

**Power
Week**

Université IBM i 2019

22 et 23 mai

IBM Client Center Paris



**S20 – Gestion des changements et supervision des
traitements IBM i, Windows et Linux**



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Agenda

- Présentation SMA
- Evolution des besoins d'Automatisation
 - DevOps
 - Cloud
 - Sécurité
- Présentation OpCon
 - Plate-forme d'automatisation OpCon
 - Automatisation dans le Cloud: API, connecteurs et sécurité.
 - OpCon Deploy
 - OpCon Vision
- Q/R.



Présentation SMA

Présentation SMA



Pure Player
Depuis 1980
+ 750 clients
24/7 support

EXPERTISE - INNOVATION

Spécialiste mondial de solutions d'automatisation

PLATEFORME D'AUTOMATISATION DIGITALE

Présence globale – HQ Houston, TX



Des centaines de clients modernisent leur exploitation !



Quelques références IBM i, en France

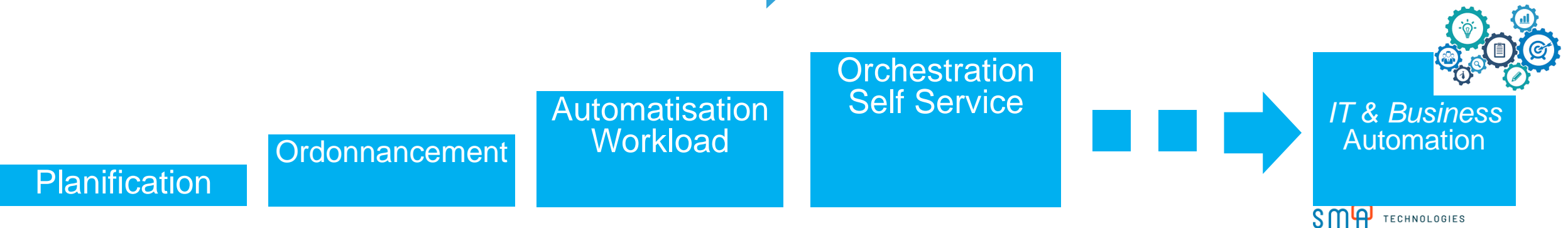
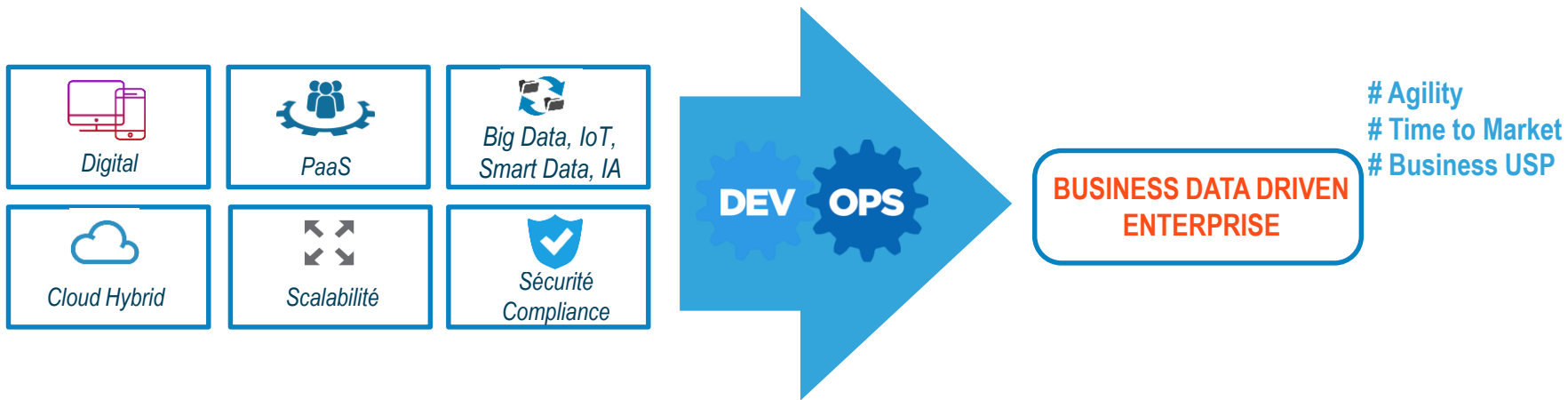




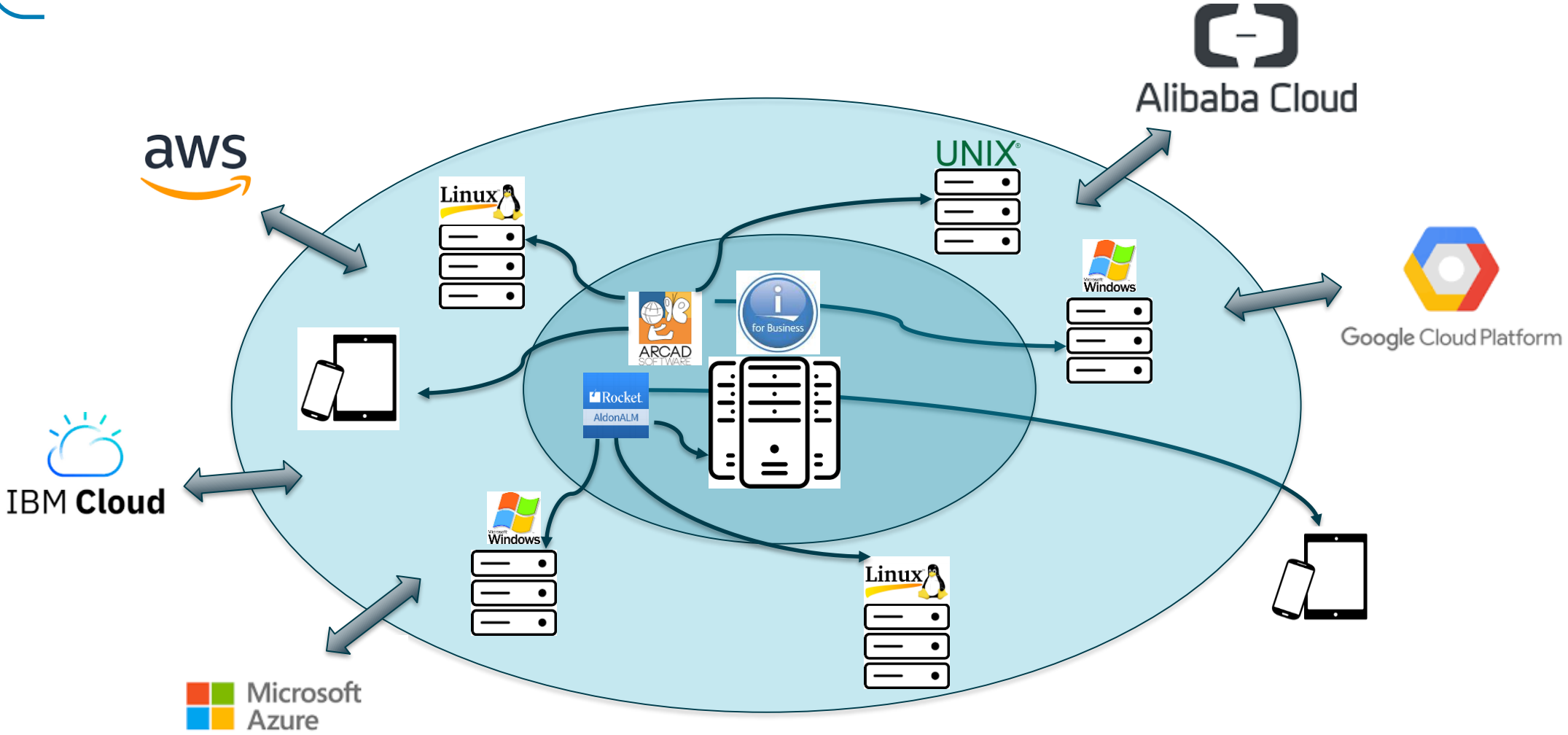
Evolution des besoins d'Automatisation

Challenges de la Modernisation du SI et de l'Exploitation

- L'automatisation est incontournable pour adapter le SI à l'ère Digitale
- L'Exploitation IT doit s'aligner sur les contraintes métiers et clients et être disponible 24h/24 7j/7.
- L'automatisation est la clé pour rendre les métiers agiles et efficaces.



