correct service pack levels outlined in the Duet OSS Release Note. Also ensure the OSS Notes for Duet are applied to this system  Duet Users should have the correct authorizations in the backend for Duet specific authorizations as well as general authorizations for the SAP Application functionality <p>Documentation Recommendation: Add the new backend system to the Duet implementation kit Template and add to any diagrams of your landscape</p>	

5.4.7 Add or remove Scenario Configuration for the various scenarios

Task Description	Control of changes to Duet configuration. These changes could be to the Duet UI or specific backend configuration.
When is task required	Requests from Business community or other groups
Where to find procedure	Various Duet scenario configuration guides
Skills required	Depends on the requirement
Documentation Recommendation: Document how business groups should communicate a request for changes to configuration. The request should include the change required, to which system if it is a backend change etc.	

5.5 Initial Tasks on the Duet Client

5.5.1 Maintaining Access to Business Applications

Task Description	Assigning access to specific user groups / users to Duet scenarios
When is task required	During Duet installation phase prior to roll out of Duet software to client machines Ad-hoc requests to add or remove a user to a Duet scenario
Where to find procedure	<u>SAP Administration Guide</u>
Skills required	Netweaver ABAP (Authorizations for the backend) Duet Expert
Documentation Recommendation: See the Duet Implementation Kit Template to document Duet backend roles representing a duet scenario	

5.5.2 Setting Global Group Policies

Task Description	Centrally manage the Duet configuration file settings for groups of computers and users
When is task required	Global Group Policies should be set prior to roll-out of the Duet software to the Client Machines
Where to find procedure	See <i>Appendix A</i> in <u>Microsoft Administration Guide</u>
Skills required	Exchange / ADS
More information	Group policies can also be set manually on the individually client machines but global group policies is recommended

5.5.3 Roll-out of Duet to Client Machines

Task Description	Installation of Duet components on multiple Duet end-user machines
When is task required	Part of Duet Implementation Project Also required for roll-out to new employees who will be using Duet May be required to re-install on existing client machines
Where to find procedure	<u>Duet Installation Guide</u> Review <u>Microsoft Readme</u> document for client considerations during a roll-out
Skills required	Software Deployment Group
Additional Information	
<p>Roll-out of Duet Clients is recommended to be a phased approach. It can be based on specific user groups and then expanded as required.</p> <p>It is therefore necessary to use a software distribution system where you are able to deploy the Client software to certain User computers.</p> <p>Your company must plan for the best distribution method based on your requirements.</p> <p>There is a sample Microsoft VB script available that can be used by customers as an example of how to deploy Duet on Client machines. As of the date of this document, the Microsoft VB script has not yet been published to the SDN but will be coming in the near future. Refer to the Duet Blogs on the SAP Service Marketplace for any updates.</p> <p>Start with a small control group for initial implementation During the initial Duet implementation, start out with a small control group to determine if any issues may be encountered during the roll-out.</p> <p>Roll-out Strategy A clear Roll-out strategy is required when determining who should be deployed first if it is a phased installation.</p> <ul style="list-style-type: none"> ▪ Initial Roll-out should be with a small, carefully controlled production end user group that can give quick access to support if required ▪ Ensure managers are rolled out with their team. This is especially important for scenarios like leave management where approvals are required. <p>Documentation Recommendation: Outline roll-out methods for Duet software, support tools, patches etc</p>	

5.5.4 Roll-out of Central Client Diagnostic Tool to Client Machines

Task Description	Roll Out the Duet Central Client Diagnostic Tool client component to Client Machines which can be used for troubleshooting and is required for the Central Client Diagnostics monitoring tool. By utilizing the central monitoring tools, administrations can monitor and troubleshoot the Duet client without having to access the client machine
When is task required	This task can be performed along with the Duet installation in the same deployment method
Where to find procedure	For information on the Central Client Monitoring Tool client component, refer to the SAP Administration Guide
Skills required	Software Deployment

5.5.5 End User Help Desk and Escalation Procedures

Task Description	As a follow up task to implement troubleshooting and escalation procedures, Duet end-users will need to know the procedures to report errors
When is task required	During Final Preparation of Duet Implementation Project Communication to new user is also required so it is recommended to have a document outlining procedures
Where to find procedure	Based on customer service level agreement strategy
Skills required	Project Management
Additional Information When users encounter an issue with Duet, they should keep track of the following: <ol style="list-style-type: none">1) What error occurs2) How can the error are re-created, for example, what action was being performed by the user step by step.3) Has any new Microsoft add-ins been enabled on the client4) If an administrator requires direct access to the client machine for troubleshooting, availability should also be communicated	

5.6 Regular Tasks on the Duet Client

5.6.1 Monitoring Duet Client Activities

Task Description	Monitoring Duet Client Activities
When is task required	Daily
Where to find procedure	Microsoft Administration Guide <u>SAP Administration Guide</u> – see information on the Central Client Diagnostic Tool as well as the Duet Administration Tool
Skills required	Duet Expert
Documentation Recommendation: Similar to the landscape monitoring, document what tools will be used, monitoring tool settings, frequency of monitoring etc.	

5.6.2 Backing Up and Restoring the Duet Client Installation

Task Description	Backup and recovery of Duet Client Installation
When is task required	See guides
Where to find procedure	<u>Microsoft Administration Guide</u>
Skills required	Duet Expert

5.6.3 Applying Patches and Hotfixes to the Duet Client

See section Applying New Support Packages, Patches and Hotfixes to the Duet Landscape.

5.7 Tasks on Demand on the Duet Client

5.7.1 Troubleshooting Duet Client Deployment

Task Description	Troubleshooting Issues on the Duet client
When is task required	When error or warning messages show up in monitoring tools for specific user. When Duet End User reports an issue to the First Line Help Desk
Where to find procedure	<u>Microsoft Administration Guide</u> <u>SAP Administration Guide</u> – see information on the Central Client Diagnostic Tool as well as the Duet Administration Tool
Skills required	Duet Expert
Documentation Recommendation: These procedures should also be part of the landscape troubleshooting. Special considerations are required in gaining access to Duet clients if direct access is required.	

5.7.2 Repairing the Duet Client Components

Task Description	Repairing Duet Client
When is task required	When issues arise or inconsistencies occur
Where to find procedure	<u>Microsoft Administration Guide</u>
Skills required	Duet Expert

5.7.3 Removing the Duet Client Components

Task Description	Remove Duet Client Components from a client machine
When is task required	On request
Where to find procedure	<u>Microsoft Administration Guide</u>
Skills required	Duet Expert