AutomationEdge for IT Automation

White Paper

(V 1.4)

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1. IT and HR automation with AutomationEdge

Automation is a key building block for providing digital experience at workplace. Even though enterprises have invested in service management tools and monitoring tools, many IT tasks are still done manually.

AutomationEdge comes prebuilt with 200+ ready adapters and actions for IT systems and business applications. This helps in

- Automated resolution of IT requests and incidents
- Automated resolution of HR employee onboarding and offboading
- Assist IT technicians to handle advance and complex tickets with the help of automation

Ready Adapters for IT and HR Automation
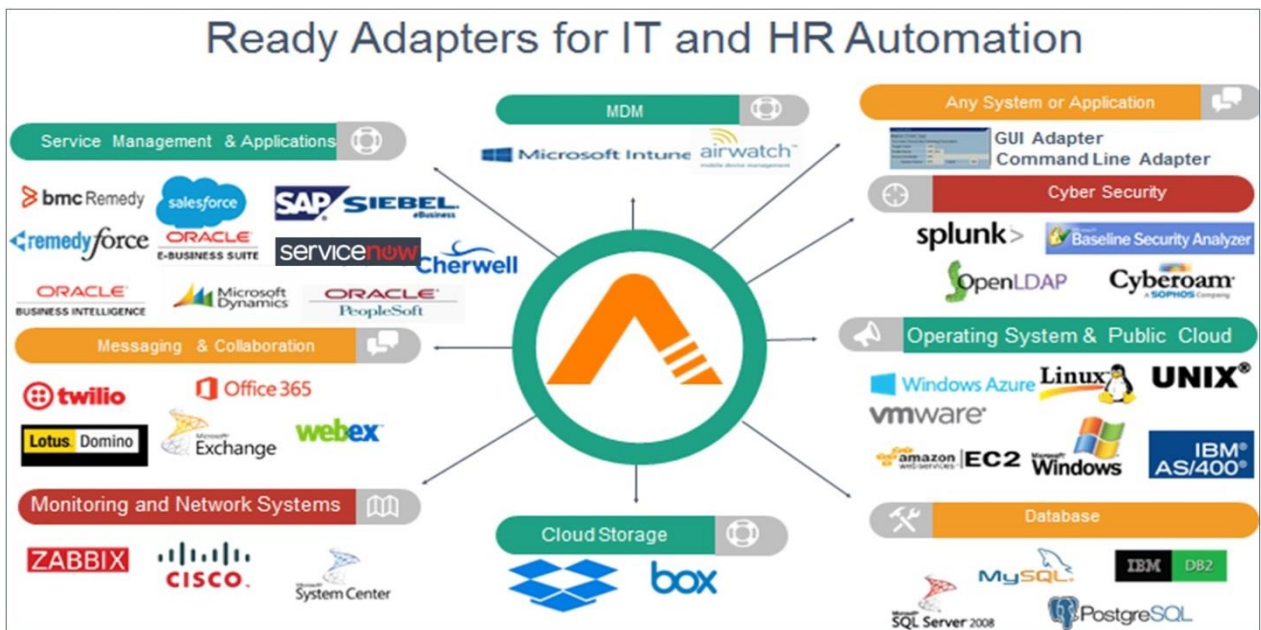
2. Example use cases

Following table provides the list of sample use cases and scenarios where AutomationEdge can be used.

Use Case	Service Request / Incident / Event	Use Case details	Examples of target systems / steps involved
Employee onboarding	Service Request	Give access to employees on business applications and IT systems including user creation, role based access , update location data etc.	Employee creation on core banking system (e.g. Flexcube, Finnacle), loan origination system (e.g. Finnone), insurance policy admin applications (e.g. Life Asia), CRM system (e.g. MS Dynamics, Salesforce, Talisma) ERP systems (e.g. Oracle EBS, SAP, JDE, Peoplesoft), Ticketing systems (e.g. Service Now, BMC Remedy, Cherwell), email and collaboration (e.g. MS Exchange, IBM Lotus Domino), web conferencing (WebEx, MS Skype, GoToMeeting), Dashboard Analytics and Reproting (SAP BO, OBIEE, Microstrategy, Qlik) etc.
Employee off boarding	Service Request	Remove access to employees on business applications and IT systems including user creation, role based access , update location data etc.	Employee removal from core banking system (e.g. Flexcube, Finnacle), insurance policy admin applications (e.g. Life Asia), loan origination system (e.g. Finnone), CRM system (e.g. MS Dynamics, Salesforce, Talisma) ERP systems (e.g. Oracle EBS, SAP, JDE, Peoplesoft), Ticketing systems (e.g. Service Now, BMC Remedy, Cherwell), email and collaboration (e.g. MS Exchange, IBM Lotus Domino), web conferencing (WebEx, MS Skype, GoToMeeting), Dashboard Analytics and Reporting (SAP