Evolution de l'infrastructure du SI



Challenges de l'Exploitation Informatique

- Aligner l' Exploitation informatique sur les besoins métiers
- Accélérer la **capacité** et la **vitesse des changements**
- Gérer les **architectures hybrides**
- Devenir « **Scalable** »: « Infrastructure As A Code » & « Cloud »
- Être **prédictif** avec **gestion proactive des incidents**
- Améliorer la **sécurité** et gérer la **compliance** (RGPD)

Planification

Ordonnancement

Automatisation
Workload

Orchestration
Self Service



*IT & Business
Automation*



Challenges de la modernisation DevOps

- Organisation
 - Élimination des silos
 - Equipe multidisciplinaires, avec un Leader
 - Itération versus projet.
- Communication
 - Peu ou pas de documentation (Tags).
 - Indicateurs (QoS, SLA, Self Service, ...)
 - + de DASHBOARD, - de REPORTING
- Automatisation
 - IT (Dev & Ops & Sec)
 - Business Services



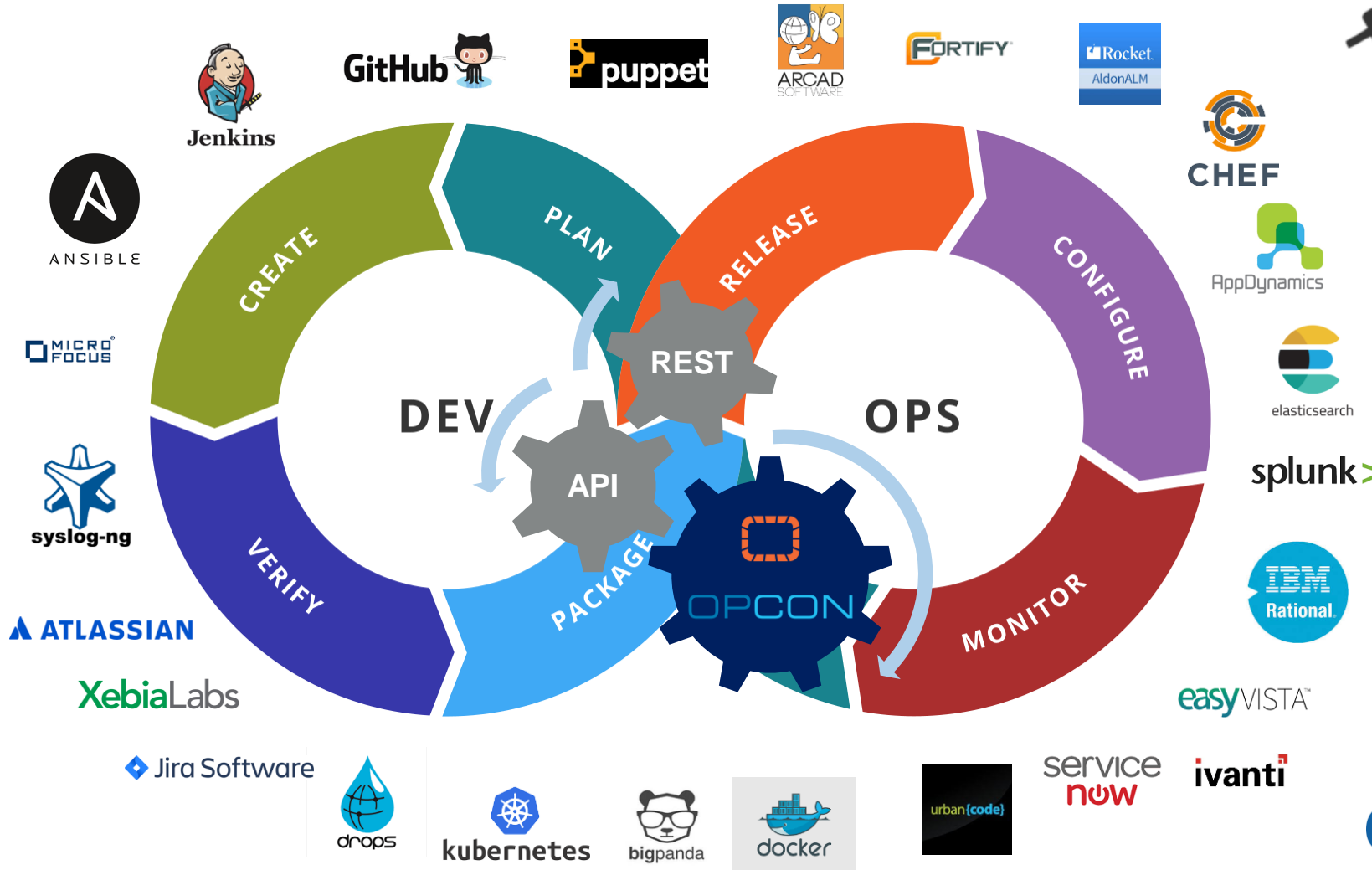
DevOps = OpCon API !



Code
Build
Configure

Test
Analyse
Security

Define
Plan
Security



Release
Deploy
Coordination

Continuous
Configuration
Automation
Coordination

Infrastructure
APM &
Analytics

Gartner

sma TECHNOLOGIES

La plateforme d'automatisation est le cœur de la DevOps Tool Chain pour accélérer les changements

