

Case Study: Dynamics Enterprise Deployments

Automated CI/CD Pipelines for Dynamics 365

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Introduction:

Many companies run their deployment process manually, which works but includes a high risk of common errors like typos. In addition, setting up and maintaining deployment steps documentation consumes a lot of time. In the following text you will read more about the advantages of modern state of the art CI/CD pipelines (automated Deployment) in comparison to manual deployments.

Primary Goals:

- Reduce efforts of technical resources
- 24h Test/UAT Feedback circle - Nightly Deployments every day (Automatically)
- Professional strong End-to-End Release Management
- Integrated to existing infrastructure (Azure DevOps)

Overview:

Type: Enterprise project

Users: 1.000

Duration: 2 years

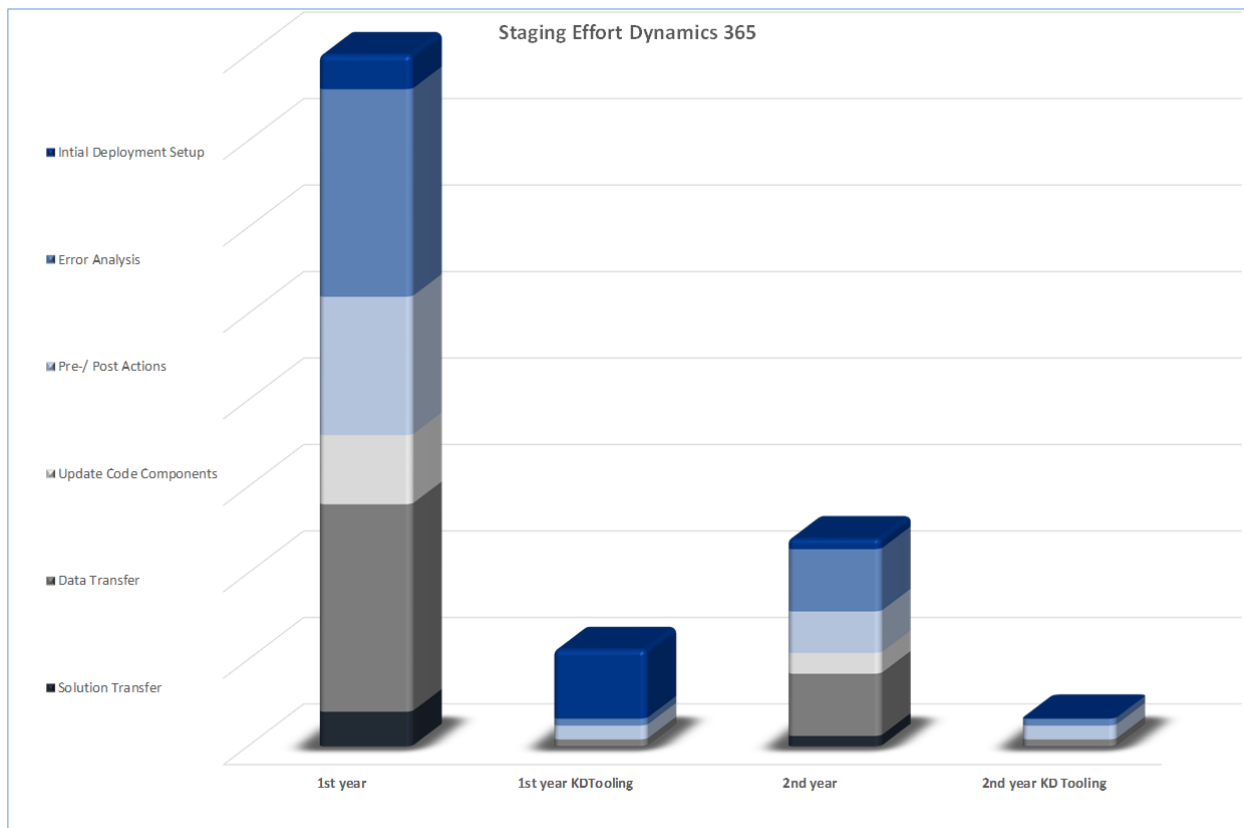
A good enterprise approach is to have at least 4 environments. Depending on the team and strategy multiple deployments per week are necessary:

System	Deployments/Month	Deployments/Year	h/Month	h/Year
DEV	10	120	20h	240h
INT	4	48	8h	96h
PrePROD	1	12	2h	24h
PROD	1	12	2h	24h
	16	192	32h	384h

*based on a avg. duration of 2 hours per deployment.

Based on the scenario above the deployment effort for the full project time of 2 years can be split into the different categories:

<p>Manuel Deployment (without Tooling):</p> <ul style="list-style-type: none"> • Low initial config effort • Higher risk of common errors (typos) • Repeated steps for each deployment • Many actions before and after each deployment • Simple errors, such as typos can lead to long troubleshooting 	<p>Automated Deployment</p> <ul style="list-style-type: none"> • New tool & higher initial config effort • Technical invest, without business value
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* Assumptions are made based on enterprise project experience.

Fully automated deployment pipelines can reduce **efforts up to 70%**. Depending on project complexity, planning efforts and compliance regulations.

How to implement automated deployments:

Scripting: Self-written scripts often lead to confusion and are very difficult for others to read and use.

Every time a deployment occurs, certain values have to be adapted to the specific environment before or after the deployment process and this leads to considerable additional effort.

Deployment Software: The solution to these problems is to introduce a tool for an automated deployment process. After a single setup, the process runs automatically and with a much higher overall quality.

KDTooling Deployment Manager:

Calculation is based on deployment categories which can be fully automated.

More Pricing Information can be found here: <https://kuppsoft.com/tools/deployment-manager>
Enterprise license price automatically reduces to 1/12 (yearly fee) after the first 12 months.

Consulting Costs (per h)	120 €
Avg. Amount per month	32 h
Initial Effort for CI	8 h

Costs (Enterprise)	Without Tooling	KDTooling
Tooling Costs	-	2 100,00 €
Consulting Costs	3 840,00 €	-
Other Costs	-	-
per month	3 840,00 €	2 100,00 €
1st year	46 080,00 €	25 200,00 €
2nd year	13 824,00 €	2 100,00 €
Total costs	59 904,00 €	27 300,00 €

Sample: Calculation