			BO, OBIEE, Microstrategy, Qlik) etc.
ID Management (Employee move)	Service Request	Update access to employees on business applications and IT systems including user update, role based access changes, update location data etc.	Employee updating on core banking system (e.g. Flexcube, Finnacle), loan origination system (e.g. Finnone), insurance policy admin applications (e.g. Life Asia),CRM system (e.g. MS Dynamics, Salesforce, Talisma) ERP systems (e.g. Oracle EBS, SAP, JDE, Peoplesoft), Ticketing systems (e.g. Service Now, BMC Remedy, Cherwell), email and collaboration (e.g. MS Exchange, IBM Lotus Domino), web conferencing (WebEx, MS Skype, GoToMeeting), Dashboard Analytics and Reporting (SAP BO, OBIEE, Microstrategy, Qlik)
Distribution List Management	Service Request	Create /Update Email distribution list members	Update distribution list in Email management systems (MS Exchange, IBM Lotus Domino)
Virtual Machine management - private cloud and public cloud	Service Request	Create /Update VM in private cloud	create , update, delete VM (e.g. VMWARE, Azure, Amazon EC2) based on template
Virtual Machine management - private cloud and public cloud	Service Request	Start / Stop / Snapshot VM in private cloud	Start / Stop / Snapshot VM in private cloud (e.g. VMWARE, Azure, Amazon EC2) environment

AD Management	Service Request	various management activities for AD for reports, governance etc.	Add to Group Computer Last Logged In Date Copy User Add Account Add Group Delete Account Delete Group Disable Account Reset User Password and many more
Shared folder access	Service Request	access to shared folder (Active directory based , Box, Dropbox)	user creation, user deletion, backup (box, dropbox), provide access (MS folder, box, dropbox)
security reports request	Service Request	Microsoft MBSA reports for set of servers	Provide reports for Microsoft MBSA reports
Mobile Device Management	Service Request	mobile device management for VMWARE Airwatch and MS Intune	Airwatch, MS Intune - delete/disable User ID Onboarding first time user – enable, Change of device, Wipe Device etc.
Datacenter	Incident / Service Request /Event	automation of various scenarios like vm update , db size increase, tmp file cleanup and many such type of actions based on requests or events	plugins involved in this type of automation include ping, traceroute, process and machine status (CPU, Memory etc.), service restart (unix, windows)
Network	Incident / Service Request /Event	network device remedial actions or assistant to L2/L3 engineer	Cisco Change Vlan Enable Privileged Commands Get Interfaces Status Change Interface Status Write configurations Configuration backups. Terminate login Session network status check and remedial actions and tickets work

			log update with complete resolution or initial investigation steps are completed and work log is updated to help L2/L3 engineer when she starts working on the ticket
Applications	Incidents / Service Requests /Events	applications remedial actions or assistant to L2/L3 engineer	application status check and remedial actions and tickets work log update with complete resolution or initial investigation steps are completed and worklog is updated to help L2/L3 engineer when she starts working on the ticket
Security incident response	Incidents / Service Requests /Events	security remedial actions or assistant to L2/L3 engineer	security incident remedial actions and tickets worklog update with complete resolution or initial investigation steps are completed and worklog is updated to help L2/L3 engineer when she starts working on the ticket

Database queries	Incidents / Service Requests /Events	Database and SQL queries handling to assist IT teams or line of business	Database and SQL queries for service requests or incident resolution or event resolution : SQL Server database user creation Grant Permission to Database User Reset Password for Database User Database Creation Run SQL Agent Job SQL Server Full Backup SQL Server database user creation Grant Permission to Database User Reset Password for Database User Database Creation Script to execute requested query Unlock Database user
Exchange management	service requests /incident	mailbox management for MS Exchange and Office 365	Add New E-Mail Account Delete Existing E-Mail Account Reset E-Mail password Increase Mail Box Storage Size Add New E-mail profile Modify E-Mail profile Add E-mail Distribution list Add Member in E-mail distribution list Address book load to outlook client Delete Member from E-mail distribution list Password reset and many more