DevOps Automation Tool Chain

Exemple d'une Tool Chain DevOps pour accélérer les changements



Self Service

Application Change Management

- On demand
- Continuous change
- Planned changes



Jenkins

Infrastructure As A code

Infrastructure change and updates



ANSIBLE

CMDB
service now

Servers & Applications

Self Service

BUSINESS USERS



Nouveaux scripts & jobs

OPCON

- Reboot
- Disable Server
- Create server
- Stop jobs

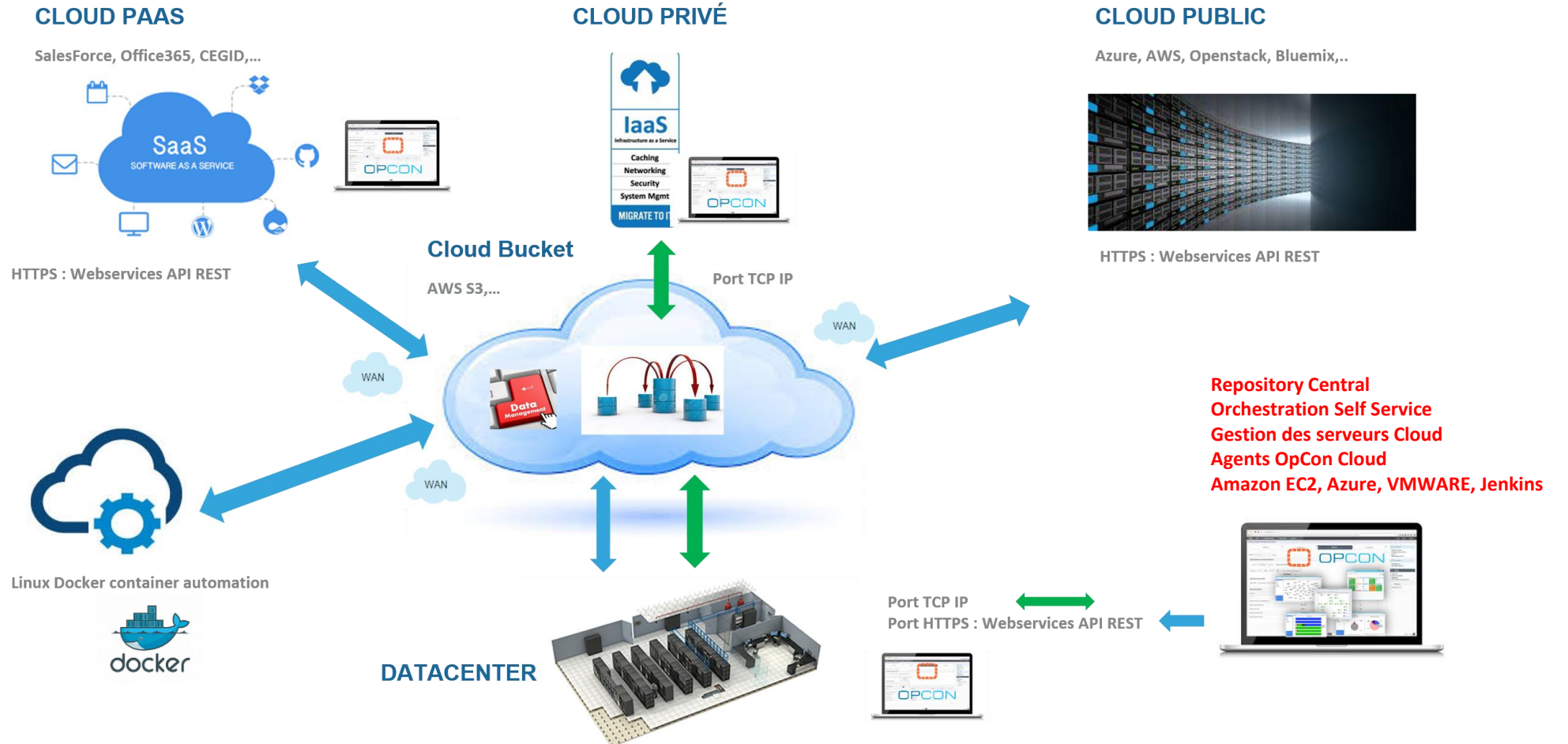
- Application changes
- Application Scripts & jobs changes
- Infrastructure servers changes
- Infrastructure scripts & jobs changes

Challenges de la modernisation

Automatisation architectures hybrides avec OpCon

Cloud Privé
& Public
IaaS
SaaS
PaaS

AWS
MS AZURE
DOCKER
Kubernetes
VMware



Connecteurs Cloud

Interface avec les Cloud Providers

- Gestion d'instances dans le Cloud:
 - Création
 - Démarrage
 - Statut
 - Arrêt
 - Suppression

Définition AWS EC2

User Id: CLOUD SERVICE ACCOUNT

Connector Location: [[AWSEC2Path]]

User ID: demo

Region: EU West (Ireland)

Operation: StartInstance

Create Instance | Get Instance Status By Tag | Start Instance | Stop Instance | Terminate Instance | Failure Criteria

Tag Name: DB SQL

Insert, Update or Remove Instances

Defined Instances
MS SQL SERVER EMEA
SERVER ALTERNATE



IBM Cloud

Connecteur **Webservices Rest**



- Automatisation des nouvelles applications **via leur API**
- Fonctions **GET, POST, PUT, et DELETE**

Définition Web Services (RESTful)

User Id

Job Details | SSL | Failure Criteria

Connector Location

URL

Operation

User Name

User Password

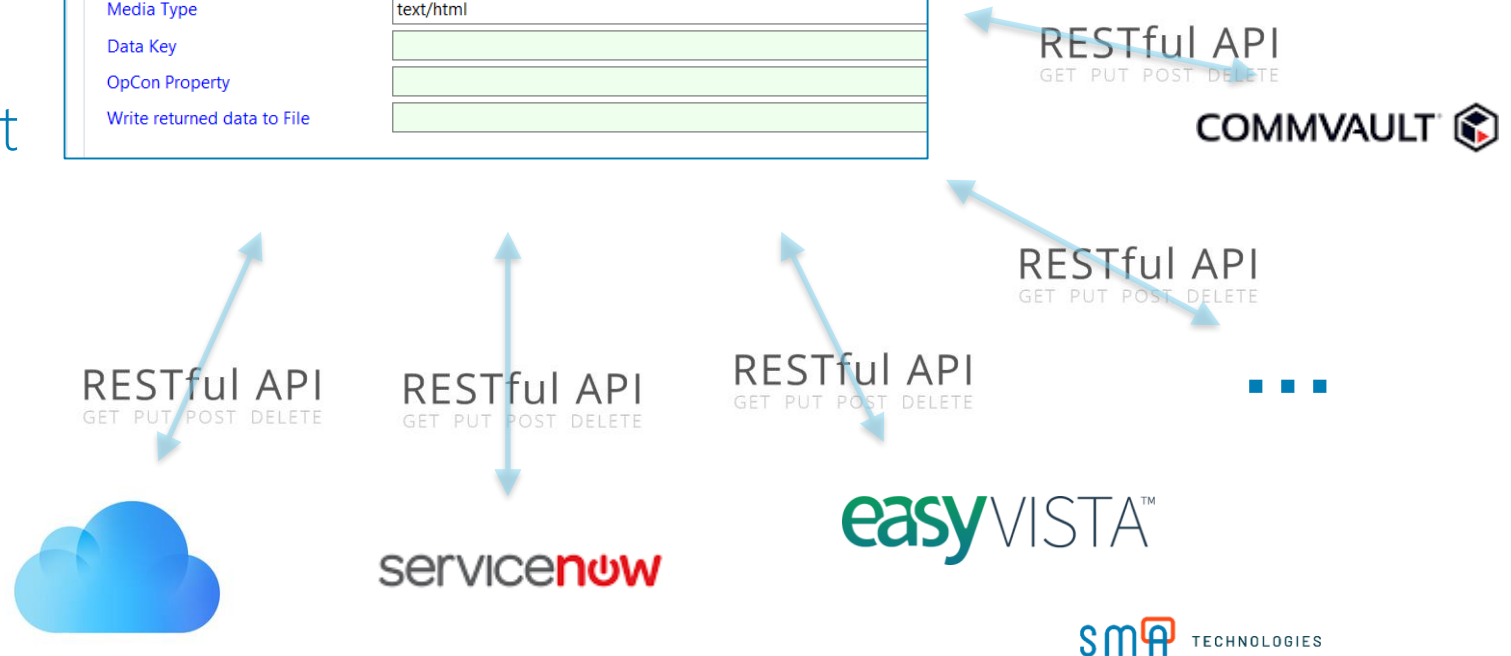

Header Attributes | Query Response (GET) | Message Body (POST/PUT) | Message Body (POST_POLL)

Media Type

Data Key

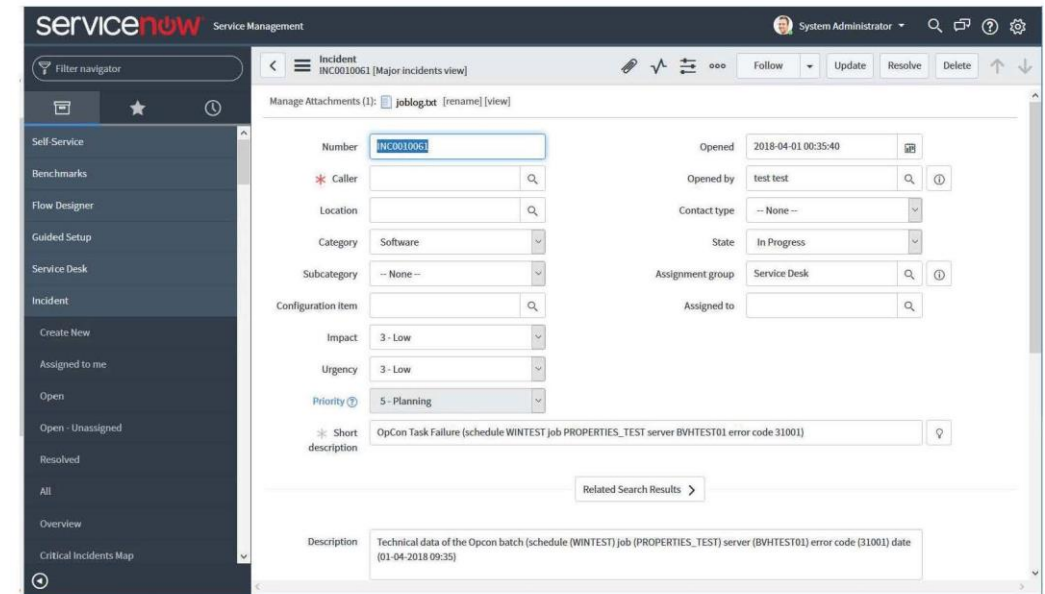
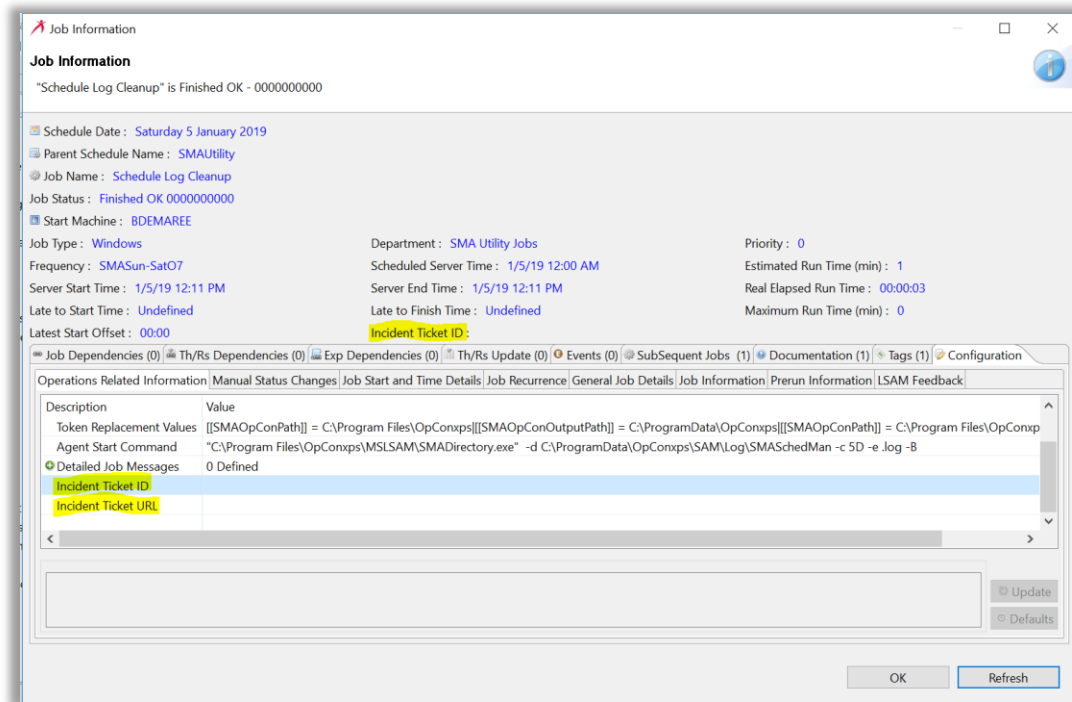
OpCon Property

Write returned data to File

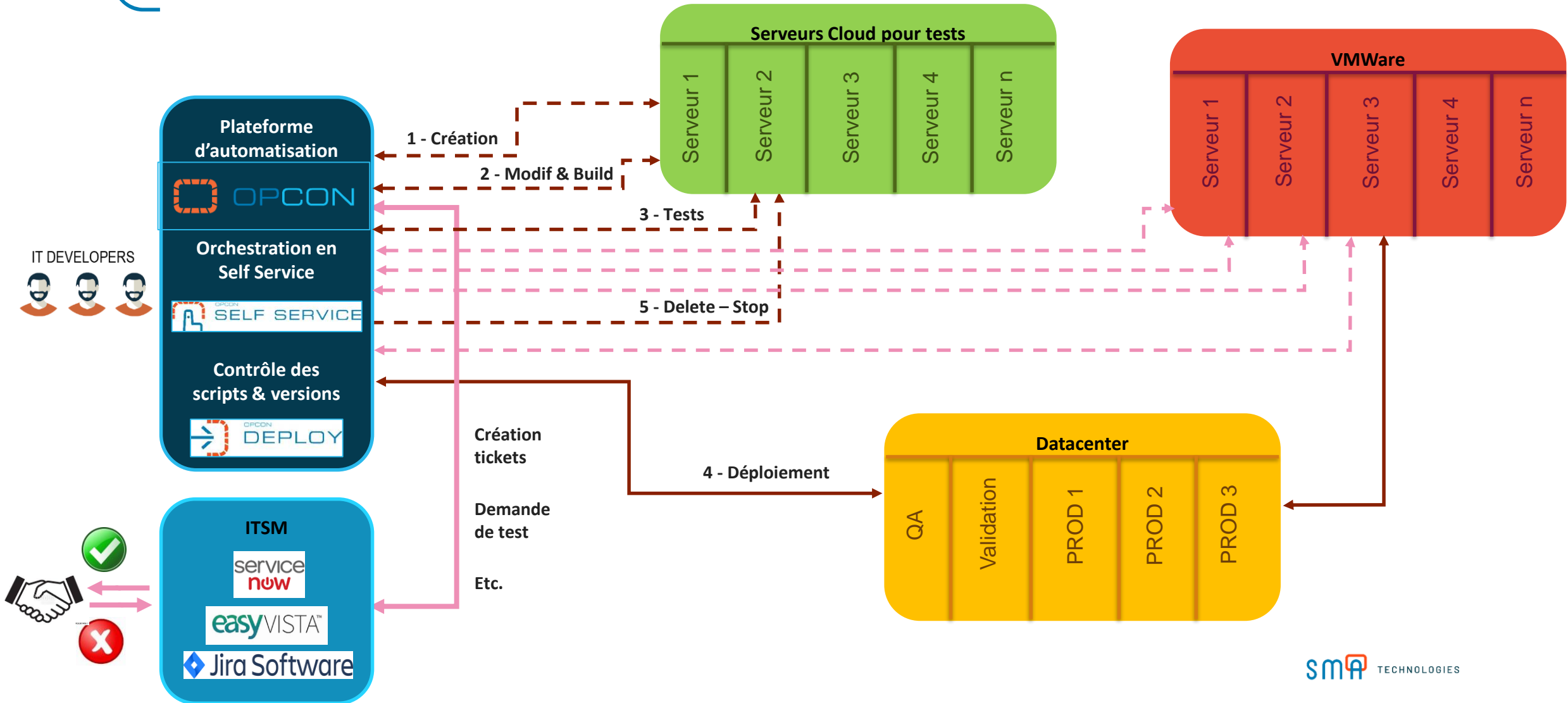


Connecteurs ITSM (Exemple ServiceNow)

- Création et suivi de tickets depuis OpCon



Exemple : Tests d'applications dans le Cloud et changement continu sans intervention humaine