3. Usage scenarios

AutomationEdge can be used for two set of users

- End users in the organization through
    - Enterprise wide Service Request management system / IT Ticket system / HR system already deployed in the organization
    - Self service console of AutomationEdge
- IT and HR staff to assist them in their tasks
    - Self service console of AutomationEdge

The monitoring tools will typically send the event / alert which need action to IT ticketing systems to create a ticket. AutomationEdge can either integrate with IT ticketing system or directly with monitoring tool to help in automated resolution of events / alerts.

4. Detailed list of ready actions available with AutomationEdge

Here is the detailed list of ready actions for IT automation.

Sr. No.	Target Server / Application	Use Case / Step
1	**Active Directory**	AD Health Check
		Add To Group
		Check User Status
		Create User Account
		Unlock User Account
		Computer Last Logged In Date
		Remove User From Group
		Copy User
		Create Group
		Delete User Account
		Delete Group
		Disable Account
		Enable Account
		Search Account
		Is AD Account Disabled
		Is AD Account Locked
		Get User Property
		Set User Property
		Group Exist
		LDAP Query
		List Security Groups
		List Organization Unit (OU)
		Password Expiration Days Left
		Set Password Properties
		Rename Account
		Reset User Password
		Move Computer To Organization Unit
		Move User To Organization Unit
		User Exist
		List Distribution Groups
		Grant Local Administrator Privileges On Computer
		Temporary Files Cleanup
		Enable USB Access
		Map Shared Folder For User Profile
		Display Locked Accounts
		Creating An Child Organization Unit

1	Active Directory (Cont.)	Removing Access From the Shared Folder
		Grant Access To Shared Folder
		Delete Deactivated Account In AD
		Removing Computer From Organization
		Users Who Have Tried the Wrong Password
		Deletion Of AD Objects
		Share Folder Creation
2	AWS - EC2	Create VM
		Delete VM
		Start VM
		Stop VM
3	Box	Create User
		Update User
		Delete User
		Get User
		Create Folder
		Delete Folder
		Copy Folder
		Get Folder Info
4	Cisco	Cisco Change VLAN
		Write configurations
		Configuration Backups
		Enable Privileged Commands
		Get Interfaces Status
		Send command
		Start Session
		Terminate Session
		Change Interface Status
5	Database - MS SQL	Add Data File Or Log File
		Assign Server Role
		Create Database
		Create Login User
		Delete Login User
		Modify Data File Or Log File
		Reset Password
		Shrink Database
		Shrink File
		Start SQL Agent Job
		Stop SQL Agent Job
		Unlock Login User
6	Database – MySQL	Create User

6	**Database – MySQL (Cont.)**	Unlock User
		Reset Password
		Grant Permission to User
		Create Database
		Full Backup
7	**Database – Oracle**	Clean Listener Log
		Delete Old Trace Files
		Create Tablespace
		Create User
		Delete User
		Extend Tablespace
		Reset Password
		Unlock User
8	**Desktop/Laptop**	Map Network Drive
		Clean Temporary Files
9	**FTP**	Add Folder
		Delete File
		Delete Folder
		File Exists
		Get File
		List Folder
		Put File
		Rename File
		Rename Folder
		Start FTP Session
		Terminate FTP Session
10	**JIRA**	Create Project
		Update Project
		Delete Project
		Get All Projects
		Create User
		Update User
		Remove User
		Create Issue
		Delete Issue
		Get Issue
11	**ITSM – Cherwell**	Delete Record
		Get Record
		Insert Record
		Update Record
12	**ITSM – Remedy**	Delete Record

12	ITSM – Remedy (Cont.)	Get Record
		Insert Record
		Update Record
13	ITSM - Remedy on Demand (RoD)	Delete Record
		Get Record
		Insert Record
		Update Record
14	ITSM – RemedyForce	Delete Record
		Get Record
		Insert Record
		Update Record
15	ITSM – ServiceNow	Delete Record
		Get Record
		Insert Record
		Update Record
16	LDAP	Reset Password
		Add User
		Delete User
		Add Email Id
		Delete Email Id
17	Linux	Add User
		Kill Service
		Start Service
		Stop Service
		Restart Service
		Monitor CPU load
		Monitor Memory Load
		Get Disk Utilization
		Disk Cleanup
		Linux Server Health Check
18	Microsoft Azure	Add VM
		Start VM
		Stop VM
		Remove VM
		Remove Resource Group
		Resize VM memory
19	Microsoft Azure AD	Add User Account
		Delete User Account
		Reset Password
20	MS Exchange On-Premise	Add E-mail to Distribution list
		Delete Member from E-mail distribution list