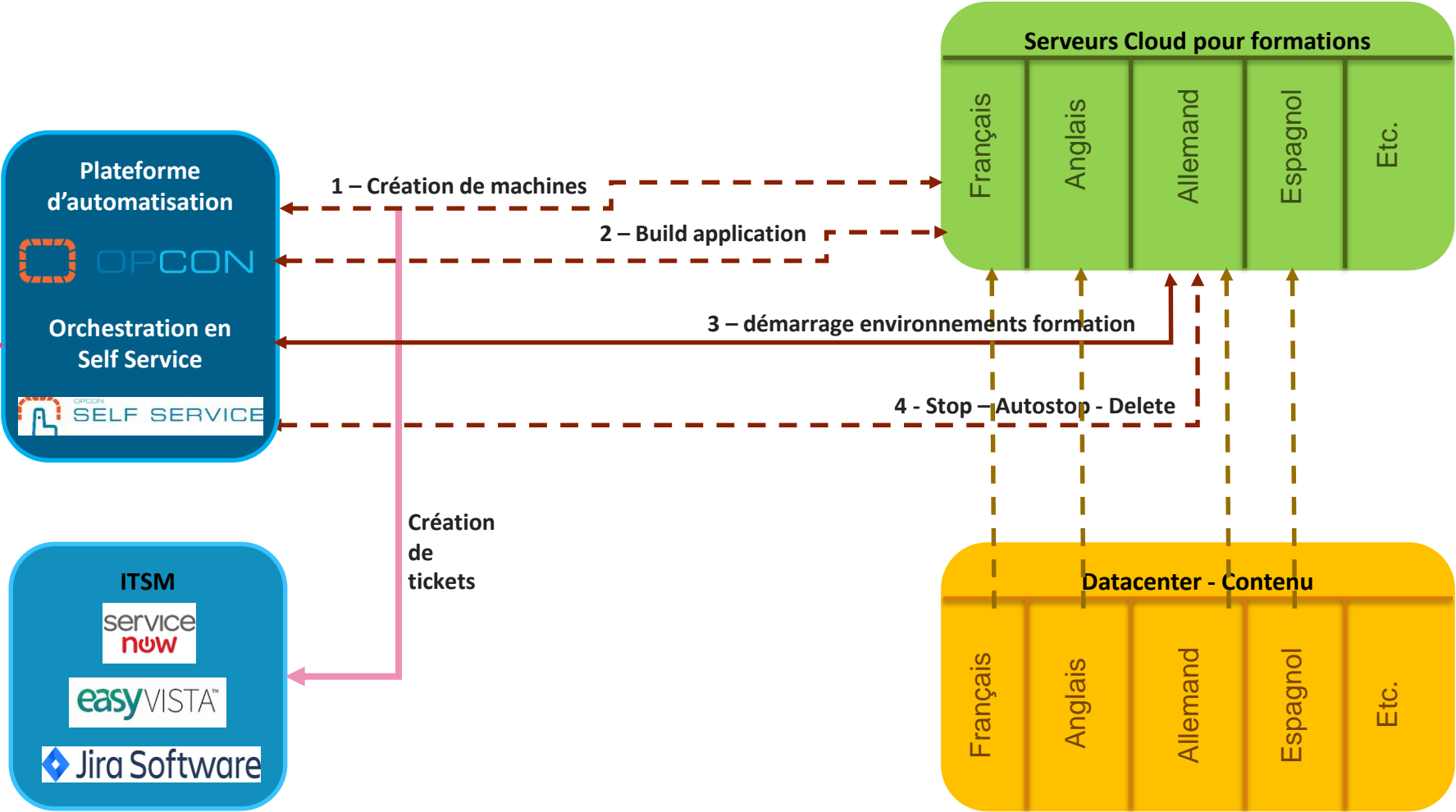
Exemple : environnements de formation sur le Cloud

Formateur



9h - 18h

Bouton « Start Formation »



Challenges de la modernisation Sécurité



- Sécurité informatique
 - Scripts CENTRALISÉS vs dispersés sur les serveurs
 - Logs CENTRALISÉES vs dispersées sur les serveurs
 - PRA / PCA du SI
- Sécurité des données Métiers
 - REPORTING & DASHBOARD fiables avec des données SÉCURISÉES
 - Accès aux données sensibles PROTÉGÉES
- Compliance
 - CONFORMITÉ ISOXX, SOX,...
 - RGPD



Présentation plateforme d'automatisation OpCon

Plateforme d'automatisation OpCon

The screenshot displays the OpCon Enterprise Manager interface. The main area shows a complex workflow graph with nodes representing jobs and their dependencies. On the right, there are performance metrics for 'Running' (33%) and 'Completed' (33%) jobs. Below the graph, there are four summary cards for different categories: Business, Cloud, SELF-SERVICE, and Technique, each showing start and end times and durations.



The OpCon Automation Platform dashboard is divided into several sections:

- OpCon Agents:** HP, IBM, Linux, Unisys, Unix, Windows.
- Workflow Designer**
- File Transfer**
- Java & Web responsive GUI**
- OpCon Self Service**
- Audit Reports**
- OpCon Automation Core**
- Central script Management**
- OpCon Vision**
- Notifications**
- Documentation**
- OpCon API**
- OpCon Deploy**

Application Connectors: Microsoft Automation Suite - SAP Automation Suite, Cegid - Infor - Oracle - Sage, CommVault - Java - ServiceNow - Tuxedo - VMware - WSUS - Cloud ...



Gold Application Development
Silver Data Platform



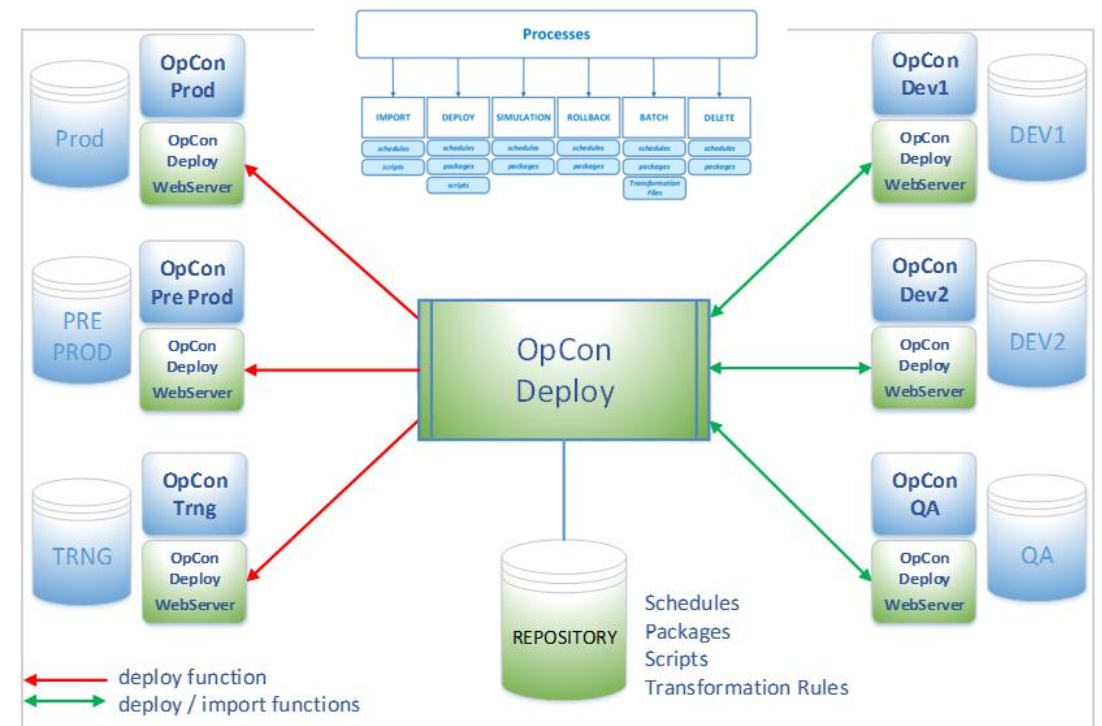


OPCON
DEPLOY

Nouveau !

OpCon Deploy

- **Gestion des changements** de chaînes de traitements, de workflows et de scripts dans les environnements OpCon:
 - OpCon Deploy a sa propre base de données
- Principales fonctionnalités :
 - **Versionning** des packages, workflows et scripts
 - **Règles de transformation** entre environnements
 - Basic (serveur, user,...)
 - Standard (fréquence, dépendances,...)
 - Avancée (modification des lignes de commandes)
 - **Simulation** d'un déploiement
 - **Rollback** d'un déploiement
 - Déploiement en **mode Batch**
 - **Historique** des changements
 - Tous les **changements** sont **audités**



OpCon Deploy

- Bénéfices
 - Accélère et sécurise les **changements**
 - **Gestion** sécurisée du changement **par package**
 - Gestion des **changements de masse**
 - Permet le changement **collaboratif**
 - Gestion **multi-versions** des environnements applicatifs (Dev, Test, QA,...)
 - Gestion centralisée des scripts
 - **Orchestration** possible des changements avec **OpCon Self Service**

The screenshot shows the 'Package deployment' window. At the top, it says 'Select a Package to deploy' and 'Select a Package to deploy within the list'. Below this is a 'Filter by Package name' search box containing the text 'ova'. Underneath is a 'Package list' showing two items: 'OVA_PKG001' and 'OVA_PKG001_SCHED'. Below the package list is a 'Version' table with columns: Name, Description, Current producti..., Schedules, Transformation us..., User, and Date.

Name	Description	Current producti...	Schedules	Transformation us...	User	Date
<input type="checkbox"/> Version 3	OVA PkAge		3	✓	OVA_admin	30/01/2019 16:46.3
<input type="checkbox"/> Version 2	OVA PkAge	✓	3	✓	OVA_admin	30/01/2019 16:15.5
<input type="checkbox"/> Version 1	OVA PkAge		3		OVA_admin	29/01/2019 16:22.9

At the bottom of the window are navigation buttons: '< Back', 'Next >', 'Simulate', 'Batch deploy', 'Deploy', and 'Cancel'.

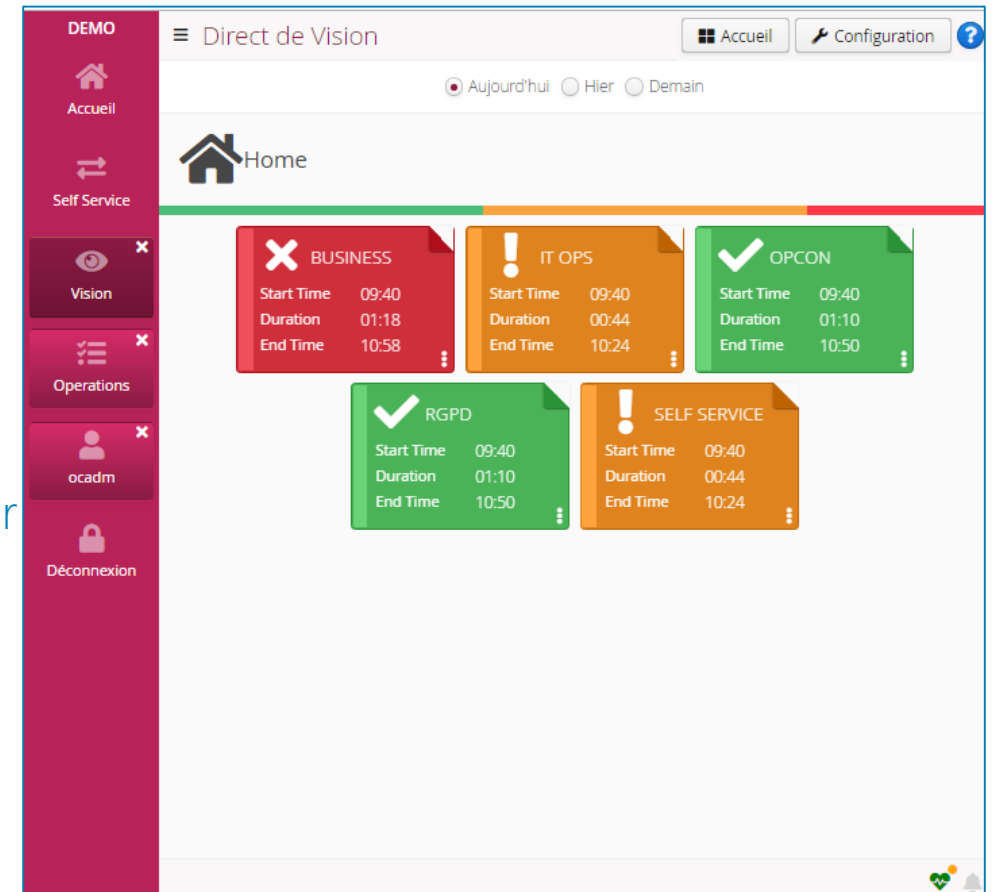


OPCON
VISION

Nouveau !

OpCon Vision

- Challenges:
 - Monitoring des exploitations de plus en plus complexe, avec des temps de plus en plus limités.
 - Gestion du chemin critique est essentielle pour la disponibilité des applications métiers
- Vues Vision:
 - Une console unique sous forme de tableau de bord pour le monitoring global
 - Regroupements des jobs par "Tag", avec plusieurs sous-niveaux possibles
 - Un clic sur la carte permet de visualiser immédiatement les jobs taggés et filtrés, avec interventions possibles sur les jobs:
 - Cancel, hold, skip, restart, force start,...



OpCon Vision

- Exemples d'utilisations et de regroupements:
 - Jobs **critiques**
 - Jobs **techniques**
 - Jobs liés à des **entités** (France, UK,...)
 - Jobs liés à des **métiers** (facturation, logistique,...)
 - Jobs liés à des **environnements OpCon**
 - Jobs liés au **Cloud**
 - Jobs liés à la **RGDP** (traitement BDD permis de conduire, paie,...)
 - ...

The screenshot shows the OpCon Vision dashboard in a browser window. The address bar displays 'localhost/#!vision/live'. The page title is 'Direct de Vision'. The navigation bar includes 'Accueil' and 'Configuration' buttons. The main content area shows a summary of jobs for 'Home > BUSINESS' on 'Aujourd'hui'. A table lists job details:

Job	Start Time	Duration	End Time
ACCOUNTING	07:09	03:29	10:38
CRITIQUES	07:09	00:46	07:55
HR	07:09	03:41	10:50
LOGISTIC	07:09	00:19	07:28
PAYROLL	07:09	03:41	10:50

The dashboard uses a color-coded system: green for successful jobs (ACCOUNTING, CRITIQUES, HR, PAYROLL) and red for failed jobs (LOGISTIC). A sidebar on the left contains navigation options: DEMO, Accueil, Self Service, Vision, Operations, oadm, and Déconnexion.

OpCon Vision

- Au dos de chaque carte: Totalisation du nombre total de jobs pour chaque statut de job:

The screenshot displays the OpCon Vision interface. The left sidebar contains navigation options: DEMO, Accueil, Self Service, Vision, Operations, oadm, and Déconnexion. The main content area shows a 'Direct de Vision' header with 'Accueil' and 'Configuration' buttons. Below this, there are radio buttons for 'Aujourd'hui', 'Hier', and 'Demain'. A red 'X' icon is next to 'Home > BUSINESS'. The dashboard features several job cards, each with a checkmark and a title: ACCOUNTING, CRITIQUES, HR, and PAYROLL. Each card displays 'Start Time', 'Duration', and 'End Time'. A tooltip is overlaid on the PAYROLL card, showing a summary of job statuses:

En attente	0
En cours	0
Terminé	6
Avertissement	0
Erreur	1

A hand cursor is pointing at the bottom of the tooltip.