20	**MS Exchange On-Premise (Cont.)**	Disable Mailbox
		Enable Mailbox
		Get Mailbox
		Get Mailbox Database
		Get Mailbox Permission
		Get Mailbox Server
		Get Mailbox Statistics
		Remove Mailbox Content
		Add New E-Mail Account
		Delete Existing E-Mail Account
		Reset E-Mail password
		Increase Mail Box Storage Size
		Add Member in E-mail distribution list
		Modify E-Mail profile
		Create Distribution List
		Delete Distribution List
21	**Network**	Get External Internet IP Address
		Ping Latency
		Send Syslog Message
		Telnet
		Trace Route
		Ping (Verify connectivity)
		Wake on LAN Mac Address
22	**Office 365**	Modify E-Mail profile
		Create Distribution list
		Add Member in distribution list
		Delete Member from E-mail distribution list
		Delete Distribution List
		Disable Mailbox
		Enable Mailbox
		Get Mailbox / User Statistics
		Add New E-Mail Account
		Delete Existing E-Mail Account
		Reset Password
23	**Skype for Business**	Add user
		Remove User
		Modify Access
24	**SolarWinds**	Acknowledgement Alert
		Execute SWQL Query
		Get Alerts
		Net Nodes

25	Unix	Password Reset
		Account Unlock
		Remove Permission to Folder
		Grant Permission to Folder
		Disk Cleanup
		Application Logs/Temp Files Cleanup
		Unix server Health Check
26	VirusTotal	Scan File
		Scan URL
27	VMWare Host	Add Folder
		Enable Maintenance Mode
		Exit Maintenance Mode
		Capture Host List
		Reboot Host / Power Cycle
		Add Snapshot
		Restore Current Snapshot
		Delete Selected Snapshot
		Delete All Snapshots
		List Snapshots
		Rename Snapshot
		Revert to Current Snapshot
		Revert to Snapshot
		Snapshot Info
		List Templates
		Mark Template
		Unmark Template
28	VMWare vCenter	Increase Memory of VM
		Decrease Memory of VM
		Increase CPU of VM
		Decrease CPU of VM
		Add Disk to VM
		Remove Disk from VM
		Reset VM
		Reboot VM
		Rename VM
		Delete VM
		Clone VM
		VM Power On
		VM Power Off
		Get VM Power State
		VM Guest Info

		Add Host to vCenter
		Create Machine on vCenter
		VM Suspend
29	**Windows Server**	Start Service
		Stop Service
		Restart Service
		Log Management
		Reset Remote Desktop Session
		Request Local Dynamic Privileges
		Monitoring Disk Utilization
		Create User On Local Server
		Delete User On Local Server
		Create Group On Local Server
		Delete Group on Local Server
		Disk Cleanup
		Get Service List
		Get Service Startup Type
		Get Service Status
		Resume Service
		Pause Service
		Set Service Logon Credentials
		Set Service Startup Type
		Health check
30	**Zabbix**	Create Hostgroup
		Delete Hostgroup
		Update Hostgroup
		Get Hostgroup
		Create Host
		Delete Host
		Update Host
		Get Host
		Create User
		Delete User
		Update User
		Get User

5. Machine learning and tickets classification with AutomationEdge

When the tickets are raised in the ticketing system by end users or by monitoring tools, the tickets are assigned manually to different support queues and priority is set by human agents in the help desk function.

AutomationEdge can also pick tickets from unstructured emails received in the common email box. AutomationEdge can helps in automatic ticket classification without human agent intervention.