OpCon Vision

- Un clic sur une carte permet d'afficher la liste des jobs associés à la carte.
- ... et d'intervenir sur les jobs, de voir le rapport d'exécution et le Pert.

The screenshot shows the SMA OpCon Solution Manager interface. The main area displays a table of jobs with columns for Date, Chemin Schedule, Nom, Heure Dém..., and Durée. A sidebar on the right contains various action buttons for job management.

Date	Chemin Schedule	Nom	Heure Dém...	Durée
2019/05/13	D-LOGISTIC	C1-LOGISTIC-21	10:44	00:01
2019/05/13	D-LOGISTIC	C1-LOGISTIC-22	10:45	00:00
2019/05/13	D-LOGISTIC	C1-LOGISTIC-23	10:45	00:01
2019/05/13	D-LOGISTIC	C1-LOGISTIC-25	10:47	00:01
2019/05/13	D-LOGISTIC	C1-LOGISTIC-26	10:48	00:01
2019/05/13	D-LOGISTIC	C1-LOGISTIC-2A	10:44	00:00

The screenshot shows a detailed job execution report for 'C1-LOGISTIC-2A'. It includes the date (2019/05/21), schedule (D-LOGISTIC), and job name (C1-LOGISTIC-2A). The report contains a list of execution logs with timestamps and details about the job's execution, including the path to the job file and the environment variables.

The screenshot shows the 'Découverte Progressive' interface, which displays a dependency graph of jobs. The graph shows a central job 'D-LOGISTIC' connected to several other jobs: 'C1-LOGISTIC-23', 'C1-LOGISTIC-24A', 'C1-LOGISTIC-24C', 'C1-LOGISTIC-24B', 'C1-LOGISTIC-25', and 'C1-LOGISTIC-25'. The interface includes a search bar and a sidebar with navigation options.

OpCon Vision

- Droits sur les cartes: Affectation des cartes à des rôles OpCon.

The screenshot displays the 'Configuration de Vision' interface. On the left is a navigation sidebar with options: Accueil, Self Service, Vision (highlighted), Operations, oadm, and Déconnexion. The main area shows a tree view with folders like BUSINESS, ACCOUNTING (selected), CRITIQUES, HR, LOGISTIC, PAYROLL, IT OPS, OPCON, RGPD, and SELF SERVICE. A 'Modifier Carte' dialog box is open, showing the following configuration:

- Carte parent: /BUSINESS
- Type: Groupe Tag
- Nom: ACCOUNTING
- Instance: Courante
- Pattern: compta
- Job Offset: Current Frequency Day
- Rôles: Héritage
- Rôles Révoqué: ETUDES, Profil-Isa, Profil-Michel
- Rôles Accordé: Profil_Comptable, Role_ocadm

OpCon Vision

- Contexte Vision: Adaptation du tableau de bord Vision en fonction du calendrier.

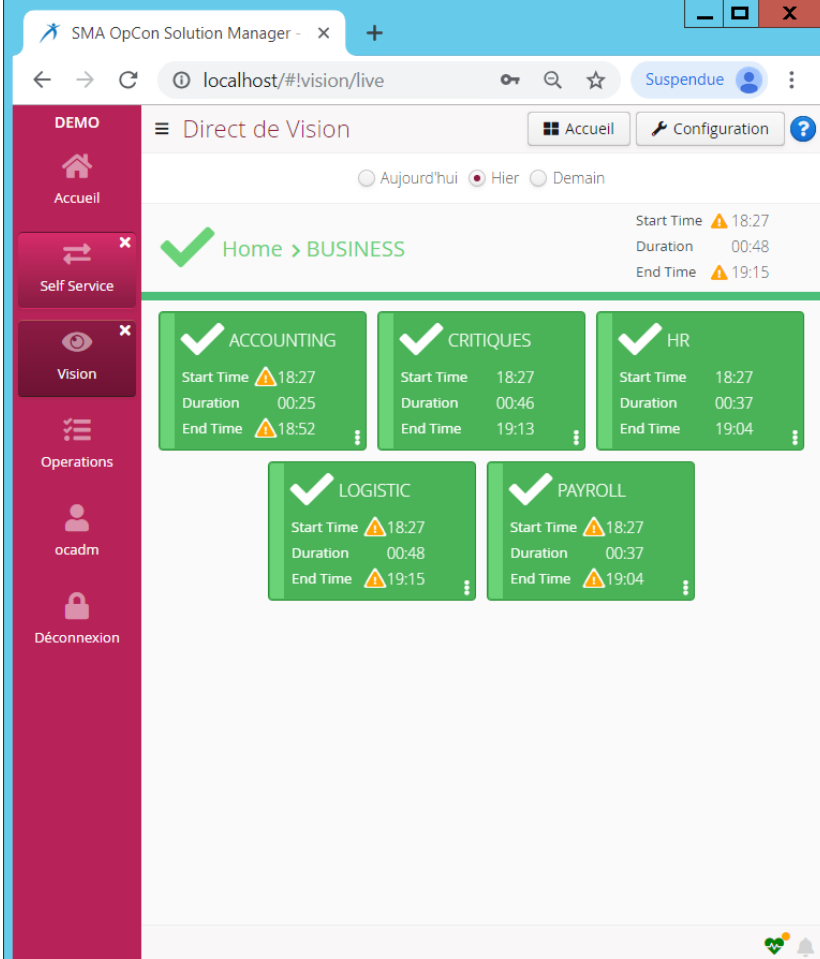
The image displays two overlapping screenshots from the OpCon Vision software interface.

The top-left screenshot shows the 'Vision Settings' dialog box. It features a header with a hamburger menu icon, the text 'Vision Settings', and two buttons: 'Frequencies' (highlighted with a red box) and 'Actions'. Below the header, there is a green plus icon and a folder icon labeled 'IT OPS'. At the bottom, there are 'Save' and 'Cancel' buttons.

The bottom-right screenshot shows the 'Vision Frequency' configuration screen. It includes a 'Name' field with the value 'Weekend', a 'Description' text area, and a 'Date Policy' dropdown menu set to 'Include Selected Dates'. Below these fields is a calendar grid with columns for days of the week (Mon-Sun) and months (Jan-Dec). The grid shows 'All' selected for all days and months. A 'Clear' button is located below the calendar. At the bottom, there are two checkboxes: 'Included Dates' (checked) and 'Excluded Dates' (unchecked). Below the checkboxes are four monthly calendar views for January 2018, February 2018, March 2018, and April 2018, with specific dates highlighted in green to indicate inclusion.

OpCon Vision: Monitoring proactif avec SLAs

- Monitoring en temps réel des processus critiques.
- Suivi des jobs via SLAs
- Rapports & Analyse



The screenshot displays the SMA OpCon Solution Manager interface. The browser address bar shows 'localhost/#!vision/live'. The main dashboard is titled 'Direct de Vision' and includes navigation options for 'Accueil' and 'Configuration'. A sidebar on the left contains menu items: 'DEMO', 'Accueil', 'Self Service', 'Vision', 'Operations', 'ocadm', and 'Déconnexion'. The main content area shows a 'Home > BUSINESS' section with a green checkmark. Below this, there are five monitoring cards for different processes: ACCOUNTING, CRITIQUES, HR, LOGISTIC, and PAYROLL. Each card displays a green checkmark, a start time, a duration, and an end time, with a yellow warning triangle next to the end time. The ACCOUNTING card shows Start Time 18:27, Duration 00:25, and End Time 18:52. The CRITIQUES card shows Start Time 18:27, Duration 00:46, and End Time 19:13. The HR card shows Start Time 18:27, Duration 00:37, and End Time 19:04. The LOGISTIC card shows Start Time 18:27, Duration 00:48, and End Time 19:15. The PAYROLL card shows Start Time 18:27, Duration 00:37, and End Time 19:04. A top navigation bar includes 'Aujourd'hui', 'Hier', and 'Demain' options. The bottom right corner features a status indicator and a notification bell.