The following figure is an illustration of a Process in AutomationEdge Process Studio which helps in tickets classification.
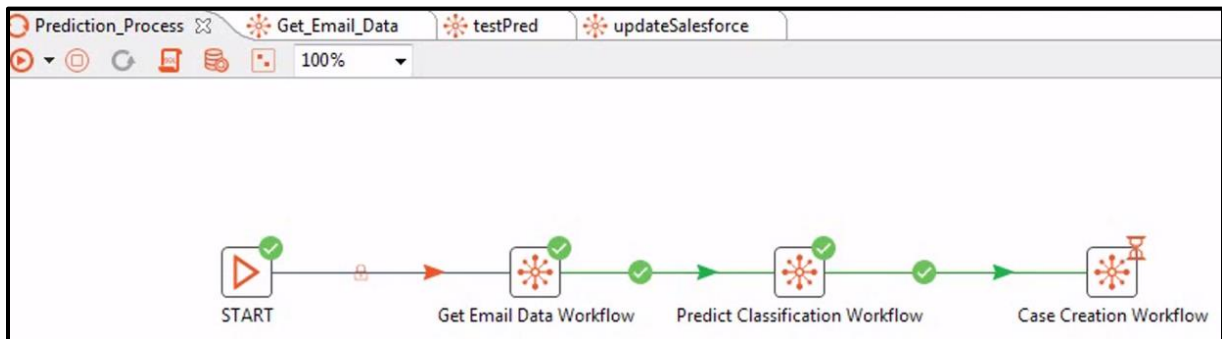
Automatic ticket classification helps reduce manual efforts and results in faster turnaround time of ticket handling.

6. Chatbot for IT and Non-IT Service Desk with AutomationEdge

AutomationEdge supports chatbots for IT Service Desk. The business users can raise service requests, report issues, request for information and knowledge articles, request password resets, unlock accounts etc. The chatbot can be used for IT as well as non-IT services support. The rich set of ready bots for IT and business along with RPA technology available with AutomationEdge helps businesses quickly deploy chatbot technology to support users.
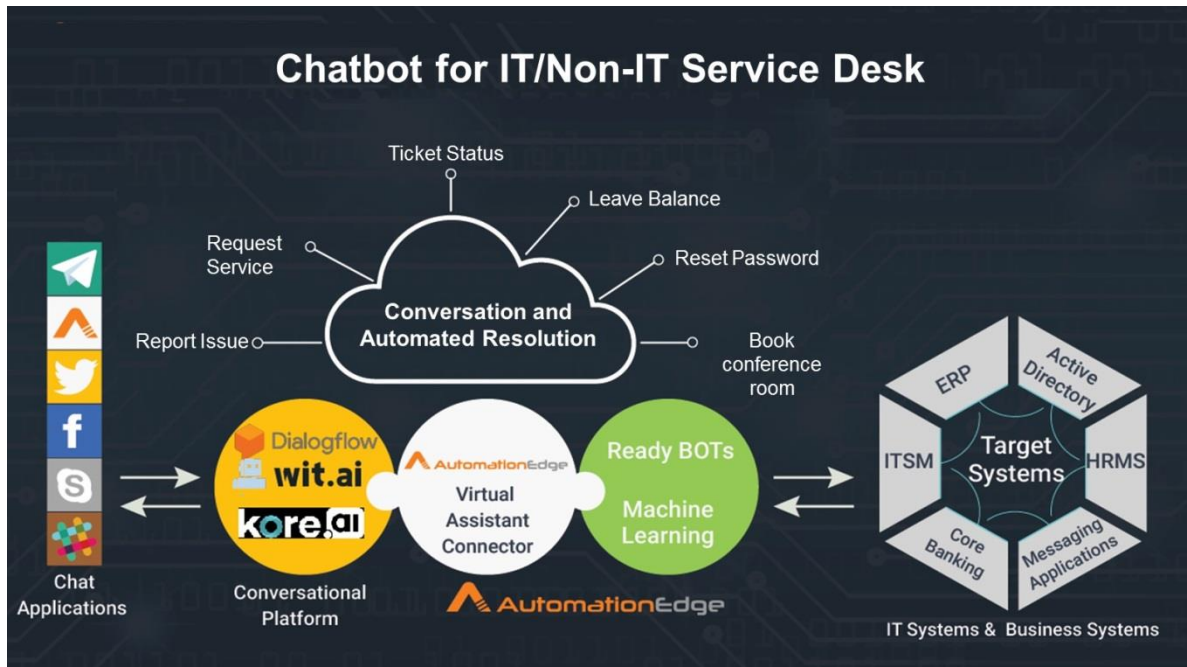
Enterprise Chabot

7. Contact Information

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