OpCon Vision

- Gestion de SLAs (Service Level Agreements)
 - Par contexte
 - Heure de démarrage prévue
 - Heure de fin prévue
 - Jour courant, précédent, suivant, N+..., N-...

Frequency(ies) + Add

Frequency * All Days + Add

SLA

Requirement * Expected Start Time

Time * 21 : 00

Day * Current

✓ OK ✗ Cancel

-5
-4
-3
-2
Previous
Current
Next
+2
+3
+4
+5

OpCon Vision

- Paramétrage d' Actions prédéfinies.

The image displays the 'Vision Settings' interface with the 'Actions' tab selected. A 'Vision Action' dialog box is open, showing the configuration for an action named 'Notify Ops Estimated Late to Finish'. The dialog includes fields for the name, a list of events, an event template, and specific notification details like 'To', 'Message', and 'Exclude notification id from header'. The 'Event Template' field contains a complex template string: `$NOTIFY:TEXTMSG,<to>,<message>,[exclude notification id from header]`. The 'Message' field contains the text: 'Please figure out what's slowing down the [[CI:'. The 'To' field contains the placeholder `[[OpsOnCall]]`. The 'Exclude notification id from header' dropdown is set to 'No (N)'. The dialog has 'OK' and 'Cancel' buttons at the bottom.

vision Action

name * Notify Ops Estimated Late to Finish

Events * + -

Event Template * \$NOTIFY:TEXTMSG,<to>,<message>,[exclude notification id from header]

\$NOTIFY:TEXTMSG,[[OpsOnCall]],Please figure out what's slowing down the [[CI.\$CARD NAME]] workflow. It's estimated end time is [[CI.\$CARD END TIME]],N

To * [[OpsOnCall]]

Message * Please figure out what's slowing down the [[CI:

Exclude notification id from header No (N)

OK Cancel

Save Cancel

OpCon Vision

- Définition des conditions de déclenchement des Actions.

The screenshot displays a configuration window for defining action triggers. It is divided into two main sections: SLA and Trigger(s).

SLA Section:

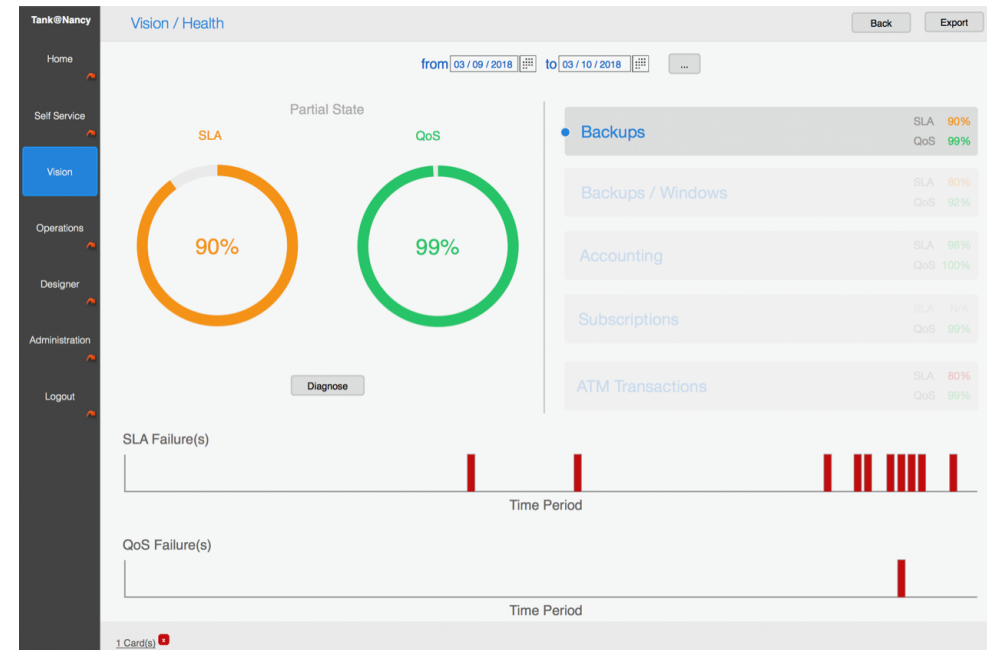
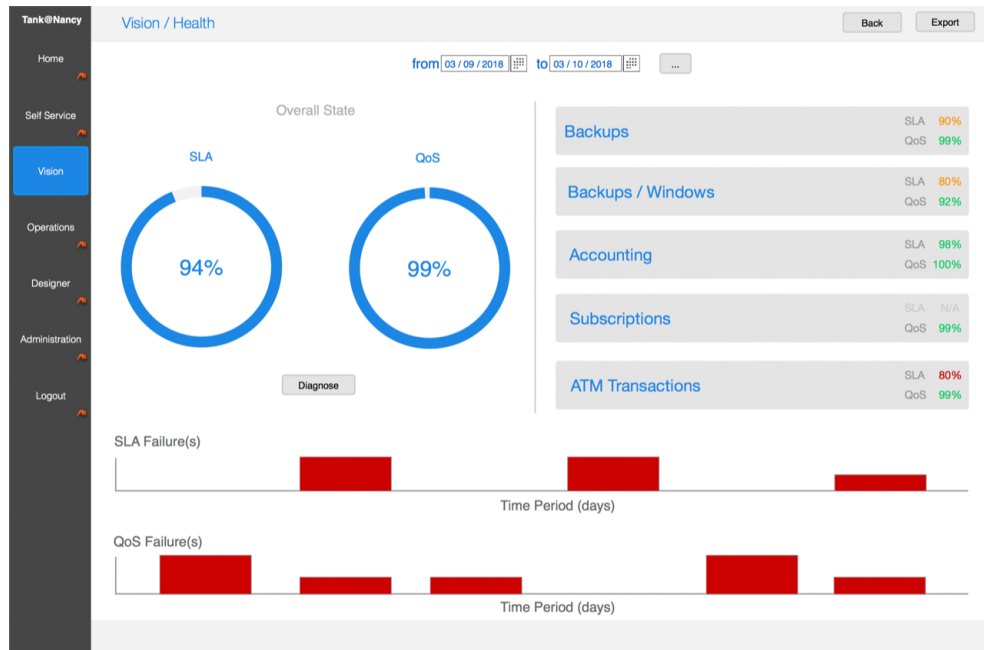
- Frequency ***: A dropdown menu set to "All Days" with a green "+" button to its right.
- Requirement ***: A dropdown menu set to "Expected Start Time".
- Time ***: Two dropdown menus for hours and minutes, set to "21" and "00" respectively.
- Day ***: A dropdown menu set to "Current".
- Buttons: "✓ OK" (blue) and "✗ Cancel" (black).

Trigger(s) Section:

- Status ***: A dropdown menu set to "Failed".
- Runnable(s) ***: A list of options with "Failed" selected and highlighted in blue. Other options include "Partial Failed", "Finished Ok", "Started Late (SLA)", "Finished Late (SLA)", "Estimated Late to Start (SLA)", and "Estimated Late to Finish (SLA)".
- Buttons: "✓ OK" (blue) and "✗ Cancel" (black).

OpCon Vision

- Dashboards & reports en temps réel



Questions

Merci !

Pour plus d'infos, venez
nous retrouver sur notre
stand pour une
démo personnalisée !